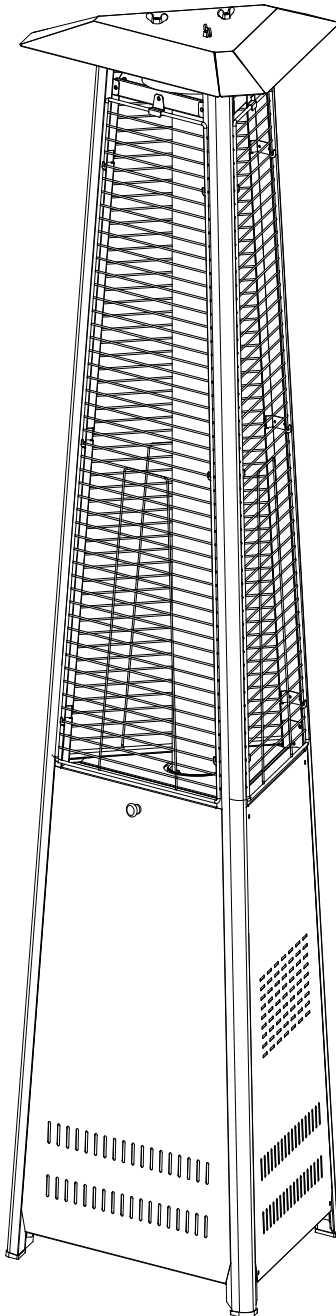


Owner's Manual

OUTDOOR PATIO HEATER

MODEL #BSH-A



DANGER

If you smell gas:

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

WARNING

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

WARNING

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: For Outdoor Use Only

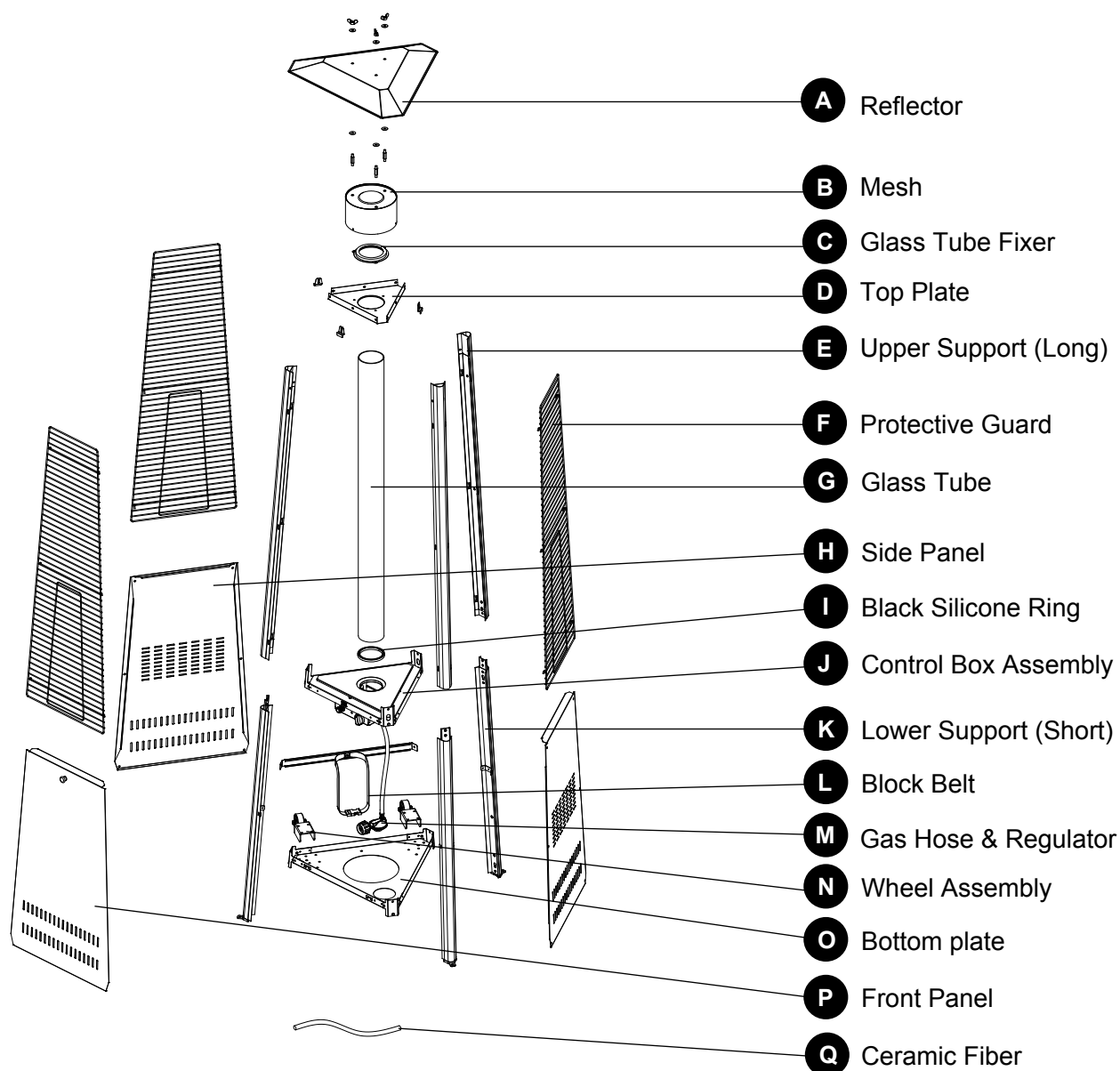
WARNING

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.



ANS Z83.26-2014/CSA 2.37-2014 Gas-Fired Outdoor Infrared Patio Heaters

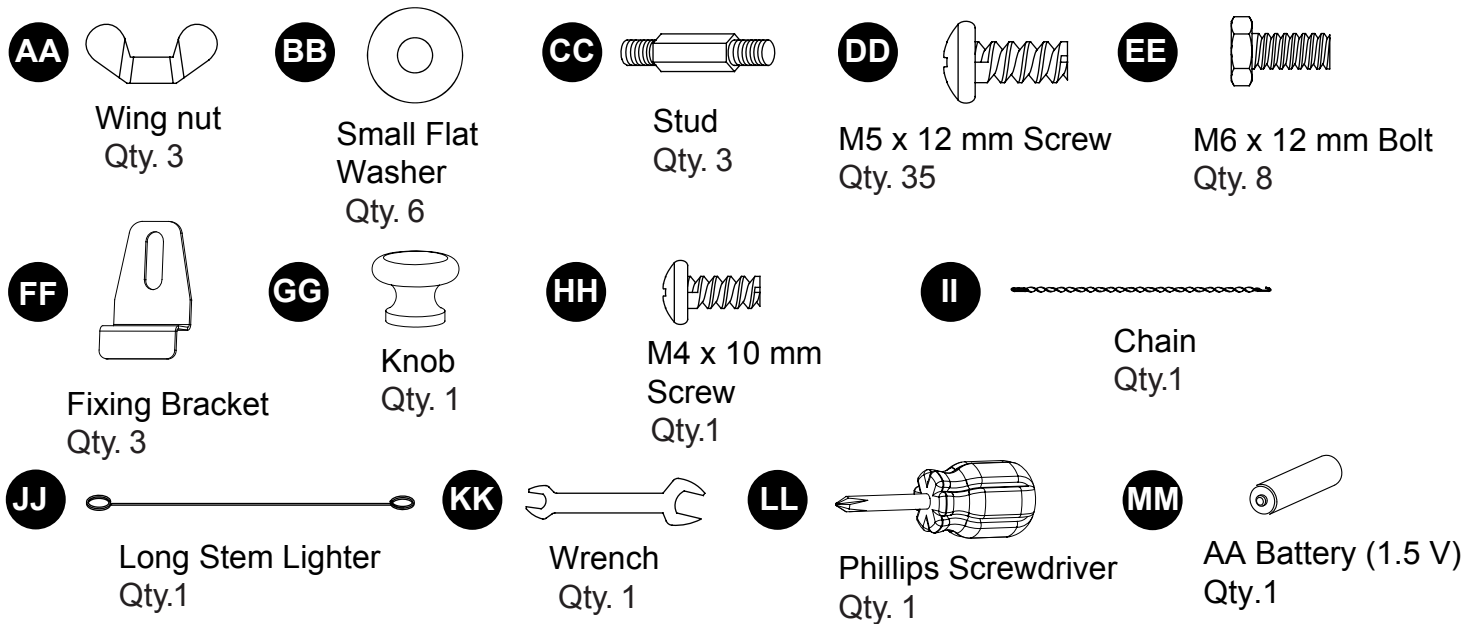
PACKAGE CONTENTS



PART	DESCRIPTION	QUANTITY
A	Reflector	1
B	Mesh	1
C	Glass Tube Fixer	1
D	Top Plate	1
E	Upper Support (Long)	3
F	Protective Guard	3
G	Glass Tube	1
H	Side Panel	2
I	Black Silicone Ring	1
J	Control Box Assembly	1
K	Lower Support (Short)	3

PART	DESCRIPTION	QUANTITY
L	Block Belt	1
M	Gas Hose & Regulator	1
N	Wheel Assembly	2
O	Bottom plate	1
P	Front Panel	1
Q	Ceramic Fiber	1

HARDWARE CONTENTS (shown actual size)



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 this patio heater. 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 follow these precautions, as they are essential when using any mechanical or fueled equipment.

DANGER

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

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.

DANGER



CARBON MONOXIDE HAZARD
This appliance produces carbon monoxide which has no odour. Using it in an enclosed space can kill you. Never use this appliance in an enclosed space such as a camper, tent or home.

SAFETY INFORMATION

DANGER

- EXPLOSION - FIRE HAZARD
- Keep solid combustibles, such as building materials, paper or cardboard, a safe distance away from the heater as recommended by the instructions.
- Provide adequate clearances around air openings into the combustion chamber.
- 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.
- During operation, this product can be a source of ignition. Keep heater area clear and free from combustible materials, gasoline, paint thinner, cleaning solvents and other flammable vapours and liquids. Do not use heater in areas with high dust content. Minimum heater clearances from combustible materials: 36" (91 cm) from the sides & 24" (61 cm) from the top.

DANGER

- EXPLOSION - FIRE HAZARD
- Never store propane near high heat, open flames, pilot lights, direct sunlight, other ignition sources or where temperatures exceed 120 degrees F (49°C).
- Propane vapours 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, near flame, pilot light, other ignition sources or while heater is hot to touch.
- This heater is red hot during use and can ignite flammables too close to the burner. Keep flammables at least 36" (91 cm) from sides & 24" (61 cm) from top. Keep gasoline and other flammable liquids and vapors well away from heater.
- Store the propane cylinder outdoors in a well ventilated space out of reach of children. Never store the propane cylinder in an enclosed area (house, garage, etc.). If heater is to be stored indoors, disconnect the propane cylinder for outdoor storage.

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.

CAUTION

SERVICE SAFETY

- Keep all connections and fittings clean. Make sure propane cylinder valve outlet is clean.
- During set up, check all connections and fittings for leaks using soapy water. Never use a flame.
- Use as a heating appliance only. Never alter in any way or use with any device.

CAUTION

CAUTION indicates an imminently hazardous situation which, if not avoided, may result in minor or moderate personal injury, or property damage.

CAUTION

An appliance may be installed with shelter no more inclusive than:

- (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 partial enclosure which includes an overhead cover and three side walls, as long as 30 percent or more of the horizontal periphery of the enclosure is permanently open.

SAFETY INFORMATION

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.

WARNING

BURN HAZARD

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

WARNING

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

WARNING

We cannot foresee every use which may 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.
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.

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 settle 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 cylinders set up for vapour withdrawal.
- Store or use propane gas in compliance with local ordinances and codes or with ANS/NFPA 58. Turn off propane when not in use.

WARNING

- Alert children and adults to the hazards of high surface temperatures. Stay away from these surfaces to avoid burning skin or igniting clothing.
- 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.
- Replace any guard or protective device removed for servicing the appliance prior to placing back in service.
- 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.

WARNING

WARNING: This product contains small batteries. Swallowed small batteries can cause CHOKING HAZARD. Seek immediate medical attention if batteries are swallowed or inhaled. Keep children away from the small batteries.

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: 90 minutes

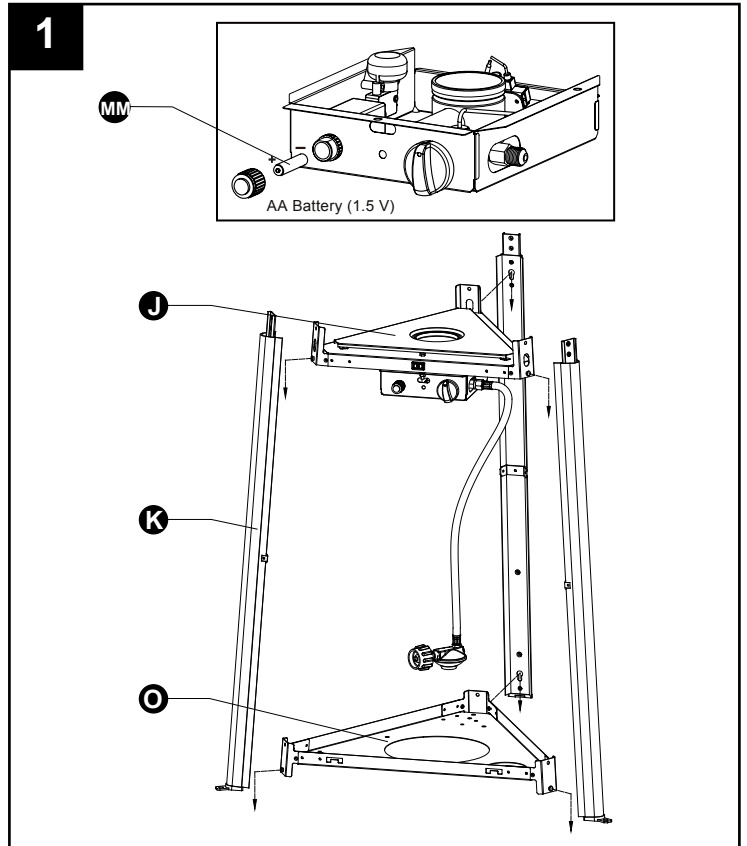
Tools Required for Assembly (not included):
Phillips screwdriver w/ medium blade. Leak Detection Solution.

ASSEMBLY INSTRUCTIONS

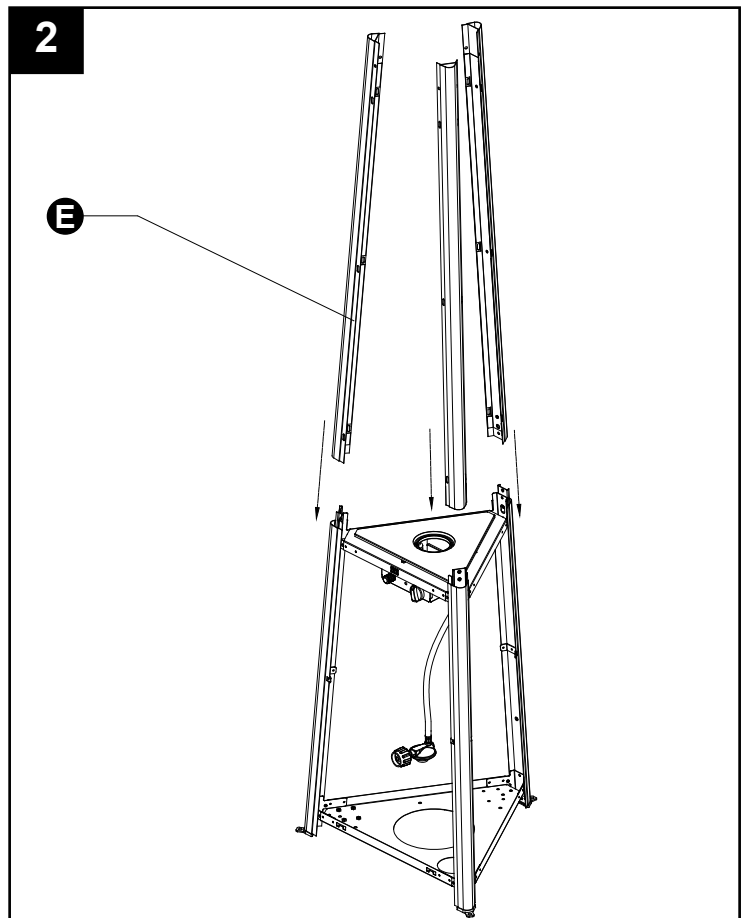
1-1. Unscrew the switch button, load small battery, tighten the switch button.

1-2. Insert the hoods of bottom plate (O) to the lower holes of the three lower supports (K). Insert the hoods of control box assembly (J) to the upper holes of the three lower support (K).

Note: Make sure align the side of bottom plate (O) with the holes with the side of control box assembly (J) with the magnet.



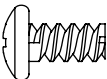
2. Insert three upper supports (E) to the three lower supports (K).



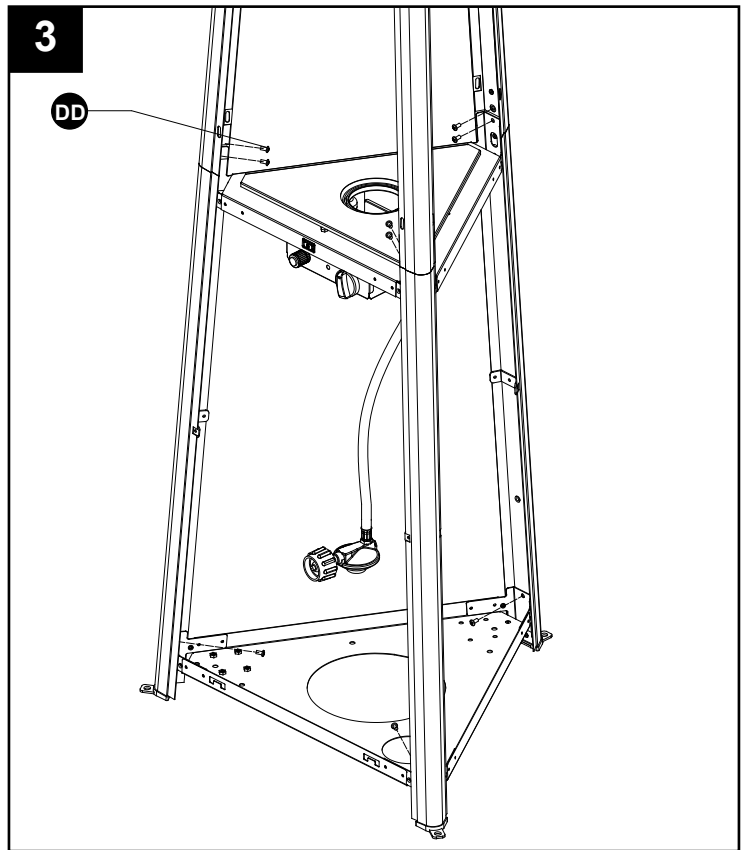
ASSEMBLY INSTRUCTIONS

3. Use Phillips screwdriver (LL) to fasten the control box assembly (J) and the bottom plate (O) with M5 x 12 mm screws (DD).

Hardware Used

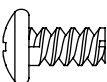
DD M5 x 12 mm Screw  x 9

LL Phillips Screwdriver  x 1

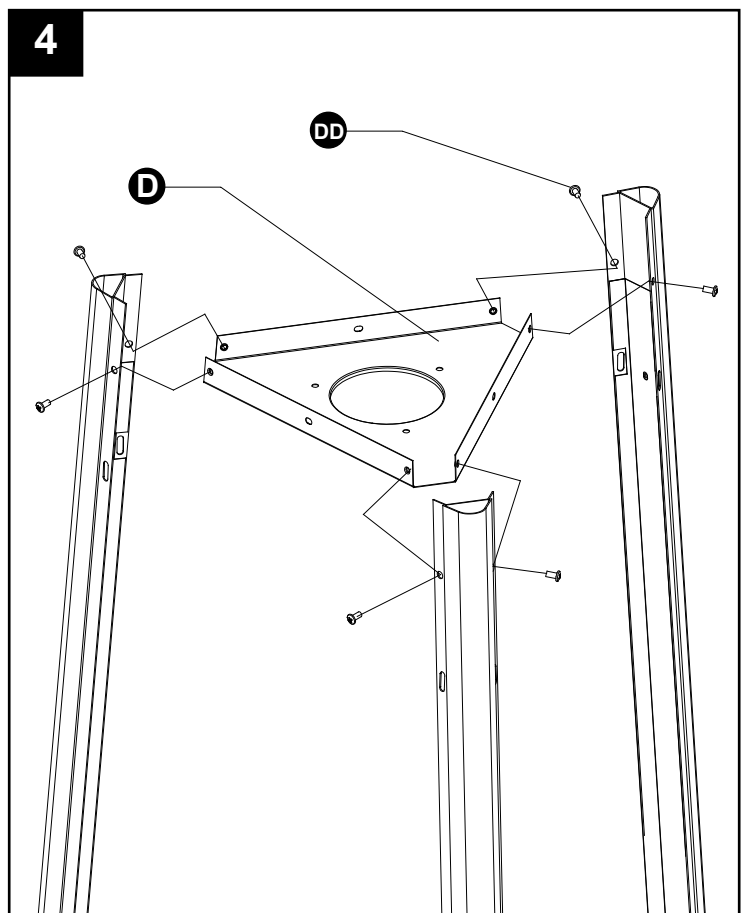


4. Use Phillips screwdriver (LL) to secure the top plate (D) to the upper supports (E) with M5 x 12 mm screws (DD).

Hardware Used

DD M5 x 12 mm Screw  x 6

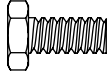
LL Phillips Screwdriver  x 1

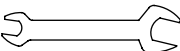


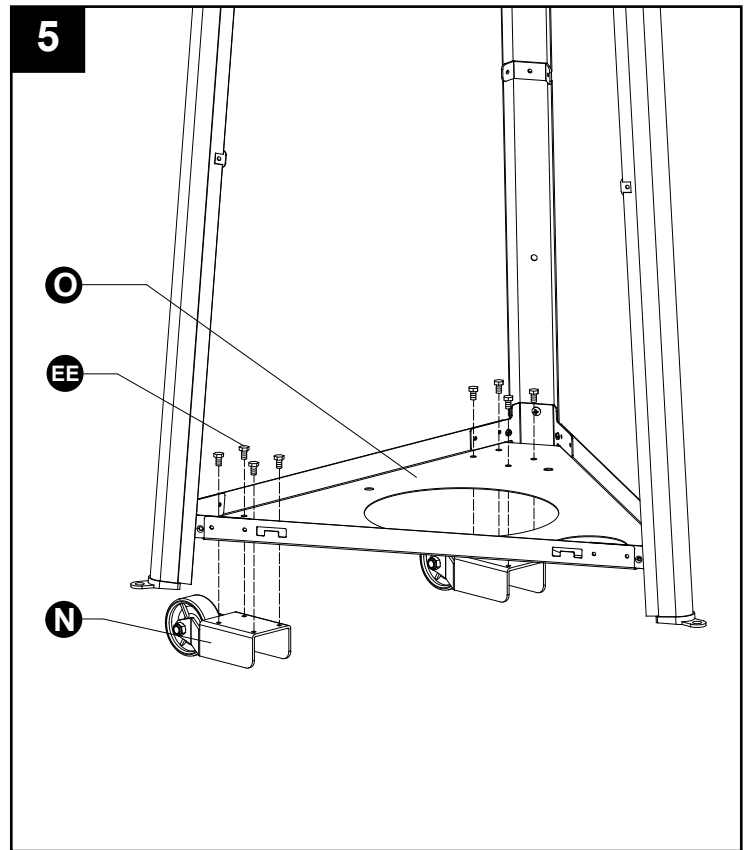
ASSEMBLY INSTRUCTIONS

5. Using wrench (KK) to assemble the wheel assembly (N) to the bottom plate (O) with M6 x 12 mm bolts (EE).

Hardware Used

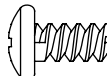
EE M6 x 12 mm Bolt  x 8

KK Wrench  x 1

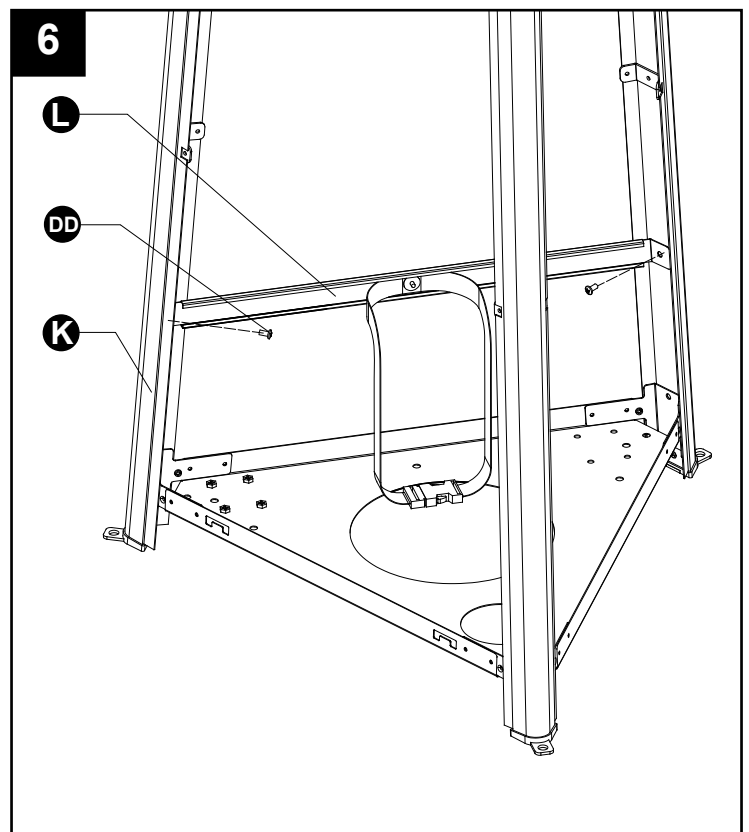


6. Use Phillips screwdriver (LL) to secure the block belt (L) to the lower supports (K) with M5 x 12 mm screws (DD).

Hardware Used

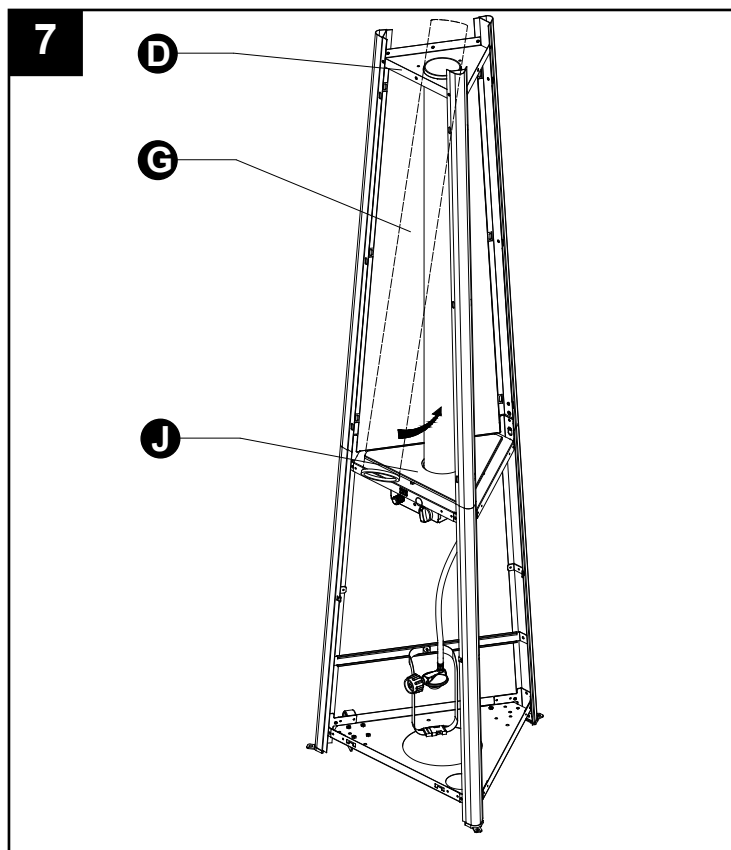
DD M5 x 12 mm Screw  x 2

LL Phillips Screwdriver  x 1



ASSEMBLY INSTRUCTIONS

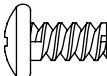
7. Carefully install the glass tube (G) between the center of top plate (D) and control box assembly (J). Make sure the end of the glass tube (G) is inserted securely into the three clips of the control box assembly (J).



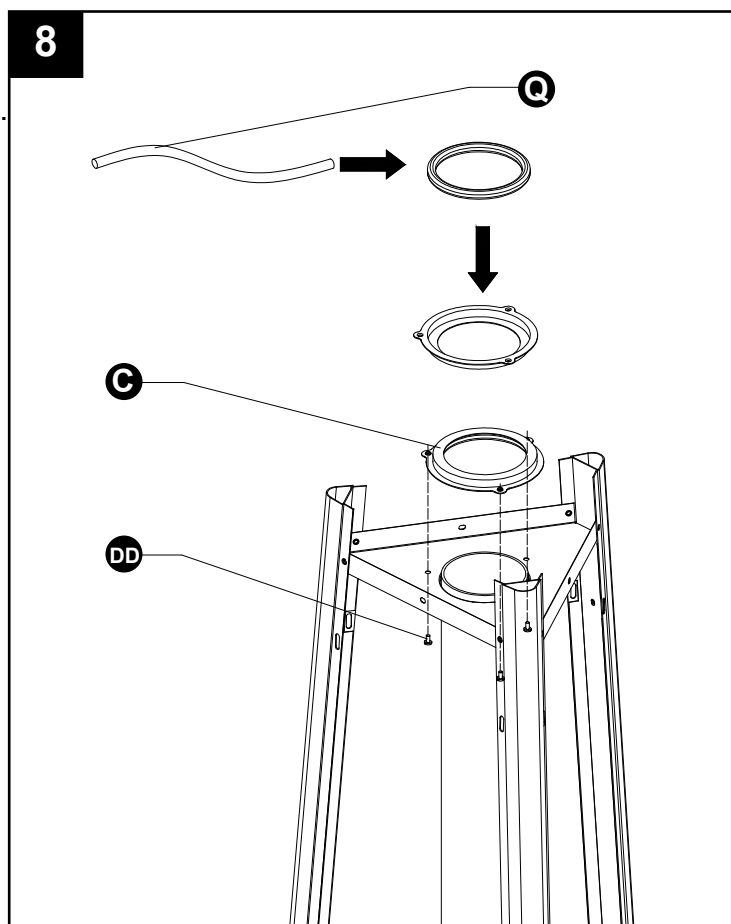
8. Assemble the glass tube fixer (C). Insert the ceramic fiber (Q) to the quartz tube fixer. Press the glass tube fixer to the glass tube. Make sure the ceramic fiber is outside of glass tube.

Use Phillips screwdriver (LL) to secure the glass tube fixer (C) to the top plate (D) with M5 x 12 mm screws (DD).

Hardware Used

DD M5 x 12 mm Screw  x 3

LL Phillips Screwdriver  x 1

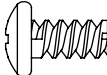


ASSEMBLY INSTRUCTIONS

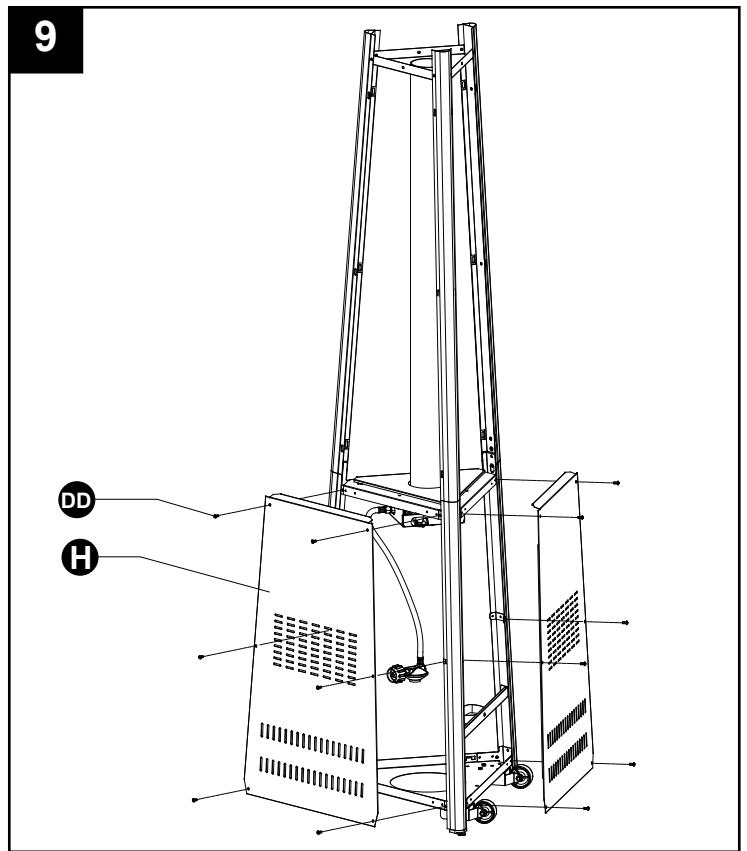
9. Use Phillips screwdriver (LL) to install side panels (H) to bottom of assembly with M5 x 12 mm screws (DD).

Note: Do not cover the panel where the magnet is.

Hardware Used

DD M5 x 12 mm Screw  x 12


LL Phillips Screwdriver  x 1




10. Install the knob (GG) to M4x10 screw (HH). Hang the chain (II) to the hole on the control box assembly (J) and put the pothook of front panel to the holes of bottom plate.

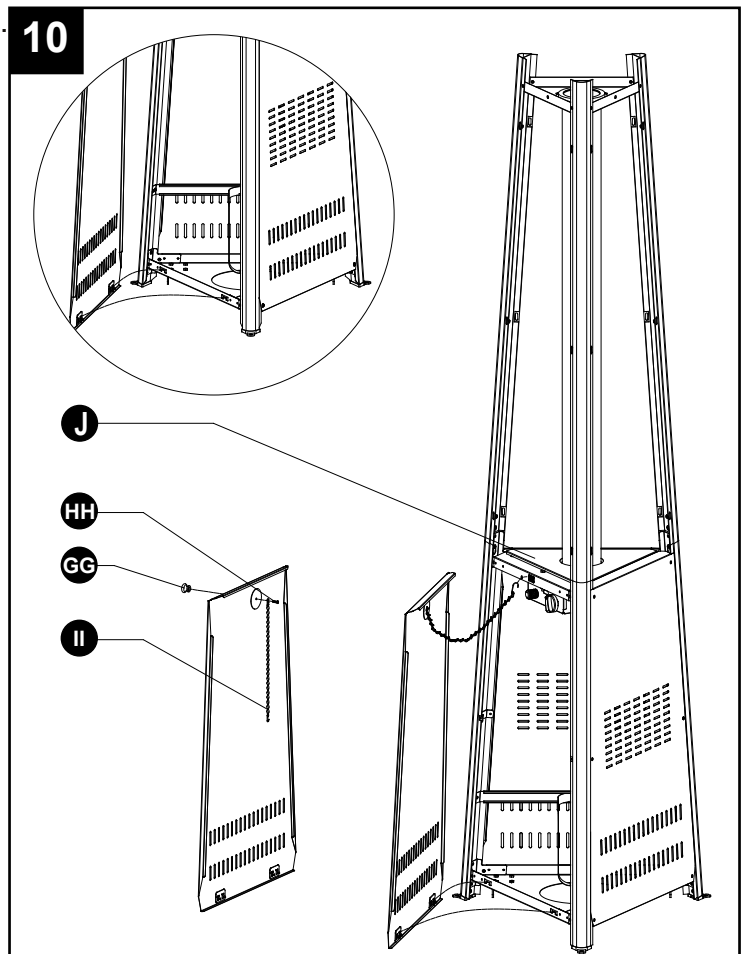
Hardware Used

GG Knob  x 1

HH Screw M4 X 10  x 1

II Chain  x 1

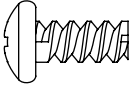

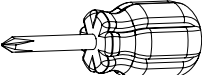
LL Phillips screwdriver  x 1

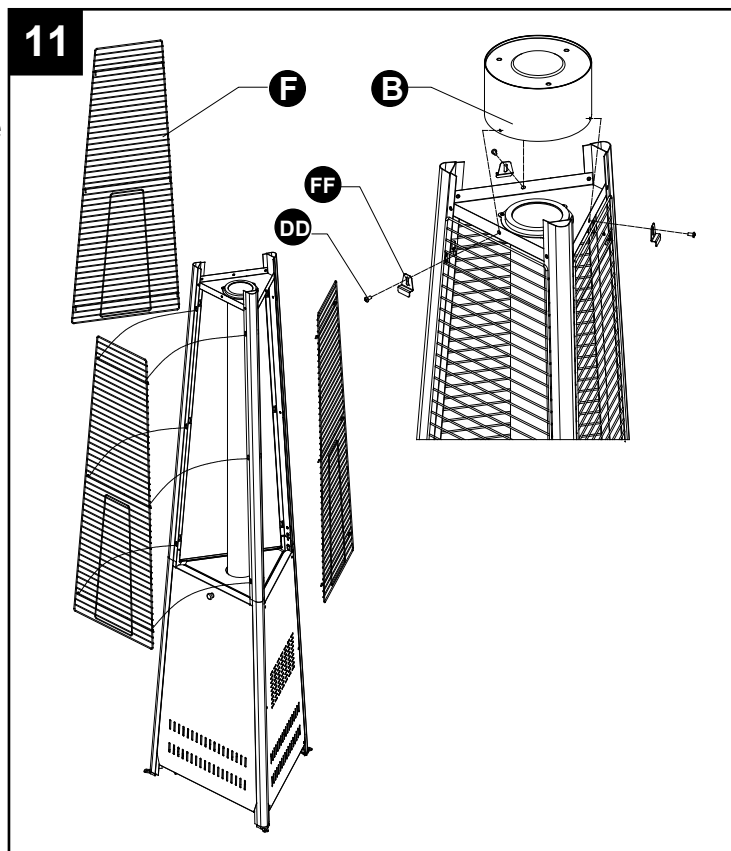


ASSEMBLY INSTRUCTIONS

11. Assembly the protective guard and mesh
Insert the hooks of protective guard (F) to the holes of upper supports (E).
Put the mesh (B) on the top plate (D). Make sure the screw holes align the holes of top plate (D).
Use Phillips screwdriver (LL) to secure the mesh (B) and protective guard (F) to the top plate (D) with M5 x 12 mm screws (DD) and fixing bracket (FF).

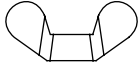
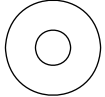
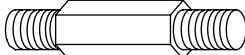
Hardware Used

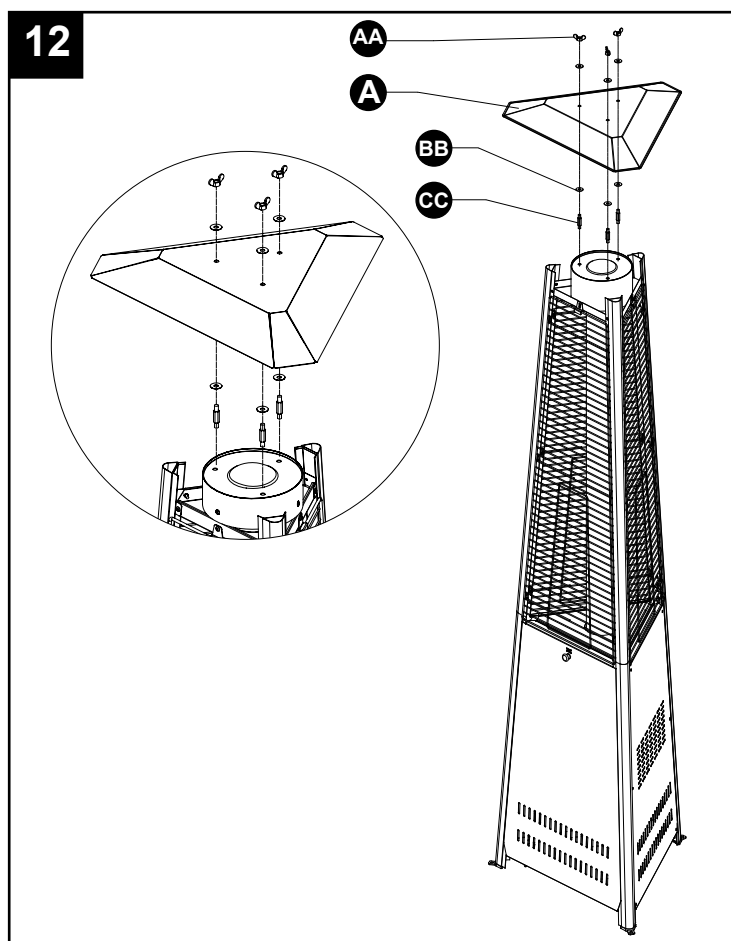
- DD** M5 x 12 mm Screw  x 3
- FF** Fixing Bracket  x 3
- LL** Phillips Screwdriver  x 1



12. Carefully lean the assembly and attach reflector (A) to mesh (B) with studs (CC), small flat washers (BB) on either side of reflector (A) and then wing nuts (AA).
Gently return the assembly to the upright position.

Hardware Used

- AA** Wing Nut  x 3
- BB** Small Flat Washer  x 6
- CC** Stud  x 3



ASSEMBLY INSTRUCTIONS

13. Connect regulator to cylinder. Install cylinder, and secure with the propane block belt tightly. Complete installation.

Note:

The propane gas and cylinder are sold separately.

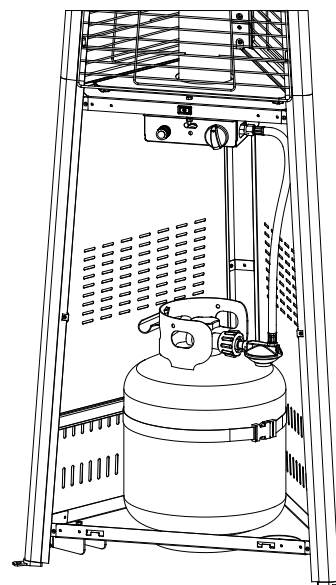
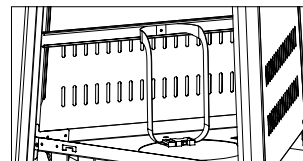
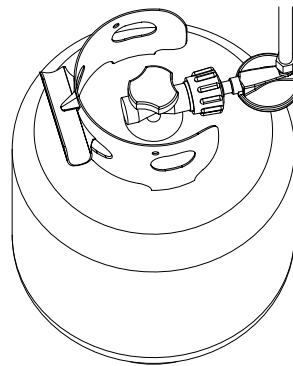
Warning:

Use a standard 20 lb. propane cylinder only.

Use this heater only with a propane vapour withdrawal supply system. See chapter 12 of the standard for storage and handling of liquefied petroleum gas, ANS/NFPA 58 or CSA B149.1, Natural Gas and Propane Installation Code. Your local library or fire department should have this book.

Storage of an appliance indoors is permissible 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. The maximum inlet gas supply pressure: 250 PSI. The minimum inlet gas supply pressure: 5 PSI is required for purpose of input adjustment. The heater must have a minimum output rating of 16,000 BTU/hr when it is not working at full capacity. The pressure regulator and hose assembly supplied with the appliance must be used. 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.

13



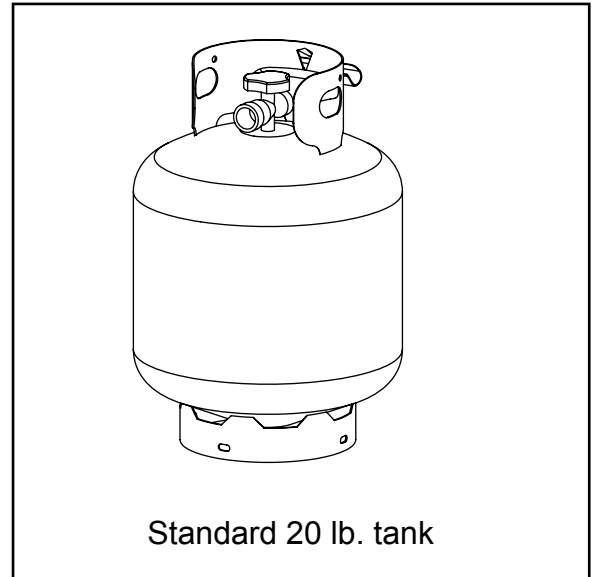
ASSEMBLY INSTRUCTIONS

Warning:

A dented, rusted or damaged propane cylinder may be hazardous and should be checked by your propane 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.

The cylinder must have a listed overfilling prevention device.



The cylinder must have a 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.

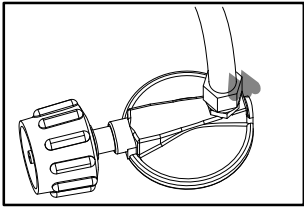
- Do not store a spare LP-gas cylinder under or near this appliance;
- Never fill the cylinder beyond 80 percent full;
- Place the dust cap on the cylinder valve outlet whenever the cylinder is not in use. Only install the type of dust cap on the cylinder valve that is provided with the cylinder valve.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

OPERATION INSTRUCTIONS

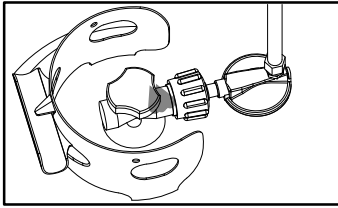
Leak Check

WARNING

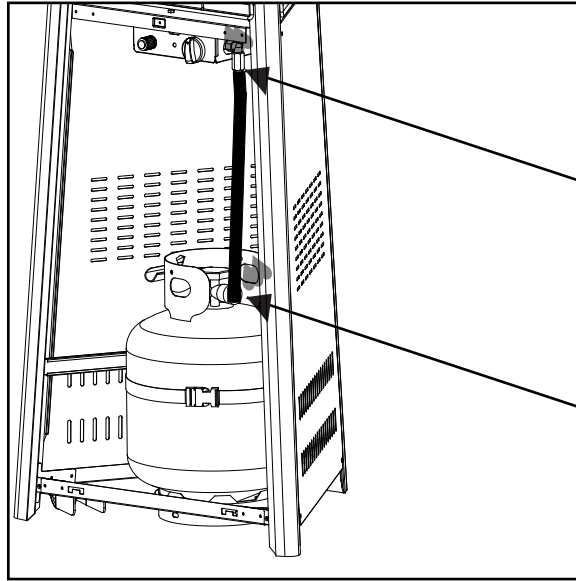
- Perform all leak tests outdoors.
- Extinguish all open flames.
- NEVER smoke while carrying out the leak test.
- Do not use the heater until all connections have been leak tested and do not leak.



Hose / Regulator
connection



Regulator / Cylinder
connection



1. Make 2-3 oz. of leak check solution (one part liquid dish washing detergent and three parts water).
2. Apply several drops of solution where hose attaches to regulator.
3. Apply several drops of solution where regulator connects to cylinder, apply the soapy solution to all hose & valve connections.
4. Make sure all patio heater and light valves are OFF.
5. Turn cylinder valve ON.

If bubbles appear at any connection, there is a leak.

1. Turn cylinder valve OFF.
 2. If leak is at hose/regulator connection: Add teflon tape and re-attach the regulator to the hose with wrenches. If bubbles continue appearing, the hose should be returned to the place of purchase.
 3. If leak is at regulator/cylinder valve connection: disconnect, reconnect, and perform another leak check. Apply the soapy solution to all hose & valve connections. If you continue to see bubbles after several attempts, cylinder valve is defective and should be returned to cylinder's place of purchase.
- If NO bubbles appear at any connection, the connections are secure.**

NOTE: Whenever gas connections are loosened or removed, you must perform a complete leak test.

OPERATION INSTRUCTIONS

DANGER

- CARBON MONOXIDE HAZARD
- 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.

Caution: Do not attempt to operate until you have read and understand all General Safety Information in this manual and 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 vapours or liquids.
3. Make sure 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. If relighting a hot heater, always wait at least 5 minutes.
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 manufacturer.

Lighting:

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

1. Turn the control knob to the “OFF” position.
2. Fully open LP cylinder valve.
3. Push 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.

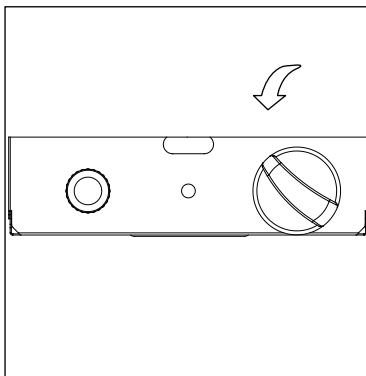


Figure 1

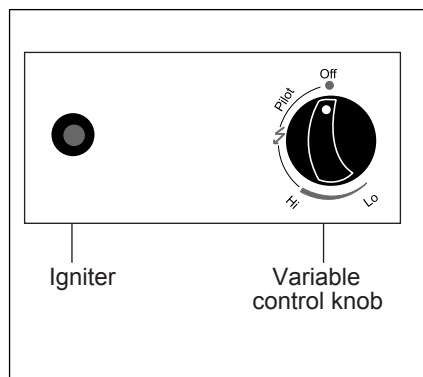


Figure 2

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 to 6.
7. If after repeating steps 4 to 6 unit does not light, then
 - Push in 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).

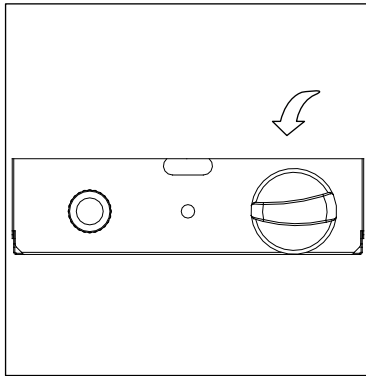
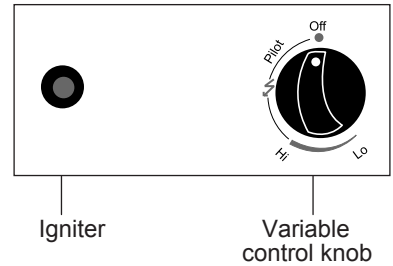


Figure 3

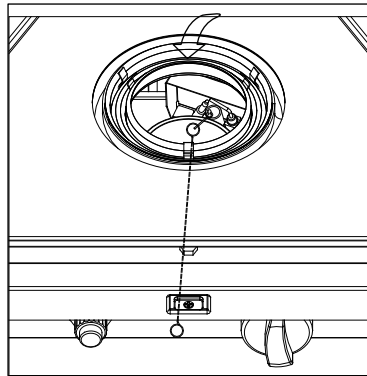


Figure 4

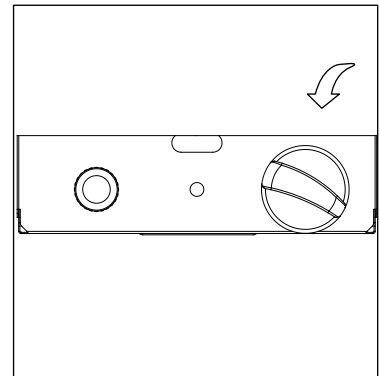


Figure 5

8. Push in and turn the control knob to the "HIGH", then release control knob. If you want a lower temperature, push in the control knob and turn counterclockwise to the "LOW" position. (Figure 5).

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

WARNING: If you attempt to relight the pilot without waiting, you will get a flash that could cause bodily harm and property damage.

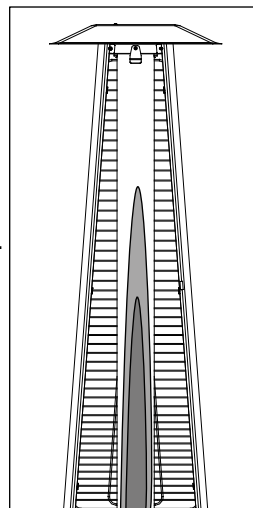
If you experience any ignition problem please consult "Troubleshooting" on page 19.

Caution: Avoid inhaling fumes emitted from the heater's first use. Smoke and odours 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.

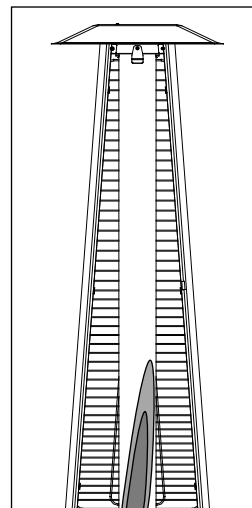
Note: The burner may be noisy when initially turned on. To eliminate excessive noise from the burner, turn the control knob to the PILOT position. Then, turn the knob to the level of heat desired.

Note:

In normal conditions, the height of flame is $\frac{2}{3}$ height of glass tube in HIGH position. The height of flame is $\frac{1}{3}$ height of glass tube in LOW position. The flame is stable and bright. No noise nor black smoke - the presence of these elements indicate a problem. Please consult Troubleshooting section, on page 19.



Normal



Abnormal

OPERATION INSTRUCTIONS

WARNING

FOR YOUR SAFETY

Be careful when attempting to manually ignite this heater. Holding in the control knob for more than 20 seconds before igniting the gas will cause a ball of flame upon ignition.

When heater is ON:

The flame should be blue with straight yellow tops. If excessive yellow flame is detected, turn off heater and consult "Troubleshooting" on page 19.

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 light. Failure to follow this warning could cause a flash ignition or explosion.
3. Repeat the "Lighting" steps on prior page.

WARNING

FOR YOUR SAFETY

Heater will be hot after use. Do not touch or move the heater until it is completely cooled (approx. 45 minutes).

Shut Down:

1. Turn 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 heating experience, perform this check before each use.

Before Operating:

1. User is 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. Outside temperature is adequate. Please note that 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.

OPERATION INSTRUCTIONS

9. Heater is away from gasoline or other flammable liquids or vapours.
10. Heater is away from windows, air intake openings, sprinklers and other water sources.
11. Heater is located at least 24" (top) / 36" (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 or near the heater.
19. Any guard or other protective device removed for servicing the heater must be replaced prior to operating the heater.
20. Any repair of this heater 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 control compartment, burner and circulating air passageways of the heater be kept clean.

After Operation

1. Gas control is in OFF position.
2. Gas tank valve is OFF.
3. Disconnect propane gas cylinder.

CARE AND MAINTENANCE

WARNING

FOR YOUR SAFETY:

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

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

1. Keep exterior surfaces 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.
2. Keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
3. Do not obstruct the flow of combustion and ventilation air.
4. Keep the ventilation opening(s) of the cylinder enclosure free and clear from debris.
5. Air flow must be unobstructed. Keep controls, burner, and circulating air passageways clean.

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 no 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
	Anti tilt switch could be faulty, or wires not connected properly	Replace anti tilt switch/Connect wire properly
Burner won't light	Propane cylinder is frosted over	Wait until the propane cylinder warms up and becomes unfrosted
	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	Dirt or film on reflector and burner screen	Clean reflector and burner screen
Thick black smoke	Blockage in burner	Remove blockage and clean burner inside and outside
Gas odour with extreme yellow tipping of flame.	Burner tilt	Adjust the position of control box assembly
	Spiders and insects	Clean burner and orifices
Heater glow is excessively uneven.	Bad regulator	Change the regulator
	Spiders and insects	Clean burner and orifices
Heater makes popping noises.	Blockage in orifice	Clean burner and orifices
	Spiders and insects	

CARE AND MAINTENANCE



- 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 protective guards. Then take the glass tube from the heater and wash and clear. After that assemble the glass tube and the rest of 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 upper support (long) down. Do not apply to emitter screen or domes.

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 completely cooled off before covering.*

During periods of extended inactivity or when transporting:

- Turn control knob OFF.
- Disconnect LP cylinder and move to a secure, well-ventilated location outdoors.
- 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

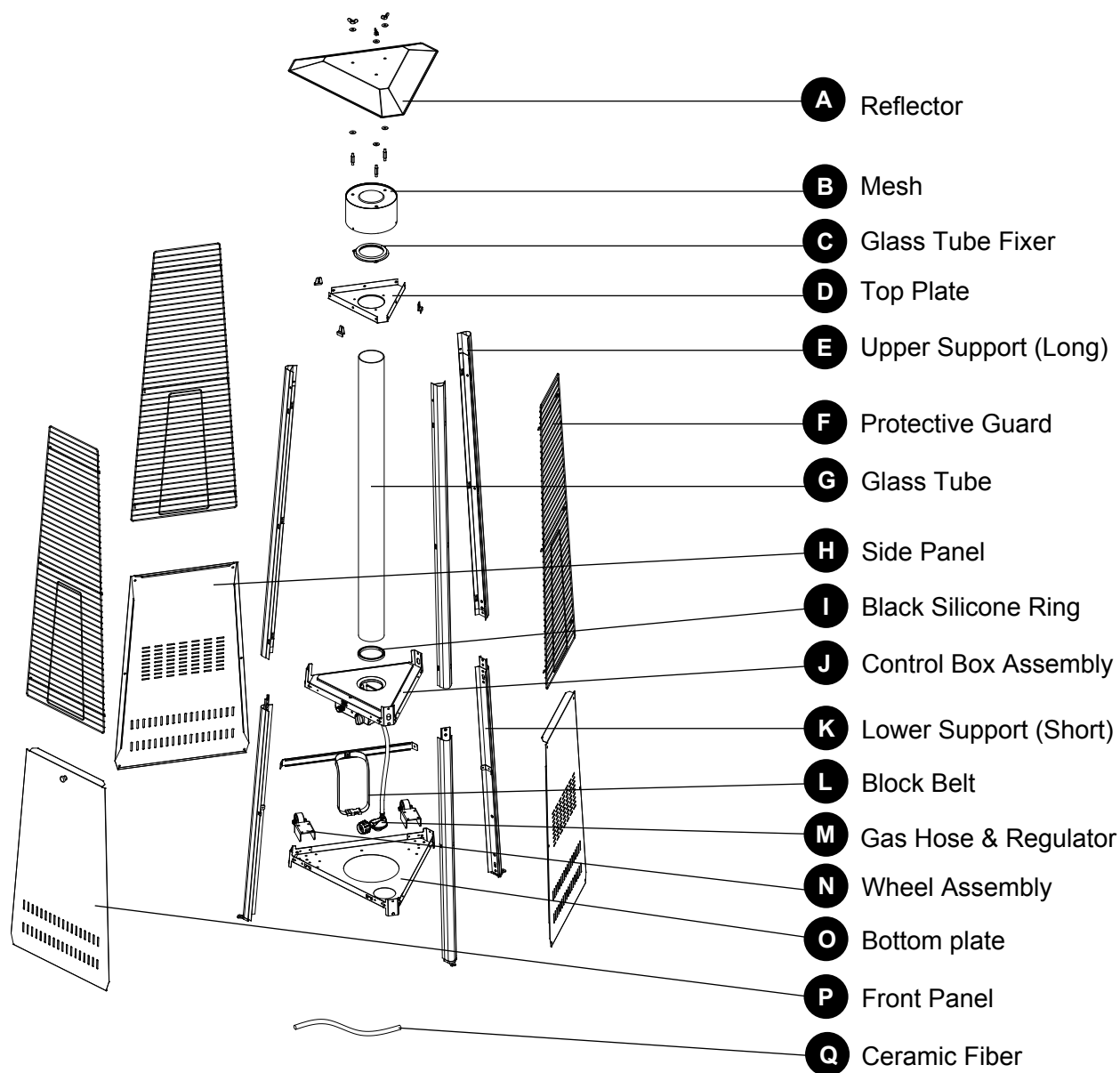
Only a qualified service person should repair gas passages and associated components.

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

WARRANTY

This product is inspected, tested and carefully packaged to minimize the chance of damage during shipment. If a part within one year from the date of purchase proves to be defective in material or fabrication under normal use, the part will be repaired or replaced. The Company's obligation under the warranty is to replace or repair defective parts at our discretion. Any expenses or damage resulting from the installation, removal or transportation of the product will be the responsibility of the owner and are not covered by this warranty. The owner assumes all other risks arising out from the use or misuse of the product. The warranty will be void if the product damage or failure is deemed by the Company to be caused by accident, alteration, misuse, abuse, incorrect installation or removal, or connection to an incorrect power source by the owner. The Company neither assumes, nor authorizes any person or entity to assume for it any obligation or liability associated with its products.

REPLACEMENT PARTS LIST



PART	DESCRIPTION	QUANTITY
A	Reflector	1
B	Mesh	1
C	Glass Tube Fixer	1
D	Top Plate	1
E	Upper Support (Long)	3
F	Protective Guard	3
G	Glass Tube	1
H	Side Panel	2
I	Black Silicone Ring	1
J	Control Box Assembly	1
K	Lower Support (Short)	3

PART	DESCRIPTION	QUANTITY
L	Block Belt	1
M	Gas Hose & Regulator	1
N	Wheel Assembly	2
O	Bottom plate	1
P	Front Panel	1
Q	Ceramic Fiber	1