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> Goodman 80,000 BTU 96% AFUE Downflow/Horizontal Gas Furnace Model GD9S960804CN User Manual

Goodman GD9S960804CN

Goodman 80,000 BTU 96% AFUE Downflow/Horizontal Gas Furnace

Model: GD9S960804CN - User Manual

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1. PRODUCT OVERVIEW

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Goodman 80,000 BTU 96% AFUE Downflow/Horizontal Gas Furnace, Model GD9S960804CN. This unit is designed to provide reliable heating for residential applications.





Front view of the Goodman 80,000 BTU Gas Furnace, Model GD9S960804CN.

Key Features:

- **80,000 BTU Heating Capacity:** Provides powerful heating for homes up to 2,000 square feet.
- **96% AFUE Efficiency Rating:** Converts 96% of the fuel used into heat, reducing energy waste.
- **Downflow/Horizontal Installation Flexibility:** Designed for versatile installation in various home setups.
- **Single-Stage Gas Valve:** Delivers consistent heat output with energy-efficient performance.
- **Durable Aluminized Steel Heat Exchanger:** Built for enhanced heat transfer and extended durability.
- **Quiet Operation:** Advanced sound-dampening technology minimizes noise.
- **Heavy-Duty Galvanized Steel Cabinet:** Protects internal components from wear and tear.
- **Compact Design:** Space-saving design for installation in tight areas.
- **A2L Model:** Directly replaces GC9S960804CN, GCES960804CN. AHRI Certified: 215224960.

2. IMPORTANT SAFETY INFORMATION

READ ALL INSTRUCTIONS BEFORE OPERATING THIS APPLIANCE.

Failure to follow safety warnings and instructions could result in serious injury, death, or property damage.

General Safety Precautions:

- **Professional Installation Required:** This furnace must be installed by a qualified, licensed HVAC technician. Improper installation can lead to gas leaks, carbon monoxide poisoning, fire, or explosion.
- **Gas Supply:** Ensure the gas supply is turned off before performing any service or maintenance. Verify proper gas pressure and connections upon installation.
- **Carbon Monoxide:** This appliance produces carbon monoxide, which is an odorless, colorless gas that can cause severe injury or death. Install carbon monoxide detectors in your home.
- **Electrical Hazard:** Disconnect all electrical power to the unit before servicing.
- **Flammable Materials:** Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **Clearances:** Maintain proper clearances from combustible materials as specified in the installation instructions.

Proposition 65 Warning:

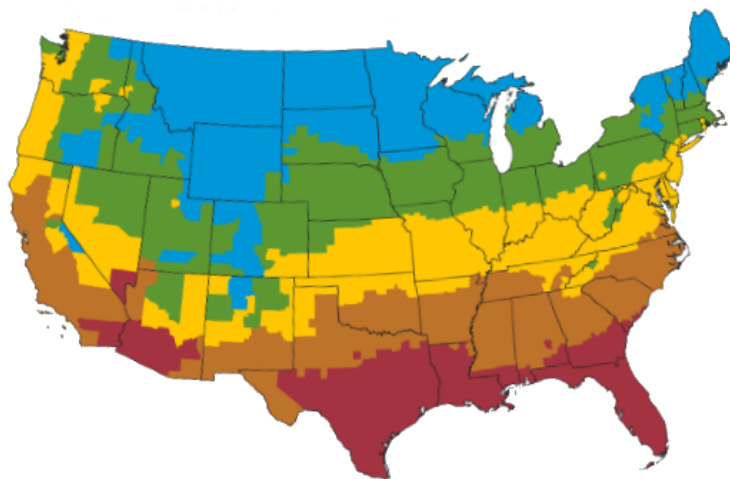
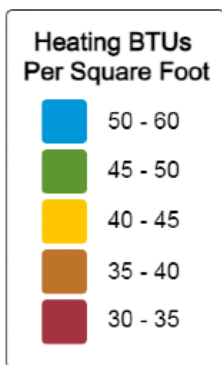
This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

3. SETUP AND INSTALLATION

Installation of this Goodman gas furnace requires specialized knowledge and tools. It must be performed by a qualified, licensed HVAC professional to ensure safety, compliance with local codes, and proper operation.

Installation Considerations:

- **Orientation:** This furnace is designed for downflow and horizontal left and right applications.
- **Location:** The compact design allows for installation in tight areas such as attics, closets, or basements, provided adequate clearances are maintained.
- **Ductwork:** Ensure proper sizing and sealing of supply and return air ductwork for optimal performance.
- **Ventilation:** Proper venting of combustion byproducts is critical. Follow all local and national codes for vent pipe installation.
- **Electrical Connections:** The unit requires 115 VAC, 1 phase, 60Hz electrical supply. All wiring must comply with local and national electrical codes.
- **Gas Connections:** Connect to a natural gas or propane (with optional LP kit, sold separately) supply. Ensure all gas connections are leak-free.



To calculate heating BTUs needed, multiply the square footage of the space to be heated by the number of BTUs indicated for your climate zone to get an approximate furnace size.

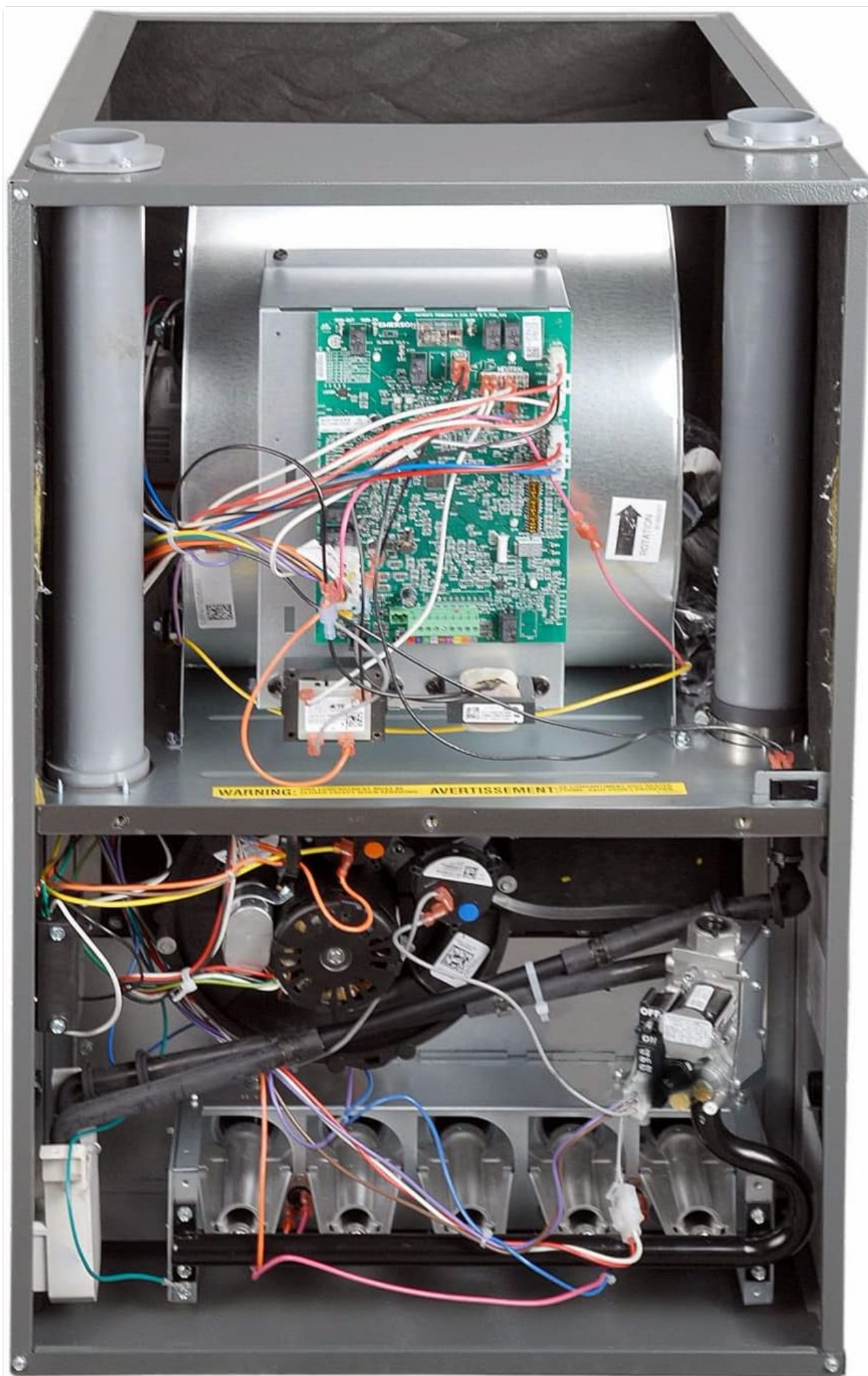
Approximate Cooling Coverage By Climate Zone in Square Feet

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
1.5 Ton	600 - 900	600 - 950	600 - 1000	700 - 1050	700 - 1100
2 Ton	901 - 1200	951 - 1250	1001 - 1300	1051 - 1350	1101 - 1400
2.5 Ton	1201 - 1500	1251 - 1550	1301 - 1600	1351 - 1600	1401 - 1650
3 Ton	1501 - 1800	1501 - 1850	1601 - 1900	1601 - 2000	1651 - 2100
3.5 Ton	1801 - 2100	1851 - 2150	1901 - 2200	2001 - 2250	2101 - 2300
4 Ton	2101 - 2400	2151 - 2500	2201 - 2600	2251 - 2700	2301 - 2700
5 Ton	2401 - 3000	2501 - 3100	2601 - 3200	2751 - 3300	2701 - 3300

Illustration of airflow direction for downflow and horizontal left/right furnace installations.

Pre-Installation Checks:

1. Verify that the furnace model matches the requirements of the installation site.
2. Inspect the unit for any shipping damage.
3. Ensure all necessary accessories (e.g., line sets, LP Kits, heat kits, whips, disconnects) are available if required for the specific installation.



Internal components of the Goodman gas furnace, including the control board and burner assembly.

4. OPERATING INSTRUCTIONS

Once properly installed and commissioned by a qualified technician, your Goodman gas furnace operates automatically based on your thermostat settings.

Basic Operation:

1. **Thermostat Control:** Set your home thermostat to the desired temperature and select the 'Heat' mode.
2. **Heating Cycle:** When the room temperature falls below the thermostat setting, the thermostat signals the furnace to begin a heating cycle.
3. **Ignition:** The furnace's igniter will activate, followed by the opening of the single-stage gas valve, allowing gas to flow to the burners.
4. **Heat Exchange:** Combustion gases heat the aluminized steel heat exchanger.
5. **Air Circulation:** The blower fan then circulates air over the hot heat exchanger, distributing warm air through your home's ductwork.
6. **Cycle Completion:** Once the room temperature reaches the thermostat setting, the furnace will shut off until more heat is required.

For detailed instructions on your specific thermostat model, refer to its separate user manual.

5. MAINTENANCE

Regular maintenance is crucial for the longevity, efficiency, and safe operation of your gas furnace. While some tasks can be performed by the homeowner, an annual professional inspection is highly recommended.

User-Performed Maintenance:

- **Air Filter Replacement:** Check your air filter monthly and replace it every 1-3 months, or more frequently if you have pets or allergies. A dirty filter restricts airflow, reducing efficiency and potentially damaging the unit. This model uses filter sizes (2) 10 x 20 inches or (1) 16 x 25 inches (for top return).
- **Clear Area Around Furnace:** Ensure the area around the furnace is clear of obstructions, flammable materials, and debris to allow for proper airflow and safe operation.

Professional Annual Maintenance:

A qualified HVAC technician should perform an annual inspection and tune-up, which typically includes:

- Checking and cleaning the burners and heat exchanger.
- Inspecting the ignition system.
- Verifying gas pressure and connections.
- Testing safety controls.
- Lubricating moving parts (if applicable).
- Checking electrical connections.
- Inspecting the flue system for blockages or leaks.

6. TROUBLESHOOTING

Many operational issues can be resolved with simple checks. However, due to the complexity and safety risks associated with gas appliances, it is strongly recommended to contact a qualified HVAC technician for any issues beyond basic troubleshooting.

Common Issues and Initial Checks:

- **No Heat:**
 - Check thermostat settings (ensure it's set to 'Heat' and desired temperature is above room temperature).
 - Verify power to the furnace (check circuit breaker).
 - Ensure the gas supply valve to the furnace is open.
 - Check if the air filter is excessively dirty and restricting airflow.
- **Insufficient Heat:**
 - Replace dirty air filter.
 - Check for blocked return or supply vents.
- **Unusual Noises:**
 - Rattling or vibrating sounds may indicate loose panels or ductwork.
 - Squealing could be a worn blower motor bearing.
- **Pilot Light Out (if applicable):** This model uses an electronic ignition system, so a pilot light is not typically present. If your furnace has a pilot light and it's out, follow the relighting instructions on the unit or consult a technician.

If you smell gas, immediately evacuate the premises, call your gas provider from a safe location, and do not operate any electrical switches or phones.

For all other issues or if basic checks do not resolve the problem, contact a qualified HVAC service technician.

7. PRODUCT SPECIFICATIONS



GD9S960804CN

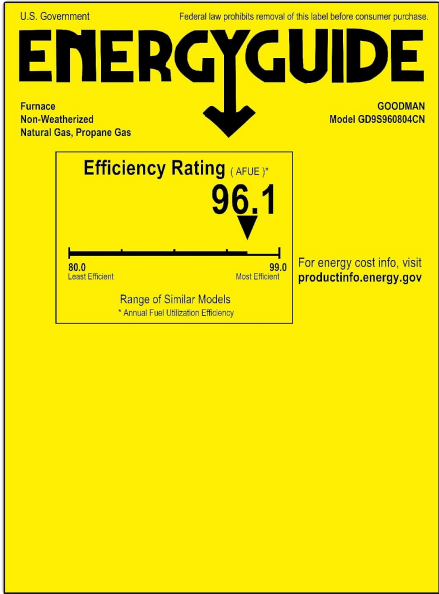
Dimensions:	W 21" x D 28.75" x H: 34.5"
Electrical:	115 VAC, 1 phase, 60Hz
High Fire Input:	80,000
High Fire Output:	76,880
Gas Valve:	Single Stage
Orientation:	Downflow/Horizontal
AFUE Rating:	96%
Burners:	4
Speeds:	9
Filter Size: (Qty)	(2) 10 x 20 or (1) 16 x 25 (top return)
Min. Ampacity:	13.7
MOP:	20

*Meets California 40 ng/J Rules
*Not installable in SCAQMD, SJVAPCD

Visual representation of key specifications for the Goodman GD9S960804CN furnace.

Feature	Detail
Model Number	GD9S960804CN

Manufacturer	Goodman
Heating Capacity	80,000 BTU
AFUE Efficiency Rating	96%
Gas Valve Type	Single-Stage
Orientation	Downflow/Horizontal
Burners	4
Speeds	9
Electrical Supply	115 VAC, 1 phase, 60Hz
High Fire Input	80,000 BTU
High Fire Output	76,880 BTU
Item Weight	141 pounds
Product Dimensions (H x W x D)	33.4 x 28 x 21 inches
Color	Grey
Included Components	1 Gas Furnace
Filter Size (Qty)	(2) 10 x 20 or (1) 16 x 25 (top return)
Min. Ampacity	13.7
MOP	20
California Compliance	Meets California 40 ng/J Rules
Installation Restrictions	Not installable in SCAQMD, SJVAPCD



EnergyGuide label indicating 96.1 AFUE efficiency for Model GD9S960804CN.

8. WARRANTY INFORMATION

Your Goodman gas furnace comes with a comprehensive warranty to protect your investment.

10-Year Parts Limited Warranty:

This product includes a **10-year parts limited warranty**. To be eligible for this warranty, the unit must be:

- Installed by a qualified, licensed installer.
- Registered online within 60 days of installation.

Failure to meet these conditions may affect warranty coverage. Please retain your proof of purchase and installation records.



Goodman's 10-year parts limited warranty details.

Accessories such as line sets, LP Kits, heat kits, whips, disconnects, etc., are sold separately and may have their own warranty terms.

9. CUSTOMER SUPPORT

For technical assistance, service, or warranty inquiries, please contact your installing HVAC professional or the manufacturer's authorized service provider.

Manufacturer Information:

Brand: Goodman

Model: GD9S960804CN

For additional product information or to explore other Goodman products, you may visit the official brand store:

[Visit MRONextDay.com Store](https://www.MRONextDay.com)

Always provide your model number (GD9S960804CN) and serial number when contacting support for faster 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