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› Goodman 3 Ton 14.5 SEER R-32 Air Conditioning System with Multi Position Air Handler User Manual

Goodman GLXS4BA3610-AMST36CU1300

Goodman 3 Ton 14.5 SEER R-32 Air Conditioning System

MODELS: GLXS4BA3610 CONDENSER & AMST36CU1300 AIR HANDLER

User Manual

1. Introduction

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Goodman 3 Ton 14.5 SEER R-32 Air Conditioning System. This system consists of a GLXS4BA3610 Condenser Unit and an AMST36CU1300 Multi-Position Air Handler. This system is designed for cooling only and does not provide heating. For heating functionality, a heat pump system or an HKTS series heat kit addition is required. Please read this manual thoroughly before installation or operation and retain it for future reference. Proper installation by a qualified professional is crucial for system performance and warranty validity.



Figure 1: Goodman GLXS4BA3610 Condenser Unit (left) and AMST36CU1300 Air Handler Unit (right).

2. Safety Information

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Installation and service must be performed by a qualified installer or service agency.

- **Electrical Hazard:** Disconnect all power to the unit before servicing or installing. Failure to do so may result in severe injury or death.
- **Refrigerant Handling:** This system uses R-32 refrigerant. R-32 is a mildly flammable refrigerant. Only qualified and certified technicians should handle R-32 refrigerant.
- **Sharp Edges:** Exercise caution when handling sheet metal parts to avoid cuts. Wear appropriate personal protective equipment, including gloves and safety glasses.
- **Heavy Equipment:** The units are heavy. Use proper lifting techniques and equipment to prevent injury.
- **Professional Installation:** This system requires installation by a qualified HVAC technician to ensure safe and correct operation, and to validate the product warranty.

3. Product Features

The Goodman Air Conditioning System is designed for efficient cooling performance. Key features include:

- **Energy-Efficient Compressor:** The outdoor condenser unit features an energy-efficient compressor for optimized cooling.

- **Single-Speed Condenser Fan Motor:** Ensures consistent airflow and cooling performance.
- **R-32 Refrigerant Optimized:** Both the condenser and air handler are designed for use with R-32 refrigerant, which offers improved efficiency.
- **Multi-Position Air Handler:** The AMST36CU1300 air handler supports upflow, horizontal right, or horizontal left configurations, providing flexible installation options.
- **Internal Thermal Expansion Valves:** Factory-installed TXVs in the air handler optimize cooling performance.
- **High Efficiency Multi-Speed ECM Blower Motor:** Ensures efficient airflow and enhanced comfort.
- **Serviceability:** Designed with user-friendliness in mind, including service valves, gauge ports, and inspection points.



Figure 2: GLXS4BA3610 Condenser Unit



Figure 3: AMST36CU1300 Multi-Position Air Handler Unit

4. Installation Guidelines

Installation of this air conditioning system must be performed by a qualified and licensed HVAC professional.

- **System Configuration:** The air handler supports multi-position installation (upflow, horizontal right, horizontal left). For downflow installations, an optional downflow kit must be purchased separately.
- **Refrigerant:** The system is pre-charged for 15 feet of tubing and uses R-32 refrigerant. Ensure proper handling and charging procedures are followed by a certified technician.
- **Electrical Requirements:** The system operates on AC 208/230 V, single phase. Ensure the electrical supply meets these specifications and is properly wired according to local codes.
- **Line Set Connections:** Liquid Line Valve Connection: 3/8 Inches. Suction Line Valve Connection: 3/4 Inches.
- **Accessories:** Thermostats, line sets, heat kits, outdoor sensors, and other accessories are sold separately and may be required for complete system functionality.

Dimensions:

- **Condenser Unit (GLXS4BA3610):** 29 inches (W) x 29 inches (D) x 32.5 inches (H)
- **Air Handler Unit (AMST36CU1300):** 21 inches (W) x 21 inches (D) x 53.44 inches (H)

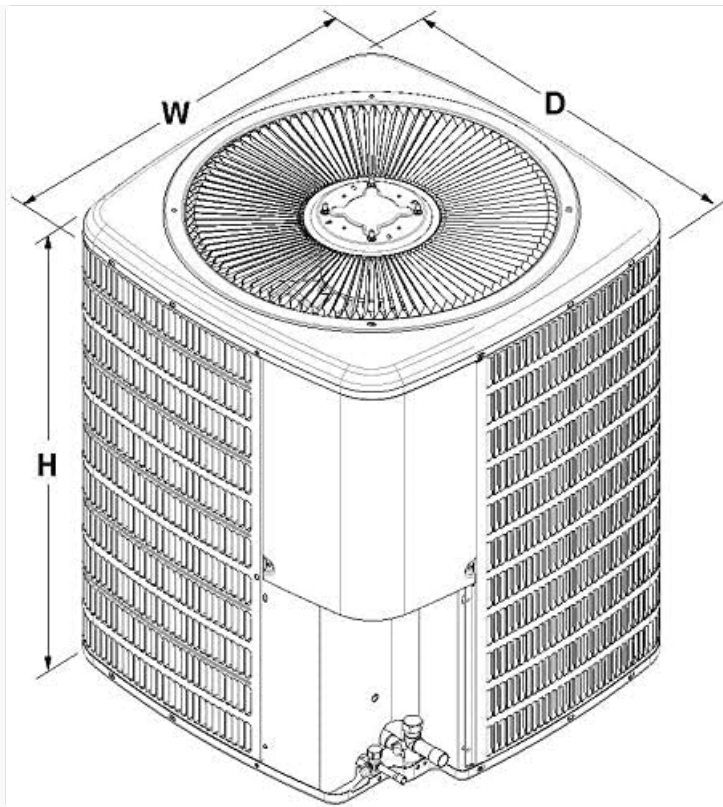


Figure 4: Condenser Unit with labeled dimensions (W, D, H).

5. Operating Instructions

This Goodman system is designed for cooling operation only. Your system's operation is controlled by a thermostat (sold separately).

- **Setting the Thermostat:** Set your thermostat to the 'COOL' mode. Adjust the desired temperature setting to a level below the current room temperature to initiate cooling.
- **Fan Operation:** The thermostat typically allows you to set the fan to 'AUTO' or 'ON'. In 'AUTO' mode, the fan runs only when the cooling system is active. In 'ON' mode, the fan runs continuously, circulating air even when cooling is not required.
- **Temperature Control:** Maintain a consistent temperature setting for optimal comfort and energy efficiency. Avoid frequent, drastic temperature changes.

6. Maintenance

Regular maintenance is essential for the longevity and efficient operation of your air conditioning system. It is recommended to have a qualified HVAC technician perform annual professional maintenance.

- **Air Filter Replacement:** Check and replace the air filter in your air handler monthly, or more frequently if you have pets or allergies. A dirty filter restricts airflow and reduces efficiency.
- **Outdoor Coil Cleaning:** Keep the outdoor condenser coil free of dirt, leaves, and other debris. Clear any obstructions around the unit to ensure proper airflow. This should be done periodically, especially before the cooling season.
- **Drain Pan and Line:** Ensure the condensate drain pan is clear and the drain line is not clogged. A clogged drain can lead to water overflow and damage.
- **Professional Inspection:** Schedule an annual inspection and tune-up by a qualified technician. This includes checking refrigerant levels, electrical connections, and overall system performance.

7. Troubleshooting

Before contacting a service technician, review these common issues and potential solutions:

Problem	Possible Cause	Solution
System not cooling	Thermostat setting incorrect	Check thermostat mode and temperature
	Dirty air filter	Replace air filter
	Power supply issue	Check circuit breaker
	Refrigerant leak	Contact a qualified technician
Weak airflow	Dirty air filter	Replace air filter
	Blocked return air vents	Clear obstructions
	Blower motor issue	Contact a qualified technician
Unusual noises	Loose parts	Turn off unit and contact a qualified technician
	Motor issues	
	Refrigerant issues	
Water leakage	Clogged condensate drain line	Clear drain line
	Cracked drain pan	Contact a qualified technician

If troubleshooting steps do not resolve the issue, contact a qualified HVAC service technician.

8. Technical Specifications

Specification	Detail
Brand	Goodman
Condenser Model Number	GLXS4BA3610
Air Handler Model Number	AMST36CU1300
Cooling Capacity	36,000 BTU (3 Ton)
SEER2 Rating	14.5
EER	12.2
Refrigerant Type	R-32
Voltage (AC & Air Handler)	208/230 V
Phase	1
Air Handler Motor	High Efficiency Multi-Speed ECM Blower
Liquid Line Valve Connection	3/8 Inches
Suction Line Valve Connection	3/4 Inches
Condenser Dimensions (W x D x H)	29" x 29" x 32.5"
Air Handler Dimensions (W x D x H)	21" x 21" x 53.44"

Specification	Detail
Standby Power Consumption	14 Watts
AHRI Certified	Yes (Certificate #214859638)

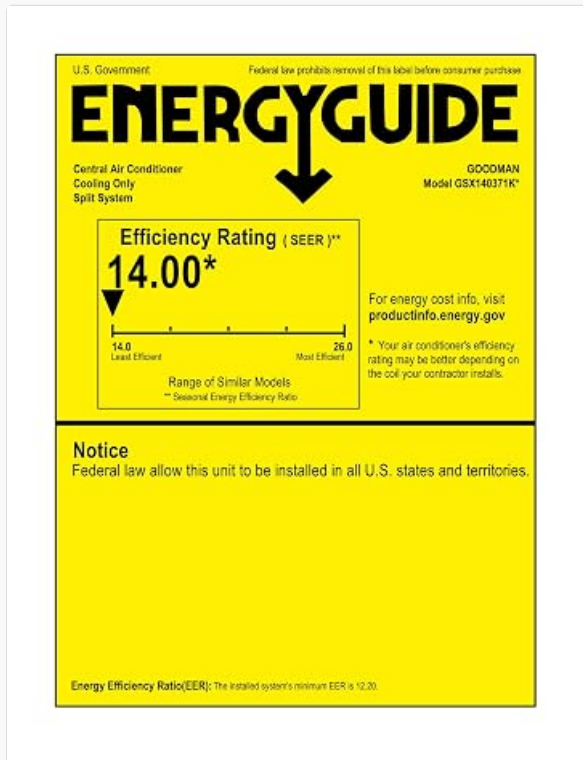


Figure 5: EnergyGuide Label for Goodman GLXS4BA3610 Condenser Unit.

9. Warranty and Support

This Goodman Air Conditioning System comes with a **10-year parts limited warranty**. To validate this warranty, the system must be installed by a qualified installer and registered online within 60 days of installation.

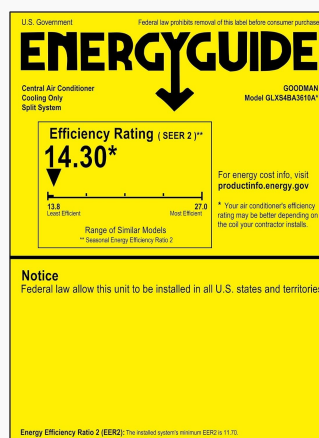


Figure 6: Goodman 10-Year Limited Warranty.

For warranty registration, technical support, or to locate a qualified service provider, please visit the official Goodman website or contact their customer service department. You can also find more information on the [Goodman Brand Store on Amazon](#).

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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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