

## Goodman AMST48CU1300

# Goodman AMST48CU1300 4 TON Multi-Position R-32 Air Handler Instruction Manual

## INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Goodman AMST48CU1300 4 TON Multi-Position Multi-Speed ECM Based R-32 Air Handler with Internal TXV. Please read this manual thoroughly before attempting to install or operate the unit. Proper adherence to these instructions will ensure optimal performance, safety, and longevity of your air handler.

**Important Note: This unit is designed for use with R-32 refrigerant ONLY. Using any other refrigerant will void the warranty and may cause system damage or safety hazards.**

## IMPORTANT SAFETY INFORMATION

Installation and servicing of air conditioning equipment can be hazardous due to system pressure, electrical components, and sharp edges. Only qualified, trained, and experienced technicians should install, repair, or service this equipment. Failure to follow these instructions can result in property damage, personal injury, or death.

- **Professional Installation Required:** This unit must be installed by a qualified HVAC professional.
- **R-32 Refrigerant Handling:** R-32 is a mildly flammable refrigerant. Proper handling, storage, and charging procedures are critical. Ensure adequate ventilation during service.
- **Electrical Safety:** Disconnect all power to the unit before performing any maintenance or service. Ensure proper grounding.
- **Personal Protective Equipment:** Always wear appropriate personal protective equipment (PPE) such as safety glasses, gloves, and protective clothing when working on the unit.
- **Read All Labels:** Pay close attention to all warning and caution labels on the unit.

## PRODUCT FEATURES

The Goodman AMST48CU1300 Air Handler is engineered for reliable and efficient performance, incorporating several key features:

- **Durable All-Aluminum Coil:** Designed for enhanced durability and corrosion resistance.
- **9-Speed ECM Motor:** Provides efficient and quiet operation with precise airflow control.

- **High-Efficiency Evaporator:** Optimizes heat transfer for effective cooling and heating.
- **SmartFrame Cabinet:** Robust galvanized steel construction for long-lasting performance.
- **Foil-Faced Insulation:** Enhances thermal efficiency and reduces noise.
- **Easy Service Access:** Designed for straightforward maintenance and repair.
- **Primary/Secondary Drain Connections:** Offers flexibility in condensate drainage setup.
- **AHRI Certified:** Ensures performance ratings meet industry standards.

**QUALITY IS PARAMOUNT**

***SMARTFRAME CABINET***



**STABLE AND RELIABLE**

Image: The Goodman AMST48CU1300 4 TON Multi-Position Air Handler, showcasing its robust cabinet design and Goodman branding.

Video: An overview of the Goodman 4 Ton Air Handler, highlighting its features and design. This video provides a visual representation of the product and its components.

## INSTALLATION

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### General Guidelines

Installation must be performed by a certified HVAC technician in accordance with all local and national building codes and safety regulations. The unit is designed for multi-position installation (upflow, downflow, horizontal left, or horizontal right), offering flexibility for various applications.

- **Location:** Select a location that allows for proper airflow, drainage, and service access.
- **Ductwork:** Ensure ductwork is properly sized and sealed to prevent air leakage and optimize system efficiency.
- **Drainage:** Connect both primary and secondary condensate drains to prevent water overflow. Ensure proper slope for gravity drainage or install a condensate pump if necessary.
- **Electrical Connections:** All electrical wiring must comply with local codes and the unit's wiring diagram. Ensure the correct voltage (240 Volts) is supplied.
- **Optional Heat Kits:** This unit is compatible with a variety of optional field-installed HKT heat kits, which are sold separately. Refer to the heat kit's specific instructions for installation.

### R-32 Refrigerant Specifics

The AMST48CU1300 air handler is specifically designed for use with R-32 refrigerant. R-32 has a lower Global Warming Potential (GWP) compared to older refrigerants, making it a more environmentally friendly choice. Due to its mildly flammable nature, specific tools and procedures are required for handling R-32. Only technicians trained and certified in R-32 handling should perform refrigerant-related tasks.

Video: This video discusses facts versus fiction regarding R-32 refrigerant, providing valuable information for understanding its properties and use in HVAC systems.

## OPERATION

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Once properly installed, the Goodman AMST48CU1300 air handler operates in conjunction with your outdoor condensing unit (AC only or heat pump) and thermostat to provide conditioned air to your home. The ECM motor automatically adjusts its speed to meet the heating or cooling demands, ensuring consistent comfort and energy efficiency.

- **Thermostat Control:** Set your thermostat to your desired temperature and operating mode (Cool, Heat, Auto, Fan On/Auto).
- **Fan Operation:** The fan can be set to run continuously (Fan On) for improved air circulation or only when heating/cooling (Fan Auto).
- **Airflow:** Ensure all supply and return air vents are unobstructed for optimal airflow.

## MAINTENANCE

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Regular maintenance is crucial for the efficient and reliable operation of your air handler. It is recommended to have a qualified technician perform annual professional maintenance.

- **Air Filter Replacement:** Check and replace the air filter monthly, or more frequently if the unit is in constant use or if you have pets. A dirty filter restricts airflow and reduces efficiency.
- **Coil Cleaning:** The evaporator coil should be inspected and cleaned annually by a professional to ensure optimal heat transfer.
- **Condensate Drain Inspection:** Periodically check the condensate drain pan and line for blockages (e.g., algae, debris). Clear any obstructions to prevent water overflow.

- **Electrical Connections:** A technician should inspect all electrical connections for tightness and wear during annual maintenance.

## TROUBLESHOOTING

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
Unit not turning on	No power, thermostat setting, tripped breaker	Check power supply, verify thermostat settings, reset circuit breaker.
Insufficient heating/cooling	Dirty air filter, blocked vents, low refrigerant, outdoor unit issue	Replace air filter, clear vents, contact technician for refrigerant check or outdoor unit inspection.
Noisy operation	Loose components, fan imbalance, motor issue	Contact technician for inspection and repair.
Water leaking from unit	Clogged condensate drain, cracked drain pan	Clear drain line, contact technician for drain pan inspection.

## SPECIFICATIONS

Detailed specifications for the Goodman AMST48CU1300 Air Handler:

Specification	Value
Manufacturer	Goodman
Part Number	AMST48CU1300
Item Weight	150 pounds
Product Dimensions	23 x 22 x 62 inches
Item Model Number	AMST48CU1300
Size	48K BTU (Cooling), 21" (Cabinet Width)
Power Source	Corded Electric
Voltage	240 Volts
Item Package Quantity	1
Refrigerant Type	R-32 ONLY

## WARRANTY INFORMATION

All Goodman brand equipment is covered by a 10-Year Parts Limited Warranty, 10-Year Unit Replacement Warranty, Lifetime Compressor Warranty, and Lifetime Heat Exchanger Warranty. This warranty is valid if installed by a qualified installer and registered online within 60 days of installation. Online registration is not required in California.

For full warranty details and terms, please refer to the official Goodman warranty documentation provided with your unit or contact Goodman customer service.

## CUSTOMER SUPPORT

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If you have questions, require technical assistance, or need to schedule service for your Goodman AMST48CU1300 Air Handler, please contact your installing HVAC contractor. They are best equipped to provide support specific to your installation.

For general product information or to locate a qualified Goodman dealer, please visit the official Goodman website or refer to the contact information provided in your product packaging.