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> 90,000 Btu 80% Afue Bryant Gas Furnace - 315AAV048090

## Bryant 315AAV048090

# Bryant Gas Furnace User Manual

Model: 315AAV048090

## INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Bryant 315AAV Variable-Speed 4-Way Multipoise Gas Furnace. Please read this manual thoroughly before operating the unit to ensure safe and efficient performance.

The Bryant 315AAV furnace is designed to provide optimal comfort and energy efficiency. It incorporates advanced features such as Perfect Heat and Perfect Humidity technology, aiming to reduce drafts, minimize sound levels, and maintain consistent temperatures throughout your home. This unit also contributes to improved indoor air quality and electrical efficiency.

## PRODUCT OVERVIEW



**Figure 1:** Front view of the Bryant 315AAV Gas Furnace. This image shows the main housing of the furnace, featuring a louvered

section for air intake/exhaust and the Bryant brand badge on the front panel. The top section reveals internal components, likely the heat exchanger or burner assembly.

## Key Features:

- **Perfect Heat, Perfect Humidity operation:** Designed for enhanced comfort and humidity control.
- **Two-stage heating:** Provides efficient heating with reduced operating sound in low-stage.
- **Variable speed blower motor:** Contributes to super-low electrical use, up to 80% less than standard models.
- **Increased SEER ratings:** Enhances efficiency for AC and HP systems when paired.
- **CFM matching:** Matches CFM to cooling system at all static points for optimal performance.
- **Super Dehumidify:** Provides advanced dehumidification benefits.
- **Four-position furnace:** Adaptable for upflow, horizontal right, horizontal left, and downflow installations.
- **Thirteen different vent options:** Offers flexibility in venting configurations.
- **Compact height:** Only 33 1/3 inches tall for easier installation in various spaces.
- **Microprocessor based smart control center:** Adapts heating stages to meet demand, allows continuous fan speed adjustment, and offers adjustable heating air temperature rise.
- **Cooling airflow selections:** Up to 12 selections with a wide range of capability.

## SETUP AND INSTALLATION

Installation of this Bryant gas furnace should only be performed by a qualified heating and air conditioning technician. Improper installation can lead to hazardous conditions, property damage, and void the product warranty.

### Pre-Installation Checks:

- Verify that the furnace model matches the installation requirements and local building codes.
- Ensure adequate space for installation, maintenance, and airflow.
- Confirm availability of proper electrical supply, gas supply, and venting.

### Key Installation Considerations:

1. **Location:** Select a location that allows for proper air circulation, drainage, and access for servicing.
2. **Venting:** Adhere strictly to manufacturer's instructions and local codes for venting. This model offers thirteen different vent options.
3. **Gas Connection:** Connect to natural gas or propane supply as per specifications. Ensure all connections are leak-free.
4. **Electrical Wiring:** All wiring must comply with national and local electrical codes.
5. **Ductwork:** Connect the furnace to the existing or new ductwork system, ensuring proper sizing and sealing for efficient air distribution.

*Refer to the detailed installation manual provided with the unit for comprehensive instructions and diagrams.*

## OPERATING INSTRUCTIONS

Once installed, your Bryant furnace is designed for automated operation. Familiarize yourself with the thermostat controls and the furnace's basic functions.

### Starting the Furnace:

1. Ensure the gas supply valve to the furnace is open.
2. Confirm the electrical power switch for the furnace is in the "ON" position.
3. Set your thermostat to the "HEAT" mode and adjust the temperature setting to a desired level above the current room temperature.
4. The furnace's smart control center will initiate the heating cycle, including ignition and blower operation.

## Thermostat Settings:

- **HEAT Mode:** Activates the heating function.
- **COOL Mode:** If paired with an AC unit, activates the cooling function. The furnace blower will operate to circulate cool air.
- **AUTO Fan:** The blower operates only when heating or cooling is active.
- **ON Fan:** The blower runs continuously, circulating air even when heating/cooling is not active. This can help with air quality and temperature distribution.

*For optimal performance and energy savings, consider programming your thermostat to adjust temperatures based on your daily schedule.*

## MAINTENANCE

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Regular maintenance is crucial for the longevity, efficiency, and safe operation of your Bryant gas furnace. It is recommended to have a qualified technician perform annual professional maintenance.

### User Maintenance (Monthly/Quarterly):

- **Air Filter Replacement/Cleaning:** Check the air filter monthly, especially during periods of heavy use. Replace disposable filters or clean reusable filters as needed. A dirty filter restricts airflow, reducing efficiency and potentially damaging the unit.
- **Clear Area Around Furnace:** Ensure the area around the furnace is free from obstructions, combustible materials, and debris to allow for proper airflow and safe operation.

### Professional Maintenance (Annually):

- Inspection of heat exchanger for cracks or corrosion.
- Cleaning of burners and ignition system.
- Checking and adjusting gas pressure.
- Lubrication of moving parts (if applicable).
- Testing of safety controls and electrical connections.
- Verification of proper thermostat operation.
- Inspection of flue pipe for blockages or leaks.

*Neglecting regular maintenance can lead to decreased efficiency, increased energy costs, and potential safety hazards.*

## TROUBLESHOOTING

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Before calling for service, review the following common issues and their potential solutions. For complex problems, always contact a qualified HVAC technician.

| Problem                   | Possible Cause                                                                                           | Solution                                                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Furnace not heating       | Thermostat set incorrectly; Power off; Gas supply off; Dirty air filter; Pilot light out (if applicable) | Check thermostat settings; Ensure power switch is ON; Open gas valve; Replace/clean filter; Consult manual for pilot relight instructions or call technician. |
| Insufficient heating      | Dirty air filter; Blocked vents/registers; Undersized furnace; Duct leaks                                | Replace/clean filter; Ensure vents are open and clear; Consult technician for system sizing or duct inspection.                                               |
| Frequent cycling (on/off) | Dirty air filter; Oversized furnace; Thermostat issues                                                   | Replace/clean filter; Consult technician for diagnosis.                                                                                                       |
| Unusual noises            | Loose parts; Blower motor issues; Ignition problems                                                      | Turn off furnace and call a qualified technician immediately.                                                                                                 |

Always prioritize safety. If you smell gas, immediately evacuate the premises, do not operate any electrical switches, and contact your gas provider and emergency services.

## SPECIFICATIONS

The following table outlines the key specifications for the Bryant 315AAV048090 Gas Furnace:

| Attribute                                 | Value                             |
|-------------------------------------------|-----------------------------------|
| Model Number                              | 315AAV048090                      |
| Brand                                     | Bryant                            |
| BTU Rating                                | 90,000 Btu                        |
| AFUE (Annual Fuel Utilization Efficiency) | 80%                               |
| Heating Method                            | Convection                        |
| Fuel Type                                 | Natural Gas (Propane convertible) |
| Power Source                              | Propane                           |
| Heating Elements                          | 1                                 |
| Ignition System Type                      | Electronic                        |
| Control Type                              | Knob                              |
| Height                                    | 33 1/3 inches (approx.)           |
| Department                                | HVAC                              |
| Manufacturer                              | Bryant                            |
| Made In                                   | USA                               |

## WARRANTY AND SUPPORT

Bryant products are known for their reliability and are backed by comprehensive warranties. Specific warranty terms and conditions may vary based on the model and region. It is crucial to register your product upon installation to ensure full warranty coverage.

Warranty Information:

- Typically includes coverage for parts and heat exchanger.
- Warranty claims usually require proof of purchase and professional installation.
- Regular professional maintenance is often a condition for maintaining warranty validity.

Customer Support:

For technical assistance, warranty claims, or to locate a certified Bryant dealer or service technician, please refer to the official Bryant website or contact their customer service line. Always provide your model number (315AAV048090) and serial number when seeking support.

Contact information for Bryant can typically be found on the unit's nameplate or on the official Bryant Heating & Cooling Systems website.

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