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› Goodman 96% AFUE Single Stage Upflow/Horizontal Multi-Speed Natural Gas Furnace User Manual

Goodman GR9S961205DN

Goodman 96% AFUE Single Stage Upflow/Horizontal Multi-Speed Natural Gas Furnace

Model: GR9S961205DN

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Goodman 96% AFUE Single Stage Upflow/Horizontal Multi-Speed Natural Gas Furnace, Model GR9S961205DN. Please read this manual thoroughly before attempting any procedures to ensure safe and efficient use of the appliance. This furnace is designed for residential heating applications, offering high efficiency and reliable performance.

PRODUCT OVERVIEW

The Goodman GR9S961205DN furnace is a high-efficiency natural gas furnace designed for versatile installation in upflow or horizontal configurations. It features a durable construction and advanced components to provide consistent heating.

Key Features

- **High Efficiency:** 96% AFUE (Annual Fuel Utilization Efficiency) for reduced energy consumption.
- **Versatile Installation:** Designed for both upflow and horizontal system configurations.
- **Durable Heat Exchanger:** Features a heavy-duty aluminized-steel tubular heat exchanger and a stainless-steel secondary heat exchanger for longevity.
- **Reliable Ignition:** Equipped with a durable Silicon Nitride igniter for consistent startup.
- **Multi-Speed Motor:** Provides flexible airflow for enhanced comfort and efficiency.
- **Single-Stage Gas Valve:** Ensures straightforward and effective heating operation.



Figure 1: Front view of the Goodman GR9S961205DN furnace, showcasing its compact design and Goodman branding.

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GR9S961205DN



Efficiency

96%

Heating (BTU)

120k

Flow

Up/Multi

Stages

One

Dimensions

24.5 x 28.75 x 34.5

Weight

156

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Figure 2: The furnace with an overlay highlighting key specifications such as 96% efficiency, 120k BTU heating, up/multi flow, single stage, and dimensions.



Figure 3: Top view of the furnace with the cover removed, showing the internal heat exchanger tubes.



Figure 4: Detailed view of the upper internal section of the furnace, displaying the gas valve, igniter, and various electrical connections.



Figure 5: Diagram illustrating the precise dimensions of the furnace: 24.5 inches wide, 28.88 inches deep, and 34.5 inches high.

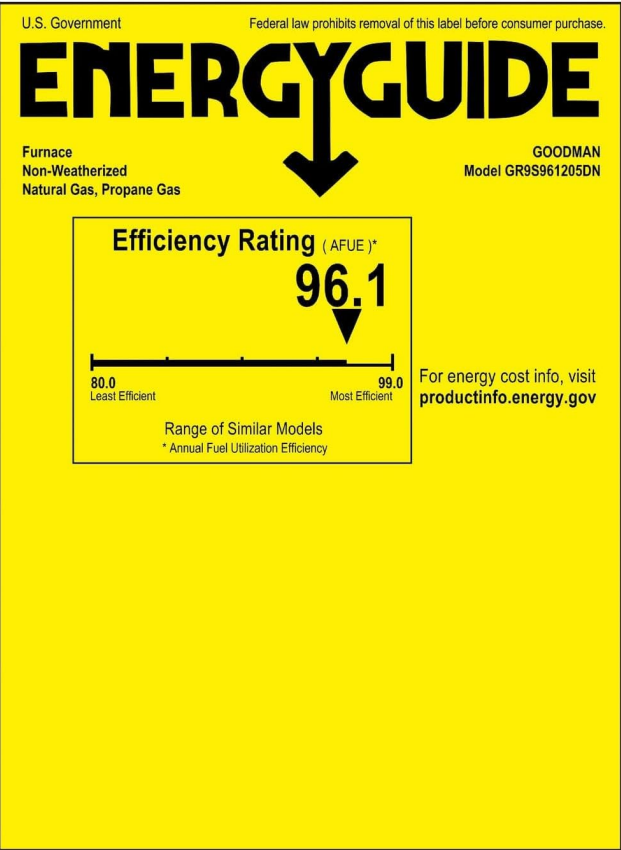


Figure 6: The U.S. Government EnergyGuide label for the Goodman GR9S961205DN furnace, indicating an AFUE efficiency rating of 96.1.

SPECIFICATIONS

Attribute	Detail
Model Number	GR9S961205DN
System Configuration	Upflow or Horizontal
AFUE Efficiency	96%
Heating Capacity	120,000 BTU
Motor Type	Multi-Speed
Gas Valve	Single-Stage
Voltage	115V
Dimensions (W x D x H)	24.5" x 28.88" x 34.5"
Heat Exchanger	Heavy-duty aluminized-steel tubular (primary), Stainless-steel (secondary)

Attribute	Detail
Igniter Type	Silicon Nitride
Manufacturer	Goodman
Country of Origin	Made in USA

SETUP AND INSTALLATION

Important: Installation of this furnace must be performed by a qualified and licensed HVAC professional. Improper installation can lead to serious injury, property damage, or death, and will void the product warranty. This section provides general guidelines and is not a substitute for professional installation instructions.

- **Location:** Ensure the furnace is installed in a location that meets all local and national building codes, with adequate clearance for service and combustion air.
- **Ductwork:** Connect the furnace to properly sized supply and return ductwork.
- **Gas Supply:** Connect to a natural gas supply line according to local codes. Ensure proper gas pressure and leak testing.
- **Electrical Wiring:** Connect the furnace to a dedicated electrical circuit as per wiring diagrams provided with the unit and local electrical codes.
- **Ventilation:** Install proper venting for combustion by-products. This is a high-efficiency furnace, typically requiring PVC or CPVC venting.
- **Condensate Drain:** Establish a proper condensate drain line to remove water produced during high-efficiency operation.
- **Thermostat:** Connect a compatible thermostat for system control.

Refer to the detailed installation manual provided with the physical product for specific instructions, diagrams, and safety warnings.

OPERATING INSTRUCTIONS

Once installed by a qualified professional, operating your Goodman furnace is typically managed through your home's thermostat. Ensure the thermostat is correctly programmed for your desired heating schedule and temperature settings.

Starting the Furnace

1. Ensure the gas supply valve to the furnace is open.
2. Verify the electrical power switch for the furnace is in the "ON" position.
3. Set your thermostat to "HEAT" mode.
4. Adjust the thermostat's temperature setting to a level higher than the current room temperature. The furnace should initiate its heating cycle.
5. Listen for the igniter to glow, followed by the sound of the burners igniting. The blower fan will typically start after a short delay once the heat exchanger warms up.

Stopping the Furnace

- To temporarily stop heating, set your thermostat to "OFF" or lower the temperature setting below the current room

temperature.

- For extended periods of absence or maintenance, turn off the electrical power switch to the furnace and close the manual gas shut-off valve.

If the furnace fails to ignite or operate correctly, refer to the Troubleshooting section or contact a qualified service technician.

MAINTENANCE

Regular maintenance is crucial for the efficient and safe operation of your furnace. Some tasks can be performed by the homeowner, while others require a qualified HVAC technician.

Homeowner Maintenance (Monthly/Quarterly)

- **Air Filter Replacement/Cleaning:** Check your furnace filter monthly, especially during periods of heavy use. Replace disposable filters or clean reusable filters as needed (typically every 1-3 months) to ensure proper airflow and efficiency.
- **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.
- **Check Condensate Drain:** Periodically check the condensate drain line for clogs or blockages. Clear any visible debris.

Professional Maintenance (Annually)

It is highly recommended to have your furnace inspected and serviced by a qualified HVAC technician at least once a year, preferably before the heating season begins. Professional maintenance includes:

- Cleaning and inspection of burners and heat exchanger.
- Checking gas pressure and connections.
- Lubricating moving parts (if applicable).
- Testing safety controls and electrical components.
- Inspecting flue pipe and venting system.
- Checking thermostat calibration.

TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For complex problems or if these steps do not resolve the issue, contact a qualified HVAC technician.

Problem	Possible Cause	Solution
Furnace not heating	Thermostat setting too low; Power off; Gas supply off; Clogged air filter; Pilot light/igniter issue.	Increase thermostat setting; Check furnace power switch and circuit breaker; Ensure gas valve is open; Replace/clean air filter; Contact technician for ignition issues.
Noisy operation	Loose panels; Blower motor issues; Ductwork issues; Dirty blower wheel.	Check and tighten panels; Contact technician for motor or blower issues.

Problem	Possible Cause	Solution
Blower runs constantly	Thermostat set to "FAN ON"; Limit switch malfunction.	Set thermostat fan to "AUTO"; Contact technician for limit switch issues.
Weak airflow	Clogged air filter; Blocked return air vents; Duct leaks.	Replace/clean air filter; Clear obstructions from vents; Contact technician for duct inspection.

Always turn off power to the furnace before attempting any inspection or maintenance.

WARRANTY AND SUPPORT

This Goodman furnace comes with a **10-year parts limited warranty**. This warranty is valid provided the unit is installed by a qualified installer and registered online. Please retain your proof of purchase and installation records.

For warranty claims, technical support, or to find a qualified installer, please visit the official Goodman website or contact their customer service. You can also visit the [Goodman Store on Amazon](#) for more product information.

Accessories such as thermostats, line sets, and conversion kits are sold separately and may have their own warranties.

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This manual is for informational purposes only and is not a substitute for professional installation or service.

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

