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Goodman GR9T961004CN

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Furnace User Manual

Model: GR9T961004CN

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Goodman GR9T961004CN 96% AFUE Two-Stage Natural Gas Furnace. This unit is designed for upflow or horizontal installations and features a multi-speed ECM motor for enhanced efficiency and airflow control. Please read all instructions carefully before proceeding.

PRODUCT OVERVIEW

U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Furnace
Non-Weatherized
Natural Gas, Propane Gas

GOODMAN
Model GMEC961004CN



Efficiency Rating (AFUE)*

96.1



Range of Similar Models

* Annual Fuel Utilization Efficiency

For energy cost info, visit
productinfo.energy.gov

Figure 1: Internal view of the Goodman GR9T961004CN furnace, highlighting the multi-speed ECM motor and heat exchanger.



Figure 2: External view of the Goodman GR9T961004CN furnace, featuring the Energy Star Partner label.



Figure 3: EnergyGuide label for a similar Goodman furnace model (GMEC961004CN), indicating a 96.1 AFUE efficiency rating.

SETUP AND INSTALLATION

Important: Installation must be performed by a qualified HVAC professional to ensure safety and proper operation, and to maintain warranty validity.

1. Fuel Source

- This furnace operates on Natural Gas.
- If Liquid Propane (LP) is required, a separate LP conversion kit must be purchased and installed by a qualified technician. The furnace does not include this kit.

2. Configuration

The GR9T961004CN model is designed for **Upflow** or **Horizontal** installations. It **cannot** be installed as a downflow unit. The air flow direction is critical and determined by the furnace's internal design.

- **Upflow:** Air enters from the bottom and is discharged from the top. The blower is located at the bottom, drawing air in and pushing it through the burners and into the ductwork.
- **Horizontal:** The furnace is laid on its side, with air flowing horizontally.
- **Downflow:** *(Not applicable for this model)* Air enters from the top and is discharged from the bottom. Downflow furnaces have the blower at the top, pushing air through the burners and into the ductwork.

Furnaces are specifically configured for their intended airflow and are not interchangeable between upflow, downflow, or horizontal orientations without proper modification or selecting the correct model.

3. Efficiency and Venting

This furnace boasts a 96% AFUE (Annual Fuel Utilization Efficiency) rating. This means that for every dollar spent on natural gas, 96 cents are converted into usable heat for your home. High-efficiency furnaces like this one typically feature two PVC pipes for intake and exhaust, distinguishing them from lower-efficiency models that use a single aluminum vent.

4. Low NOx Compliance

This model is a Low NOx furnace, designed to reduce nitrogen oxide emissions. Depending on local regulations, particularly in certain California air quality management control districts, an Ultra Low NOx furnace (model numbers typically ending in 'U') may be required. Always verify local codes before installation.

OPERATING INSTRUCTIONS

1. Fan Speed Control (Multi-Speed ECM Motor)

Your furnace is equipped with a multi-speed ECM (Electronically Commutated Motor) motor. This motor enhances overall efficiency by providing superior airflow control and reducing noise. Unlike single-speed fans that are either fully on or fully off, the multi-speed motor can adjust its speed to precisely match heating demands. This results in more consistent temperatures, improved comfort, and quieter operation.

2. Two-Stage Burner Operation

The two-stage burner allows the furnace to operate at two different heating capacities: 100% and approximately 70%. This provides more precise temperature control and increased efficiency compared to single-stage furnaces that only operate at 100% capacity. In milder weather, the furnace can run at the lower stage, consuming less fuel and maintaining a more even temperature. During colder periods, it can switch to the higher stage for maximum heat output. Ensure your thermostat is compatible with two-stage heating systems to fully utilize this feature.

MAINTENANCE

Regular maintenance is crucial for the longevity and efficient operation of your furnace. It is recommended to schedule annual inspections and servicing by a qualified HVAC technician.

- **Air Filter:** Check and replace the air filter monthly, or more frequently if pets are present or during periods of heavy use. A clean filter ensures proper airflow and efficiency.
- **Heat Exchanger:** Have the aluminized steel primary heat exchanger inspected annually for cracks or damage.
- **Burners:** Ensure burners are clean and operating correctly.
- **Venting System:** Inspect the PVC venting for any obstructions, leaks, or damage.
- **Drainage System:** Verify that the condensate drain line is clear and free of blockages.

TROUBLESHOOTING

If your furnace is not operating correctly, consider the following basic checks before contacting a service technician:

- **No Heat:**
 - Check the thermostat settings to ensure it's set to "Heat" and the desired temperature is above the current room temperature.
 - Verify the furnace power switch is "On".
 - Check the circuit breaker for the furnace.
 - Ensure the gas supply valve to the furnace is open.
- **Insufficient Heat:**
 - Replace dirty air filters.
 - Check for blocked return air vents or supply registers.
- **Unusual Noises:**
 - Rattling or vibrating sounds may indicate loose panels or components.
 - Squealing could be a sign of a worn blower motor bearing or belt.

- **Error Codes:** Refer to the diagnostic codes displayed on the furnace's control board (visible through the sight glass) and consult your full installation manual for specific meanings.

For complex issues or if basic troubleshooting does not resolve the problem, contact a certified HVAC professional.

SPECIFICATIONS

Feature	Detail
Model Number	GR9T961004CN
AFUE Efficiency	96%
BTU Heating Capacity	100,000 BTU
Stages	Two-Stage
Motor Type	Multi-speed ECM
Installation Type	Upflow/Horizontal
Heat Exchanger	Aluminized Steel Primary
Low NOx	Yes
Dimensions (Package)	48 x 48 x 48 inches
Item Weight	140 pounds
Voltage	115 Volts
Air Flow Capacity	1600 Cubic Feet Per Minute
Certification	Energy Star

OFFICIAL PRODUCT VIDEOS

What to know about buying a furnace

Your browser does not support the video tag.

This video from Superior Home Supplies provides general guidance on selecting a furnace, covering fuel sources, configurations (upflow, downflow, horizontal), fan speeds (single, multi-speed, variable), and efficiency ratings (96% AFUE vs. 80% AFUE). It also touches on Low NOx requirements for California.

WARRANTY AND SUPPORT

Goodman products are known for their durability and come with a comprehensive warranty. Specific warranty details are provided with your product documentation. For warranty claims, technical support, or service inquiries, please refer to the contact information provided in your furnace's packaging or on the official Goodman website.

For any questions regarding your Goodman furnace, please contact a certified HVAC professional or Goodman customer support.

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.

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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

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