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ACiQ B0F3K8RDYN

ACiQ 1 Ton 21 SEER2 Central Inverter Heat Pump System User Manual

Model: B0F3K8RDYN

1. SAFETY INFORMATION

Read all safety warnings and instructions carefully before installing, operating, or performing maintenance on this heat pump system. Failure to follow these instructions may result in property damage, personal injury, or death.

- **Qualified Personnel:** Installation and service must be performed by a qualified, licensed HVAC technician.
- **Electrical Safety:** Ensure the power supply is disconnected before performing any electrical work. Follow all local and national electrical codes.
- **Refrigerant Handling:** This system uses R-454B refrigerant. Only qualified personnel should handle refrigerants. Improper handling can cause injury or environmental damage.
- **Sharp Edges:** Be aware of sharp edges on metal parts during installation and maintenance. Wear appropriate personal protective equipment (PPE).
- **Heavy Equipment:** The outdoor and indoor units are heavy. Use proper lifting techniques and equipment to prevent injury.

2. PRODUCT OVERVIEW

The ACiQ 1 Ton 21 SEER2 Central Inverter Heat Pump System is a high-efficiency heating and cooling solution designed for year-round comfort. It features advanced inverter technology for precise temperature control and reduced energy consumption.

Key Features:

- **Inverter Technology:** Adjusts power based on demand, providing precise temperature control, reduced energy consumption, and quieter operation.
- **High Efficiency:** 21 SEER2 rating for significant energy savings.
- **All-Season Performance:** Capable of heating down to -13°F and cooling up to 122°F, ensuring comfort in extreme temperatures. Includes a chassis and crankcase heater for winter protection.

- **Durable Construction:** Features an aluminum coil for reliability and fiberglass-free insulation for improved efficiency and reduced condensation.
- **Multi-Positional Air Handler:** Supports horizontal, vertical, upflow, or downflow installation for versatile placement.

System Components:

- Outdoor Condenser Unit
- Indoor Air Handler Unit
- 5kW Back-up Heat Kit
- Smart LCD Thermostat



Figure 2.1: ACiQ Heat Pump System Components with Dimensions. The outdoor unit measures approximately 12.99 inches deep, 31.69 inches wide, and 21.81 inches high. The indoor air handler measures approximately 17.52 inches deep, 21.02 inches wide, and 45.00 inches high.

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Video 2.2: Overview of ACiQ HPD/EHPD Condenser and System. This video provides a general introduction to the ACiQ heat pump condenser and overall system, highlighting its features and benefits.

3. INSTALLATION AND SETUP

Proper installation is crucial for the optimal performance and longevity of your ACiQ heat pump system. This section provides general guidelines; always refer to the detailed installation manual provided with your unit for specific instructions.

3.1 Site Selection

- **Outdoor Unit:** Select a location with adequate airflow, away from obstructions, and on a stable, level surface. Ensure sufficient clearance for maintenance.
- **Indoor Air Handler:** Choose a location that allows for efficient air distribution throughout the conditioned space. Consider accessibility for maintenance and filter changes.

3.2 Multi-Positional Air Handler Installation

The indoor air handler unit is designed for flexible installation to suit various home configurations. It can be installed in the following positions:

- **Upflow:** Air enters from the bottom and exits from the top.
- **Downflow:** Air enters from the top and exits from the bottom.
- **Horizontal (Left or Right):** Air enters from one side and exits horizontally.

Multi-Positional Air Handler Unit



Figure 3.1: Multi-Positional Air Handler Unit. This diagram shows how the air handler can be configured for upflow, downflow, or horizontal airflow, providing versatility for different installation requirements.

3.3 Electrical and Refrigerant Connections

All electrical wiring and refrigerant line connections must be performed by a certified technician according to local codes and the detailed wiring diagrams provided in the full installation manual.

4. OPERATING INSTRUCTIONS

Your ACiQ heat pump system is controlled by a smart LCD thermostat, offering intuitive control over your home's climate.

4.1 Thermostat Functions

The smart LCD thermostat provides the following control options:

- **Mode Selection:** Choose between Heating, Cooling, Fan Only, or Auto modes.
- **Temperature Settings:** Adjust desired temperature setpoints.
- **Timer Settings:** Program the system to turn on or off at specific times.

- **Weekly Scheduling:** Create custom heating and cooling schedules for different days of the week.
- **Auto-Restart:** The system will automatically restart with previous settings after a power outage.
- **Child Lock:** Prevents unauthorized changes to settings.
- **Error Code Display:** Provides diagnostic error codes for easier troubleshooting.



Figure 4.1: ACiQ Smart Thermostat and Wi-Fi Connected App. This image displays the user interface for controlling the ACiQ system via a smart thermostat and a mobile application, allowing for remote climate management.

4.2 Cooling and Heating Capacity

The inverter technology allows the system to maintain comfort across a wide range of outdoor temperatures.

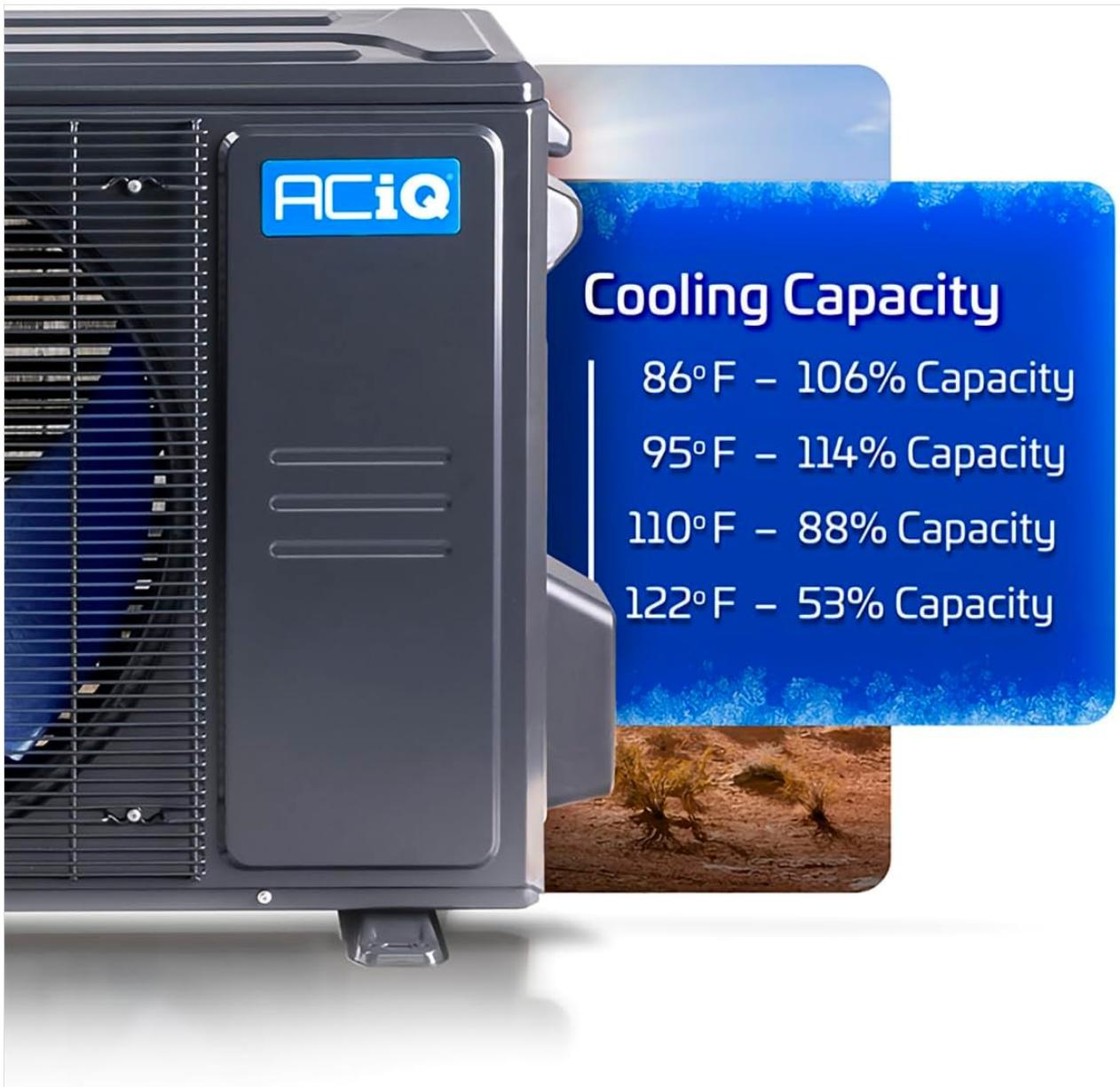


Figure 4.2: Cooling Capacity. This chart illustrates the system's cooling performance: 86°F - 106% Capacity, 95°F - 114% Capacity, 110°F - 88% Capacity, 122°F - 53% Capacity.



Figure 4.3: Heating Capacity. This chart illustrates the system's heating performance: -22°F - N/A, -13°F - 41% Capacity, 0°F - 56% Capacity, 17°F - 70% Capacity, 32°F - 84% Capacity.

OPERATES IN EXTREME COLD

STAY WARM DOWN TO

-13°F



Figure 4.4: Operation in Extreme Cold. The ACiQ heat pump is designed to operate effectively in cold conditions, providing heating down to -13°F.



Figure 4.5: Operation in Extreme Heat. The ACiQ heat pump maintains cooling performance even in high ambient temperatures, up to 122°F.

5. MAINTENANCE

Regular maintenance ensures the efficiency and longevity of your ACiQ heat pump system. Always disconnect power before performing any maintenance.

5.1 Air Filter Replacement

Check and replace the air filter in the indoor air handler every 1-3 months, or more frequently if the system is used heavily or in dusty environments. A clean filter is essential for optimal airflow and indoor air quality.

5.2 Outdoor Unit Cleaning

Keep the outdoor condenser unit free from debris such as leaves, grass clippings, and dirt. Periodically clean the coils with a soft brush or hose to ensure proper heat exchange. Do not use high-pressure washers.

5.3 Professional Inspection

It is recommended to have a qualified HVAC technician inspect and service your system annually. This

includes checking refrigerant levels, electrical connections, and overall system performance.

6. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For complex problems or if these steps do not resolve the issue, contact a qualified HVAC technician.

Problem	Possible Cause	Solution
System not heating/cooling	Incorrect thermostat setting, dirty air filter, power issue, low refrigerant	Check thermostat mode and temperature. Replace air filter. Check circuit breaker. Contact technician for refrigerant check.
Reduced airflow	Dirty air filter, blocked return/supply vents	Replace air filter. Clear any obstructions from vents.
Unusual noises	Loose parts, fan obstruction, motor issue	Turn off system and inspect for loose panels or debris. If noise persists, contact technician.
Thermostat displays error code	System malfunction	Note the error code and consult the detailed thermostat manual or contact a technician.

7. SPECIFICATIONS

Feature	Detail
Brand	ACiQ
Model Number	B0F3K8RDYN
Capacity	1 Ton (12000 British Thermal Units)
SEER2 Efficiency	18.8 SEER2
Refrigerant Type	R-454B
Noise Level	33 Decibels
Outdoor Unit Dimensions (D x W x H)	13.46" x 35.04" x 26.5"
Installation Type	Split System
Special Features	Inverter Compressor, Smart Connectivity
Included Heat Kit	5kW Back-up Heat Kit

8. WARRANTY AND SUPPORT

8.1 Warranty Terms

This ACiQ heat pump system comes with a comprehensive warranty:

- **7-Year Parts Warranty**

- **12-Year Compressor Warranty**

Note: Warranty terms are valid when the system is installed by a qualified technician and registered online with the manufacturer at no additional charge. Please refer to the official ACiQ warranty documentation for full details and registration procedures.

8.2 Customer Support

For technical assistance, warranty claims, or further information, please contact ACiQ customer support. Contact details can typically be found on the manufacturer's website or in the packaging materials.