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Carrier 42KHCT24DN-708F

Carrier Optimax Inverter Air Conditioner User Manual

Model: 42KHCT24DN-708F

1. Introduction

This user manual provides detailed instructions for the safe and efficient operation, installation, maintenance, and troubleshooting of your Carrier Optimax Inverter Air Conditioner. Please read this manual thoroughly before using the appliance and keep it for future reference.

Safety Precautions

- Ensure the unit is installed by a qualified technician.
- Do not block air inlets or outlets.
- Do not insert objects into the unit.
- Keep the unit away from water and moisture.
- Disconnect power before cleaning or maintenance.

2. Product Overview

The Carrier Optimax Inverter Air Conditioner is a high-efficiency, wall-mounted split system designed for optimal cooling performance and energy saving. It features advanced inverter technology and a tropical compressor capable of operating efficiently in ambient temperatures up to 52°C.

Components

- Indoor Unit
- Outdoor Unit
- Wireless Remote Control
- Remote Control Bracket
- Refrigerant Pipes
- Electrical Cables (for inter-unit connection)

Key Features

- **Energy Efficiency:** A+++ rating, Inverter technology saves up to 50% on monthly electricity bills.
- **Air Quality:** Ionizer technology refreshes air, kills germs, removes smoke and dust particles. Features

effective anti-dust and washable air filters.

- **Smart Design:** Compact and lightweight with a smart LED display for control functions and error codes.
- **Quiet Operation:** Designed for minimal sound levels.
- **Durability:** Anti-rust, weather-resistant outdoor metal parts with powder coating.



Figure 2.1: Carrier Optimax Inverter Air Conditioner Indoor Unit. This image shows the sleek, white indoor unit of the air conditioner, featuring the Carrier logo on the left and 'optimax INVERTER' branding on the right.

3. Installation

The Carrier Optimax Air Conditioner is designed for easy installation. It supports long pipe lengths between units and offers flexible multi-outlet pipe locations for the indoor unit. Electrical connections between indoor and outdoor units are also straightforward.

Installation Requirements

- Ensure adequate space for air circulation around both indoor and outdoor units.
- Proper drainage for condensate water must be established.
- Electrical supply must match the unit's specifications (240 Volts, 2275 Watts).
- Professional installation is highly recommended to ensure safety and optimal performance.

4. Setup

Initial Power-On

After professional installation, connect the unit to the main power supply. The unit will typically perform an initial self-check.

Optional Smart Wi-Fi Setup

Your Carrier Optimax Air Conditioner supports optional smart Wi-Fi connectivity, allowing remote control via a smartphone app. To set up Wi-Fi:

1. Download the 'Carrier Air Conditioner' app from your device's app store (Android/iOS).
2. Follow the in-app instructions to connect your air conditioner to your home Wi-Fi network.
3. Once connected, you can control your AC remotely from anywhere.

The unit can also be connected to a Building Management System (BMS) if required.

5. Operating Instructions

Your air conditioner comes with a smart infrared wireless remote control with an LCD display, offering comprehensive control functions for maximum comfort.

Operating Modes

- **Cool Mode:** Provides powerful cooling.
- **Auto Mode:** Automatically adjusts operation mode and capacity based on the difference between room temperature and desired temperature.
- **Dehumidification Mode:** Efficiently removes humidity from the room without significantly lowering the temperature.

Advanced Functions

- **Smart Air Supply:** Delivers cool air optimally for even temperature distribution.
- **Auto Horizontal Swing:** Automatically swings the louver up and down for ideal air distribution.
- **Auto Vertical Swing:** Automatically swings the vertical air flap left and right for optimal air distribution.
- **Louver Position Memory:** The horizontal and vertical air louver angles automatically return to the last set position when the unit is restarted.
- **Auto Fan Speed:** Automatically adjusts fan speed (high, medium, low) based on temperature difference.
- **My Mode:** Saves your preferred mode, fan speed, temperature, and air supply position for quick recall.
- **Turbo Function:** Increases cooling capacity by raising the current frequency (10% increase) and fan speed to maximum for rapid room cooling. Returns to previous settings after 30 minutes.
- **Follow Me Function:** The remote control has an active temperature sensor. The AC adjusts the room temperature to your exact location, effectively following you.
- **Sleep Function:** Provides energy saving and quiet, healthy, comfortable sleep by automatically adjusting fan speed to low and controlling room temperature.
- **Programmable Timer:** Easy to operate ON/OFF timer functions, including ON, OFF, and ON/OFF/OFF timers.

6. Maintenance

Regular maintenance ensures the longevity and efficient operation of your air conditioner.

Self-Cleaning Function

The unit features a self-cleaning function that activates after cooling operation to automatically clean and dry the indoor unit's coil, preventing odors and bacteria growth.

Air Filter Cleaning

The air filters are washable and designed for easy removal. To clean:

1. Open the hinged front panel of the indoor unit.
2. Slide the air filters downwards and out of the unit.
3. Wash the filters with water and a mild detergent.
4. Allow them to dry completely before reinserting.

Front Panel Cleaning

The front panel can be easily removed for cleaning by detaching its connection to the indoor unit cabinet.

7. Troubleshooting

Your Carrier Optimax Air Conditioner is equipped with smart self-diagnosis features to detect malfunctions, making service and maintenance quick and easy. Error codes will be displayed on the smart LED screen.

Common Issues and Solutions

- **Auto Restart:** In case of a power outage during operation, the microprocessor remembers the operating settings. When power returns, the AC will automatically restart with the previous settings.
- **Indoor Coil Freeze Protection:** The unit will protect the indoor coil from freezing if excessive dirt accumulates, air filters are clogged, or ambient temperature is too low in cooling mode.
- **Outdoor Coil High Temperature Protection:** The unit is protected against high temperatures on the outdoor coil during cooling operation.
- **Refrigerant Leakage Detection:** Sensitive sensors on the indoor coil detect refrigerant leaks, facilitating quick service and maintenance.

For issues not resolved by these steps or if an error code persists, please contact authorized service personnel.

8. Specifications

Below are the detailed specifications for the Carrier Optimax Inverter Air Conditioner.

Specification	Value
Brand Name	Carrier
Model Information	42KHCT24DN-708F
Product Dimensions (D x W x H)	22.5 x 108.2 x 33.8 cm
Item Weight	13.8 Kilograms
Efficiency	A++++
Capacity	3 Liters (referring to internal volume, not cooling capacity)
Annual Energy Consumption	1.17 kWh
Noise Level	45.9 dB
Installation Type	Split System
Part Number	46308614
Form Factor	High Wall

Specification	Value
Special Features	Inverter Tropical Compressor, 50% Electricity Bill Saving, Wi-Fi Enabled, Ionizer, Fast Cooling
Color	White
Voltage	240 Volts
Wattage	2275 Watts
Material Type	Plastic and Metal
Included Components	Air Conditioner Unit
Cooling Capacity	24000 BTU
Energy Efficiency (BEE Star Rating)	4 Stars
Refrigerant	R-410A

القدرة	بحري / متكرر	قبلي متكرر	دور اخير
حصان 1.5	16	12	8
حصان 2.25	24	18	16
حصان 3	30	24	20
حصان 4	36	30	24
حصان 5	42	36	28

Figure 8.1: Air Conditioner Capacity Guide. This table provides a general guide for air conditioner capacity in horsepower (HP) and corresponding recommended room sizes in square meters for different climate conditions (Last Floor, Pre-Repeated, Repeated/Sea).

9. Warranty and Support

Warranty Information

The product comes with a **5-year after-sales service** plan:

- **2 years full warranty** from the purchase date against manufacturing defects.
- **3 additional years of free spare parts** (service fees will apply).

All products have an expected life of 2 years beyond the original warranty period, during which Miraco provides paid maintenance and spare parts.

Compliance

The components of both indoor and outdoor units comply with international standards for performance and safety.

Customer Support

For any inquiries, technical assistance, or to schedule maintenance, please refer to the contact information provided with your purchase documentation or visit the official Carrier website.

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