

WHOLE HOUSE DUCTED DEHUMIDIFIER

PIONEER®

MODEL NO: QHD070AUDH26WH

Owner's Manual



- ☒ Installation
- ☒ Operation
- ☒ Maintenance

IMPORTANT NOTICE:

Please read this manual carefully before installing or operating your new air conditioning system. Be sure to save this manual for future reference.



REV062824

1. Safety Precautions

Please read all instructions thoroughly before using this product. Users of electrical products may encounter hazards, including but not limited to injury, fire, or electric shock. Failure to adhere to these instructions may result in damage to the machine and void the warranty. Proceed to remove all packing materials and inspect for any damage or missing items that may have occurred during transportation. Verify that the power supply matches the equipment's specified power requirements.

- **Do not** operate the equipment if the power cord or plug is damaged.
- **Do not** lay the power cord under the carpet.
- **Do not** cover the power cord with carpets or similar covers.
- **Do not** route the power cord under furniture or appliances. Ensure the power cord is arranged away from high-traffic areas to prevent tripping hazards.
- **Do not** touch the product or plug with wet hands or while standing in water.
- **Do not** use this product in areas where gasoline, paint, or other flammable items are stored.
- **Do not** use this machine in environments with corrosive gases (such as sulfur oxide, atmosphere, alcohol, etc.) as it may cause machine failure.
- **Do not** insert objects into the inlet door or vent within one month. This may damage the equipment and void the warranty.
- **Do not** place the machine near furnaces, heaters, or other heat sources as this may cause melting, fire, or electric shock.
- **Do not** block the air inlet valve or air outlet on the equipment. Ensure no water enters the machine to prevent machine failure or electric shock. Direct airflow away from the face or body. Do not operate the equipment under these conditions.
- To reduce the risk of injury, disconnect the power supply before performing maintenance.
- Remove the power cord from the power socket by grasping and pulling the plug end. Do not pull the power cord itself.
- **Do not** attempt to repair or adjust any electrical or mechanical functions of this equipment as it may cause danger and void the warranty.
- **Do not** continue to use the equipment if it is damaged or faulty. Turn off the product and disconnect it from the power outlet. Refer to the troubleshooting guide or contact a professional maintenance person.
- When not in use, store the equipment in dry areas, away from extreme temperature and humidity environments. Always hold the retractable handle and keep the device upright.
- **Do not** tilt or reverse the machine when it is not in use.

1. Safety Precautions (continued)

- Before using the dehumidifier, set the product flat for more than 1 hour to stabilize the refrigerant.
- If the dehumidifier has been tilted or inverted, it must be placed horizontally and left for at least 24 hours before use.
- The dehumidifier must always be placed horizontally for optimal efficiency.
- It is recommended to keep all doors, windows, and other exterior openings of the room closed so the dehumidifier can operate effectively within a confined area.
- The dehumidifier is designed to operate within an ambient temperature range of 5°C to 40°C (41°F to 104°F) and a relative humidity level of 20.0% or higher.
- If the room's temperature and humidity levels exceed this range, the dehumidifier may not function properly.
- The power cord is 10-1/2 feet long, and the drain hose is 6 feet long. When in use, the power cord should be connected to a power supply, and the drainage hose should be connected to a drainage area. Ensure the drain hose is not lifted more than 16 feet above the floor to prevent performance issues.
- The air intake and exhaust must be at least 8 inches from the wall to ensure proper operation.
- If the machine will not be used for an extended period, turn it off and unplug the power cord.
- Clean the filter regularly and ensure the drainage pipe is not blocked to maintain smooth drainage.



Special Notice

Disposing of this appliance improperly, or in other natural surroundings, endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain. Please follow proper disposal protocol.

Installation Safety Precautions



- The dehumidifier uses environmentally friendly R32 refrigerant, which is colorless, odorless, and combustible.
- Ensure the room for installing, operating, and storing the dehumidifier is larger than the specified area.
- Do not puncture or ignite the dehumidifier.
- Store the dehumidifier in a way that prevents mechanical damage from accidents.
- Keep the dehumidifier in a room free from continuous fire sources (e.g., open flames, lit gas appliances, electric heaters).
- Conduct safety checks before maintaining or repairing dehumidifiers using combustible refrigerants to minimize fire risk.

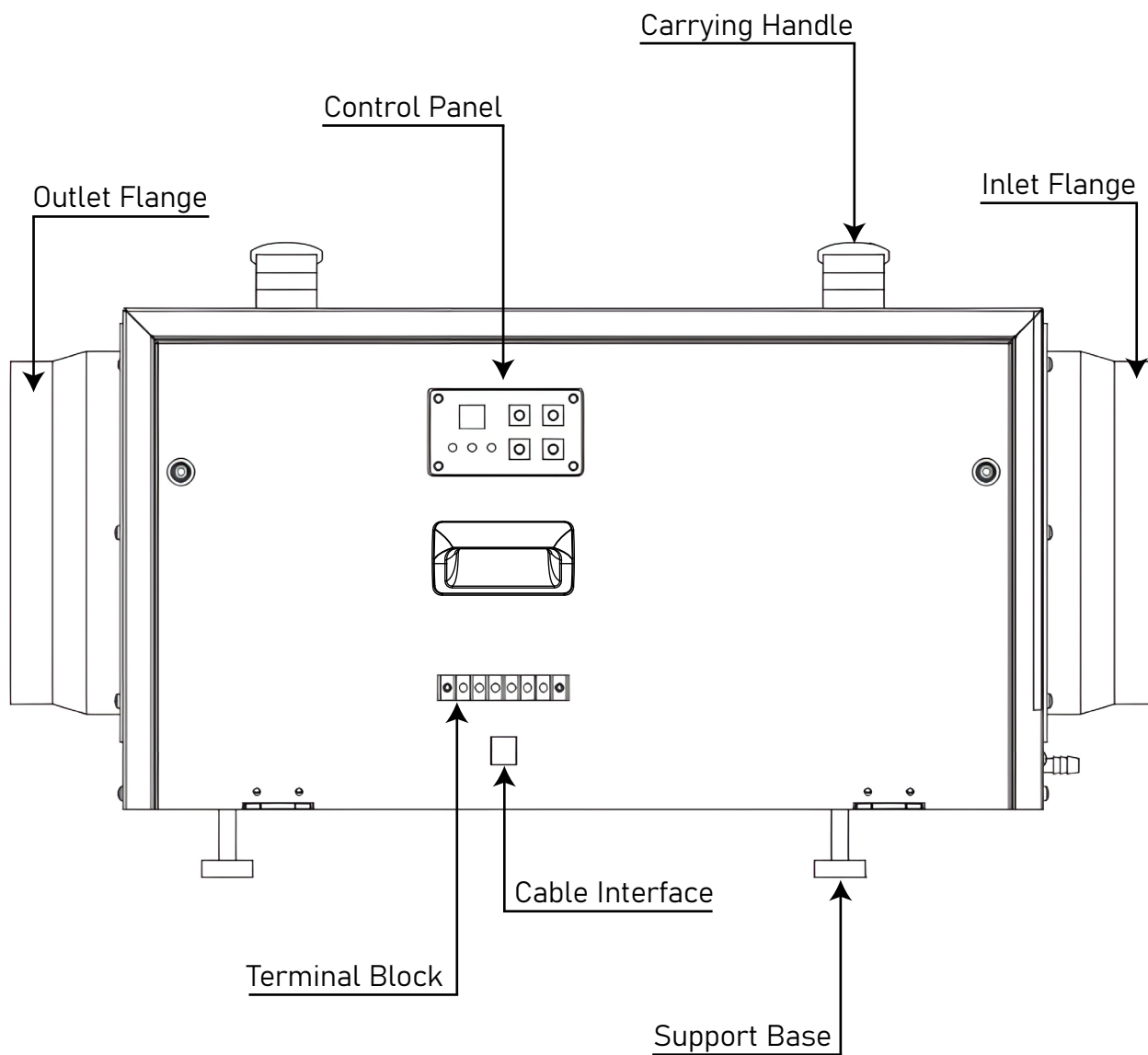
Maintenance Precautions



- Due to the special nature of R32 refrigerant, contact an authorized service center for repairs or scrapping.
- Maintenance by unqualified or non-professional personnel can be hazardous.
- Strictly follow the manufacturer's requirements when maintaining the dehumidifier.



2. Structural Overview

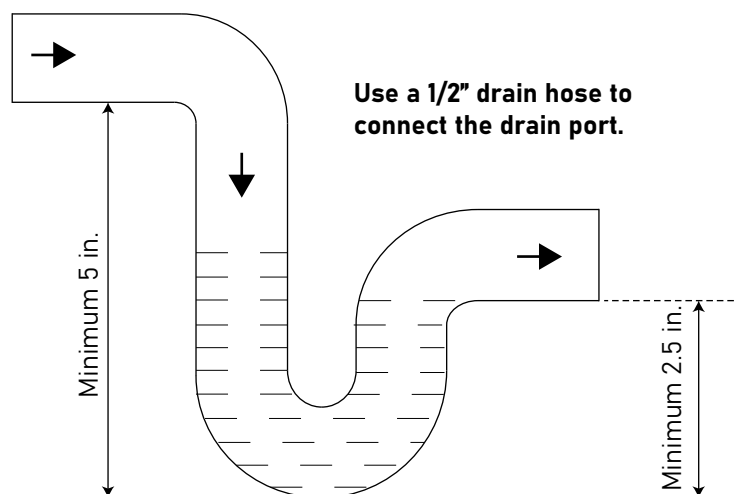


3. Prior to Use



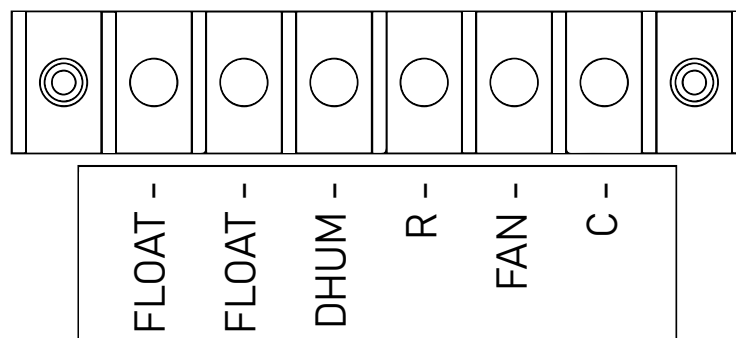
Connect a 3/4" NPT drain fitting to the drain port. Use clamps and snap rings to secure drain fittings.

To ensure smooth drainage, install the drain piping with a continuous downward slope and connect it to appropriate drains or condensate pumps.



4. Methods of Control

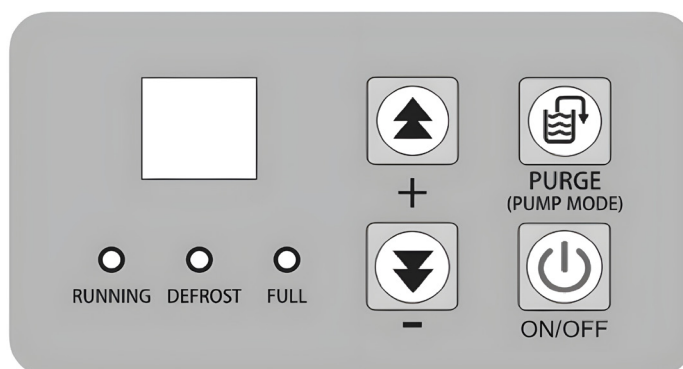
i. Terminal Block Layout



- **FLOAT(2):** External low pressure water level sensor or float switch
- **DHUM:** Compressor and Fan during dehumidification operation
- **R:** 12VDC Output
- **FAN:** Running Fan in Ventilation Mode
- **C:** 12 VDC Output

External 12VDC devices can be powered by terminals R and C.

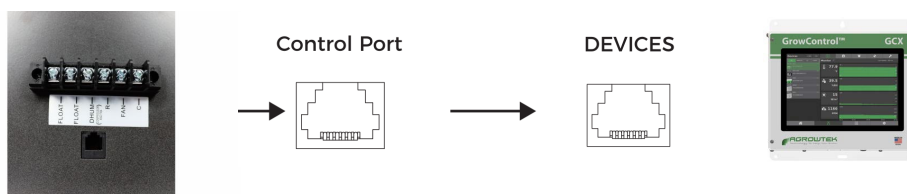
ii. Onboard Controller



- **Power Key:** For On/Off operation. Press to turn the system on and off.
- **Purge Key:** For One-Touch drainage. Press to start water pump drainage.
- **PLUS Key:** Value adder. Press to increase the value of the selected parameter.
- **MINUS Key:** Value subtractor. Press to decrease the value of the selected parameter.

iii. Unified Control via RJ12 Port

Connect an external controller via the terminal model RJ12, 6P6C protocol, or Modbus serial communication. Send Control/Query commands, switch the machine On/Off, set humidity values or fan speeds, enable or disable continuous dehumidification mode, query the current temp. or humidity, and display any fault codes.



5. Dehumidification Operation

Press the "on-off" key to turn on the dehumidifier. The dehumidification function will activate. Pressing the power button again will turn off the dehumidification function.

The humidity setting range is 30% to 90%, with the default humidity set to 30% when powered on for the first time.

To adjust the humidity level, the "increase" or "decrease" keys should be pressed to change the setting in 1% increments. Holding the key for 3 seconds will quickly adjust the setting. If no operation is performed for 3 seconds, the current setting will be saved, and the adjustment mode will exit.

If the humidity is set to 30% and the "decrease" key is pressed again, the dehumidifier will enter continuous dehumidification mode (regardless of the current humidity level, the compressor will keep running).

- When the ambient humidity exceeds the set humidity by 3% or more, the fan will start, and the compressor will start after 3 seconds.
- When the ambient humidity is less than 3% below the set humidity, the compressor will stop, and the fan will stop after 3 seconds.

Upon first startup, there is no 3-minute delay protection for the compressor. During normal operation, the compressor's startup and shutdown are based on both humidity conditions and a 3-minute protection delay.

6. Drainage Function

1) Automatic Drainage

When the system detects that the water tank is full, the compressor and fan will continue running, and the water full indicator will flash (no fault code will be displayed). The water pump will start and run for 40 seconds to drain the water. If the full signal is cleared, the draining process will stop.

If the full signal is not cleared within 60 seconds, the unit will stop, and the fault code and water full indicator will flash.

2) Manual Drainage

After turning on the power, pressing the manual drain button once in any state will start the water pump, which will run for 40 seconds. If the full signal is cleared, the draining process will stop.

The water full indicator will flash during this process.

7. Power-On Self Test (POST)

After powering on, all displays and indicators light up for 2 seconds, and the buzzer beeps briefly. Simultaneously, the system conducts a self-test on communication and each sensor.

If the detection is normal, the unit enters the shutdown state (three alarms may occur).

8. Compressor Protection for Three Minutes

After the compressor is stopped, a waiting period of 3 minutes is required before it can start again.

After the compressor starts, it must run for 3 minutes before it can stop.

When the power is turned on for the first time, there is no 3-minute delay protection for the compressor to start.

9. Defrost Function

1) Entering Defrost Mode

This model uses a fan-based defrosting method. In dehumidification mode, when the coil temperature is less than or equal to 30°F and the duration is greater than or equal to 15 minutes, the defrost mode is activated.

The compressor turns off, the fan runs, the defrost indicator flashes, and the dehumidification indicator turns off.

2) Exiting Defrost Mode

Defrost mode is exited when the coil temperature is greater than 37°F and the duration is greater than 3 minutes.

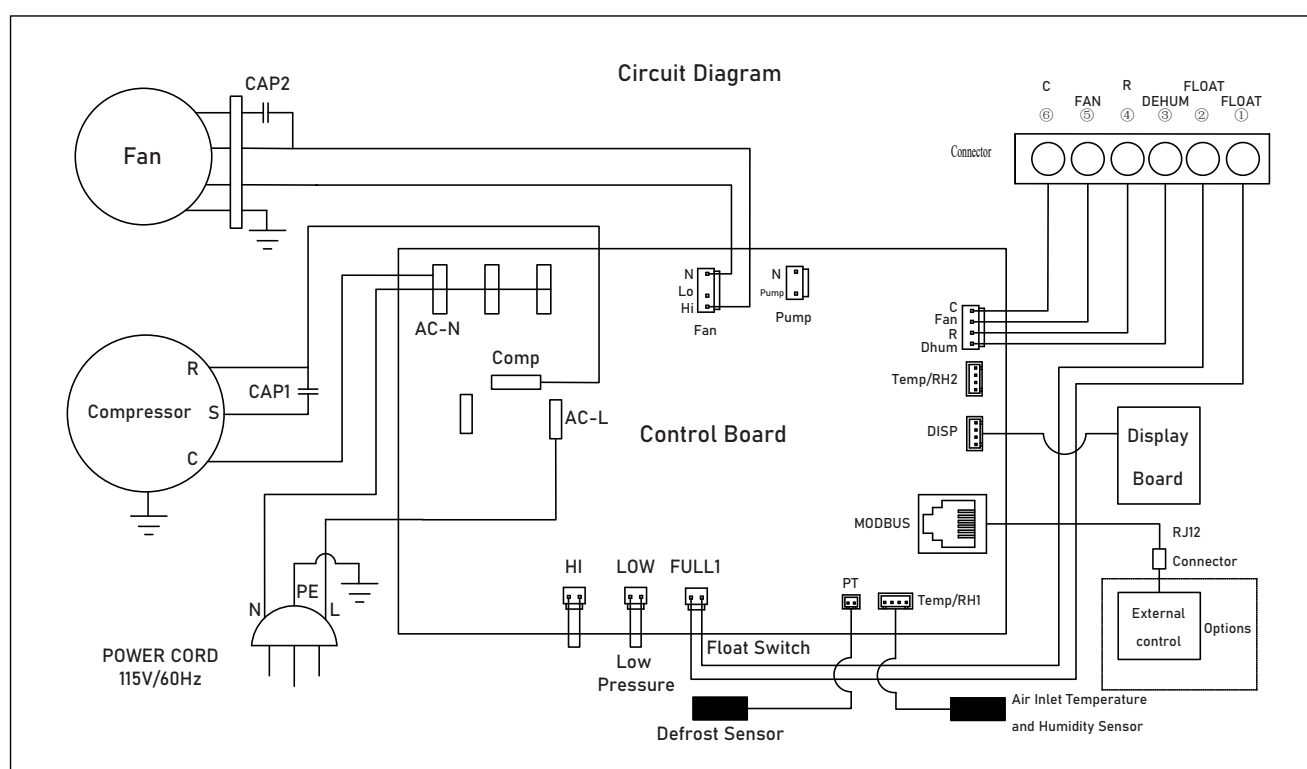
The fan continues running, the compressor turns on, the defrost indicator turns off, and the dehumidification indicator turns on.

10. Technical Data

i. QHD070AUDH26WH Dehumidifier Specifications

Description	Unit	Value
Input Power Supply	V	110/120
Frequency	Hz	60
Rated Current	A	6.6
Input Power	W	750
Dehumidification Capacity (80°F/60%RH)	Pints/Day	70
Filter Type	-	304 Grade Stainless Steel
Power Cord Length	ft	10.6
Hose Length	ft	6
Net Weight	lbs	55
Machine Dimensions (WDH)	in.	12-5/8 x 27-3/4 x 11
Refrigerant Type/Amount	-/oz.	R32 / 9.9

ii. QHD070AUDH26WH Dehumidifier Electrical Schematic



11. Troubleshooting

Fault types are divided into performance faults and safety faults. Performance faults allow for the machine to be continue operation once resolved, but safety faults require the machine to be shut down and restarted once the fault is eliminated.

If multiple faults occur simultaneously, they will be displayed in the order of fault codes.

Error Code	Fault Description	System Response	Suggested Resolution
E0	Communication Failure	Alarm + Shutdown	Inspect communication cable and reconnect or replace if necessary
E1	Humidity Sensor Fault	Auto-switch to continuous dehumidification mode	Confirm that the temperature and humidity sensors are securely connected, and reconnect or replace if necessary
E2	Temperature Sensor Fault	Error Display Only	Confirm that the temperature sensor is securely connected, and reconnect or replace if necessary
E3	Water Reservoir Full Alarm	Enter Standby Mode	Check for clogged drainage lines or repair/replace the water pump
E4	Coil Temperature Sensor Fault	Enter Standby Mode	Confirm that the coil temperature sensor is securely connected, and reconnect or replace if necessary

IMPORTANT:

Before performing any disassembly or internal inspection, ensure that the system is unplugged or that the main power to the system is turned off.

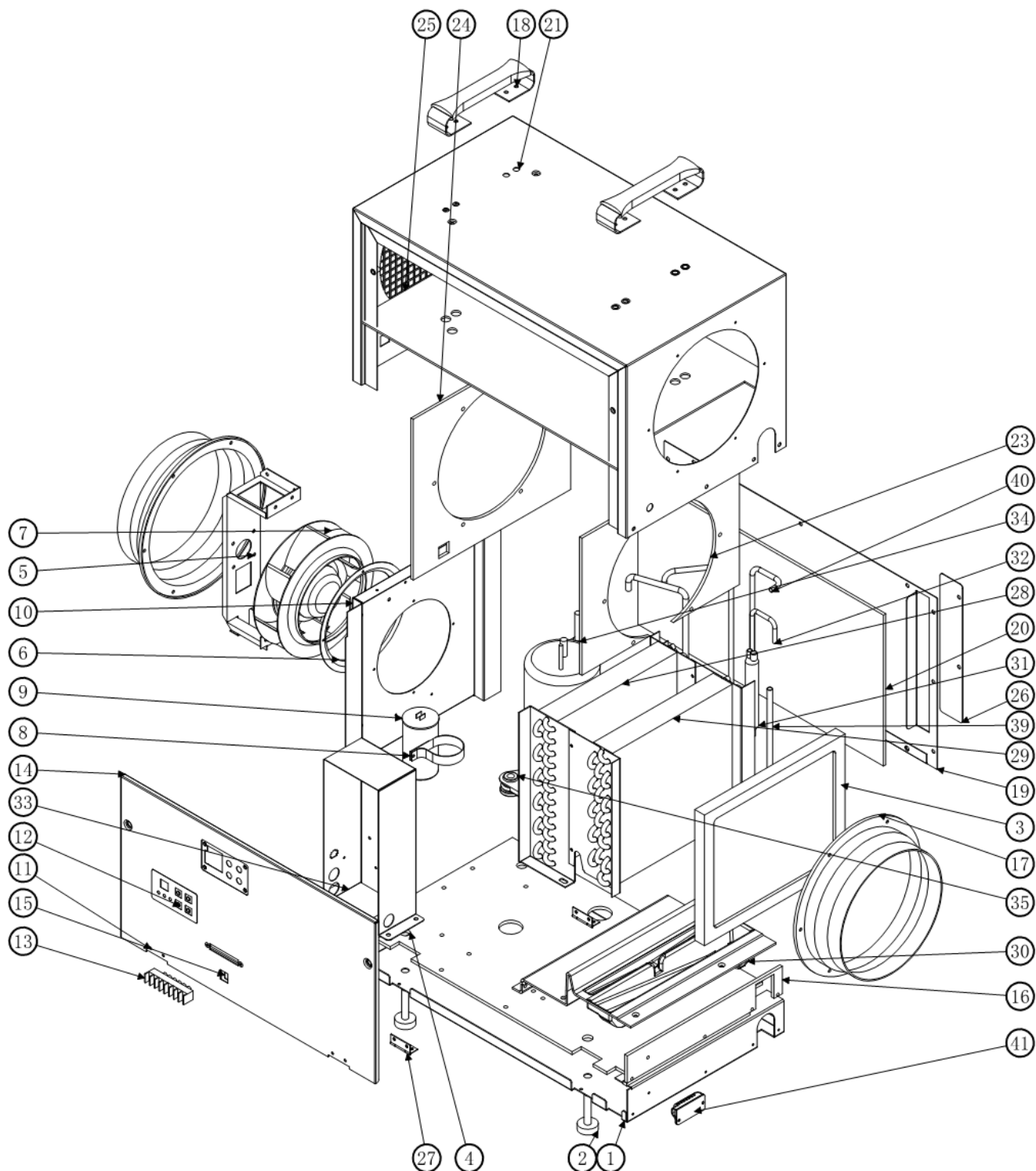
This appliance contains refrigerant and other potentially hazardous materials. When disposing of this appliance, the law requires special collection and treatment. Do not dispose of this product as household waste or unsorted municipal waste.

When disposing of this appliance, you have the following options:

- Dispose of the appliance at a designated municipal electronic waste collection facility.
- When buying a new appliance, the retailer takes back the old appliance free of charge.
- The manufacturer takes back the old appliance free of charge.
- Sell the appliance to certified scrap metal dealers.

12. Exploded Parts Diagram

See **Page 10** for the reference table of internal components.



12. Exploded Parts Diagram (continued)

Item Number	Part Name	Quantity
1	Chassis	1
2	Foot	4
3	Filter	1
4	Chassis Paste	1
5	Fan Bracket	1
6	Air Guide	1
7	Fan	1
8	Compressor Capacitor	1
9	Capacitor Hoop	1
10	Middle Bracket	1
11	Front Plate	1
12	Interface	1
13	Terminal Block	1
14	Front Panel Adhesive	1
15	Adapter Mounting Plate	1
16	Chassis Adhesive	1
17	8" Air Outlet	2
18	Handles	2
19	Rear Panel	1
20	Rear Panel Adhesive	1
21	Shell	1

Item Number	Part Name	Quantity
22	Filter Mesh Holder	1
23	Airflow Adhesive	1
24	Air Inlet Adhesive	1
25	Shell Adhesive	1
26	Filter Baffle	1
27	1-1/2" Hinge	2
28	Condenser	1
29	Evaporator	1
30	Drain Pan	1
31	Filter Drier	1
32	Liquid Outlet Pipe	1
33	Electrical Box	1
34	Compressor	1
35	Compressor Feet	3
36	Return Vent 1	1
37	Return Vent 2	1
38	Tee Pipe	1
39	Low Pressure Pipe	1
40	High Pressure Pipe	1
41	Temperature and Humidity Sensor	1

The design and specifications of this product are subject to change without prior notice as development continues. Consult with the sales agency or manufacturer for details. Refer to the equipment nameplate for all other applicable specifications.



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