



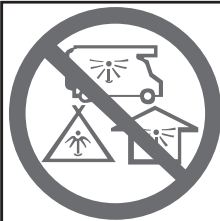
Model #s: PT-80V-LPC (80,000 BTU Heater)
PT-200V-LPC (200,000 BTU Heater)



IMPORTANT: Read and understand all of the directions in this manual before assembling, starting or servicing the heater. Improper use of this heater can cause serious injury. Keep this manual for future reference.

⚠ GENERAL HAZARD WARNING:

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 the hazards of fire, explosion, burn, asphyxiation, and carbon monoxide poisoning. Only persons who can understand and follow the instructions should use or service this heater. If you need assistance or heater information such as an instruction manual, labels, etcetera, contact the manufacturer.



WARNING: Carbon Monoxide Hazard This heater produces carbon monoxide, which has no odor. Burning the heater in an enclosed space can kill you. Never use the heater in enclosed spaces such as a tent, a camper, any vehicle or recreational vehicle (RV), enclosed shelter, or any other enclosed areas.

CONSUMER: Retain this manual for future reference.

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Phone: 215-891-8460 Fax: 215-891-8461 Web: www.pinnacleint.com Email: info@pinnacleint.com

⚠ WARNING:

Fire, burn, inhalation, and explosion hazard. Keep solid combustibles, such as building materials, paper or cardboard, a safe distance away from the heater as recommended by these instructions. Never use the heater in spaces which do or may contain volatile or airborne combustibles, or products such as gasoline, solvents, paint thinners, dust particles or unknown chemicals.

⚠ CAUTION: This is an unvented portable heater. It uses air (oxygen) from the area which it is used. Ample combustion and ventilation air must be provided. See VENTILATION page 7.

⚠ WARNING:

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- 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.

- **WHAT TO DO IF YOU SMELL GAS:**
 - Do not attempt to light heater
 - Extinguish any open flame
 - Shut off gas to heater
 - If odor continues, contact your local gas supplier or fire department.
 - Do not touch any electric switch, do not use any phone in your building
 - Immediately call your gas supplier from a neighbors phone. Follow the gas suppliers instructions
 - If you can not reach your gas supplier, call the fire department
 - Service must be done by a qualified service agency or the gas supplier

⚠ WARNING:

The state of California requires the following warning (Proposition 65):

Combustion by-products produced when using this product contain carbon monoxide, a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm).

⚠ WARNING:

Do not operate this heater until you have read, and thoroughly understand these safety and operating instruction. Failure to comply with the precautions and instructions provided with this heater can result in death, serious bodily injury, property loss or damage from the hazards of fire, explosion, burns, asphyxiation or carbon monoxide poisoning. Only persons who can read and understand these instructions should use or service this heater.

⚠ WARNING: Not for use in homes or recreational vehicles or tents.

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**NEVER LEAVE HEATER
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FUEL SOURCE**



Propane Convection Heater

Specifications

Model #	Rating BTU/Hr		Fuel Consumption		Supply Pressure		Manifold Pressure		Spark Gap	Wt. Lbs	Size WxDxH
	HIGH	LOW	Gal/Hr. Min/Max	Lbs/Hr Min/Max	Max	Min	High	Low			
PT-80V-LPC	80,000	50,000	.53/.86	2.302/3.7	200 psi	20 psi	8.5" wc	10.5" wc	.195"	11.5	16 x 16 x 19.5
PT-200V-LPC	200,000	100,000	1.08/2.18	4.62/9.25	200 psi	20 psi	4.0 psi	5.0psi	.130"	14.3	16 x 16 x 26.4

Product Identification

Fuel Type.....Liquid Propane Only
Ignition Type.....Piezo
Minimum Operating Air Temperature...-20F(-29C)

Specifications subject to change without notice

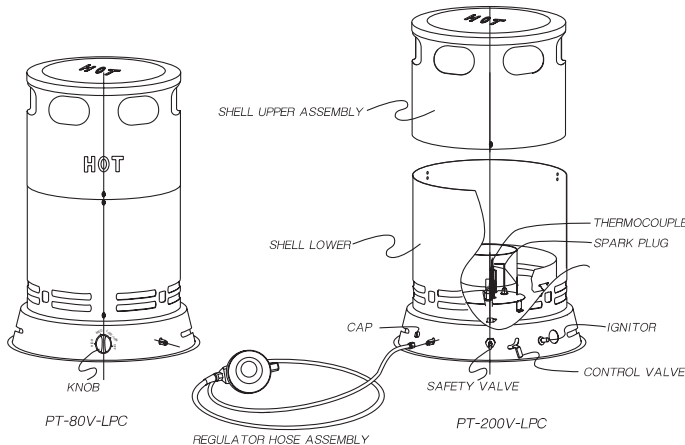


Figure 1 - Product Identification

Carbon monoxide is toxic. Humans can tolerate small amounts of carbon monoxide, and caution should be taken to provide adequate ventilation. Failure to provide adequate ventilation in accordance with this manual could result in death. Early signs of carbon monoxide poisoning resemble the flu. The symptoms of inadequate ventilation are:

- * headache * dizziness * burning of the nose and eyes
- * nausea * dry mouth or * sore throat

If the heater is being used in the presence of others, be sure to inform them of the proper safety precautions, operating procedures and the hazards involved. Some people are more affected by carbon monoxide than others. These are pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol or at high altitudes.

- Check the heater thoroughly for damage before each use. DO NOT operate a damaged heater.
- DO NOT modify this heater or operate a heater that has been modified from it's original state.
- For outdoor use, and indoor use only in well ventilated areas. For this heater, consult Ventilation on Page 8 of this manual. For additional heaters, provide more ventilation. Provide at least 3 square feet of opening for ventilation per 100,000 Btu of rated operation.
- NEVER use heater in occupied dwellings.
- NEVER use heater in a tent.
- Operate heater in a manner that will not directly expose it to water, rain or dripping water.
- Keep heater area free from combustible materials such as gasoline, paint thinners and other flammable vapors and liquids. Dust is combustible. Do not use heater in areas of high dust concentration.

Safety Information

Accidents can be avoided with care and good judgement. The following rules are sound practices you should follow for the safe and comfortable operation of your heater.

It is important that you read this entire User's Manual carefully and thoroughly before operating or servicing this heater. Keep this manual handy to use as a reference. It is your guide to safe and proper operation of this heater.

This is a direct-fired heater. Direct-fired means that all of the combustion products enter the heated space. This

heater is rated at 98% combustion efficiency, but still produces small amounts of carbon monoxide. Carbon monoxide

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Propane Convection Heater

Safety Information (continued)

Minimum clearance from Combustibles:

	PT-80V-LPC	PT-200V-LPC
Top	5 feet	7 feet
Sides	3 feet	3 feet

- Operate only on level and stable surfaces.
- NEVER leave heater unattended.
- Keep children and animals away from heater.
- Never operate heater while unattended or sleeping.
- Before connecting the heater to the propane cylinder, make sure that the heater regulator knob is in the **OFF** position.
- NEVER handle an operating or hot heater, as severe burns may result. All exposed surfaces may become very hot during operation. Always allow at least 15 minutes of cooling time before handling the heater.
- Always disconnect and remove the heater from the cylinder after use.

Theory of Operation

Fuel Supply System

Fuel is supplied under pressure from the fuel cylinder to the heater by the hose/regulator assembly. The regulator maintains a constant flow of fuel to the heater.

System of Ignition

As the fuel is sprayed into the combustion chamber, through a supply nozzle, the Piezo ignitor ignites the fine mixture of fuel and air.

Automatic Control System

If the flame should extinguish, the Automatic Control Valve shuts down the heater.

Propane Supply

Average Temp.(°F)	PT-80V-LPC 100lb. cylinders	PT-200V-LPC 100lb. cylinders
32°	1	2
20°	1	2
10°	2	3
0°	2	3
-10°	2	3
-20°	2	3

The chart on this page, shows the minimum number of **100 lb. cylinders** required in cold weather. Your local LP dealer will help you select the proper supply system. The amount of LP gas used by this heater varies. The two factors that will determine this are as follows:

- The amount of gas in the tank.
- The temperature of the cylinder and surrounding area.

You must provide the propane gas and cylinder(s). Use this heater only with a propane vapor withdrawal supply system. Refer to Chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gas, ANSI/NFPA 58. Your local library or fire department will have this booklet.

⚠ WARNING: Extremely hot during operation. Do not touch any metal components while in operation. Keep gasoline and any other flammable liquids away from heater.

⚠ WARNING: Be sure to read and understand all of the Safety Information in this manual before lighting this heater.

⚠ Caution: Heater has high surface temperatures. Be sure to keep children, pets and clothing away from the heater. Be sure to keep Burner and Heater Regulator clean and free from any debris. Maintain safe distances from heater as shown on Page 4.

- LP Characteristics - Flammable, explosive under pressure, heavier than air, and pools in low areas.
- In its natural state, propane has no odor, but for your safety an odorant that smells like rotten cabbage has been added.
- Contact of LP gas with the skin can cause freeze burns.
- Heater is manufactured for use with LP gas only. DO NOT attempt to convert to any other gas. Such modifications are dangerous, and will void warranty.
- When heater is not in use, LP supply must be turned OFF.
- Be sure that the propane cylinder is located on a level and stable surface.
- Do not use this heater in a basement or below ground level. Propane is heavier than air, and will always seek the lowest level. If you suspect a leak, shut off the valve at the propane cylinder immediately. **Do not use a flame to check for leaks!** Use a 50/50 solution of dish soap and water to check for leaks. Repair any leaks before attempting to re-light the heater.
- Check the "O" ring on the heater inlet fuel connector for damage before each use. Replace if damaged or worn.

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PROTEMP

**Propane
Convection Heater**

Assembling the Heater

⚠ CAUTION: Never attempt to light this heater until it has been fully assembled.

- Remove heater from Carton
- Remove all packaging protecting heater during shipping. Retain plastic caps covering inlet and regulator hose for storage
- Save carton and packing materials for later storage
- Inspect heater closely for any damage that may have occurred during shipping. If there is any damage, return the heater to the place of purchase.
- Slide Upper housing straight up an off of Lower housing, and remove all of the packed items from inside heater.

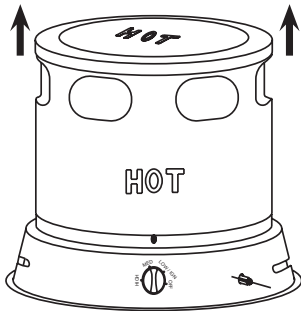


Figure 2: Removing Upper Housing

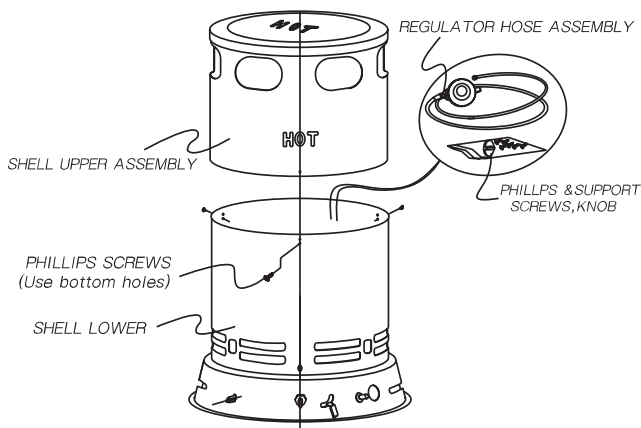


Figure 3: Assembly screw placement

- Attach 3 (three) of the phillips head screws to the bottom row of holes in the Lower Housing (see Figure 4).
- Slide Upper Housing over Lower Housing, lining up the four remaining screw holes. Insert 3 (three) phillips head screws and tighten securely.

Connecting to Gas Supply

IMPORTANT! Always use a propane cylinder that has a connection device that is compatible with the hose and regulator assembly supplied.

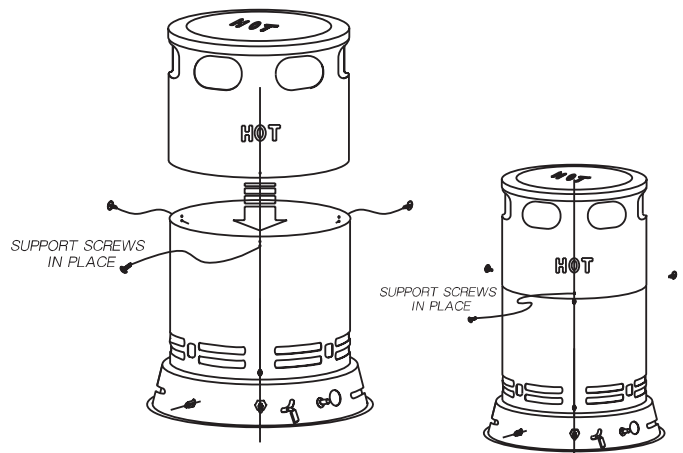


Figure 4: Attach top with four phillips screws. Install control knob.

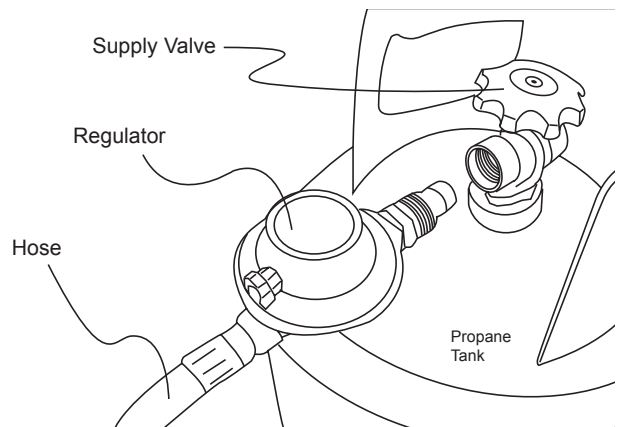


Figure 5: Attaching Regulator to cylinder

- To connect hose and regulator assembly, rotate fitting on hose/regulator counterclockwise into threads on tank valve (see Figure 4). Be sure to tighten firmly. Important: Be sure to position the regulator so that the regulator is horizontal, also as shown in Figure 4.
- To connect to heater inlet, rotate clockwise and tighten firmly with a wrench (see Figure 3).
- Check all connections for leaks, using a 50/50 solution of dishsoap and water. Bubbles at the connections show a leak. Correct all leaks before lighting heater. **NEVER USE AN OPEN FLAME TO CHECK FOR LEAKS.**

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PROTEMP

**Propane
Convection Heater**

Operation

⚠ WARNING: Review and understand all of the warnings in the Safety Information section of this manual, Page 4.

⚠ WARNING: Due to very high surface temperatures, it is important to keep children, furniture and clothing away from the heater. Keep control and burner area free from dirt and debris.

⚠ WARNING: Extremely hot while in operation. Do not touch heater while operating. Keep children, furniture, clothing, gasoline and other flammable liquids and vapors away from heater.

NOTE: Once the gas connection has been made, air may be trapped in the gas line. Before lighting the heater it will be necessary to purge any air trapped in the line. Once this is done the heater will light and operate normally. Purging the gas line will be necessary every time the gas cylinder is replaced.

LIGHTING INSTRUCTIONS

- **Stop!** Read all of the Safety Information provided with this heater
- Turn valve on propane cylinder counterclockwise until fully open
- Press in Control Knob and turn counterclockwise to **LOW/IGN** position
- If burner does not ignite, turn Control Knob to **OFF** position and repeat the ignition procedure
- Keep Control Knob pressed in for approximately to to 15 seconds before releasing
- If the flame goes out, wait 5 minutes, and repeat the ignition and lighting steps
- After heater ignites, turn Control Knob to desired heat setting.

RELIGHTING INSTRUCTIONS

- Rotate valve on cylinder clockwise to close it, and wait five (5) minutes.
- Relight following the LIGHTING INSTRUCTIONS.

SHUT-DOWN INSTRUCTIONS

- Turn Control Knob to the **OFF** position
- Rotate valve on cylinder clockwise to close it

⚠ WARNING: Never attempt to service this heater while it is still operating, or hot or connected to the gas supply. Severe burns can result.

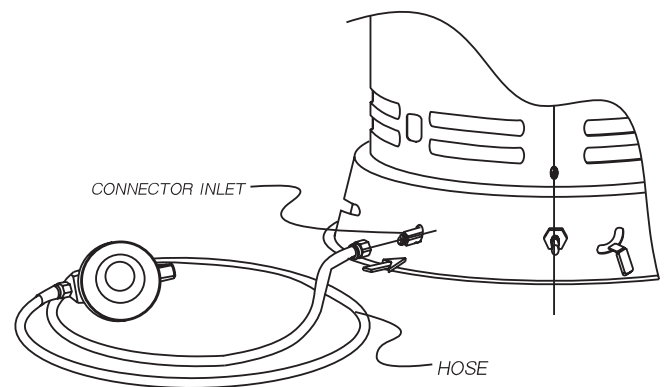


Figure 6. Attaching Regulator Hose to Inlet Connector

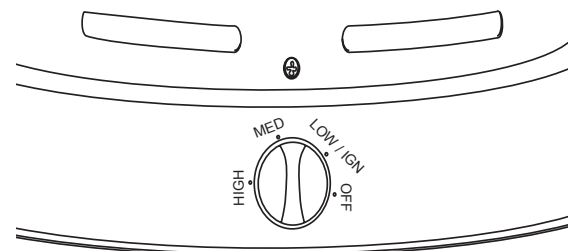


Figure 7. Heater Control Knob

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**Propane
Convection Heater**

TROUBLESHOOTING

Problem	Possible Cause	Solution
Burner fails to ignite	<ul style="list-style-type: none"> - Valve on supply cylinder closed - Cylinder excess flow check valve closed - Burner nozzle blockage - Ignition system not sparking 	<ul style="list-style-type: none"> - Open cylinder valve - Close cylinder valve, wait one minute, and re-open slowly - Replace Burner Nozzle - Inspect igniter wires for damage, be sure spark gap is .195"
Burner lights, but the goes out when Control Knob is turned to desired setting	<ul style="list-style-type: none"> - Not enough time for thermocouple to warm up - Gas pressure too low - Thermocouple needs replacing, or loose - Control valve damaged 	<ul style="list-style-type: none"> - keep Control Valve depressed for at least 45 seconds - Check cylinders for adequate gas - Replace or tighten themocouple connection - Replace Control Valve
Burner flame is too low	<ul style="list-style-type: none"> - Cylinder valve not fully open - Clogged burner oriface - Gas pressure too low - Fuel supply too low 	<ul style="list-style-type: none"> - Be sure cylinder valve is fully opened - Replace burner - Be sure regulator is operating properly - Replace low fuel supply with new, full cylinder

Ventilation

For this heater, provide a minimum of 2.5 square feet of space by opening a window or door to provide fresh, outside air. For additional heaters, provide more ventilation. Provide at least 3 square feet of opening for ventilation per 100,000 Btu of rated operation.

Maintenance and Storage

- Inspect your heater before each use. Check all connections for leaks, following the procedure outlined on Pages 4 and 5. Check the Regulator Hose for any cracks, breaks or wear. If the hose is damaged replace it with the correct manufacturers part.

- After use, always disconnect the heater from the cylinder, and store the heater separately from the tank. Be sure to close the tank valve after use, and before storage.

- Always store the propane cylinder outdoors, but not in an enclosed area. Never store the cylinder near high heat, direct sunlight or open flames. Never store the cylinder indoors. The cylinder should be stored outdoors in accordance with chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gasses (ANSI/INFPA 58).

- Always keep your heater clean, inside and out

- Have heater inspected annually by a qualified service technician

- Place the plastic covers over the fittings the heater was supplied with when putting heater away for the season

- Always store the heater in a clean, dry and safe place

Pinnacle Products International, Inc. reserves the right to make any changes in materials, specifications, prices or design without notice. **Pinnacle Products International, Inc.** may also discontinue items at any time.

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Propane Convection Heater

Replacement Parts

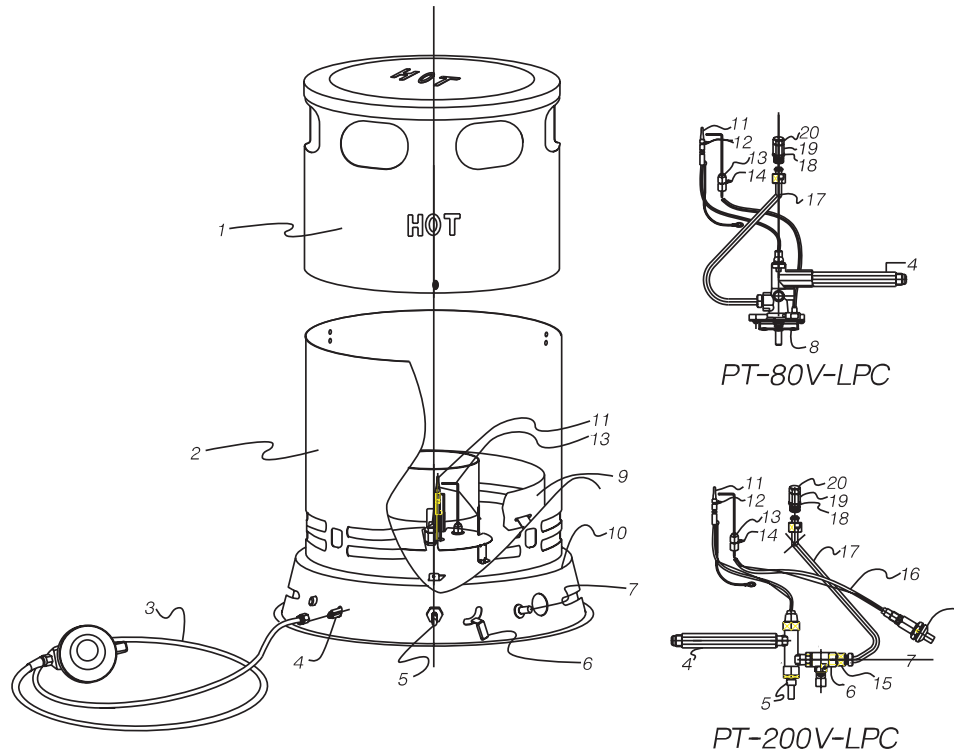


Figure 8. Exploded view of Heater

Bills of Material

Item #	Description	PT-80V-LPC	PT-200V-LPC
1	Shell Upper Ass'y	24-524-0013	24-524-0014
2	Shell Lower	24-524-0015	24-524-0016
3	Regulator	24-041-0001	24-041-0004
4	Inlet Connector	24-507-0006	24-507-0007
5	Safety Valve	-	24-013-0002
6	Ball Valve	-	24-015-0001
7	Piezo Lighter	-	24-122-0003
8	Valve Ass'y	24-011-0005	-
9	W-scren	24-526-0001	24-526-0001
10	Base	24-501-0007	24-501-0008
11	Thermo Couple	24-091-0002	24-091-0003
12	T/C B.K.T	24-504-0007	24-504-0007
13	Spark Plue	24-141-0001	24-141-0001
14	Spark Plue B.K.T	24-504-0008	24-504-0008
15	Connector Outlet	-	24-507-0008
16	Ignition Wire	-	24-601-0005
17	Tubing Outlet Ass'y	24-605-0006	24-605-0007
18	Nozzle Nut	24-518-0005	24-518-0005
19	Nozzle Holder	24-515-0001	24-515-0001
20	Nozzle	24-081-0007	24-081-0008

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Propane
Tank Top Heater

LIMITED WARRANTY

Pinnacle Products International, Inc. warrants this heater to the original retail purchaser only, to be free from defects in material and workmanship for a period of one (1) year from the date of initial purchase. This product must be properly installed, maintained and operated in accordance with the instructions provided.

Pinnacle Products International, Inc. requires reasonable proof of your date of purchase from an authorized retailer or distributor. Therefore, you should keep your sales slip, invoice, or cancelled check from the original purchase. This Limited Warranty shall be limited to the repair or replacement of parts, which prove defective under normal use and service within the warranty period, and which **Pinnacle Products International, Inc.** shall determine at its reasonable discretion.

This warranty does not apply to products purchased for rental use.

This Limited Warranty does not cover any failures or operating difficulties due to normal wear and tear, accident, abuse, misuse, alteration, misapplication, improper installation or improper maintenance and service by you or any third party. Failure to perform normal and routine maintenance on the heater, shipping damage, damage related to insects, birds, or animals of any kind, and damage due to weather conditions are also not covered. In addition, the Limited Warranty does not cover damage to the finish, such as scratches, dents, discoloration, rust or other weather damage, after purchase.

All transportation costs for the return of the damaged product or parts will be the responsibility of the purchaser. Upon receipt of damaged item, **Pinnacle Products International, Inc.** will examine the item and determine if defective. **Pinnacle Products International, Inc.** will repair or replace and return the item, freight pre-paid. If **Pinnacle Products International, Inc.** finds the item to be in normal operating condition, or not defective, the item will be returned freight collect. This Limited

Warranty is in lieu of all other express warranties. **Pinnacle Products International, Inc.** dis-claims all warranties for products that are purchased from sellers other than authorized retailers or distributors.

AFTER THE PERIOD OF THE ONE (1) YEAR EXPRESS WARRANTY EXPIRES, **Pinnacle Products International, Inc.** DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR APPLICATION. FURTHER, **Pinnacle Products International, Inc.** SHALL HAVE NO LIABILITY WHATSOEVER TO PURCHASER OR ANY THIRD PARTY FOR ANY SPECIAL, INDIRECT, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. **Pinnacle Products International, Inc.** assumes no responsibility for any defects caused by third parties. This Limited Warranty gives the purchaser specific legal rights; a purchaser may have other rights depending upon where he or she lives. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long a warranty lasts, so the above exclusion and limitations may not apply to you.

Pinnacle Products International, Inc. does not authorize any person or company to assume for it any other obligation or liability in connection with the sale, installation, use, removal, return, or replacement of its equipment, and no such representations are binding on **Pinnacle Products International, Inc.**

Always be sure to specify model number and serial number when making any claim with **Pinnacle Products International, Inc.** For your convenience use the space provided below to list this information:

Model #: _____

Serial #: _____

Date of Purchase: _____

