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Goodman GLXS4BA3610 AMST36CU1300

Goodman 3 Ton 14.3 SEER A/C Straight Cool System User Manual

Models: GLXS4BA3610 (Outdoor Unit) & AMST36CU1300 (Indoor Air Handler)

1. PRODUCT OVERVIEW

This manual provides essential information for the installation, operation, and maintenance of your Goodman 3 Ton 14.3 SEER A/C Straight Cool System. This system is designed to provide efficient cooling for your home and consists of an outdoor condenser unit (GLXS4BA3610) and an indoor multi-position air handler (AMST36CU1300). **Important Note:** This system is designed for cooling only and **does not provide heat**. For heating capabilities, a heat pump system or an additional HKTS series heat kit must be integrated.



Figure 1: Overview of the Goodman 3 Ton A/C Straight Cool System components. This image displays the outdoor condenser unit, the indoor air handler, and an optional heat kit.

Key Features:

- **Efficient Cooling:** 14.5 SEER rating for energy-efficient operation.
- **Durable Construction:** Heavy-gauge, galvanized steel enclosure cabinet for the outdoor unit, and corrosion-resistant aluminum for the indoor air handler.
- **R-32 Refrigerant:** Utilizes R-32, a chlorine-free refrigerant, for efficient heat transfer.
- **Multi-Position Air Handler:** The AMST36CU1300 air handler supports upflow, horizontal right, or horizontal

left installation configurations.

- **Factory-Installed Components:** Includes a factory-installed in-line filter drier and internal thermal expansion valves for optimized performance.
- **Quiet Operation:** Single-speed condenser fan motor designed for dependable, quiet airflow.

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:** Ensure power is disconnected before servicing. High voltage can cause severe injury or death.
- **Refrigerant Handling:** This system contains R-32 refrigerant. Only qualified personnel should handle refrigerants. Improper handling can cause frostbite or other injuries.
- **Sharp Edges:** Be cautious of sharp edges on sheet metal parts during installation and maintenance. Wear appropriate personal protective equipment (PPE).
- **Heavy Equipment:** The units are heavy. Use proper lifting techniques and equipment to prevent injury.
- **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 HVAC system requires specialized knowledge and tools. It is mandatory that installation be performed by a qualified HVAC professional to ensure proper function, safety, and warranty validity.

3.1 Pre-Installation Checks

- Verify that the system components (GLXS4BA3610 outdoor unit and AMST36CU1300 indoor air handler) match the installation requirements.
- Ensure the installation site complies with local building codes and regulations.
- Confirm electrical supply meets the system's requirements (refer to specifications).

3.2 Outdoor Unit Placement (GLXS4BA3610)

The outdoor condenser unit should be placed on a level, stable surface, away from obstructions that could impede airflow. Ensure adequate clearance around the unit for proper operation and maintenance.



Figure 2: Goodman GLXS4BA3610 Outdoor Condenser Unit. This image highlights the robust construction and grille design of the outdoor unit.



Figure 3: Top view of the Goodman GLXS4BA3610 Outdoor Condenser Unit. This perspective shows the fan assembly and protective top grille.

3.3 Indoor Air Handler Placement (AMST36CU1300)

The AMST36CU1300 air handler offers flexible installation options:

- **Upflow:** Air enters the bottom and exits the top.
- **Horizontal Right:** Air enters the left and exits the right (when facing the unit).

- **Horizontal Left:** Air enters the right and exits the left (when facing the unit).

The coil mounting track allows for easy repositioning and flexible installation. Ensure proper condensate drainage is established.





Figure 4: Goodman AMST36CU1300 Indoor Air Handler Unit. This image displays the air handler's exterior, including connection points.

3.4 Refrigerant Lines and Electrical Connections

The outdoor unit is pre-charged for 15 feet of tubing. Longer line sets will require additional refrigerant. All refrigerant and electrical connections must be made by a qualified technician according to local codes and manufacturer specifications.

Note: Accessories such as thermostats, heat kits, and outdoor sensors are sold separately. For downflow installations, an optional downflow kit must be purchased separately.

4. OPERATING INSTRUCTIONS

Once installed by a qualified professional, your Goodman A/C system is designed for straightforward operation via a compatible thermostat (sold separately).

4.1 Initial Startup

1. Ensure all electrical connections are secure and power is supplied to the unit.
2. Set your thermostat to the "Cool" mode.
3. Adjust the desired temperature setting to a level below the current room temperature.
4. The system should begin cooling within a few minutes. Allow the system to run for at least 30 minutes to stabilize.

4.2 Normal Operation

- Maintain your thermostat at a comfortable setting. Frequent adjustments can reduce efficiency.
- Ensure all windows and doors are closed when the system is operating to maximize cooling efficiency.
- The system will cycle on and off as needed to maintain the set temperature.

5. MAINTENANCE

Regular maintenance is crucial for the longevity and efficient operation of your Goodman A/C system. Some tasks can be performed by the homeowner, while others require a qualified technician.

5.1 Homeowner Maintenance

- **Air Filter Replacement:** Check and replace the air filter in your indoor air handler every 1-3 months, or more frequently if you have pets or allergies. A dirty filter restricts airflow and reduces efficiency.

- **Clear Outdoor Unit:** Keep the area around the outdoor condenser unit free from debris, leaves, grass clippings, and other obstructions. Ensure at least 2 feet of clearance on all sides.
- **Condensate Drain:** Periodically check the condensate drain line for blockages. A clogged drain can lead to water leaks.

5.2 Professional Maintenance (Annual)

It is recommended to have a qualified HVAC technician perform annual maintenance, typically in the spring before the cooling season begins. This service usually includes:

- Cleaning of indoor and outdoor coils.
- Checking refrigerant levels and pressure.
- Inspecting electrical connections and components.
- Lubricating moving parts (if applicable).
- Checking thermostat calibration.
- Inspecting ductwork for leaks.

6. TROUBLESHOOTING

Before calling for service, review the following common issues and solutions. Always ensure power is off before inspecting any internal components.

Problem	Possible Cause	Solution
System not cooling	Thermostat set incorrectly; Power supply off; Dirty air filter; Outdoor unit obstructed; Refrigerant leak.	Check thermostat settings; Ensure circuit breaker is on; Replace air filter; Clear obstructions around outdoor unit; Contact a qualified technician for refrigerant issues.
Poor cooling performance	Dirty air filter; Dirty coils; Undersized system; Leaky ductwork.	Replace air filter; Clean outdoor coil (professional recommended); Consult technician for system sizing or ductwork inspection.
Unusual noises	Loose parts; Fan motor issues; Refrigerant issues.	Turn off unit and inspect for loose panels; Contact a qualified technician for internal component inspection.
Water leaking from indoor unit	Clogged condensate drain line; Frozen evaporator coil.	Clear condensate drain line; Check air filter (if frozen coil); Contact technician if issue persists.

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

7. SPECIFICATIONS

The following specifications apply to the Goodman 3 Ton 14.3 SEER A/C Straight Cool System (Models GLXS4BA3610 & AMST36CU1300).

Feature	Detail
Brand	Goodman
Outdoor Unit Model	GLXS4BA3610

Feature	Detail
Indoor Air Handler Model	AMST36CU1300
System Capacity	3 Tons (36,000 BTU)
SEER Rating	14.5
Refrigerant Type	R-32
Noise Level	56 dB
Installation Type	Split System
Outdoor Unit Material	Galvanized Steel
Indoor Unit Material	Corrosion-resistant Aluminum
Air Handler Installation Positions	Upflow, Horizontal Right, Horizontal Left
AHRI Certified	Yes, Certificate Number 214859638. Visit AHRI Directory

8. WARRANTY AND SUPPORT

Goodman stands behind its products with a comprehensive warranty, provided certain conditions are met.

8.1 Warranty Information

This system comes with a **10-year warranty on all parts**. To validate this warranty, the system must be:

- Installed by a qualified HVAC professional.
- 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.

8.2 Customer Support

For technical assistance, warranty claims, or to locate a qualified service provider, please refer to the official Goodman website or contact their customer service department.

You can also visit the official Goodman store for more product information:[Goodman Store on Amazon](#)

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