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- Effinity93 156,000 BTU High Efficiency Unit Heater LP 93% AFUE Separated Combustion PTC156AS0121

#### Modine PTC156AS0121

# **Modine Effinity93 Unit Heater Instruction Manual**

Model: PTC156AS0121

# INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Modine Effinity93 High Efficiency Unit Heater. This model, PTC156AS0121, is designed for optimal heating performance with 93% AFUE (Annual Fuel Utilization Efficiency) and utilizes LP (Liquefied Petroleum) gas with separated combustion for enhanced safety and efficiency. Please read this manual thoroughly before installation or operation.



Figure 1: Modine Effinity93 High Efficiency Unit Heater (Model PTC156AS0121). This image shows the main unit, a rectangular gray box with a front grille for heat dispersion and the brand and model name visible on the side panel.

# SAFETY INFORMATION

Always adhere to local codes and regulations when installing and operating this unit. Failure to do so may result in property damage, personal injury, or death. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 Warning).

• Qualified Personnel: Installation and service must be performed by a qualified installer, service agency, or gas supplier.

- **Gas Leaks:** If you smell gas, immediately shut off the gas supply to the appliance, do not touch any electrical switch, do not use any phone in your building, and call your gas supplier from a neighbor's phone.
- **Ventilation:** Ensure proper ventilation as specified in the installation instructions to prevent carbon monoxide buildup.
- Clearances: Maintain specified clearances from combustible materials. Refer to the installation manual for detailed clearance requirements.
- Electrical Safety: Disconnect power before servicing. Ensure proper grounding.

# SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your Effinity93 unit heater. This section provides a general overview; always consult the comprehensive installation manual provided with the unit for detailed instructions and diagrams.

### **Pre-Installation Checklist:**

- Verify the unit model (PTC156AS0121) matches the intended LP gas supply.
- Ensure adequate clearances from walls, ceilings, and combustible materials.
- Confirm the availability of proper electrical supply (voltage and amperage).
- Prepare the venting system according to local codes and manufacturer specifications for separated combustion.
- Inspect the unit for any shipping damage.

# **Mounting:**

The unit can be suspended from the ceiling using appropriate hanging rods or brackets. Ensure the mounting structure can support the weight of the unit and any associated piping and ductwork. Level the unit for optimal performance and condensate drainage.

#### Gas Connection:

Connect the LP gas supply line to the unit's gas inlet. Use approved gas piping materials and ensure all connections are leak-free. A manual shut-off valve must be installed upstream of the unit.

# **Electrical Wiring:**

Wire the unit according to the wiring diagram provided in the full installation manual. Ensure proper grounding and overcurrent protection. Connect the thermostat wiring as per the thermostat manufacturer's instructions.

### Venting:

Install the separated combustion venting system. This system draws combustion air from outside and exhausts flue gases to the outside, preventing indoor air contamination. Follow all instructions regarding vent pipe sizing, materials, and termination.

# **OPERATING INSTRUCTIONS**

Once installed and all connections verified, the Effinity93 unit heater is ready for operation. Always ensure the area around the heater is clear of obstructions.

### **Initial Startup:**

1. Ensure the gas supply valve to the unit is open.

- 2. Turn on the electrical power to the unit.
- 3. Set the thermostat to a temperature above the current room temperature.
- 4. The unit will initiate its startup sequence, including a pre-purge cycle, ignition, and main burner operation.
- 5. Observe the unit for proper operation and ensure no unusual noises or odors are present.

# **Normal Operation:**

The unit will cycle on and off automatically based on the thermostat setting. For optimal comfort and energy efficiency, set the thermostat to your desired temperature and avoid frequent adjustments.

# **Shutting Down:**

- Temporary Shutdown: Set the thermostat to its lowest setting or "Off" position.
- Extended Shutdown: For prolonged periods of non-use (e.g., summer), turn off the electrical power to the unit and close the manual gas shut-off valve.

# MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your Effinity93 unit heater. Always disconnect electrical power and shut off the gas supply before performing any maintenance.

# **Annual Maintenance (Recommended by Qualified Technician):**

- Inspect and clean the burner and heat exchanger.
- · Check and adjust gas pressure.
- Inspect the ignition system components (igniter, flame sensor).
- · Examine the venting system for obstructions, leaks, or corrosion.
- Lubricate motor bearings if applicable (some motors are sealed).
- Verify electrical connections are tight and free from corrosion.
- Test safety controls (e.g., high-limit switch, rollout switch).

# **User Maintenance (Monthly/Seasonally):**

- Keep the area around the unit clean and free of dust, debris, and combustible materials.
- Ensure the air intake and exhaust vents are clear of obstructions (e.g., snow, leaves, bird nests).
- · Visually inspect the unit for any signs of damage or unusual wear.

# **Troubleshooting**

This section provides solutions to common issues. For complex problems or if you are unsure, contact a qualified service technician.

Problem	Possible Cause	Solution
Unit does not start.	No power; thermostat set too low; gas supply off; safety lockout.	Check circuit breaker/fuse; raise thermostat setting; open gas valve; reset unit (turn power off/on for 30 seconds).
Unit cycles on and off too frequently.	Oversized unit; restricted airflow; dirty filter (if applicable); thermostat location.	Consult technician for sizing; check for obstructions; ensure proper airflow; relocate thermostat away from drafts or heat sources.

Problem	Possible Cause	Solution
No heat or insufficient heat.	Pilot light out (if applicable); gas pressure issue; faulty igniter/flame sensor; heat exchanger issue.	Check gas supply; contact qualified technician for diagnosis and repair.
Unusual noises.	Loose components; motor issues; fan imbalance.	Inspect for loose panels; contact technician for internal component inspection.

# **SPECIFICATIONS**

Feature	Detail
Model	PTC156AS0121
Brand	Modine
Heating Capacity	156,000 BTU
Fuel Type	LP (Liquefied Petroleum) Gas
Efficiency (AFUE)	93%
Combustion Type	Separated Combustion
ASIN	B00BZ7HXJS
First Available Date	September 5, 2024

# WARRANTY AND SUPPORT

For specific warranty terms and conditions, please refer to the warranty card included with your unit or visit the official Modine website. Keep your proof of purchase for warranty claims.

For technical support, service, or to locate a qualified Modine service provider, please contact Modine customer service or visit their official support page. Always provide your model number (PTC156AS0121) and serial number when seeking support.

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## Related Documents - PTC156AS0121



### Modine Gas-Fired Unit Heaters: HDS, HDC, PTX, BTX - Catalog and Specifications

This document provides comprehensive details on Modine's Gas-Fired Separated Combustion Unit Heaters (HDS, HDC) and Dual Rated Venting Unit Heaters (PTX, BTX). It covers design features, performance data, unit selection procedures, dimensional data, specifications, and available accessories for these HVAC solutions.



### Modine PTS & BTS Gas-Fired Unit Heater Installation and Service Manual

This manual provides comprehensive installation, service, and safety guidelines for Modine PTS and BTS separated combustion gas-fired unit heaters, designed for non-residential applications. It covers unit location, mounting, venting, gas connections, electrical requirements, operation, performance data, and troubleshooting.



#### Modine DBS/DCS/IBS/ICS Installation and Service Manual

Comprehensive installation and service manual for Modine DBS/DCS/IBS/ICS indirect gas-fired indoor separated combustion make-up air units. Covers installation, operation, maintenance, troubleshooting, and safety procedures.



### Modine Unit Heaters: Features, Specifications, and Performance Data

Comprehensive guide to Modine's Hot Dawg, PDP, BDP, and PTP series unit heaters, detailing features, technical specifications, performance data, electrical and gas controls, and dimensional information for commercial and industrial applications.



# Modine HD & HDB Gas-Fired Unit Heaters: Installation and Service Manual

Comprehensive installation and service manual for Modine HD and HDB series gas-fired unit heaters. Covers safety, installation, operation, troubleshooting, and specifications for models HD and HDB.



# Modine Electric Unit Heaters for Standard Washdown and Hazardous Locations

Comprehensive guide to Modine's range of electric unit heaters, including HER, VE, PTE, HEX (explosion-proof), and MEW (washdown) models. Covers features, specifications, performance data, unit selection, and accessories for industrial, commercial, and hazardous environments.