

INSTRUCTION MANUAL

PATIO HEATER



**WARNING: FOR OUTDOOR USE ONLY OR IN AMPLY VENTILATED AREAS
PLEASE KEEP THE MANUAL FOR FUTURE REFERENCE!**

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PATIO HEATER SAFETY WARNINGS

PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION AND USE.

- This appliance must be used outdoors or in a well ventilated area, and should not be installed or used indoors.
- To change the gas cylinder in a well ventilated area, away from any inflammation sources such as candle, cigarettes, or other flame producing appliances.
- The cylinder must be stored outdoors or in a well ventilated area.
- Storage this appliance indoors is permissible only if gas cylinder is disconnected and removed from the appliance.
- Do not move this appliance when in operation, or after it has been turned off before the temperature has cooled down.
- Do not attempt to alter the appliance in any manner. Do not paint the radiant screen, control panel or reflector.
- Do not obstruct the ventilation holes of the cylinder housing.
- The appliance must be installed and gas cylinder stored in accordance with local gas fitting regulations.
- Shut off the valve at the gas cylinder or the regulator before moving the appliance.
- Use only the type of gas specified by the manufacturer.
- Repairs should be done by a qualified person.
- In case of violent wind, particular attention must be taken against tilting of the appliance.
- To check that the regulator seal is correctly fitted and able to fulfil its function.
- To close the gas supply at the valve of the gas cylinder or the regulator after use.
- Do not use this appliance until all connections have been leak tested.

TROUBLESHOOTING

IF THE PROBLEM IS:	AND THIS CONDITION EXISTS:	THEN DO THIS:
Pilot won't light	Cylinder valve is closed	Open valve
	Blockage in orifice or pilot tube	Clean or replace orifice or pilot tube*
	Air in the 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	Gas cylinder low or empty
	Igniter fails	Use match to light pilot, and obtain new igniter and replace. (See below pictures)
Pilot won't stay lit	Dirt build up around pilot	Clean dirt from around pilot
	Connection between gas valve and pilot assembly is loose	Tighten connection and perform leak test
	Bad thermocouple	Replace thermocouple
Burner won't light	Gas pressure is low	Replace gas cylinder
	Blockage in orifice	Clear blockage
	Control knob is not in "ON" position	Turn control knob to "ON" position
Burner flame is low <i>Note: Do not operate heater below 5 °C (40°F)</i>	Gas pressure is low	Replace gas cylinder
	Outdoor temperature is greater than 5°C (40°F) and tank is less than 25% full	Replace gas cylinder
	Supply hose is bent or kinked	Straighten hose and perform leak test on hose
	Control knob is fully "ON"	Turn control knob to "OFF", let it cool to room temperature and check burner and orifices for blockage
Emitter glows uneven <i>Note: Bottom 2.5cm of emitter normally does not normally glow</i>	Gas pressure is low	Replace gas cylinder
	Base is not on a level surface	Place heater on a level surface
	Heater not level	Level heater
Carbon build-up	Dirt or film on reflector and emitter	Clean reflector and emitter
Thick black smoke	Blockage in burner	Turn control knob to "OFF", let it cool to room temperature and remove blockage and clean burner inside and outside.



If for some reasons your ignition fails to deliver a spark, the heater can be started by inserting a lit match using supplied match holder through the burner hole (see left photo) while pushing the control knob in the "PILOT" position, which shall be performed by a qualified person

IN THE EVENT OF ANY PROBLEM, PLEASE ALWAYS CONSULT YOUR LOCAL DEALER.

TECHNICAL DATA

Product Name	Patio Heater						
Category	I ₃ (28-30/37)		I _{BP} (30)	I _P (37)	I _{BP} (37)	I _{BP} (50)	I _P (50)
Gas	G30	G31	G30/G31	G31	G30/G31	G30/G31	G31
Pressure(mbar)	28-30	37	30	37	37	50	50
Heat input	12.5KW				12KW	13.5kW	12.5KW
Consumption	909g/h				873g/h	982g/h	909g/h
Injector size (mm)	1.70				1.60	1.60	1.60
Warning:							
The appliance shall only be installed or operated with maximum height from the rim of reflector to the ground, so the adjustable device shall be fixed according to this requirement. Close the valve of the gas cylinder or the regulator after use.							

Warning:

The appliance shall only be installed or operated with maximum height from the rim of reflector to the ground, so the adjustable device shall be fixed according to this requirement.

Use only regulator and hose approved for LP Gas at the correct pressures and gas type.

The pressure adjuster should comply with the standard and current regulations in the country where it is installed, which may be found at your nearest retailer of gas items.

Refer to the technical data. It is strictly prohibited to use adjustable pressure.

The life expectancy of the regulator is estimated as 10 years. It is recommended that the regulator is changed within 10 years of the date of manufacture or the national conditions require it.

-Using 30mbar butane regulator for butane of I3B/P (30) or butane of I3+.

-Using 30mbar propane for propane or butane/propane mixture of I3B/P(30).

-Using 37mbar butane regulator for butane of I3B/P (37).

-Using 37mbar propane regulator for propane or butane/propane mixture of I3B/P (37) or I3P (37).

-Using 50mbar butane regulator for butane of I3B/P (50).

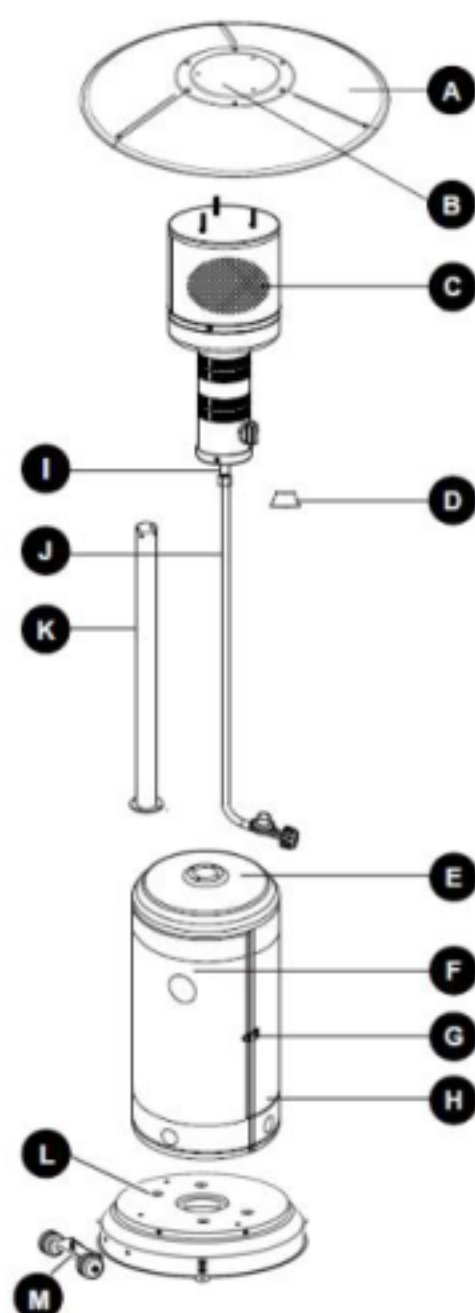
-Using 50mbar propane regulator for propane or butane/propane mixture of I3B/P (50) or I3P(50)

The type of replaceable hose should meet the standard of

The hose used must conform to the relevant standard for the country of use. The length of the hose must be 0.7 meters (minimum) and 1.5 meters (maximum). Worn or damaged hose must be replaced. Ensure that the hose is not obstructed nor kinked. It is recommended that the hose is changed within 1 year of the date of manufacture or the national conditions require it.

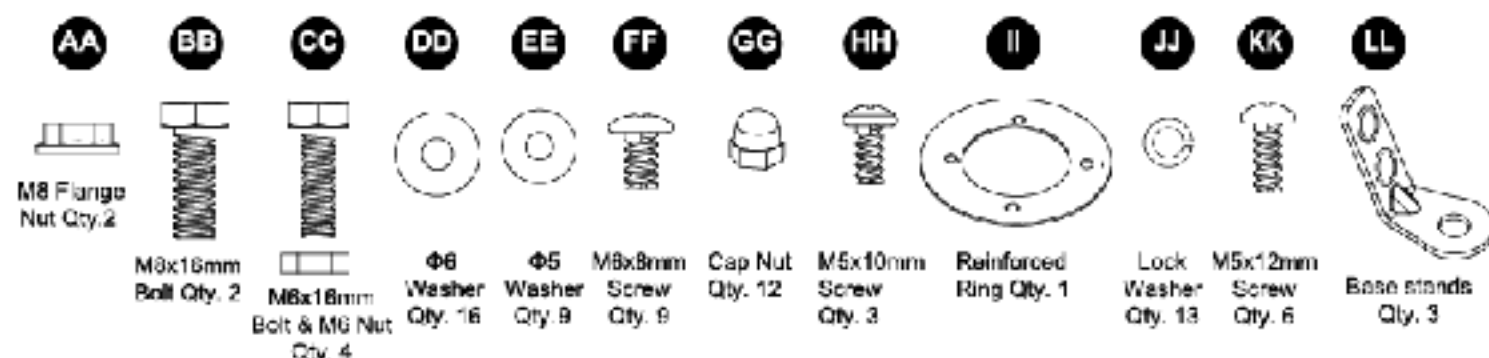
- In the event of gas leakage, the appliance shall not be used or if alight, the gas supply shall be shut off and the appliance shall be investigated and rectified before it is used again.
- Checking the tubing or the flexible hose per month and each time the cylinder is changed.
- The tubing or the flexible hose must be changed within one year.
- The hose assembly must be replaced prior to the appliance being put into operation if there is evidence of excessive abrasion or wear, or if the hose is damaged, and that the replacement hose assembly shall be that specified by the manufacturer.
- The heater should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required as necessary. It is imperative that control compartment, burners and circulating air passageways of the appliance be kept clean.
- Shut off and check heater immediately if any of the following conditions exist:
 - ☐ The smell of gas in conjunction with extreme yellow tipping of the burner flames.
 - ☐ Heater does not reach a proper temperature. A temperature less than 5°C will cause restricted heat flow and the appliance will not work properly.
 - ☐ The appliance starts making popping noises during use (a slight popping noise is normal when the appliance is extinguished).
- The regulator & hose assembly must be located out of pathways where people may trip over it or in area where the hose will not be subject to accidental damage.
- Any guard or other protective device removed for servicing the heater must be replaced before operating the heater.
- Children and adults should be warned of the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.
- Young children and pets should be carefully supervised when they are in the area of the heater.
- Clothing or other flammable materials should not be hung from the appliance, or placed on or near the appliance.
- Certain material or items when stored under or near this appliance will be subjected to radiant heat and could be seriously damaged.
- Do not place articles on or against this appliance.
- Do not use or store flammable materials near this appliance.
- Do not spray aerosols in the vicinity of this appliance while it is in operation.
- Always maintain at least 915mm clearance from combustible materials.
- Always position the appliance on a firm level surface.
- The appliance shall only be installed or operated with maximum height from the rim of reflector to the ground, so the adjustable device shall be fixed according to this requirement.
- The use of this appliance in enclosed areas can be dangerous and is PROHIBITED.

PART LIST



PART	DESCRIPTION	QUANTITY
A	Reflector Panel	3
B	Reflector Plate	1
C	Head Assembly	1
D	Deck Ring	1
E	Top of Housing (preassembled)	1
F	Door (preassembled)	1
G	Door Lock (preassembled)	1
H	Rear of Housing (preassembled)	1
I	Gas Pipe	1
J	Hose & Regulator	1
K	Post	1
L	Base (preassembled)	1
M	Wheel Kit	1

ALL HARDWARE CONTENTS (Include preassembled)



PATIO HEATER ASSEMBLY

Instruction before assembly

Required Tools: Philip Screwdriver / Adjustable Spanners / Wrenches

Leak Detection Solution: one part detergent and three parts water

Assemble all nuts and bolts loosely at first. Tighten all connections after completion of assembly. This eases your work and increases the stability of your appliance.

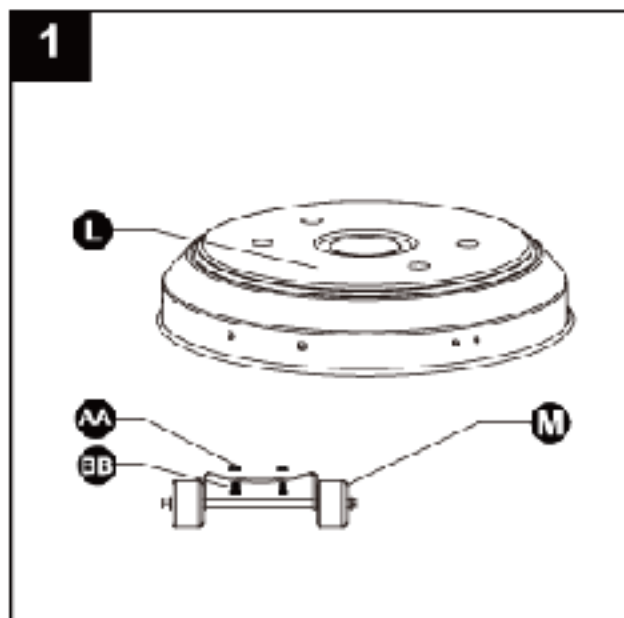
Before assembly, make sure all packing material and any transmit protection must be moved.

Small deviations in equipment may occur. This is no lack of quality but subject to improvements.

1. Line up holes on the bracket of wheel assembly (M) with the corresponding holes on base (L), then insert M8 x 16 mm bolts (BB) through holes. Hand tighten with M8 flange nuts (AA). Be sure the wheel assembly (M) is parallel to the base (L).




Hardware Used

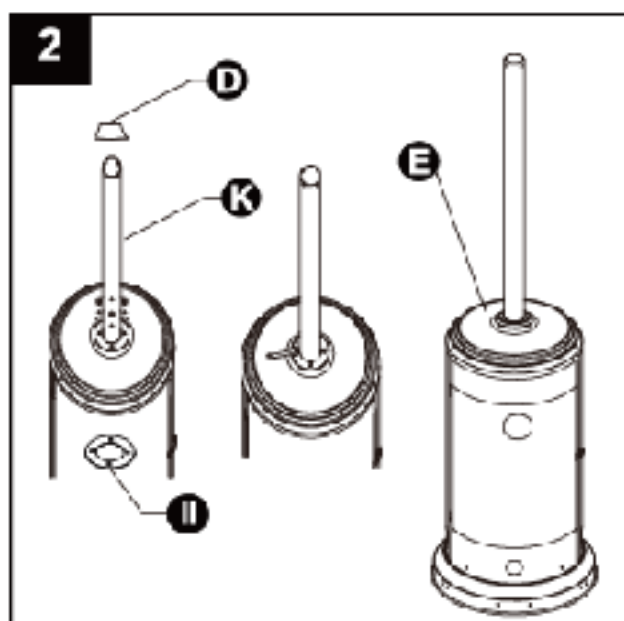
- | | | | |
|-----------|------------------|---|-----|
| AA | M8 Flange Nut |  | x 2 |
| BB | M8 x 16 mm Bolts |  | x 2 |



2. Put post (K) on the top of housing (E), put reinforced ring (II) under top of housing (E). Secure post (K) and reinforced ring (II) using M6 x 16 mm Bolt and M6 Nut (CC), lock washer (JJ), $\Phi 6$ Washers (DD). Fasten and cover with the deck ring (D).




Hardware Used

- | | | | |
|-----------|--------------------------|---|-----|
| CC | M6 x 16 mm Bolt & M6 Nut |  | x 4 |
| DD | $\Phi 6$ Washer |  | x 4 |
| II | Reinforced Ring |  | x 1 |
| JJ | Lock Washer |  | x 4 |

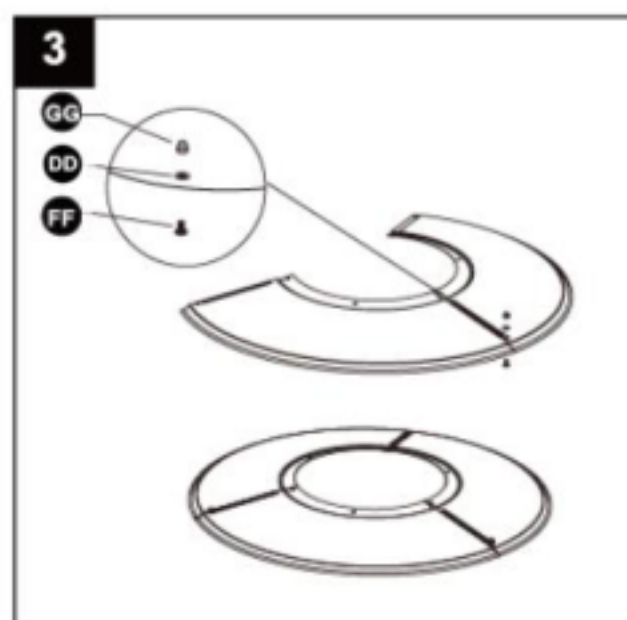


3. Attach reflector panels (A) together using M6 x 8mm screws (FF), $\Phi 6$ washers (DD) and cap nuts (GG).
Secure loosely with cap nuts (GG).

Hardware Used




DD $\Phi 6$ Washer		x 3
FF M6 X 8 mm Screw		x 3
GG Cap Nut		x 3

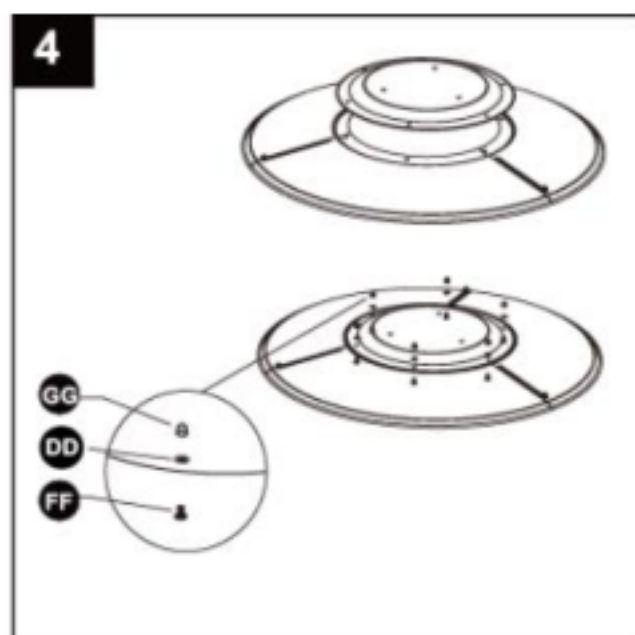
Note: In order to achieve proper alignment of reflector sections, it may be necessary to loosen the preassembled bolts prior to assembly and retighten once complete.



4. Attach reflector plate (B) to reflector panels (A) using M6 x 8mm screws (FF), $\Phi 6$ washers (DD) and cap nuts (GG).
Secure loosely with cap nuts (GG).
Note: Once properly aligned, tighten all screws and the preassembled bolts.

Hardware Used

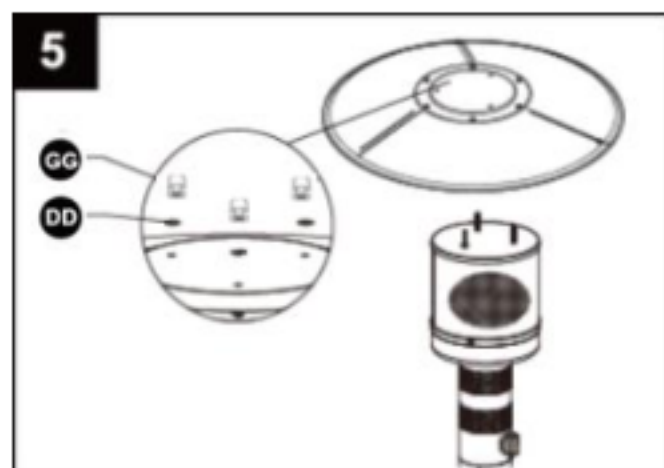
DD $\Phi 6$ Washer		x 6
FF M6 X 8 mm Screw		x 6
GG Cap Nut		x 6



5. Attach reflector assembly to head assembly (C).
Secure with cap nuts (GG) and $\Phi 6$ washers (DD).
Note: Do not over tighten!

Hardware Used

DD $\Phi 6$ Washer		x 3
GG Cap Nut		x 3



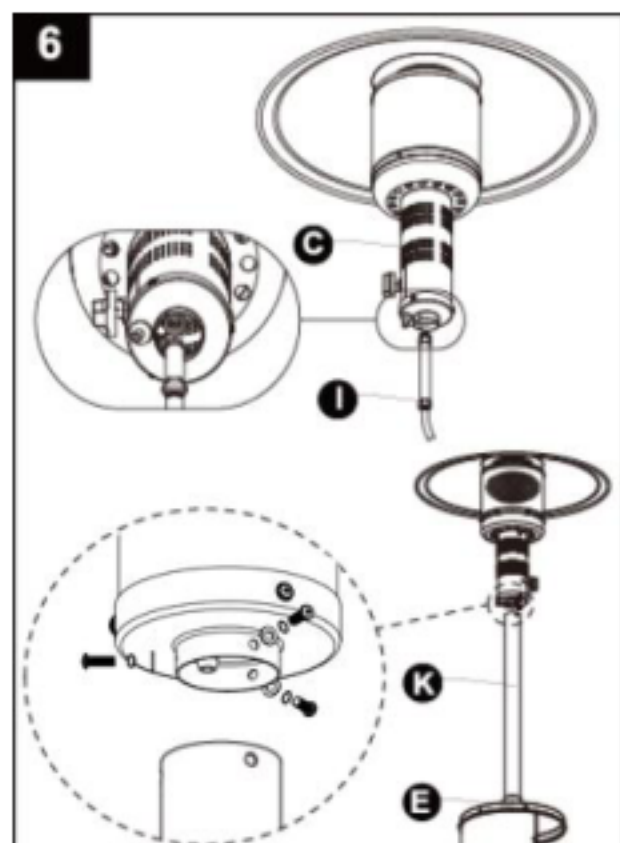
6. Buy at least 1.3m gas hose and regulator from local market. Connect hose & regulator to gas pipe (I).

Insert gas pipe with hose & regulator assembly (I/J) through top of housing (E) and Post (K), tighten gas pipe (I) to head assembly (C).

Secure head assembly (C) to the post (K) using preassembled bolts M5 x 10 (HH), lock washer (JJ), and $\Phi 5$ washers (EE).

Note: The control knob on head assembly (C) should be aligned with door (F).

The pressure regulator and hose assembly to be used must conform to local standard codes.



Hardware Used

EE $\Phi 5$ Washer x 3

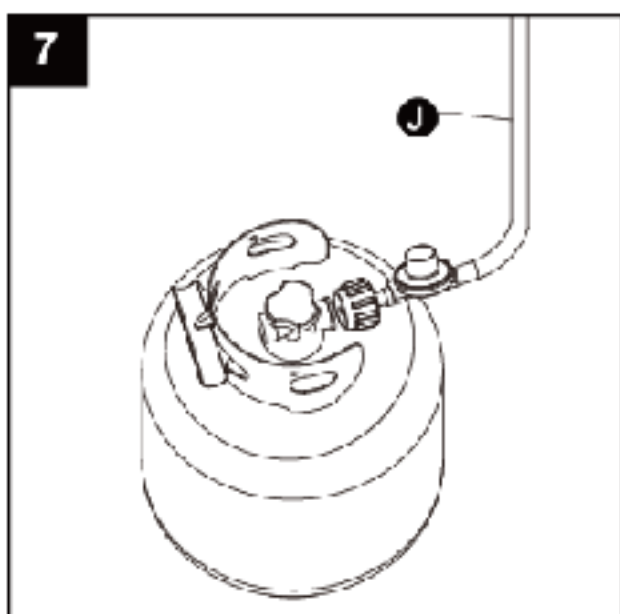
HH M5 x 10 mm Screws x 3

JJ Lock Washer x 3

7. Secure gas hose and regulator (J) onto gas cylinder (not included).

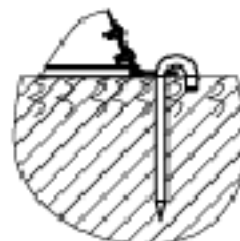
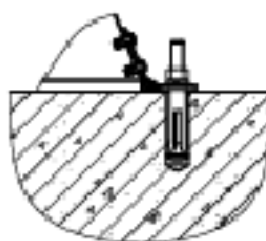
Place the gas cylinder into the rear of housing (H), then close the door (F).

Note: See instruction Gas requirement and Connecting to a gas cylinder before buying a gas cylinder.



Base stands assembly

Secure 3pcs base stands to the base using preassembled 6pcs bolts M5 x 12 (KK), 6pcs $\Phi 5$ washers (EE) and 6pcs lock washers (JJ) firstly, then strike suitable hook bolts or rawbolts from local market through the stand holes into the ground or floor. (See figure 1)

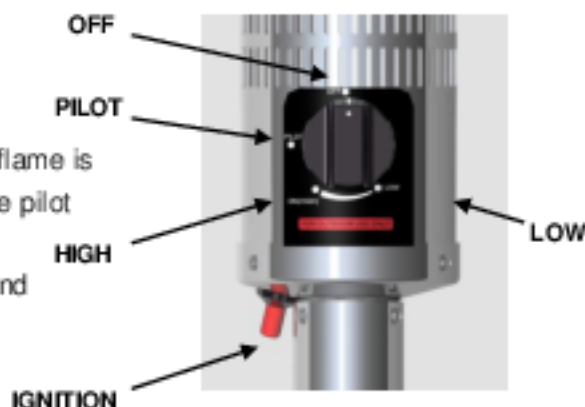


OPERATING INSTRUCTIONS

BEFORE FIRST USE AND AFTER EVERY GAS CYLINDER CHANGE, GAS DELIVERY SYSTEM MUST BE PURGED OF AIR BEFORE IGNITING! TO DO THIS, TURN THE CONTROL KNOB ANTI-CLOCKWISE TO THE PILOT SETTING. PRESS KNOB IN AND HOLD FOR 3 MINUTES BEFORE ATTEMPTING IGNITION.

TO LIGHT THE PILOT

- Check all connections prior to each use.
- Turn on main gas supply at source.
- Press to turn control knob anti-clockwise to **PILOT**, see right photo.
- Hold knob depressed, press **IGNITION** button repeatedly until pilot flame is lit, then continue to hold the knob depressed for 10 seconds until the pilot remains lit after releasing knob.
- If pilot fails to ignite or alight, press to turn knob clockwise to **OFF** and repeat.



TO LIGHT THE PATIO HEATER

- The pilot should be lit and the knob set to **PILOT**.
- Hold knob depressed gently and turn anti-clockwise to **HIGH**.
- When mesh glows lit, turn knob clockwise from **HIGH** to **LOW** as needed.

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.

RE-LIGHTING

- Turn Control Knob to OFF.
- Wait at least 5 minutes, to let gas dissipate, before attempting to re-light pilot.
- Repeat the "Lighting" steps.

TO EXTINGUISH

- Hold knob depressed & turn the knob clockwise to 'OFF'
- Close the valve of the gas cylinder or the regulator after use.
- Close the gas bottle and allow this appliance to cool before moving the appliance.

Note: After use, some discoloration of the emitter screen is normal. Close regulator after use, allow the appliance to cool before moving.

LEAK TESTING

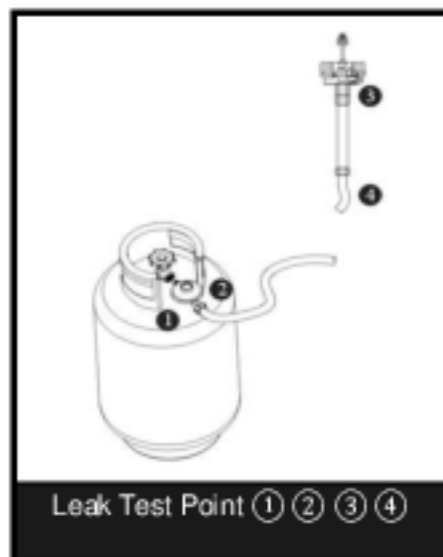
NEVER USE A NAKED FLAME TO CHECK FOR LEAKS.

NEVER LEAK TEST WHILE SMOKING.

The gas connections on this appliance are leak tested at the factory prior to shipment.

This appliance needs to be periodically checked for leaks and an immediate check is required if the smell of gas is detected.

- Make a soap solution using 1 part of liquid dish-washing soap to 3 parts water. The soap solution can be applied with a soap bottle, brush, or rag to the leak tested points shown in the figure above.
- The valve of the gas cylinder should be in the **OFF** position at this point of the leak test. Once the soapy solution is applied to the gas connections, the valve of the gas cylinder needs to be turned to the **ON** position.
- Soap bubbles will begin to form in the soapy solution if a leak is present.
- In case of a leak, turn off the gas supply. Tighten any leaking fittings, then turn the gas supply on and recheck.



GAS REQUIREMENTS

- The pressure regulator and hose assembly to be used must conform to local standard codes.
- Never use a gas cylinder with a damaged body, valve, collar, or foot ring. A dented or rusty gas tank may be hazardous and should be checked out by a gas supplier.
- Never connect this appliance to an unregulated gas source.
- When the appliance is not in use, turn the gas cylinder OFF.
- Always perform a leak test on gas connections whenever a cylinder is connected. If bubbles form in the leak test solution, do not use. Never use a flame to test for leaks.

CONNECTING TO A GAS CYLINDER

- Use 9 kg gas cylinder. Please refer to your gas supplier for suitable gas cylinder.
- Refer to your gas supplier for instructions on the use of your gas cylinder.
- Only change gas cylinders outdoors or in a well ventilated area away from naked flames and any other source of ignition.
- The gas cylinder must always be used in an upright position.
- Close the heater control knob by turning fully clockwise.
- Close the gas cylinder tap and then attach the regulator onto the gas cylinder.
- Tighten all connections firmly and with a spanner where appropriate. The cylinder should be located on the cylinder base.
- Check for leaks at all joints using soapy water. If a leak is found, tighten the joint and then re-test.

IMPORTANT SAFETY RULES

For use outdoors or in amply ventilated areas.

An amply ventilated area must have a minimum of 25% of the surface area open.

The surface area is the sum of the walls surface.

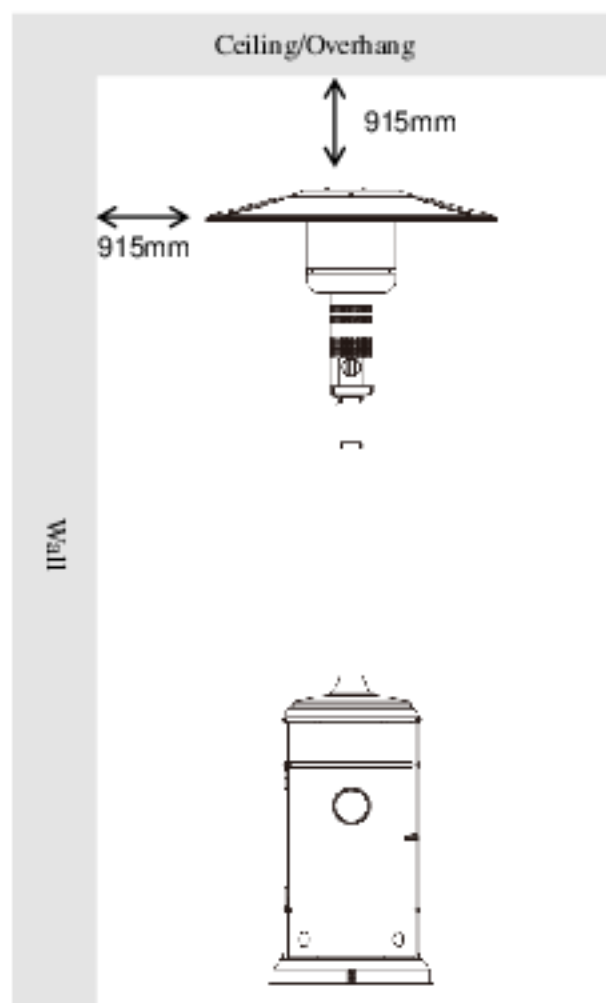
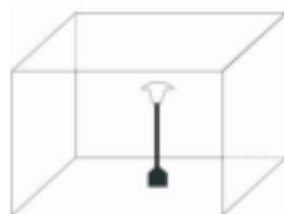
The use of this appliance in enclosed areas can be dangerous and is **PROHIBITED**.

Children and adults should be aware of the high operating temperatures of areas above the pot when operating this heater. Children should be carefully supervised when in the vicinity of the heater.

NEVER hang anything, including clothes or any other flammable items, on this heater.

DO NOT operate this heater unless it is fully assembled with its reflector in place.

Respect the minimum clearances from combustible materials.



MAINTENANCE

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.
- Use warm soapy water for cleaning. Never use flammable or corrosive cleaning agents.
- While washing your unit, be sure to keep the area around the burner and pilot assembly dry at all times. If the gas control is exposed to water in any way, **DO NOT** try to use it. It must be replaced.
- Airflow must be unobstructed. Keep controls, burner and circulation 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 noises.
- Spiders and insects can nest in burner or orifices. This dangerous condition can damage the 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. If any carbon deposits develop, clean dome and engine with warm soapy water.

Note: in a salt-air environment (such as near the sea), corrosion occurs more quickly than normal. Frequently check the corroded areas and repair them promptly.

SERVICING

- Please consult your local dealer for servicing this appliance and replacement of its parts. The servicing of the appliance shall be carried out only by authorised personnel.
- Caution: do not use unauthorized parts or components for this appliance, only use original equipment replacement parts and components. The use of unauthorized parts or components will void the warranty and can create an unsafe condition.

STORAGE

There is no limitation on the storage of the appliance indoors provided that the cylinder is removed from the appliance.

Between uses:

- Turn control knob **OFF**
- Turn gas cylinder **OFF**

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 to protect exterior surfaces and to 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 gas cylinder and move to a secure, well ventilated location outdoors. DO NOT store in a location that will exceed 50°C.

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 prevent build up in air passages.

Note: Wait until heater is cool before covering