

Goodman GD9S960403BN

Goodman GD9S960403BN Gas Furnace Instruction Manual

Model: GD9S960403BN | 40,000 BTU | 96% AFUE

1. INTRODUCTION

This instruction manual provides important information for the safe and efficient operation and maintenance of your Goodman GD9S960403BN Gas Furnace. Please read this manual thoroughly before attempting to install, operate, or service the unit. Retain this manual for future reference.

The Goodman GD9S960403BN is a high-efficiency, single-stage gas furnace designed for residential heating applications. It features a 96% AFUE rating, indicating its efficiency in converting fuel into usable heat for your home. This model supports both downflow and horizontal installation configurations.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or death. Refer to this manual. For assistance or additional information, consult a qualified installer, service agency, or the gas supplier.

- **Professional Installation Required:** Installation and service of this furnace must be performed by a qualified installer or service agency.
- **Gas Safety:** Ensure all gas connections are properly sealed and tested for leaks. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **Electrical Safety:** Disconnect all electrical power to the furnace before performing any maintenance or service. Ensure proper grounding.
- **Carbon Monoxide:** This furnace produces combustion gases. Proper venting is crucial to prevent carbon monoxide poisoning. Install and maintain carbon monoxide detectors in your home.
- **Clearances:** Maintain proper clearances from combustible materials as specified in the installation instructions provided with the unit.

3. PRODUCT OVERVIEW

The Goodman GD9S960403BN Gas Furnace is engineered for reliable and efficient home heating. Key features include:

- **High Efficiency:** Up to 96% AFUE (Annual Fuel Utilization Efficiency) for reduced energy consumption.
- **Single-Stage Operation:** Provides consistent and steady heat output.
- **Multi-Speed ECM Motor:** Optimizes airflow for improved comfort and reduced operating noise and energy use.
- **Flexible Installation:** Designed for downflow or horizontal configurations to suit various home layouts.
- **Durable Construction:** Built for long-term performance and low maintenance.
- **R32 Refrigerant Compatible:** Supports environmentally friendly heating systems.



Figure 1: Front view of the Goodman GD9S960403BN Gas Furnace. This image shows the dark gray exterior casing with the Goodman logo prominently displayed on the lower access panel.



Figure 2: Internal view of the Goodman GD9S960403BN Gas Furnace. This image displays the complex wiring, circuit board, blower motor, and gas burner assembly within the unit, highlighting its sophisticated internal design.

4. SETUP AND INSTALLATION

Installation of the Goodman GD9S960403BN Gas Furnace requires specialized knowledge and tools. It is strongly recommended that installation be performed by a qualified HVAC professional.

4.1 Pre-Installation Checks

- Verify that the furnace model matches the requirements of the installation site.
- Ensure adequate space and clearances are available for the unit, including access for maintenance.
- Confirm that the electrical supply, gas supply, and venting provisions meet local codes and manufacturer specifications.

4.2 Installation Orientation

This furnace is designed for both downflow and horizontal applications. The specific orientation will dictate ductwork connections and condensate drainage setup.

- **Downflow:** Air enters from the top and exits from the bottom.
- **Horizontal:** Air enters from one side and exits from the other, typically installed in attics or crawl spaces.

4.3 Venting

The GD9S960403BN uses PVC venting for exhaust gases. Proper sizing and installation of the vent system are critical for safety and efficiency. Consult the detailed installation instructions provided with the unit for specific requirements.

5. OPERATING INSTRUCTIONS

Once installed by a qualified professional, operating your Goodman GD9S960403BN Gas Furnace is straightforward.

5.1 Initial Startup

- Ensure the gas supply valve to the furnace is open.
- Turn on the electrical power to the furnace.
- Set your thermostat to the desired heating mode and temperature. The furnace will initiate its startup sequence, which typically includes a pre-purge cycle, ignition, and then blower operation.

5.2 Normal Operation

The furnace operates automatically based on your thermostat settings. The single-stage gas valve and multi-speed ECM motor work together to provide consistent heating and optimized airflow.

- The multi-speed ECM motor adjusts its speed to deliver the appropriate airflow, contributing to both comfort and energy efficiency.
- The furnace will cycle on and off as needed to maintain the set temperature.

5.3 Shutting Down the Furnace

- For temporary shutdown, set your thermostat to the 'OFF' position.
- For extended periods of non-use (e.g., summer), it is recommended to turn off the electrical power to the furnace at the circuit breaker and close the manual gas shut-off valve.

6. MAINTENANCE

Regular maintenance is essential for the longevity, efficiency, and safe operation of your Goodman GD9S960403BN Gas Furnace. Always disconnect electrical power and shut off the gas supply before performing any maintenance.

6.1 Air Filter Replacement

The air filter should be checked monthly and replaced or cleaned as needed, typically every 1-3 months, depending on usage and household conditions (e.g., pets, allergies). A dirty filter restricts airflow, reduces efficiency, and can damage the furnace.

- Locate the filter access panel.
- Remove the old filter, noting the airflow direction.
- Insert a new, clean filter of the correct size and type, ensuring the airflow arrow points towards the furnace blower.

6.2 Professional Annual Inspection

It is highly recommended to have a qualified HVAC technician perform an annual inspection and tune-up of your furnace. This service typically includes:

- Checking and cleaning the burner assembly.
- Inspecting the heat exchanger for cracks or corrosion.
- Testing ignition and safety controls.
- Verifying proper gas pressure and combustion.
- Lubricating moving parts (if applicable).
- Inspecting the flue and venting system.
- Checking electrical connections.

7. TROUBLESHOOTING

Before calling for service, review the following common issues and solutions. Always ensure electrical power and gas supply are connected and active.

7.1 No Heat

- **Thermostat Setting:** Ensure the thermostat is set to 'HEAT' and the temperature is above the current room temperature.
- **Power Supply:** Check the circuit breaker for the furnace. Reset if tripped.
- **Gas Supply:** Verify the manual gas shut-off valve to the furnace is open.
- **Air Filter:** A severely clogged air filter can cause the furnace to overheat and shut down. Replace if dirty.

7.2 Insufficient Heat

- **Air Filter:** A partially clogged filter can reduce airflow.
- **Blocked Vents/Registers:** Ensure all supply and return air vents are open and unobstructed.
- **Thermostat Calibration:** The thermostat may need recalibration or replacement.

7.3 Unusual Noises

- **Squealing/Grinding:** May indicate a problem with the blower motor or bearings. Turn off the furnace and contact a technician.
- **Rattling:** Could be loose panels or ductwork. Secure any loose components.

If these steps do not resolve the issue, contact a qualified HVAC service technician for diagnosis and repair.

8. SPECIFICATIONS

The following table outlines the key specifications for the Goodman GD9S960403BN Gas Furnace:

Specification	Value
Model Number	GD9S960403BN
BTUs	40,000
AFUE	96%

Specification	Value
Orientation	Downflow / Horizontal
Venting Type	PVC
Height	34 1/2 IN (34.5 inches)
Width	14 IN (14 inches)
Depth	28 3/4 IN (28.75 inches)
Item Weight	163 pounds
Volts	115
Motor Speed	Multi-Speed
Gas Valve	Single-stage
Manufacturer	Goodman

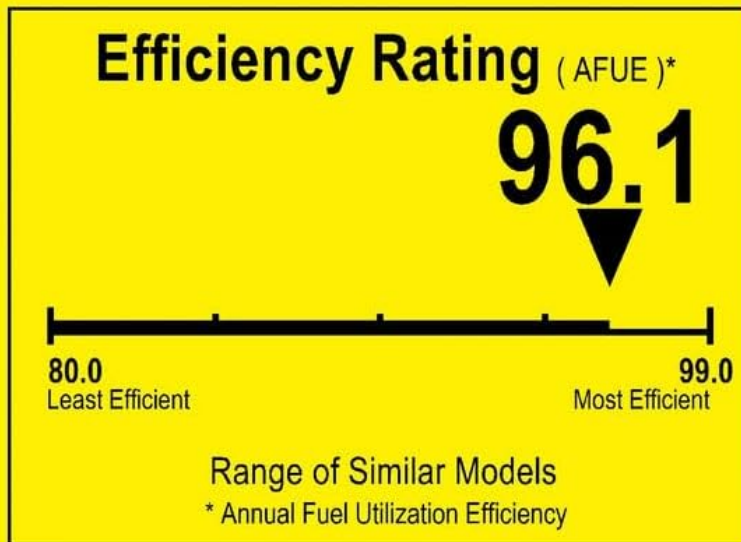
U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Furnace
Non-Weatherized
Natural Gas, Propane Gas

GOODMAN
Model GD9S960403BN



For energy cost info, visit
productinfo.energy.gov

Figure 3: EnergyGuide label for the Goodman GD9S960403BN Gas Furnace, showing an efficiency rating of 96.1% AFUE.

9. WARRANTY AND SUPPORT

For specific warranty details, please refer to the warranty documentation included with your furnace at the time of purchase or contact your installing dealer. Warranty terms typically cover parts and may vary based on registration and local regulations.

For technical support, service, or warranty claims, please contact the qualified HVAC professional who installed your unit. They are best equipped to provide assistance and ensure proper service procedures are followed.

You may also visit the official Goodman website for general product information and to locate authorized service providers in your area.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question