

SDI SERIES

INDUSTRIAL DEHUMIDIFIER
FLOOR STANDING DEHUMIDIFIER

INSTRUCTION MANUAL



Thank you for purchasing East dehumidifier!

WARNING! Before using, read this instruction manual of this dehumidifier to ensure correct usage through understanding. After reading, store them in a safe place for future reference. Incorrect handling of this product could possibly result in personal injury or physical damage.



Specifically designed for industrial environments

1. All metal plate framed structure shell.
2. Automatic defrosting.
3. Large heat exchanger to save energy
4. Eco-friendly refrigerant R410a/R407c/R32/
5. Full compressor protection against low pressure, short cycling, and overheating.
6. Memory function of operating mode after power outages.
7. High efficiency rotary compressor.

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SAFTY INSTRUCTIONS

WARNING

- All electrical connections works must be done by local professionals, according to relevant provisions to operate, or some loss of life, personal injury, property loss may be happen.
- 208-230, 380~415, 440~480 volts may cause serious injury from electric shock. Disconnect electrical power before starting installation or servicing. Leave power disconnected until installation/service is completed.
- Don't roll or damage the power cord when install or move the machine
- Don't put finger or any other rod like object into the machine

CAUTION

- Do not tilt the machine more than 45 ° in moving or installation to avoid damage to the compressor.
- Working temperature scope of the machine is 5 °C ~ 38 °C.
- The room temperature will go up around 3~5°C from compressor heat dissipation when dehumidifier running, it's normal phenomenon, please feel free to use.
- It's not necessary to use dehumidifier when the room temperature is below 10°C, the absolute humidity is quite low at this condition.
- Please try to seal environment better to increase the effect of dehumidifier.
- Do not place the machine in the area which may come into contact with water or chemical.
- Do not use any relay, extension line or adapter to connect the power of machine.
- Do not place the machine next to the stove, heater and other equipment will dissipate heat, and area with direct sunlight or wind and rain.
- Do place the plug stably and clean the dust on power line.
- Do not damage or modify the power line, do not repair by yourself and disassemble or modify the machine.
- Do place the drainage tube smoothly for continuously drain.
- Shutdown the equipment and cut power when in malfunction.

Before Starting

- This dehumidifier contains high-speed rotating parts. Before operation, ensure the access panel is properly secured and no debris is present on or around the unit.
- Do not force the panel open while the unit is running – this may cause serious damage.

Sensor & Electrical Precautions

- Temperature and humidity sensors are sensitive components – do not touch them.
- All wiring is color-coded. Electrical connections must be carried out by qualified professionals only.
- Sensors/controllers should be placed in a clean environment. Exposure to acetone, chlorine, or high-concentration smoke will cause damage.
- The humidistat is sensitive to ambient humidity – do not install it in dusty areas.

Fault & Shutdown

- If a fault occurs, the dehumidifier will shut down automatically. Inspect the unit carefully before restarting.
- Do not move or unplug the unit until the fan has come to a complete stop.

SPECIFICATIONS

Model no.	SDI-168L	SDI-240L	SDI-360L	SDI-480L
Cooling Capacity	5.3 KW	7.5 KW	15.0 KW	15.0 KW
Water Removal Capacity @30°C, RH80%	168L/DAY	240L/DAY	360L/DAY	480L/DAY
Supply Voltage	203~240V	203~240V	380V or 480V	380V or 480V
Rated Power	2820 W	3500 W	6500 W	6700 W
Rated Amps	13 A	16 A	9 A	11 A
Air Volume	1800m³/h	2700m³/h	4500m³/h	5400m³/h
Working Temperature	5°C~38°C	5°C~38°C	5°C~38°C	5°C~38°C
Humidity Range (RH)	40%~95%	40%~95%	40%~95%	40%~95%
Net Dimensions	595x405x1605mm	770x465x1705mm	1195x500x1745mm	1195x500x1745mm
Packed Dimensions	695x505x1705mm	880x580x1910mm	1295x600x1845mm	1300x580x1980mm
Net Weight	90Kg	115Kg	185Kg	195Kg
Gross Weight	100Kg	125Kg	195Kg	205Kg
Noise	≤ 60 dB	≤ 65 dB	≤ 70 dB	≤ 70 dB
Applying Area	120-220m²	200-350m²	300-550m²	450-700m²

Model no.	SDI-720L	SDI-840L	SDI-960L	SDI-1200L
Cooling Capacity	25.0KW	30 KW	30 KW	37.5 KW
Water Removal Capacity @30°C, RH80%	720L/DAY	840L/DAY	960L/DAY	1200L/DAY
Supply Voltage	380V or 480V	380V or 480V	380V or 480V	380V or 480V
Rated Power	7000 W	12000 W	13000 W	17000 W
Rated Amps	13 A	30 A	35 A	40 A
Air Volume	5800m³/h	11000m³/h	11000m³/h	13000m³/h
Working Temperature	5°C~38°C	5°C~38°C	5°C~38°C	5°C~38°C
Humidity Range (RH)	40%~95%	40%~95%	40%~95%	40%~95%
Net Dimensions	1195x500x1745mm	1387x720x1907mm	1387x720x1907mm	1387x720x1907mm
Packed Dimensions	1300x580x1980mm	1487x820x2007mm	1487x820x2007mm	1487x820x2007mm
Net Weight	240Kg	315Kg	355Kg	380Kg
Gross Weight	250Kg	330Kg	370Kg	395Kg
Noise	≤ 70 dB	≤ 75 dB	≤ 75 dB	≤ 75 dB
Applying Area	600-1000m²	700-1300m²	800-1300m²	1500-2000m²

*** Note: The specific voltage and frequency for three-phase or single-phase power shall be subject to the dehumidifier actually ordered. The detailed voltage, frequency and other relevant information will be marked on the nameplate and in the instruction manual of each unit.

UNPACKING THE DEHUMIDIFIER

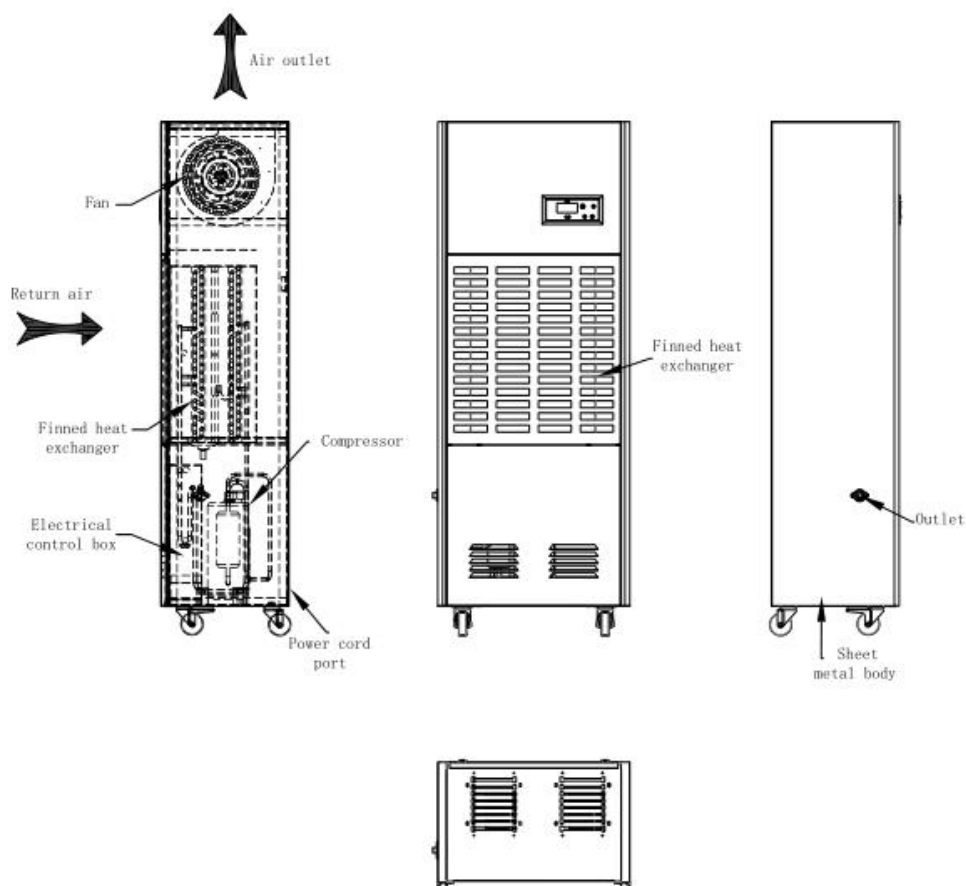
Unpack the outer ply-wooden case, and remove the protection film to take out the dehumidifier for installation.



WHAT’S IN THE CASE

Components		QTY
	Dehumidifier	1 pc
	Drianage Pipe	1 pc
	Filter	1 pc
	Power Cord	1 pc
	Instruction Manual	1 pc

STRUCTURE & RUNNING



Housing and body

- Robust steel frame construction: compact, durable, and corrosion-resistant, with anti-frost protection to prevent coil freeze-up.
- Removable flush-fitting seamless access panels.
- Patented defrost system ensures consistent, reliable dehumidification capacity.
- Integrated condensate drain tray ensures complete water evacuation, eliminating standing water.

Inlet / Outlet air panel

- Each air inlet is fitted with a removable filter.
- High-efficiency, low-noise centrifugal fan with steel volute and blades.

Refrigeration system

- Energy-saving heat exchanger with integrated liquid separator reservoir for precise refrigerant flow regulation – maximizes cooling capacity and ensures compressor stability. Built-in filter-drier protects capillary or expansion valve from clogging.
- Patented defrost design for reliable refrigeration system operation.
- Hydrophilic fin coating boosts heat transfer efficiency by 20%; premium insulation improves thermal retention by 15%.

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Compressor

- The compressor is the core component of the dehumidifier, directly determining its overall performance. As the "heart" of the system, it powers the entire refrigeration cycle. We exclusively employ internationally renowned brand compressors to ensure long-term reliability and efficiency.

Throttling device system

- The throttling device is a key component among the four main elements of the refrigeration system.
- It reduces the high-pressure liquid refrigerant from the condenser, enabling it to vaporize and absorb heat at low pressure/temperature.
- Maintains proper pressure differential between condenser and evaporator.
- Direct expansion design minimizes cooling capacity loss for enhanced efficiency.
- Also protects the compressor from overheating.

Protection features

- Purpose-built dehumidifier controller for powerful, reliable performance. Integrated motor overload and short-circuit protection.
- 3-minute startup delay prevents short-cycling after power off.
- 3-minute fan run-on after shutdown dissipates internal heat for improved durability.
- High-temperature protection safeguards compressor against thermal damage.
- Low-pressure protection prevents compressor burnout in case of refrigerant leakage.

Brief introduction

Industrial dehumidifiers offer flexible installation options to meet various owner requirements. If duct connection to an existing ventilation system is required, choose an industrial dehumidifier with flanged air inlet and outlet before purchase for easier duct connection.

This chapter provides essential information on preparation and installation procedures. Please use this as a guide prior to installation.

Delivery and storage

To ensure quality and reliability, every dehumidifier is fully tested at the factory prior to shipment.

If the unit will not be installed immediately, please observe the following storage guidelines:

Keep the original packaging in good condition.

Avoid physical impacts or damage.

Store the dehumidifier indoors and keep it properly covered to protect against dust, frost, and moisture ingress.

Inspection before installation

Inspect the unit for shipping damage. If damage is found, keep all packaging materials and notify the supplier/manufacturer immediately with photos.

Moving machine

Check weight – Verify the unit's weight before any loading or unloading.

Use proper equipment – For extended moves, use a trolley, forklift, or other mechanical aids.

INSTALLATION GUIDE

Lift correctly – Always sling the unit using designated lifting points. Keep slings clear of the motor, electrical controls, and exposed piping to avoid equipment damage.

Installation location

Install the unit indoors with sufficient service access for maintenance and inspection.

Avoid installation in areas where ambient temperature may drop below the dew point of the incoming air to prevent internal condensation.

Place the unit close to a power supply for easy connection.



Maintain adequate clearance around the dehumidifier to allow safe access for troubleshooting and routine maintenance.

Ground/Base

The dehumidifier must be installed horizontally and perfectly level. Use a spirit level to verify the unit is level during installation.

Ducting Connection

Duct dimensions must meet ISO 7807 recommendations.

Connect ducting to the unit flanges. Bolt protrusion into the duct must not exceed 20 mm.

Keep duct runs short to minimize static pressure loss.

All rigid duct fittings must be airtight to ensure performance.

Insulate ducts adequately to prevent condensation and corrosion.

Use flexible, airtight connectors at joints to reduce noise and vibration.

INSTALLATION GUIDE

Temperature and Humidity Sensor (Internal, Located at the Front Air Inlet)

The temperature and humidity sensor of this unit is factory-installed inside the machine at the front air inlet, and is used to measure the temperature and humidity of the air entering the unit. It has been installed and calibrated at the factory. No separate wiring or installation is required by the user.

Keep the inlet and filter unobstructed and clean. Do not block the inlet, filter, or the area around the sensor.

Do not cover or contaminate the sensing element. Clean gently with low-pressure air or a soft brush if dusty.

Do not spray or rinse water onto the sensor or its wiring.

Do not disassemble, relocate, or adjust the sensor.

Inspect periodically for loose or damaged wiring, dust, moisture, and inlet obstruction. Contact qualified personnel if any abnormality is found.

Drain pipe connection

A drain hose must be connected to the drain fitting on the dehumidifier. Select the hose diameter according to the drain fitting size (refer to the specification table for details).

Please note that drainage is gravity-fed (non-pressurized). To ensure proper condensate removal, observe the following:

The drain line must have a continuous downward slope towards the drain point.

The outlet of the drain hose must be positioned lower than its connection point on the dehumidifier.

Electrical connection



All electrical connections must comply with local electrical installation regulations and shall be carried out by qualified personnel only.

Voltage & Frequency – Do not connect the unit to a power supply with voltage or frequency exceeding the rated values specified on the nameplate.

Power Supply Check – Before connecting power, verify that the supply voltage and frequency fluctuation does not exceed $\pm 10\%$ of the rated values.

Grounding & Power-Off – The unit must be properly grounded. Always disconnect power before performing any inspection, maintenance, or servicing.

Caution: If the dehumidifier is connected to a three-phase power supply, the supply must be three-phase with a neutral wire and the phase sequence must be correct (3/N/PE ~). Incorrect wiring will prevent the unit from operating properly.

Installation Requirements

Installation Environment

Install the unit in an open area. Keep the front, back, and sides clear so air inlet and outlet are unobstructed.

Install on a level, solid floor or base. Level the unit to ensure proper drainage and compressor lubrication.

Use vibration pads or anchor bolts if needed to reduce vibration and noise.

Avoid dusty, oily, corrosive, or explosive atmospheres.

Avoid high-temperature, high-humidity, or steam-exposed areas.

Avoid strong electromagnetic interference sources (large motors, VFDs, welding machines).

Confirm the ambient temperature is within the unit's operating range.

Keep flammable materials away and the area well ventilated.

Do not block the air outlet. Keep enough distance to prevent hot air from short-circuiting back into the unit.

Leave sufficient space for drainage and maintenance.

INSTALLATION GUIDE

Power Supply Requirements

The power supply must have sufficient capacity for the unit.

Voltage, frequency, and phase must match the nameplate.

Three-phase models require a 3/N/PE ~ supply with correct phase sequence. Otherwise, the unit will not operate properly.

Ensure reliable grounding per local electrical codes.

Install a matching circuit breaker or leakage protector.

Use adequately sized cables. Avoid long or undersized cables to prevent voltage drop.

Route and secure cables neatly. Avoid stepping on, squeezing, or routing them near hot components.

Installation Precautions

Keep the unit upright during transport. Avoid excessive tilting to prevent compressor damage.

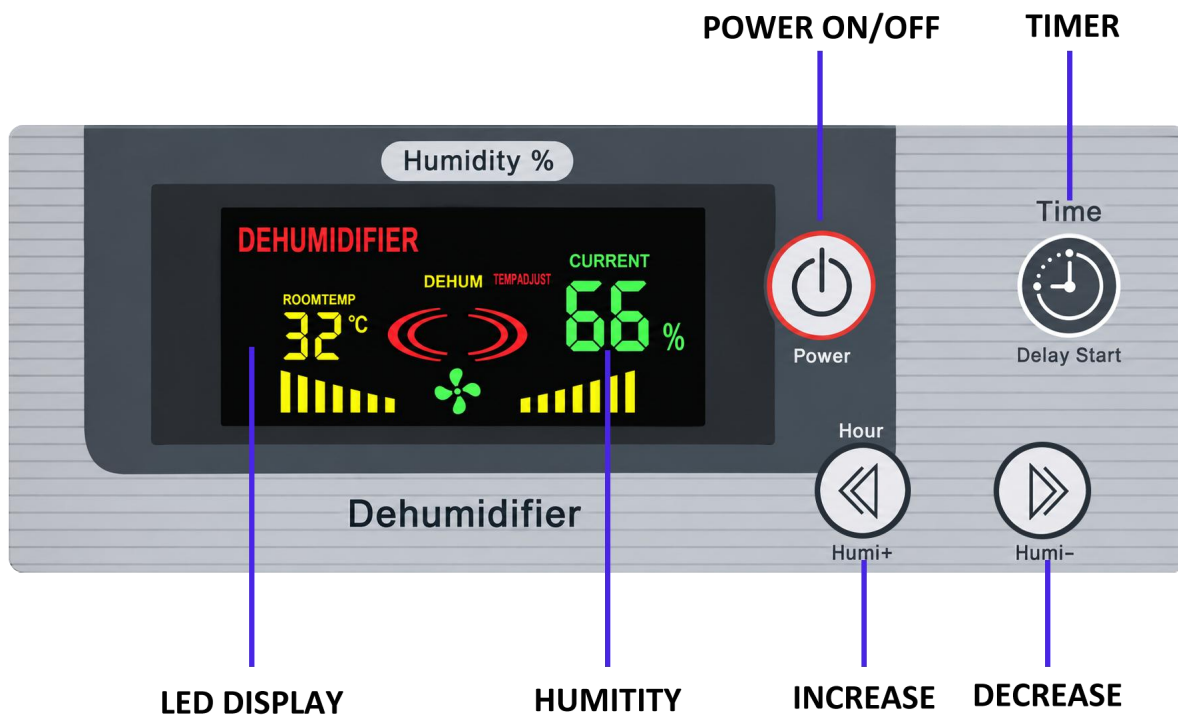
Check that the filter is installed in the correct direction and is easy to remove for cleaning.

After installation, check all wiring and connections.

Perform a drainage test to confirm condensate drains properly with no leaks.

Before first power-on, confirm correct voltage and phase sequence, and let the unit stand for a period before starting.

OPERATION GUIDE



Power: Press once to turn on the unit, press again to turn off



Time: Press to change mode setting



Value up: Press once in setting mode to add 1% of target humidity



Value down: Press once in setting mode to minus 1% of target humidity

1. “POWER” button

Press this button to start the machine, it enters start-up mode after the buzzer buzzes twice

Press this button to stop the machine, it enters stop mode after the buzzer buzzes once

2. “TIME” button

Press this button for once, and it enters the mode of current time setting;

Press this button for successively twice, it enters the mode of preset start-up;

Press this button for successively three times, it enters the mode of preset stop;

Press this button for successively four times, it exits the mode of time pre-setting.

3. “+” button

Press this button directly to increase the set humidity. Buzzer buzzes once for each pressing and the set humidity decreases by 1% RH. Successive operation can be achieved by pressing this button successively. Press “Time” button before pressing this button, the time(hour) can be increased.

4. “-” button

Press this button directly to decrease the set humidity. Buzzer buzzes once for each pressing and the set humidity decreases by 1%RH. Successively operation can be achieved by pressing this button successively. Press “Time” button before pressing this button, the time(minute) can be decreases.

Start-up

1. Turn on the power, and the dehumidifier will beep once.
2. Press the “On/Off” button once, and the LCD lights up. After all displays return to normal, the LCD shows the current ambient humidity.
3. Humidity setting: Press the “+” and “-” buttons to set the desired humidity. When the set humidity is 3% lower than the current humidity, the dehumidifier starts operating; when the set humidity is 3% higher than the current humidity, the dehumidifier stops operating.
4. When the set humidity is less than 30%, the dehumidifier enters continuous dehumidification mode.
5. Preset time setting:
Press the “Time” button once, and the hour digits on the display flash. Press “+” and “-” to adjust the hour and minute. Press the “Time” button a second time, and the “Start-up time” on the LCD flashes. Press “+” and “-” to adjust the hour and minute. Press the “Time” button a third time, and the “Stop time” on the LCD flashes. Press “+” and “-” to adjust the hour and minute. Press the “Time” button a fourth time to cancel the preset time mode.
6. After the preset time mode is set, if the dehumidifier is turned off, it will run the entire preset time sequence; if it is already operating, it will only follow the preset stop time.

Notices:

1. If the set humidity is higher than the current humidity, the dehumidifier stops working.
2. During dehumidification, after the compressor starts, the fan and compressor can only be stopped after they have been running for at least 3 minutes. The compressor can only be restarted 3 minutes after it stops.
3. When operating at low temperature, the dehumidifier may automatically detect the system temperature and defrost automatically. During defrosting, the defrost indicator lights up, the fan continues to run, and the compressor stops working.
4. **The system has an automatic memory function. After all mode settings have been completed, if there is a sudden power failure during operation or the power plug is disconnected, the system will store the current status before the power failure and automatically return to the operating mode used before the power failure when power is restored.**
5. The humidity setting range is 30%–90%.
6. If the dehumidifier will not be used for a long time, please unplug the power cord or disconnect the power supply.
7. The SDI-480L dehumidifier uses a dual-compressor structure. After start-up, Compressor A starts first, and Compressor B starts 5 seconds later. Some models use three or even four compressors, and they follow the same staggered-start logic to keep the inrush current from getting too high, protecting the power supply.
8. For three-phase models, an internal phase sequence protection device is provided. In case of incorrect phase sequence, phase loss, or no neutral wire, the display will show a corresponding warning and the dehumidifier cannot be started. Please ensure that the three-phase power is correctly connected before switching on the power.

Automatic defrost protection function

The dehumidifier is equipped with an automatic defrost function to prevent frost buildup on the evaporator coil.

When frost forms, the compressor will temporarily stop operating while the fan continues to run. This allows air to circulate over the coil and melt the frost. The defrost indicator light will illuminate during this process.

Once defrosting is complete, the dehumidifier will automatically resume normal operation.

Note: The defrost cycle may be triggered when the ambient temperature drops below 15°C. This is a normal feature and does not indicate a fault.

3-Minute Compressor Delay Protection

The compressor is protected by a 3-minute startup delay. If restarted within 3 minutes of shutdown, the compressor will wait 3 minutes before starting.



(Note! Frequent restarting can harm the compressor. The unit features a 3-minute anti-short-cycle delay to prevent damage.)

Maintenance introduction

With proper maintenance, your dehumidifier will provide long-lasting and reliable performance. The required maintenance frequency depends on the unit's operating environment – dustier or more humid conditions may require more frequent servicing. Adjust the maintenance schedule according to actual site conditions.

Note: Improper or neglected maintenance may reduce dehumidification efficiency and shorten the service life of the unit.

Filter

The unit has a filter at the air inlet to remove dust from incoming air.

Never run the unit without the filter.

Clean/replace filter monthly; replace fully annually.

Motor

The motor bearings are designed to last as long as the motor, but they will eventually wear out and require replacement after extended use. Inspect periodically.

NORMA MALFUNCTION REMOVAL

MALFUNCTIONS	ANALYZE	REMOVAL
DEHUMIDIFIER IS NOT WORKING	• POWER FAILURE • POWER OFF • POWER IS NOT PLUG IN • BLOWN FUSE	• RESUME POWER • POWER ON • PLUG IN • REPLACE FUSE
BAD DEHUMIDIFICATION EFFECT	• FILTER BLOCKED WITH DUST • AIR INLET IS BLOCKED • USED IN BAD SEALED ROOM • LESS REFRIGERANT	• WASH FILTER • REMOVE BLOCK • CLOSE DOOR AND WINDOW • FILL REFRIGERANT OR CONTACT WITH MANUFACTURER
LEAKAGE	• MACHINE IS NOT HORIZONTAL • DRAIN TUBE IS BLOCKED	• PLACE THE MACHINE HORIZONTAL • WASH OR CHANGE THE TUBE
NOISE	• MACHINE IS NOT INSTALLED STABLE • FILTER BLOCKED	• PLACE THE MACHINE STABLE • WASH THE FILTER

REMARKS

1.Please contact manufacturer or agent to maintain the malfunction that cannot be confirmed and removed, don't disassemble the machine by yourself

2.It will produce noise when the dehumidifier power on or power off, it's normal.

3.It will produce heat wind at the air outlet, it's normal

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