

INSTRUCTIONS FOR USING HEAT-PUMP DEHUMIDIFIERS

Model: RE-192; RE-300; RE-500
RE-600; RE-900; RE-1200



This product is manufactured and distributed by DeAir Joint Stock Company

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Thank you for choosing our product! This manual is essential for the installation, operation and maintenance of the device. Please follow all instructions in this manual to maximize the dehumidification efficiency, and to overcome any problems that may occur to extend the life of the device.

PRODUCT REGISTRATION

Record the dehumidifier serial number in the space provided below for future maintenance purposes.

Serial number:

IMPORTANT: Please keep a copy of your sales receipt and warranty card for DeAir warranty service.

WARRANTY POLICY

The warranty period is 24 months from the date of purchase.

Warranty is limited to free replacement of any defective part, or manufacturing defect occurring within the warranty period.

All warranty claims must state the model/serial number. These details are printed on the unit identification plate.

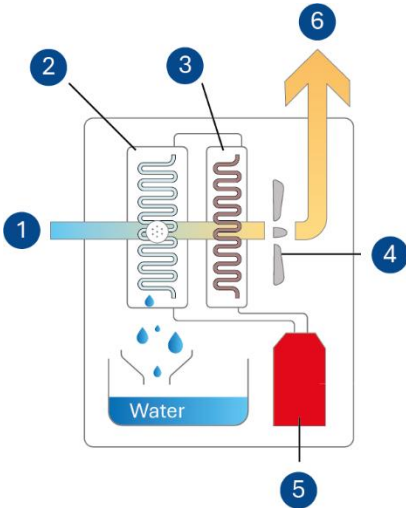
Read all instructions before using this dehumidifier. To reduce the risk of fire, electrical shock to persons when using the dehumidifier, follow basic precautions.

In case of any defect or damage to the product, please contact DeAir immediately at

Hotline: 0925 977 579

1. Working principle

1.1. Principle of dehumidification

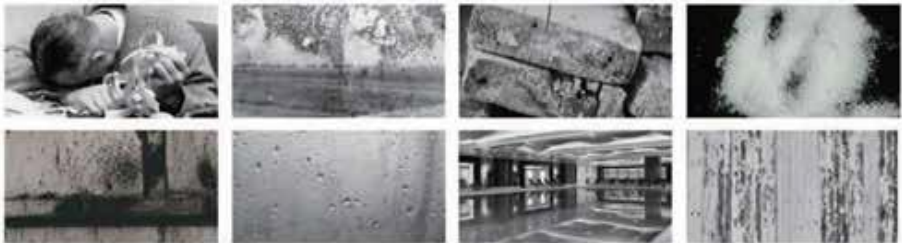


1. Humid air
2. Evaporator (cooling system)
3. Condenser (hot coil)
4. Working fan
5. Compressor
6. Dry air

DeAir.RE heat-pump dehumidifier series is designed to remove moisture using cold compression technology. In addition to the main equipment listed above, dehumidifiers can be equipped with other auxiliary components such as water carriers, electrical cabinets, etc.

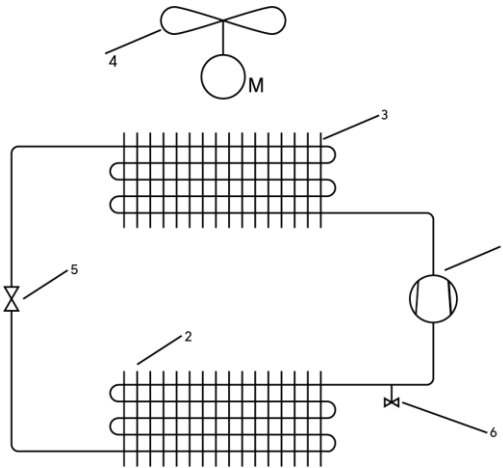
1.2. The need for dehumidification

Air quality is a major concern in the world today. In particular, humid environments not only have a negative impact on human health, but also damage metal products, medicines, and collectibles due to corrosion, mold, and bacterial growth. Therefore, controlling the humidity content in the air at an appropriate level plays a key role in preventing allergies and respiratory problems in humans and improving product durability. Moreover, the obvious benefits of humidity control have promoted its application in many industries such as mechanical manufacturing, agricultural and food processing, storage, and logistics.



2. Device Features

2.1. Schematic diagram



- | | |
|---------------------------------------|-------------------------------|
| 1. Compressor | 4. Working fan |
| 2. Evaporator (cooling system) | 5. Throttle cable |
| 3. Condenser (hot coil) | 6. Low pressure switch |

The compressor (1) compresses the refrigerant gas from the gaseous state to high temperature and high pressure. Then, the gas stream is cooled and changes state from gas to liquid thanks to the condenser (3) and cooling fan (4).

By the end of the condenser (3), the gas will have completely changed to a liquid state.

The gas flow is throttled through the throttle cable (5) to reduce pressure and temperature. Then, the gas flow continues through the evaporator (2). The gas will change state from liquid to gas completely, the state change process will simultaneously absorb heat from the humid air flow and condense water on the surface of the evaporator.

The moisture removal process is mainly in the evaporator (2).

At the end of the system (2), the gas will completely change to gaseous state to return to the compressor (1).

The system also has a low pressure switch that detects when the system is low on gas or has a gas leak to protect the system's durability.

2.2. Device specifications

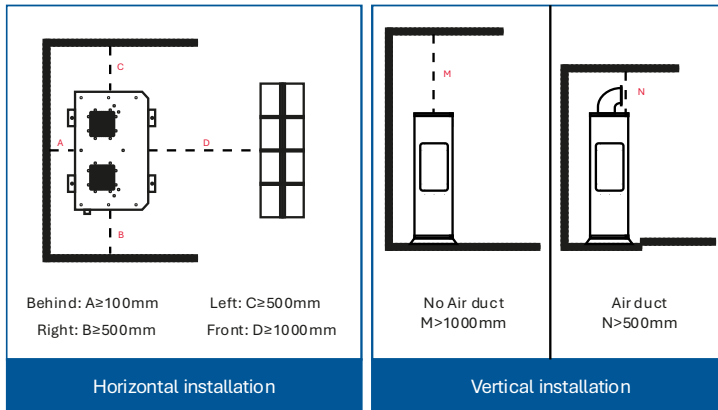
Model	DeAir.RE -192	DeAir.RE -300	DeAir.RE -500	DeAir.RE -600	DeAir.RE -900	DeAir.RE- 1200
Operating temperature (°C)	5-60	5-60	5-60	5-60	5-60	5-60
Dehumidification capacity (kg/day) @30°C/70%	192	300	500	600	900	1,200
Airflow (CMH)	2,500	3,000	4,500	6,000	9,000	12,000
Noise level (dBA)	59	59	65	65	72	72
Gas type	R410A					
Gas charge mass (kg)	1.9	1.9	3.2	4.3	6.4	8.6
Power supply (V/Ph/Hz)	380/3/50					
Power consumption (kW)	4.6	4.6	7.6	9.2	13.8	18.4
Width (mm)	780	780	1,250	1,250	1,400	1,750
Depth (mm)	480	480	600	600	720	800
Height (mm)	1,650	1,650	1,800	1,800	1,800	1,800
Weight (kg)	160	160	200	250	450	500

2.3. Device structure



3. Operating Instructions

3.1. Installation space

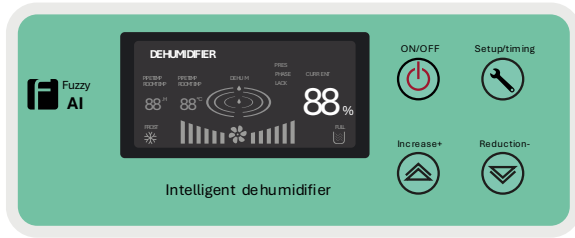





When installing the machine, it is necessary to ensure the minimum dimensions as above to ensure easy and safe operation, maintenance and repair.

3.2. Note

- The compressor in the body must be placed upright for operation. If transporting the machine over long distances, the machine must be placed upright for at least 3 hours before starting and running the machine.
- When the compressor operates for a long time at temperatures below 15°C , the radiator fins will become covered with snow, affecting the dehumidification efficiency and lifespan of the machine.
- Dehumidifier is not air conditioner, when the machine runs the fan will blow out hot air, in a closed environment the room temperature will increase.
- Make sure the external connection pipe or water fitting is securely installed.
- Make sure the machine is installed with the minimum space recommended.

3.3. Control Panel



Button	Description
	(1) Press the ON/OFF button to turn the
	(2) Press the Increase+ / Reduction- button to change humidity within the range of 10% - 95% (change 1% each time you press) or the corresponding time within the range of 24 hours (change 1 hour each time you press).
	Press the Setup/timing button to set the running and stopping time for the machine. Use the Increase+ / Reduction- button to change the setting time. The maximum setting time is 24 hours. <ul style="list-style-type: none"> • Press once to enter the humidity mode. • Press twice in a row to set the running timer. • Press three times in a row to set the shutdown timer.

3.4. User manual

Power on: After turning on the machine's CB, the LCD control panel lights up and displays the actual temperature and humidity.

Press ON/OFF button: Press ON/OFF to start the machine. The device will run the fan first, then the compressor will start running.

Humidity Control: Press the up/down button to start setting the desired humidity. This dehumidifier does not have a temperature setting.

➤ **ATTENTION:**

- The operating humidity difference of the machine is 3%. When reaching the humidity, the compressor will turn off, the fan will continue to run until the machine is turned off.
- If the humidity value is set below 30%, the dehumidifier will run continuously in dehumidifying mode. In cases of force majeure, the customer has foreseen the damage and is responsible for the possible losses, then set the humidity value below 30%. A technician is required to monitor the operation of the device at the set humidity below 30%.

4. Maintenance

4.1. Safety indications

- Do not handle electrical cords, plug or unplug with wet hands.
- Do not stop the device by disconnecting the power directly.
- Do not use power source with high voltage.
- Do not insert sticks or fingers into the air vent.
- Do not drop or dent the device.
- Do not use wastewater from the machine for drinking or feeding livestock.
- Do not open the case while the machine is in operation.
- Do not use the dehumidifier in the following environments: flammable gas environment, dusty environment, sunny environment, and slanted, rough surface.
- Stop the machine and disconnect the power before cleaning and maintenance.

4.2. Maintenance content

Maintenance and servicing must be done periodically and in compliance with the manufacturer's regulations to ensure the machine operates durably and efficiently. Perform maintenance and servicing promptly to avoid interrupting the production process.

STT	Content	Day	Month	Quarter	Year
1	Cleaning the surface of the device	✓	✓	✓	✓
2	Clean the dust filter		✓	✓	✓
3	Compressor cleaning		✓	✓	✓

4	Compressor flow measurement		✓	✓	✓
5	Copper pipe inspection			✓	✓
6	Cleaning gutters		✓	✓	✓
7	Check the water pipes		✓	✓	✓
8	Check the surface of the rack		✓	✓	✓
9	Cleaning the fan		✓	✓	✓
10	Clean electrical cabinets and check electrical equipment		✓	✓	✓
11	Check the screws securing the device in the machine.			✓	✓
12	Check the overall equipment in the machine		✓	✓	✓
13	Replacement equipment provision			✓	✓

5. Error checking and troubleshooting

5.1. Error message board

Error code	Phenomena	Treatment
E1	Temperature sensor error	Replace temperature sensor
E2	Humidity sensor error	Replace humidity sensor
E3	High pressure error	Check high pressure switch, gas pressure
E4	Low pressure error	Check low pressure switch, gas pressure
Pres	Compressor error	Check the compressor
Phase	Phase error	Phase change
Lack	Phase loss error	Check phase, supply enough phase
E9	Board error	Replace board

5.2. Troubleshooting

Phenomena	Reason	Solution
Dehumidifier not working	<ul style="list-style-type: none"> ➤ No power supply ➤ Out of phase, phase loss ➤ Fuse blown 	<ul style="list-style-type: none"> ➤ Check power supply ➤ Replace fuse
Ineffective moisture separation	<ul style="list-style-type: none"> ➤ Dust clogged filter ➤ Obstructions to the air inlet and outlet ➤ The main door or window of the room is open or the room has a large gap ➤ The refrigerant gas system in the dehumidifier is leaking, in this case the air in the dry air supply line is not warm. 	<ul style="list-style-type: none"> ➤ Clean the dust filter ➤ Check and remove obstructions from the air inlet and outlet ➤ Check and close all doors, seal gaps ➤ Contact supplier for support
Water Leak	<ul style="list-style-type: none"> ➤ The machine is tilted. ➤ Drain pipe is clogged 	<ul style="list-style-type: none"> ➤ Adjust the machine to balance. ➤ Drain pipe cleaning
Other unusual phenomena	<ul style="list-style-type: none"> ➤ The machine should not be placed on a hard, solid surface. ➤ Filter is disabled 	<ul style="list-style-type: none"> ➤ Place the machine on a stable surface. ➤ Clean the filter

**FOR ANY QUESTIONS, PLEASE CONTACT
OUR CUSTOMER SERVICE CENTER**



Hotline: +84 925 977 579

