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ACiQ B0DHFF2DKL

ACiQ 2.5 Ton 17 SEER2 Central Inverter Heat Pump System User Manual

Model: B0DHFF2DKL

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your ACiQ 2.5 Ton 17 SEER2 Central Inverter Heat Pump System. This system is designed to provide efficient heating and cooling for residential and light commercial applications. Please read this manual thoroughly before attempting any installation or operation to ensure proper function and safety.

2. Safety Information

Always prioritize safety. Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Consult a qualified installer, service agency, or the gas supplier for information or assistance. The information contained in this manual is intended for use by qualified service personnel only.

- **Electrical Safety:** Ensure the power supply is disconnected before performing any service or maintenance. All electrical wiring must comply with local and national electrical codes.
- **Refrigerant Handling:** This system uses R-454B refrigerant. Only certified technicians should handle refrigerants.
- **Installation:** Installation must be performed by a licensed HVAC professional.
- **Personal Protective Equipment:** Always wear appropriate personal protective equipment (PPE) such as gloves and safety glasses during installation and maintenance.

3. Key Features

- **Inverter Technology:** Provides precise temperature control, reduced energy consumption, and quieter operation.
- **High Efficiency:** 18.8 SEER2 and 9.7 HSPF2 ratings for energy savings.

- **Wide Operating Range:** Reliable performance from -13°F to 122°F.
- **Quiet Operation:** Indoor noise levels as low as 44 dBA, outdoor unit at 60 dBA.
- **Durable Components:** Rotary compressor, aluminum coil, and fiberglass-free insulation.
- **Eco-Friendly Refrigerant:** Utilizes R-454B refrigerant.
- **Flexible Installation:** Supports horizontal and vertical air handler installation.
- **Smart Controls:** Compatible with wired controllers, WiFi, and third-party thermostats.
- **Integrated Back-up Heat:** Includes a 10kW back-up heat kit for supplemental heating.

4. Components Overview

The ACiQ 2.5 Ton 17 SEER2 Central Inverter Heat Pump System includes the following main components:

- Outdoor Condensing Unit (Heat Pump)
- Indoor Air Handler Unit
- 10kW Back-up Heat Kit
- 30' Line Set
- Gauge Electrical Whip
- 60A Non-Fused Disconnect Switch
- WiFi Thermostat
- Surge Protector
- CPS Charging Adapter
- Wall Sleeve

Figure 1: Overview of the ACiQ 2.5 Ton 17 SEER2 Central Inverter Heat Pump System, showing the outdoor unit, indoor air handler, 10kW back-up heat kit, thermostat, line set, and various installation accessories.

5. Setup and Installation

Installation of this ACiQ heat pump system requires specialized knowledge and tools. It must be performed by a qualified and licensed HVAC technician to ensure safety, compliance with local codes, and optimal performance. Refer to the detailed installation manual provided with the product for specific instructions.

5.1 Pre-Installation Checks

- Verify that the electrical supply matches the unit's requirements (Indoor: 115/208/230V, 60Hz, 1Ph; Outdoor: 208/230V, 60Hz, 1Ph).
- Ensure adequate space for both indoor and outdoor units, allowing for proper airflow and maintenance access.
- Confirm that the maximum piping length (164 ft / 50m) and height difference (82 ft / 25m) are not exceeded.

5.2 Air Handler Installation

The indoor air handler unit is designed for flexible installation, supporting upflow, downflow, and horizontal configurations to suit various space requirements.

Figure 2: Diagram illustrating the multi-positional capabilities of the indoor air handler unit, showing options for upflow, downflow, and horizontal installation.

5.3 Outdoor Unit Placement

Consider the outdoor unit's dimensions and required clearances for optimal performance and maintenance. The unit features a compact design compared to traditional systems.

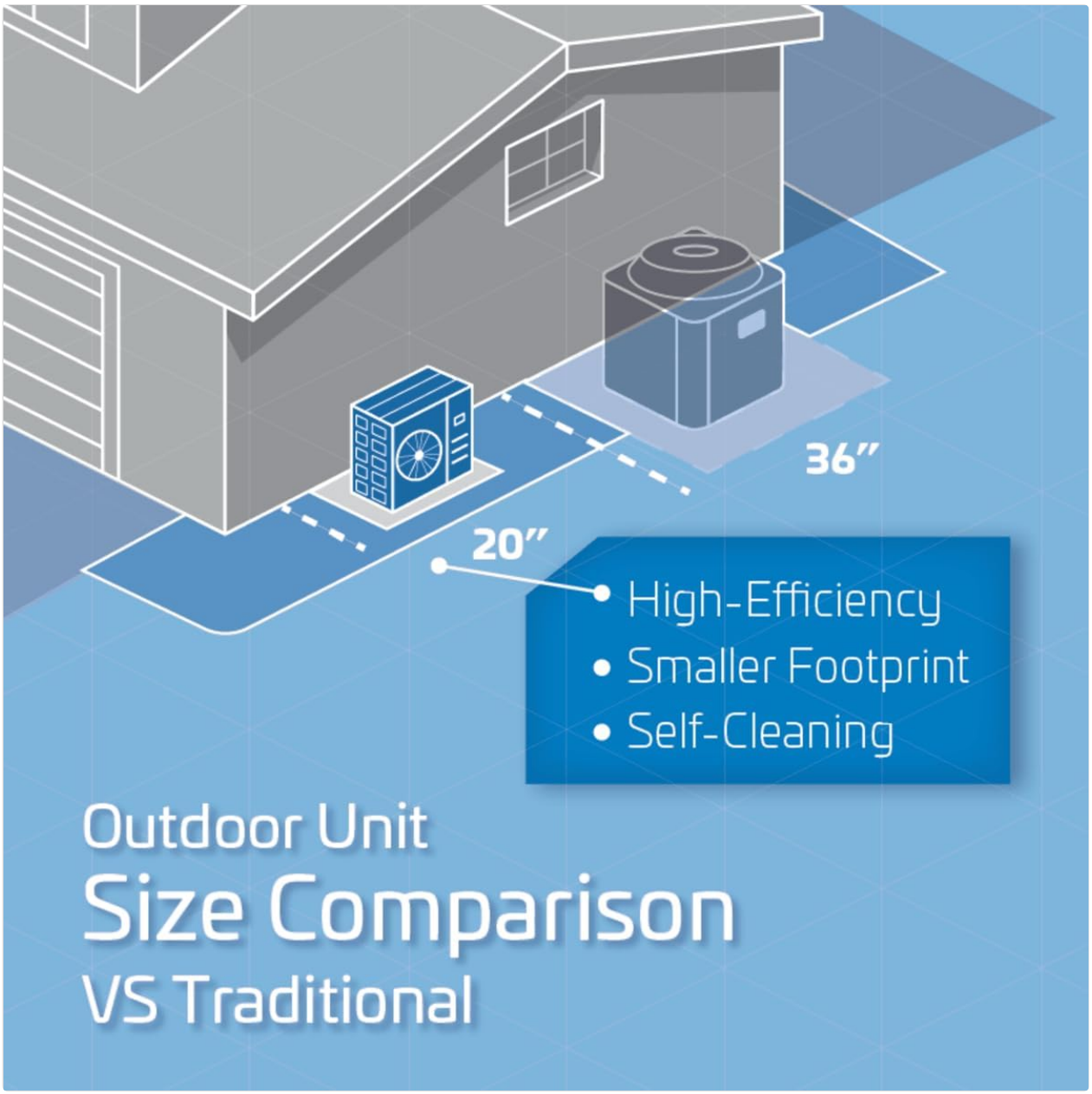


Figure 3: Graphic comparing the smaller footprint of the ACiQ outdoor unit (20 inches clearance) versus a traditional unit (36 inches clearance), highlighting its high efficiency and self-cleaning features.

6. Operating Instructions

Your ACiQ heat pump system offers advanced control options for comfortable and efficient operation.

6.1 Basic Operation Modes

- **Cooling Mode:** Provides cooling with a capacity of 31,000 BTU/hr. Operates efficiently from -13°F to 122°F ambient temperatures.
- **Heating Mode:** Provides heating with a capacity of 30,000 BTU/hr at 47°F. Reliable warmth down to -13°F. The 10kW back-up heat kit provides supplemental heat when needed.
- **Fan Mode:** Circulates air without heating or cooling.
- **Auto Mode:** Automatically switches between heating and cooling to maintain the set temperature.

Figure 4: The ACiQ outdoor unit installed on a patio, demonstrating its ability to operate effectively in extreme heat conditions, up to 122°F.

Figure 5: The ACiQ outdoor unit partially covered in snow, illustrating its capability to operate in extreme cold temperatures, down to -13°F.

6.2 Smart Controls

The system can be controlled via the included wired thermostat, WiFi-enabled app, or compatible third-party thermostats. The WiFi app allows for remote control and monitoring of your system.

Figure 6: Image showing the ACiQ Smart Home mobile application interface on a smartphone alongside a wired thermostat, demonstrating the system's smart control capabilities for climate management.

7. Maintenance

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

- **Air Filter Replacement:** Check and replace air filters in the indoor air handler every 1-3 months, or more frequently if needed. Dirty filters restrict airflow and reduce efficiency.
- **Outdoor Unit Cleaning:** Keep the outdoor unit free from debris, leaves, and dirt. Periodically clean the coils with a soft brush or water hose (ensure power is off).
- **Drainage System:** Ensure the condensate drain line is clear and free of blockages to prevent water overflow.
- **Professional Inspection:** Schedule annual inspections and maintenance by a qualified HVAC technician.

8. Troubleshooting

This section provides solutions for common issues. For complex problems, contact a qualified HVAC technician.

- **No Power:** Check circuit breakers and ensure the disconnect switch is in the ON position.
- **Insufficient Heating/Cooling:** Verify thermostat settings, check air filters for blockage, and ensure outdoor unit is not obstructed.
- **Unusual Noises:** Minor operational noises are normal. Loud or unusual noises may indicate a problem requiring professional inspection.
- **Water Leaks:** Check condensate drain line for blockages.

9. Specifications

Figure 7: Image displaying the dimensions of both the indoor air handler unit (49.02" H x 21.02" W x 21.02" D) and the outdoor condensing unit (35.04" H x 37.24" W x 16.14" D).

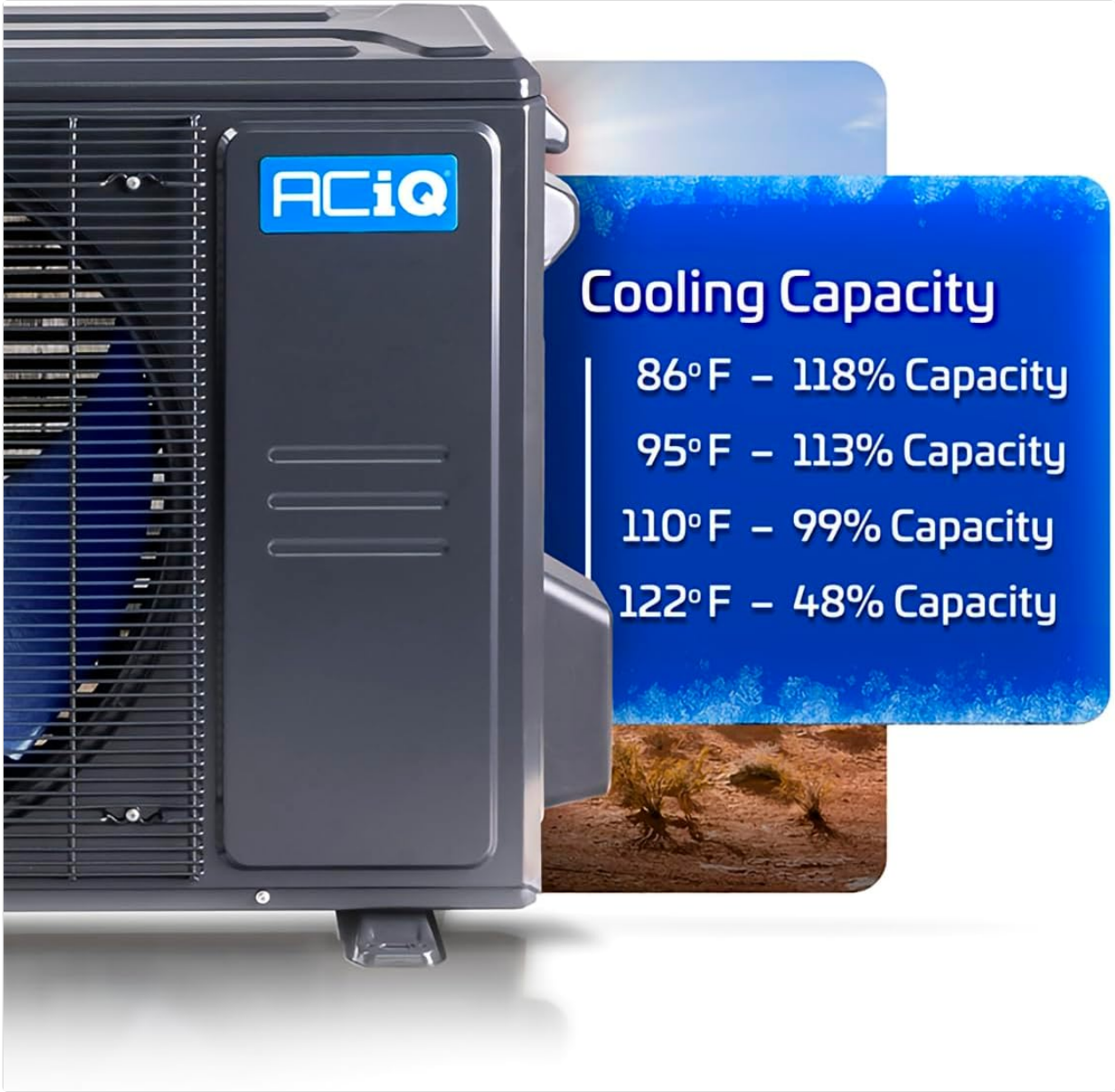


Figure 8: Chart detailing the cooling capacity of the ACiQ system at various outdoor temperatures: 86°F (118% capacity), 95°F (113% capacity), 110°F (99% capacity), and 122°F (48% capacity).

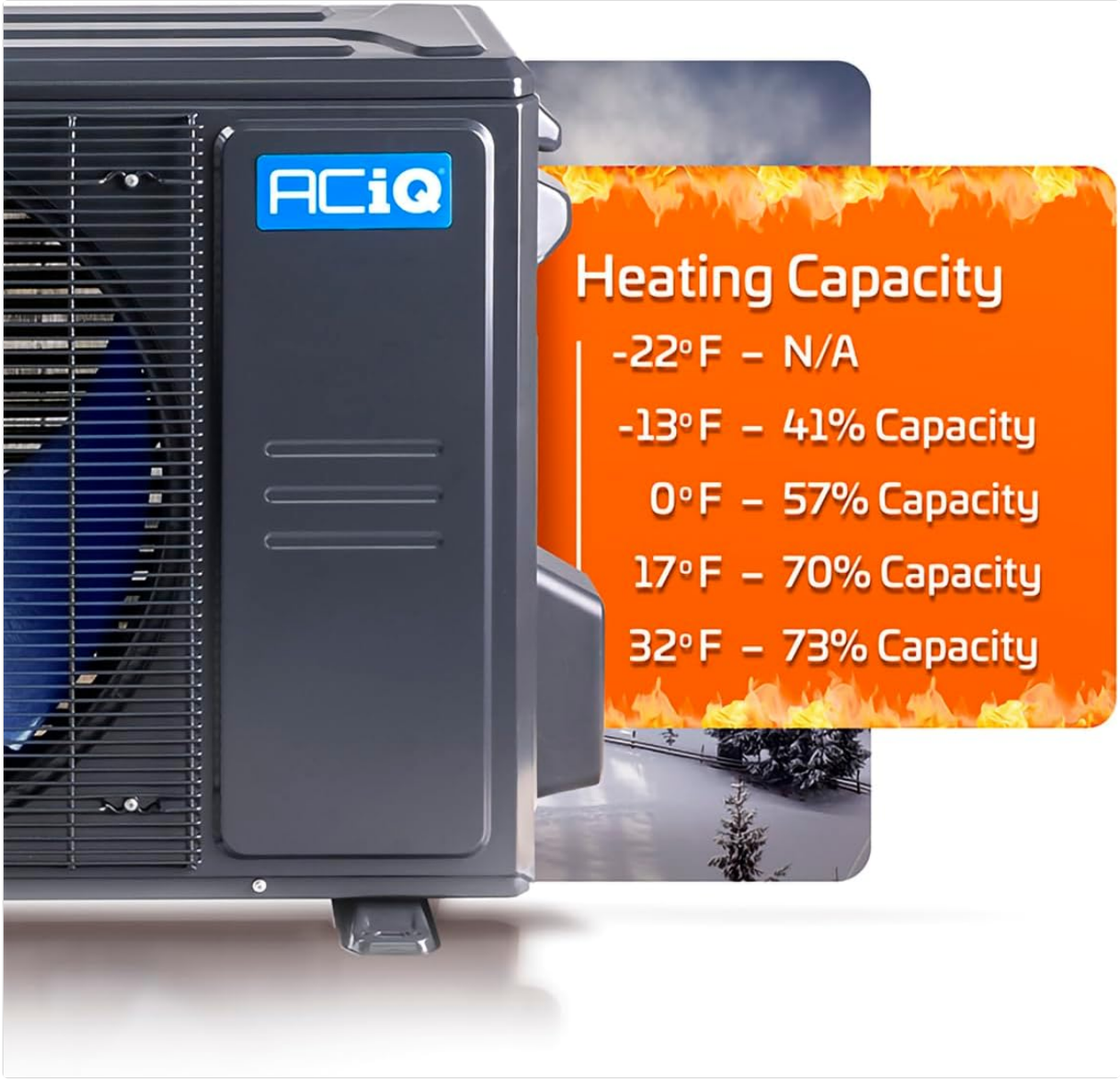


Figure 9: Chart detailing the heating capacity of the ACiQ system at various outdoor temperatures: -22°F (N/A), -13°F (41% capacity), 0°F (57% capacity), 17°F (70% capacity), and 32°F (73% capacity).

Feature	Detail
Cooling Capacity	31,000 BTU/hr
Heating Capacity	30,000 BTU/hr (at 47°F)
SEER2 Rating	18.8
HSPF2 Rating	9.7
Refrigerant Type	R-454B
Indoor Unit Power Supply	115/208/230V, 60Hz, 1Ph
Outdoor Unit Power Supply	208/230V, 60Hz, 1Ph
Max Piping Length	164 ft (50m)
Max Height Difference	82 ft (25m)

Feature	Detail
Indoor Unit Dimensions (W × D × H)	21.02" × 21.02" × 49.02"
Outdoor Unit Dimensions (W × D × H)	37.24" × 16.14" × 31.89"
Indoor Unit Net Weight	128.97 lbs
Outdoor Unit Net Weight	164.02 lbs

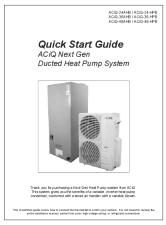
10. Warranty and Support

ACiQ offers a comprehensive warranty for this heat pump system:

- **Parts Warranty:** 7 years
- **Compressor Warranty:** 12 years

These warranty terms are valid when the system is installed by a certified technician and registered online with the manufacturer. For technical support, service inquiries, or warranty claims, please refer to the contact information provided in your product packaging or visit the official ACiQ website.

Related Documents - B0DHFF2DKL

	[ACiQ Central Inverter Systems Outdoor Unit Installation Manual] Comprehensive installation manual for ACiQ Central Inverter Systems outdoor units, covering safety precautions, refrigerant piping, wiring, unit installation, and testing procedures for models like ACiQ-18-AC, ACiQ-24-AC, ACiQ-18-EHPB, and others.
	[ACiQ Next Gen Ducted Heat Pump System: Quick Start Guide for Thermostat Wiring] This guide provides essential information for connecting and wiring thermostats to the ACiQ Next Gen Ducted Heat Pump System. It details recommended and alternative connection options, including DIP switch settings and terminal block configurations for various thermostat types.
	[ACiQ Central Heat Pump Split System Owner's Manual & Operating Guide] Comprehensive owner's manual for ACiQ Central Heat Pump Split Systems, covering safety precautions, operating conditions, features, energy saving tips, care and maintenance, and troubleshooting for models ACiQ-24, ACiQ-36, and ACiQ-48.

	[ACiQ Central Inverter Systems Outdoor Unit Installation Manual] Comprehensive installation manual for ACiQ Central Inverter Systems outdoor units, covering safety precautions, refrigerant piping, outdoor unit installation, wiring, power specifications, air evacuation, and test run procedures. Includes model details and important notes for proper setup.
	[ACiQ R32 Unitary Air Handler & Heat Pump Condenser Technical Sales Guide] This technical sales guide provides detailed specifications, performance data, dimensions, and wiring diagrams for the ACiQ R32 Unitary Air Handler and Heat Pump Condenser series, covering models ACiQ-24/36/48/60-AH32 and ACiQ-24/36/48/60-HP32.
	[ACiQ Top-Discharge Ducted Air Handler & Heat Pump Condenser Service Manual] Comprehensive service manual for ACiQ top-discharge ducted air handlers and heat pump condensers, covering product selection, installation, maintenance, troubleshooting, and technical specifications for models ACiQ-24TD, ACiQ-36TD, ACiQ-48TD, and ACiQ-60TD series.