LAVA HEAT ITALIA

THE PALERMO

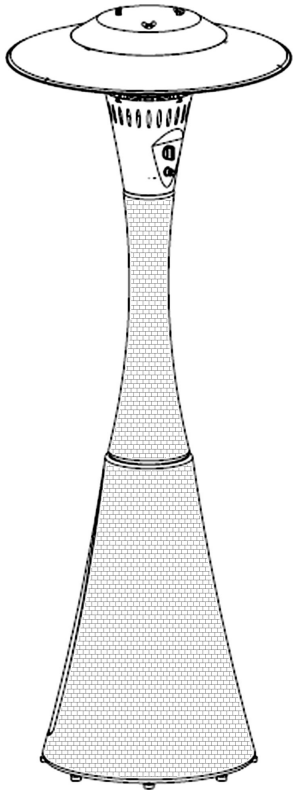
PALERMO
COLLECTION

LHI-PALERMO

OWNER'S MANUAL

SHIPS IN TWO CARTONS · ASSEMBLY REQUIRED

OUTDOOR PATIO HEATER · LIQUID PROPANE OR NATURAL GAS



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.

EST. 2001 · LOS ANGELES

WELCOME

Thank you for choosing Lava Heat Italia.

Our founder discovered the original flame tower in Italy and brought it to America, selling the first one door to door to restaurants in Beverly Hills. That heater became a collection, and the collection became a company specified today by Forbes Five-Star hotels, Michelin-starred restaurants, and hospitality groups in more than fifty countries.

We have never been content to import what already exists. Every heater we build is designed here and engineered to be measured — which is why we publish TruBTU™, our own verification standard for what a heater actually delivers at distance, rather than the theoretical output printed on a specification sheet.

The Palermo is the widest-reaching heater we make: a rattan-wrapped column beneath a one-piece reflector hood. It arrives in two cartons and assembles in six steps; the pages that follow cover unpacking, assembly, fuel connection, safe operation and care. Please read this manual before you begin, and keep it for reference.

LAVA HEAT ITALIA

DANGER — CARBON MONOXIDE HAZARD

This appliance can produce carbon monoxide, which has no odor. Using it in an enclosed space can kill you. Never use this appliance in an enclosed space such as a camper, tent, car or home.

WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. A propane cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

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.

WARNING: FOR OUTDOOR USE ONLY

CSA/ANSI Z83.26 · CSA 2.37 — GAS-FIRED OUTDOOR INFRARED PATIO HEATERS

SPECIFICATIONS

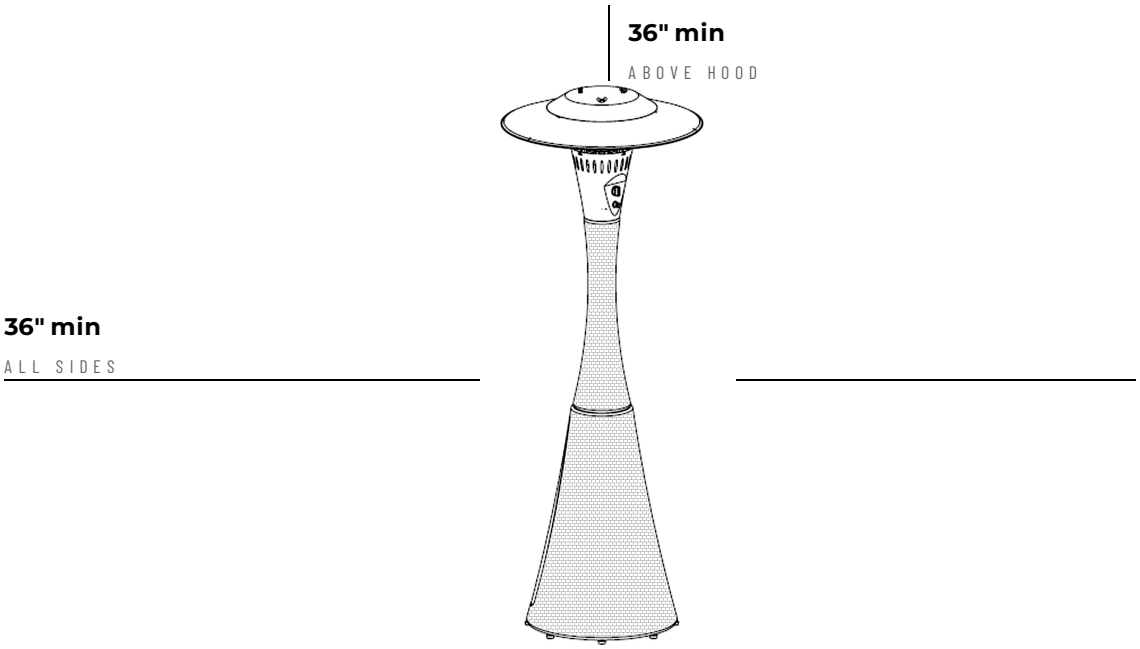
Model	**The Palermo (LHI-PALERMO)**
Input rating	**41,000 BTU/hr**
Heat radius / coverage	**15 ft · approx. 707 sq ft**
TruBTU™ comfort zone, 50°F evening	**73° at 5 ft · 65° at 10 ft · 60° at 15 ft**
Fuel	**Liquid propane or natural gas — set at the factory; LP models bio-LP compatible**
Supply pressure	**LP 11 in W.C. · NG 7 in W.C.**
Ignition	**Electronic, with manual Clima-Comfort controls · one AAA battery**
Safety	**Flame failure and anti-tilt shut-off**
Run time	**Approx. 12 hours per 20 lb cylinder (LP)**
Dimensions	**32.7 × 32.7 × 88.6 in · 41.9 lb**
Materials	**430-grade stainless emitter · marine-grade aluminum column with all-weather rattan wrap · one-piece reflector hood**
Certification	**CSA certified to ANSI Z83.26 and CSA 2.37**
Minimum clearances	**36" from the sides · 36" from the top**
Packaged	**Two cartons · 25 × 25 × 36 in, 52.9 lb · 33 × 33 × 5 in, 6 lb**

SAFETY INFORMATION

Please read and understand this entire manual before attempting to assemble, operate or install the product. 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 gas-fueled equipment is involved, and are necessary when using, storing and servicing.

Installation of this appliance at altitudes above 2000 ft (610 m) shall be in accordance with local codes, or in the absence of local codes, ANSI Z223.1/NFPA 54 or CSA B149.1.

CLEARANCES



Minimum clearances from any combustible surface or material.

CODES AND STANDARDS

United States	Installation must conform with local codes or, in their absence, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54.
Canada	Installation must conform with the Natural Gas and Propane Installation Code, CSA B149.1, or the Propane Storage and Handling Code, B149.2.
Cylinder standard	Cylinders must comply with U.S. DOT specifications for LP-gas cylinders or CAN/CSA-B339, with a listed Overfilling Prevention Device (OPD) and a protective collar around the valve.

DANGER — CARBON MONOXIDE HAZARD

This heater is a combustion appliance. All combustion appliances produce carbon monoxide during combustion. Used and maintained in accordance with all warnings and instructions, this product produces extremely minute, non-hazardous amounts. Do not block air flow into or out of the heater. Carbon monoxide poisoning produces flu-like symptoms, watery eyes, headaches, dizziness, fatigue and possibly death. You cannot see it and you cannot smell it. If these symptoms are present during operation, get fresh air immediately. For outdoor use only.

DANGER — EXPLOSION AND FIRE HAZARD

Keep solid combustibles such as building materials, paper or cardboard a safe distance from the heater. Provide adequate clearances around air openings into the combustion chamber. Never use the heater in spaces which contain volatile or airborne combustibles. Minimum clearances from combustible materials: 36" (91 cm) from the sides and 36" (91 cm) from the top.

DANGER — PROPANE STORAGE

Never store propane near high heat, open flames, pilot lights, direct sunlight or where temperatures exceed 120°F (49°C). Propane vapors are heavier than air and can accumulate in low places. If you smell gas, leave the area immediately. Never install or remove a cylinder while the heater is lit, near a flame, or while it is hot to touch. Store the cylinder outdoors in a well-ventilated space out of reach of children.

WARNING — BURN HAZARD

Never leave the heater unattended when hot or in use, and keep it out of reach of children. Alert children and adults to the hazards of high surface temperatures. Do not touch or move the heater for at least 45 minutes after use. Do not hang clothing or other flammable materials from the heater.

WARNING — CALIFORNIA PROPOSITION 65

This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

WARNING — SMALL BATTERIES

This product contains a small battery. Swallowed batteries can cause a choking hazard. Seek immediate medical attention if a battery is swallowed or inhaled. Keep children away from small batteries.

CAUTION — SERVICE SAFETY

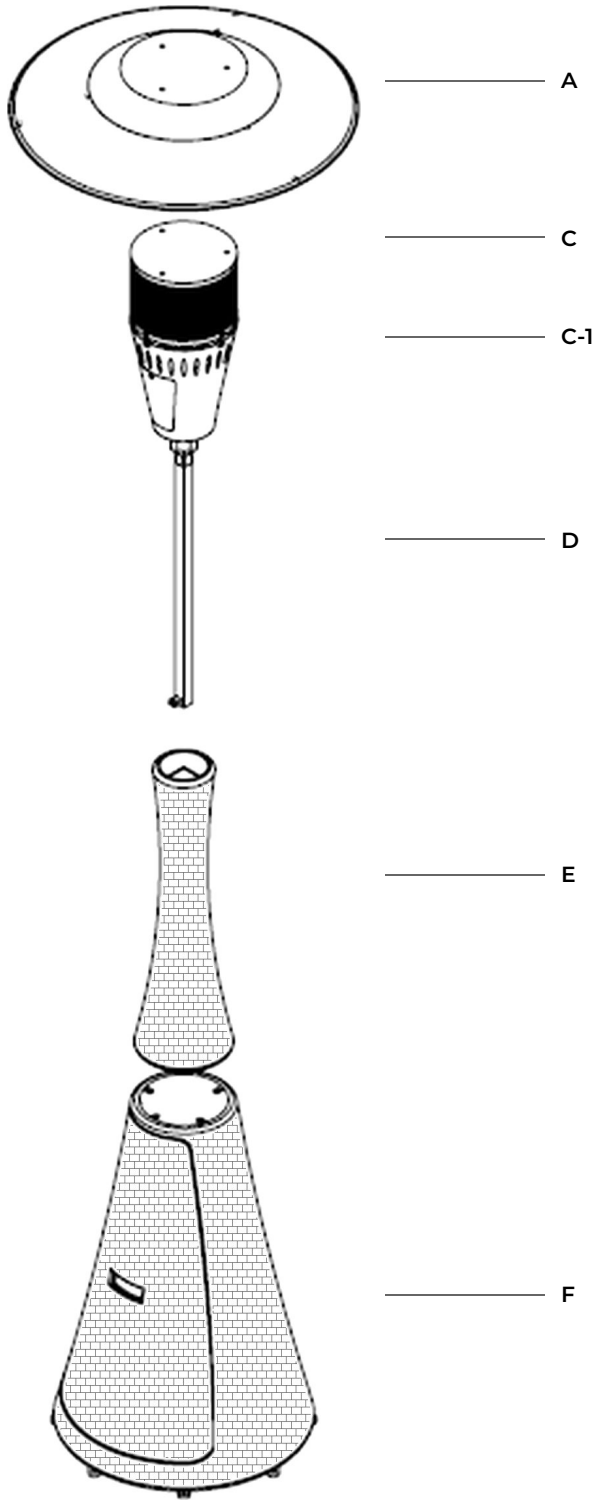
Keep all connections and fittings clean and make sure the cylinder valve outlet is clean. During assembly, check all connections and fittings for leaks using soapy water — never use a flame. Use as a heating appliance only. Never alter it in any way.

CAUTION — SHELTER

An appliance may be installed with shelter no more inclusive than: (a) with walls on all sides but no overhead cover; (b) within a partial enclosure with an overhead cover and no more than two side walls; or (c) within a partial enclosure with an overhead cover and three side walls, as long as 30 percent or more of the horizontal periphery is permanently open.

PACKAGE CONTENTS

Before assembly, make sure all parts are present. Lay every component out on a clean, flat surface. If any part is missing or damaged, do not attempt to assemble the product — contact Lava Heat Italia for replacement parts. The reflector (A) is packed in the flat carton; everything else is in the main carton.



A · Reflector, one piece	**1**
C · Burner	**1**
C-1 · Pre-assembled door	**1**
D · Post	**1**
E · Upper body	**1**
F · Lower body	**1**

Fasteners (AC1–AC5) are listed on the next page.

HARDWARE CONTENTS

Verify all hardware is present before assembly. Codes match the factory hardware bag and the assembly steps that follow.

AC1 · Wing nut	**3**
AC2 · Reflector spacer	**3**
AC3 · M6 × 20 screw	**8**
AC4 · M6 × 35 long screw	**1**
AC5 · ø8 washer	**6**

A Phillips screwdriver and leak-check solution (one part liquid dish soap to three parts water) are required and are not supplied. The igniter takes one AAA battery, not supplied.

ASSEMBLY

Estimated time: approximately 60 minutes. Work on a clean, level surface; a second person is helpful when the heater is laid down for the reflector. Steps 1 and 2 build the body, steps 3 and 4 the post and burner, and steps 5 and 6 fit the reflector. Step 7, the propane connection, follows on the fuel page.

Hand-start every fastener first and tighten fully only once each section is aligned.

1 Join the upper and lower body

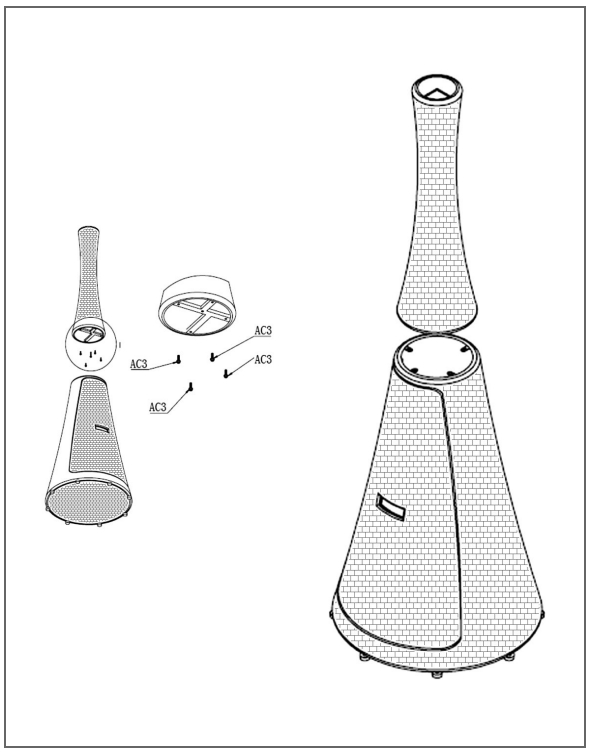
Set the upper body (E) onto the lower body (F) and align the holes of both parts.

Secure with four M6 × 20 screws (AC3).

Adjust the upper body until the holes of the two parts line up before tightening.

HARDWARE USED

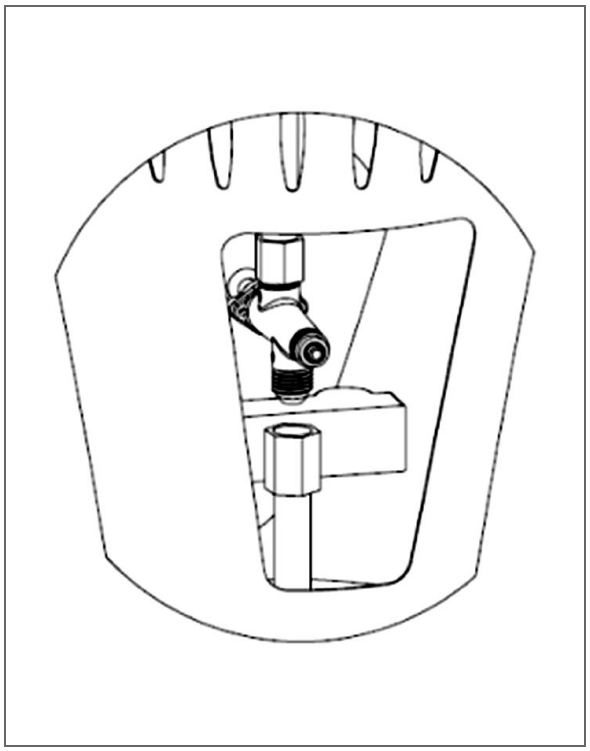
AC3	M6 × 20 screw	**× 4**



2 Connect the gas hose at the door

Open the pre-assembled door (C-1) and connect the gas hose to the safety valve.

Close and re-fix the door.



3 Mount the burner to the post

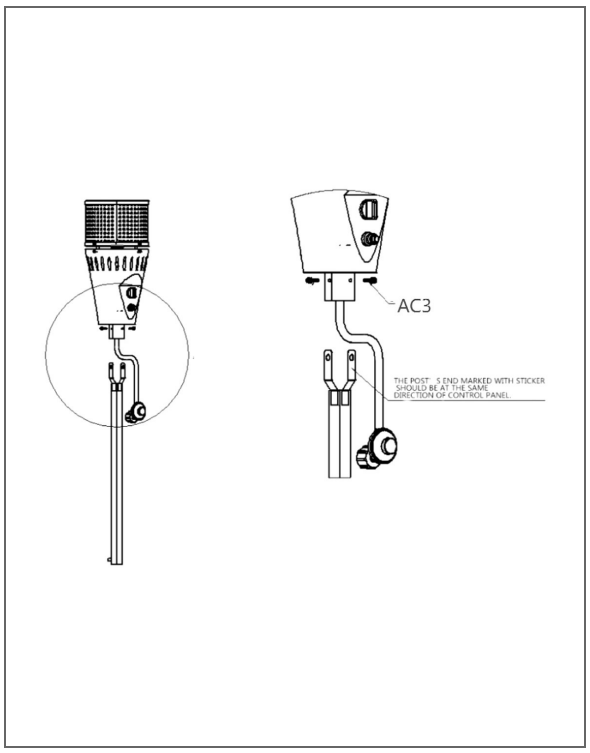
Draw the hose out of the post and lay it straight on the ground.

Connect the burner (C) to the post (D) with four M6 × 20 screws (AC3).

The post end marked with the “F” (front) sticker must face the same direction as the control panel.

HARDWARE USED

AC3	M6 × 20 screw	**× 4**



4 Secure the post to the body

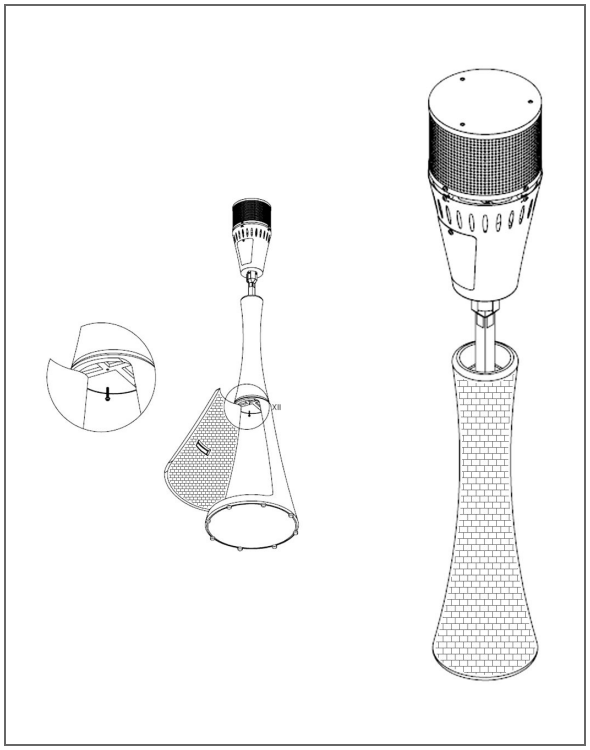
Feed the regulator down through the upper part of the body first.

Seat the post (D) in the body and secure with the M6 × 35 long screw (AC4).

The control panel should face the opposite direction to the fuel door.

HARDWARE USED

AC4	M6 × 35 long screw	**× 1**



PALERMO
COLLECTION

THE PALERMO

41,000 BTU/HR

A 15 ft radius of directed warmth — roughly 707 sq ft of usable comfort.

Clima-Comfort Controls

Electronic ignition with manual variable control, pilot through to maximum.

The Hood Does the Work

A wide one-piece reflector turns rising heat outward and down across the terrace.

Wrapped in Coastal Rattan

All-weather rattan over a marine-grade aluminum column, in four coastal tones.

Salt-Air Tested

500 hours of ASTM B117 salt-spray testing, for terraces by the sea.

Twelve Hours

A full evening's run, twice over, from a single 20 lb cylinder.





15 FT RADIUS

Shown in Walnut Rattan. Frame and structure carry a lifetime limited warranty.

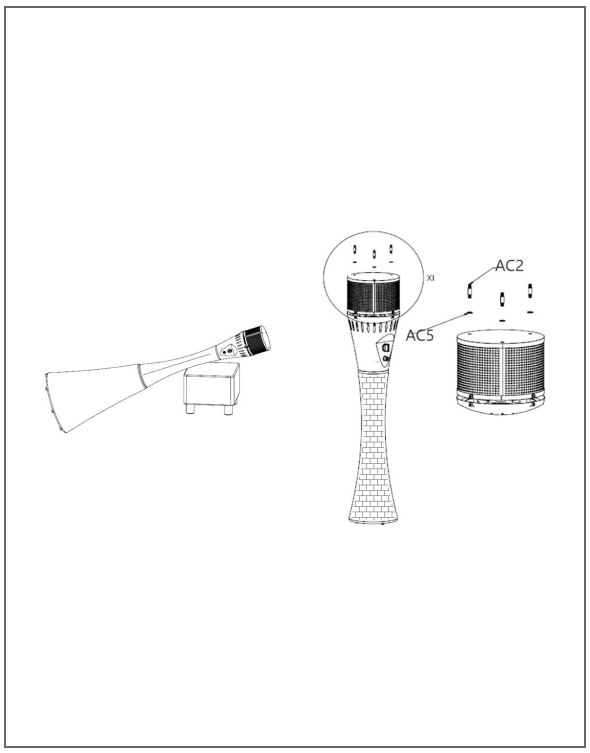
5 Fit the reflector spacers

Rest the body on a padded support, such as a chair or bench, and lay the heater down.

Thread the three reflector spacers (AC2), each with a ø8 washer (AC5), into the top of the burner (C) and tighten.

HARDWARE USED

AC2	Reflector spacer	**× 3**
AC5	ø8 washer	**× 3**



6 Attach the reflector

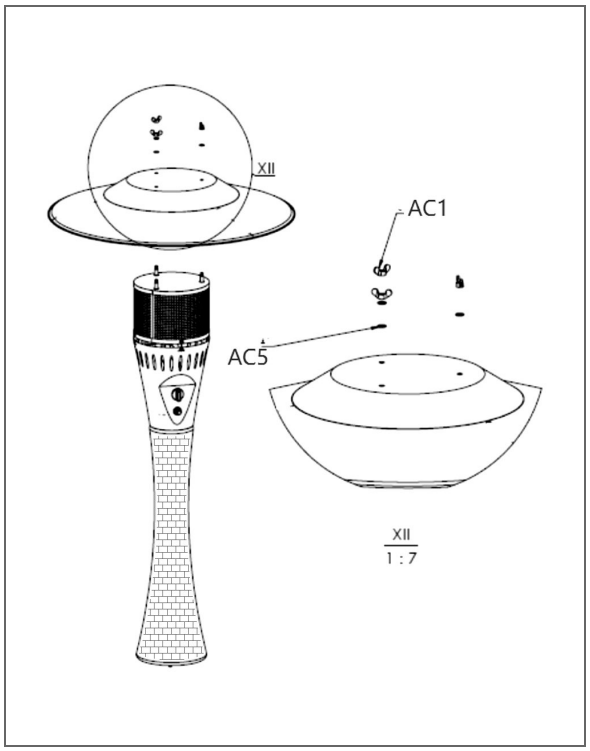
Set the reflector (A) over the burner (C) so the spacer threads pass through it.

Place a ø8 washer (AC5) over each threaded end and secure with the wing nuts (AC1).

Hand-tighten the wing nuts only — do not overtighten.

HARDWARE USED

AC1	Wing nut	**× 3**
AC5	ø8 washer	**× 3**



FUEL CONNECTION — PROPANE

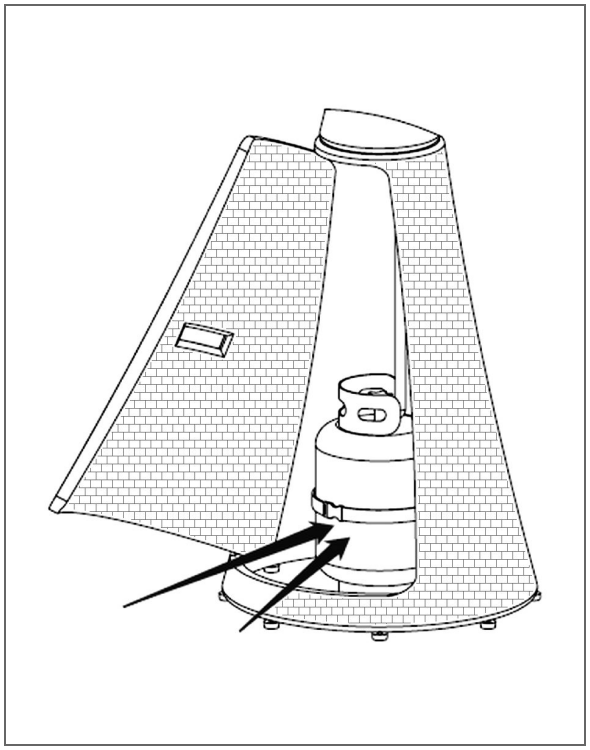
For units configured for liquid propane (LP). If your Palermo is configured for natural gas, turn to the next page. Check the rating plate inside the lower body to confirm the fuel before you connect any supply.

7 Connect the propane cylinder

Screw the gas hose and regulator onto a standard 20 lb (9 kg) propane cylinder, not supplied. Do not cross-thread the connection.

Stand the cylinder in the lower body (F) and secure it with the strap so it cannot tip.

Leak test every connection (page 15), then close the door.



CYLINDER REQUIREMENTS

· Standard 20 lb (9 kg) propane vapor-withdrawal cylinder, constructed and marked per U.S. DOT specifications for LP-gas cylinders, or CAN/CSA-B339.

· Listed Overfilling Prevention Device (OPD) and a protective collar around the cylinder valve.

· Never use a dented, rusted or damaged cylinder. Never fill a cylinder beyond 80% of capacity.

· Replace the dust cap on the valve outlet whenever the cylinder is not in use.

WARNING

Do not store a spare LP-gas cylinder under or near this appliance. Never store a cylinder in an enclosed area such as a house, garage, basement or shed. Store it outdoors in a well-ventilated area, out of direct sunlight and below 120°F (49°C).

NATURAL GAS INSTALLATION

Natural-gas units connect to a fixed supply line; no cylinder is used.

PROFESSIONAL INSTALLATION ONLY

Connection to the natural-gas supply must be made by a qualified, licensed gas technician in accordance with local codes — or, in their absence, ANSI Z223.1/NFPA 54 (US) or CSA B149.1 (Canada).

INSTALLATION REQUIREMENTS

· Supply pressure: 7 in W.C. nominal natural gas at the appliance inlet.

· Use only the natural-gas hose, regulator and fittings supplied or specified by Lava Heat Italia for this model.

· Install a dedicated, accessible manual shut-off valve in the supply line within reach of the heater.

· Route the hose so it cannot be strained, pinched or touched by hot surfaces, and secure the heater so the connection cannot be pulled.

· Leak test every joint made during installation before first lighting (page 15).

· Purge air from the supply line at first start, then follow the lighting procedure.

OPERATING ON NATURAL GAS

Lighting, operation and care are the same as for propane once the supply is connected. Wherever this manual says to open or close the cylinder valve, open or close your supply shut-off valve instead. Close the shut-off valve whenever the heater is not in use and before any cleaning or service.

WARNING — NO FIELD CONVERSION

Fuel configuration is set at the factory. Never connect a natural-gas unit to propane, or a propane unit to natural gas — the injector and valve are fuel-specific. Confirm the fuel on the rating plate inside the lower body before connecting any supply.

LEAK CHECK

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

1. Make 2–3 oz of leak check solution — one part liquid dishwashing detergent to three parts water.

2. Make sure the control knob is OFF (straight up).

3. Apply the solution to every connection — hose to regulator and regulator to cylinder (LP), or every joint made during installation (NG).

4. Slowly open the cylinder valve (LP) or supply shut-off valve (NG).

If bubbles appear at any connection there is a leak. Close the gas immediately, tighten the connection and test again. If bubbles persist, do not use the heater — contact Lava Heat Italia, or on natural gas, your gas technician. Whenever gas connections are loosened or removed, a complete leak test must be performed.

LIGHTING

The Palermo has a pilot flame that must be lit before the main burner. The control plate carries the variable knob (PILOT · MIN · MAX) and the PUSH start button; the igniter takes one AAA battery. With the knob straight up, the heater is off.

A. Open the cylinder valve (LP) or supply shut-off valve (NG) fully.

B. Push the knob down and turn it to the left, to PILOT. Keep holding it down.

C. Press the PUSH start button repeatedly until a steady blue pilot flame appears, then release the button.

D. Keep holding the knob down for a further 10–15 seconds, then release it.

E. Turn the knob further left, between MIN and MAX, to set the heat.

If the pilot goes out when you release the knob, turn the knob to OFF, wait 5 minutes for gas to clear, and repeat. For the first start, or after any cylinder change, hold the knob down at PILOT for up to 2 minutes to purge air from the line before pressing the start button.

The burner may be noisy on first ignition and a little smoke and odor are normal for the first 30 minutes as manufacturing oils burn off. A healthy flame burns blue with soft yellow tips.

SHUT DOWN

A. Turn the knob right to PILOT; the burner goes out and the pilot remains lit.

B. Push the knob down and return it to OFF (straight up).

C. Close the cylinder valve (LP) or supply shut-off valve (NG), and disconnect the regulator when the heater is not in use.

A 5-minute complete shut-off period is necessary before relighting. The heater will be hot after use: do not touch or move it until it has cooled, approximately 45 minutes. Some discoloration of the emitter screen after use is normal.

CARE AND MAINTENANCE

Keep exterior surfaces clean using warm soapy water and a soft cloth. Wipe the rattan covers with a damp cloth and let them dry fully before covering. Never use flammable or corrosive cleaning agents. Keep the area around the burner and pilot assembly dry at all times. Do not submerge the control valve; if the gas control is submerged in water it must be replaced.

Keep the appliance area clear of combustible materials. Do not obstruct the flow of combustion and ventilation air. Keep the ventilation openings of the lower body free of debris, and keep controls, burner and air passageways clean.

Spiders and insects can nest in the burner or orifices. This dangerous condition can damage the heater and render it unsafe. Clean burner holes with a heavy-duty pipe cleaner; compressed air may help clear smaller particles. Clean the reflector and burner screen with warm soapy water if carbon deposits develop.

In a salt-air environment corrosion occurs more quickly than normal. Check for corroded areas frequently and repair them promptly. A fitted cover is strongly recommended. Inspect the entire hose assembly at least annually for abrasion, cuts or wear, and leak test any suspect areas.

The igniter runs on one AAA battery in the control head. If the start button no longer sparks, replace the battery before troubleshooting further.

Between uses, turn the control knob off, disconnect the cylinder (LP) or close the supply shut-off (NG), and store the heater upright in an area sheltered from inclement weather. Wait until the heater is completely cool before covering. Never leave a propane cylinder exposed to direct sunlight or excessive heat.

Only a qualified service person should repair gas passages and associated components. Always allow the heater to cool before attempting service, and use only the regulator, hose and replacement parts specified by Lava Heat Italia.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Pilot will not light	Gas supply is closed	Open the cylinder valve (LP) or supply shut-off (NG) fully
	Air in the gas line	Hold the knob down at PILOT for 1–2 minutes to bleed the line
	Blockage in orifice or pilot tube	Clean or replace the orifice or pilot tube
	No spark at the igniter	Replace the AAA battery; if it still will not spark, contact Lava Heat Italia
Pilot will not stay lit	Knob released too soon	Hold the knob down 10–15 seconds after the pilot lights
	Dirt built up around the pilot	Clean dirt from around the pilot
	Loose connection at gas valve or pilot	Tighten the connection and perform a leak check
	Thermocouple not operating correctly	Replace the thermocouple
	Anti-tilt switch faulty or wires loose	Replace the anti-tilt switch or reconnect the wire
Burner will not light	Propane cylinder is frosted over	Wait until the cylinder warms up and becomes unfrosted
	Low gas pressure	LP: replace the cylinder. NG: have the supply pressure checked
	Blockage in orifice	Clear the blockage
Burner flame is low	Outdoor temperature below 40°F and tank less than 1/4 full	Use a full cylinder
	Knob set to MIN	Turn the knob toward MAX
Carbon build-up	Dirt or film on reflector and burner screen	Clean the reflector and burner screen
Thick black smoke	Blockage in burner	Turn off, allow to cool, and clean the burner inside and outside
Gas odor with extreme yellow tipping of flame	Spiders and insects	Clean the burner and orifices
Heater glow is excessively uneven	Spiders and insects	Clean the burner and orifices
Heater makes popping noises	Blockage in orifice	Clean the burner and orifices

The heater operates at reduced efficiency below 40°F (5°C).

WARRANTY

Every Lava Heat Italia heater is backed by the Lava Heat Italia warranty program, effective from the date of purchase as shown on the purchaser's receipt.

Frame and structure	**Lifetime limited**
Parts	**5 years limited**
Finish	**5 years limited**
Burner and glass	**1 year limited**
Gas hose and regulator assembly	**1 year limited**

Parts only — labor and freight are not included. Residential and commercial installations are covered on identical terms.

This warranty is valid for the original consumer purchaser. Defects or damage caused by the use of other than genuine parts are not covered. The warranty is void if damage or failure is caused by accident, alteration, misuse, abuse, or incorrect installation or removal. Full terms at lavaheat.com/warranty-and-product-care.

WHEN YOU RECEIVE YOUR PRODUCT

If your product is damaged, requires technical support or replacement parts, or if you have a sales question or product feedback, contact Lava Heat Italia directly.

DO NOT RETURN THIS PRODUCT TO THE RETAILER.

Lava Heat Italia · 940 W. Washington Blvd., Los Angeles, CA 90015
310-559-1700 · customerservice@lavaheat.com · lavaheat.com

REPLACEMENT PARTS

Parts are listed by the letter used throughout this manual. When ordering, quote the model (LHI-PALERMO), the part letter and the finish. Consumable items and items damaged in service are not covered by the warranty.

SERVICE RECORD

Keep this page with the manual. Quote the model and serial number in any correspondence.

Model	**The Palermo (LHI-PALERMO)**
Serial number	
Finish	
Fuel	
Date of purchase	
Dealer	
Installed by	

ANNUAL INSPECTION

Date	Carried out by	Notes
Date	Carried out by	Notes
Date	Carried out by	Notes
Date	Carried out by	Notes
Date	Carried out by	Notes
Date	Carried out by	Notes

The heater should be inspected before use and at least annually by a qualified service person. Inspect the entire hose assembly at least annually for abrasion, cuts or wear, and leak test any suspect areas.

LAVA HEAT ITALIA

LUXURY OUTDOOR HEATING · ESTABLISHED 2001

940 W. WASHINGTON BLVD., LOS ANGELES, CA 90015

310.559.1700 · CUSTOMERSERVICE@LAVAHEAT.COM

LAVAHEAT.COM

THE PALERMO · LHI-PALERMO · MADE IN CHINA