

Goodman AMST36CU1300

Goodman AMST36CU1300 Air Handler Instruction Manual

3 TON Multi-Position Multi-Speed ECM Based R-32 Air Handler with Internal TXV

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Goodman AMST36CU1300 3 TON Multi-Position Multi-Speed ECM Based R-32 Air Handler. It is crucial to read and understand all instructions before proceeding with any procedures. This unit is designed for use in residential and light commercial HVAC systems.

For optimal performance and safety, installation and servicing must be performed by a qualified HVAC technician. Failure to comply with these instructions may result in property damage, personal injury, or death, and may void the product warranty.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or death. Consult a qualified installer, service agency, or your distributor for information or assistance.

- **Electrical Hazard:** Disconnect all electrical power to the unit before servicing or installing. Failure to do so may result in electrical shock, injury, or death.
- **Refrigerant Hazard:** This unit is compatible with R-32 refrigerant ONLY. Using this unit with any other refrigerant will result in a voided warranty and potential system failure. R-32 is a mildly flammable refrigerant. Handle with care and ensure proper ventilation.
- **Sharp Edges:** Exercise caution when handling sheet metal parts to avoid cuts. Wear appropriate personal protective equipment, including gloves and safety glasses.
- **Heavy Object:** The unit weighs approximately 130 pounds. Use proper lifting techniques and equipment to prevent injury.
- **Professional Installation:** Installation by a qualified HVAC technician is mandatory to ensure safe and correct operation and to maintain warranty validity.

3. SETUP AND INSTALLATION

The Goodman AMST36CU1300 air handler is designed for multi-position installation, offering flexibility for various HVAC system configurations. This unit is compatible with both AC-only condensers and heat pumps.

3.1 Unit Placement

Ensure the installation location provides adequate clearance for airflow, maintenance, and service access. The unit must be installed on a level surface capable of supporting its weight.

3.2 Ductwork Connection

Connect supply and return air ducts according to local codes and industry best practices. Ensure all connections are sealed to prevent air leakage.

3.3 Refrigerant Piping

This unit is designed exclusively for R-32 refrigerant. Connect the refrigerant lines from the outdoor unit to the internal TXV (Thermostatic Expansion Valve) of the air handler. Proper evacuation and charging procedures must be followed by a certified technician.

3.4 Electrical Connections

Connect the unit to the appropriate power supply as specified on the unit's nameplate and in the wiring diagram. All electrical work must comply with national and local electrical codes.

3.5 Optional Heat Kits

The AMST36CU1300 is compatible with a variety of optional field-installed HKT heat kits, which are sold separately. Refer to the specific heat kit's instructions for installation.



Image 1: Front view of the Goodman AMST36CU1300 Air Handler unit, showcasing its compact design and access panels.

4. OPERATING INSTRUCTIONS

Once properly installed and commissioned by a qualified technician, the Goodman AMST36CU1300 air handler operates in conjunction with your thermostat and outdoor unit to provide conditioned air.

4.1 Initial Startup

The initial startup procedure should be performed by a qualified technician to verify proper installation, refrigerant charge, and electrical connections.

4.2 Thermostat Control

The air handler's operation is controlled by your system thermostat. Set your desired temperature and operating mode (e.g., Cool, Heat, Fan Only) on the thermostat. The Nine Speed ECM Motor will adjust its speed to meet the system's demand, providing efficient airflow.

4.3 Fan Operation

The fan can typically be set to 'Auto' or 'On' via the thermostat. In 'Auto' mode, the fan runs only when heating or cooling is required. In 'On' mode, the fan runs continuously to circulate air.

5. MAINTENANCE

Regular maintenance is essential for the longevity, efficiency, and reliable operation of your Goodman air handler. Some maintenance tasks can be performed by the homeowner, while others require a qualified HVAC technician.

5.1 Air Filter Replacement

Inspect and replace the air filter regularly, typically every 1-3 months, depending on usage and environmental conditions. A dirty filter restricts airflow, reduces efficiency, and can damage the unit. Refer to your filter's specifications for the correct size and type.

5.2 Coil Cleaning

The indoor evaporator coil should be inspected and cleaned annually by a qualified technician. Dirt and debris on the coil can significantly impair heat transfer and reduce efficiency.

5.3 Condensate Drain Maintenance

Periodically check the condensate drain pan and line for blockages (e.g., algae, debris). A clogged drain can lead to water overflow and damage. Pour a small amount of distilled vinegar into the drain line annually to help prevent algae growth.

5.4 Professional Servicing

Schedule annual professional maintenance with a qualified HVAC technician. This includes checking refrigerant levels, electrical connections, motor operation, and overall system performance.

6. TROUBLESHOOTING

Before contacting a service technician, review the following common issues and solutions. Always ensure power is disconnected before inspecting any internal components.

- **No Power:** Check the circuit breaker for the HVAC system. Ensure the thermostat is set correctly and has power.
- **Insufficient Airflow:** Check if the air filter is clean and not obstructed. Ensure supply and return vents are open and not blocked.
- **Unit Not Heating/Cooling:** Verify the thermostat is set to the correct mode (Heat/Cool) and desired temperature. Check if the outdoor unit is operating.
- **Unusual Noises:** Minor operational noises are normal. However, if you hear loud grinding, squealing, or banging, turn off the unit immediately and contact a qualified technician.
- **Water Leakage:** Check the condensate drain line for blockages. Ensure the unit is level.

For any issues beyond basic troubleshooting, or if you are uncomfortable performing these checks, contact a qualified HVAC service technician.

7. SPECIFICATIONS

Feature	Specification
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Feature	Specification
Model Number	AMST36CU1300
Capacity	3 TON
Motor Type	Nine Speed ECM
Refrigerant Compatibility	R-32 ONLY
Dimensions (L x W x H)	23 x 22 x 53 inches
Item Weight	130 pounds
Manufacturer	Goodman
Internal Component	Internal TXV

8. WARRANTY INFORMATION

All Goodman brand equipment, including the AMST36CU1300 air handler, is covered by a 10-year parts limited warranty. To qualify for the full 10-year warranty, the unit must be installed by a qualified installer and registered online within 60 days of installation. Online registration is not required in California.

For complete details regarding warranty terms, conditions, and exclusions, please refer to the official Goodman warranty documentation provided with your unit or visit the Goodman official website. Keep your proof of purchase and installation records for warranty claims.

9. SUPPORT

If you require technical assistance, service, or have questions not covered in this manual, please contact your installing HVAC contractor. They are best equipped to provide support specific to your installation.

You may also visit the official Goodman website for additional resources, product information, and to locate authorized service providers in your area. [Goodman Manufacturing](#)

10. PRODUCT VIDEOS

Your browser does not support the video tag.

Video 1: Overview of Goodman Air Handler features and benefits. (Duration: 3:37)

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Video 2: Detailed look at the installation process for a Goodman Air Handler. (Duration: 1:15)

Your browser does not support the video tag.

Video 3: Demonstration of key operational aspects of the Goodman Air Handler. (Duration: 3:37)