SDD-90L

CEILING MOUNTED DEHUMIDIFIER
DUCTED DEHUMIDIFIER

INSTRUCTION MANUAL

EAST
DEHUMIDIFIER

Eastdehumidifier.com

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.

Dehumidifier designed exclusively for ceiling spaces

1. All metal plate framed structure shell.
2. Automatic defrosting.
3. Large heat exchanger to save energy
4. Opposite air inlet and outlet to reduce efficiency interference.
5. Duct kits as optional accessories can be easily connected.
6. Full compressor protection against low pressure, short cycling, and overheating.
7. Memory function of operating mode after power outages.
8. 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 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 ℃ ~ 38 ℃.
- The room temperature will go up around 3~5℃ 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℃, 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.

⚠ CAUTION

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

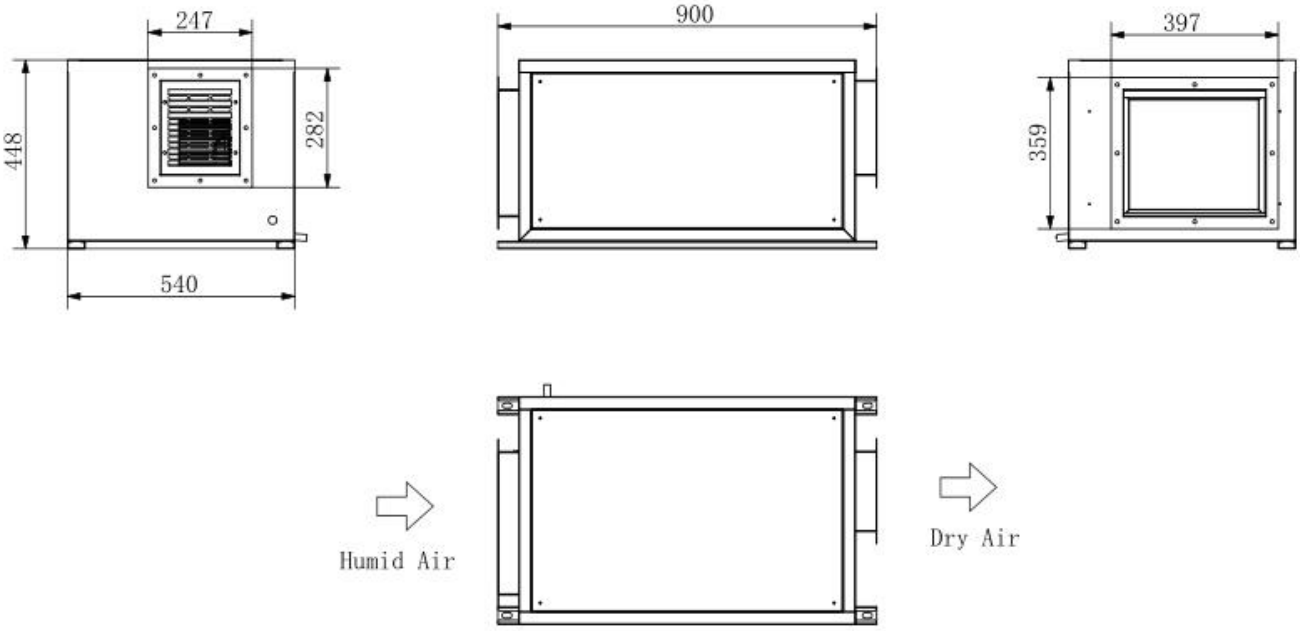
- If a fault occurs, the dehumidifier will shut down automatically. Inspect the unit carefully before restarting.

- Do not move or unplug the unit until the fan has come to a complete stop.

SPECIFICATIONS

ENVIRONMENTAL	
Operating Temperature Range	5℃~38℃
Operating Humidity Range	RH40% - RH95%
MECHANICAL	
Net Weight	49Kg (without packaging)
Drainage Pipe Size	5/8"
Capacity	90 Liters @ 30℃, 80% RH
Airflow	1000 m^3/h
ELECTRICAL	
Voltage	208~230 VAC ~, 1ø, 50 HZ
Operating Current	4.0 A @ 30℃, 80% RH

DIMENSIONS



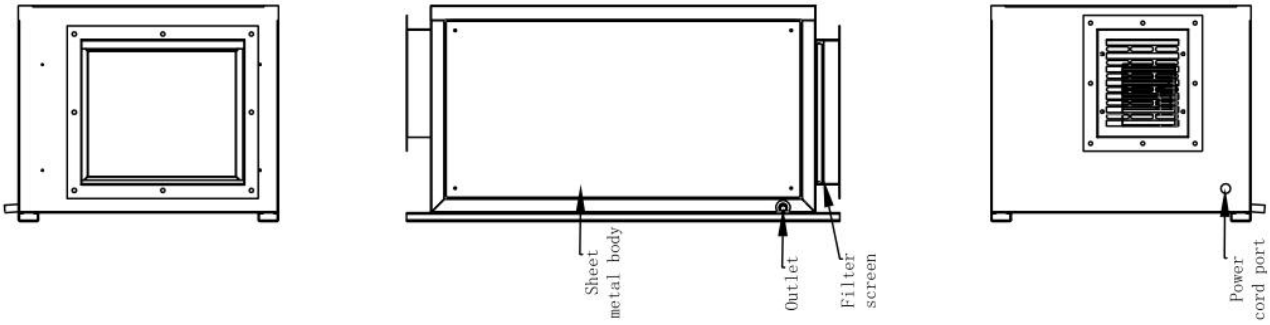
Net Dimensions: L900xW540xH480 MM
Packed Dimensions: L940XW620XH620 MM
Net Weight: 49Kg
Gross Weight: 59Kg

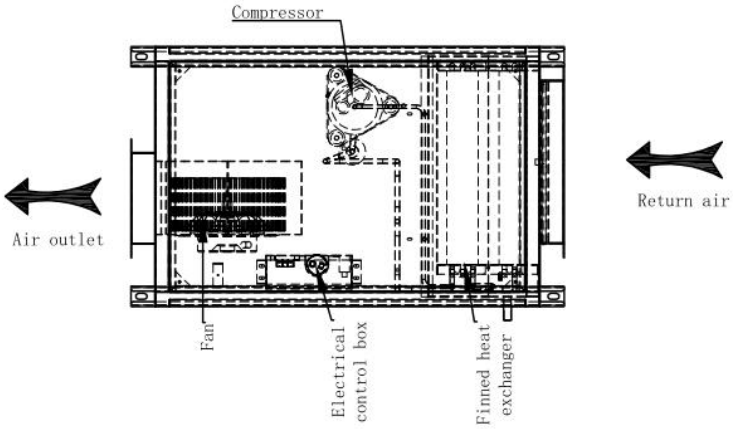
UNPACKING THE DEHUMIDIFIER

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
	Humidity Controller	1 pc
	Drianage Pipe	1 pc
	Filter	1 pc
	Power Cord	1 pc
	Instruction Manual	1 pc





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
Ceiling-mounted dehumidifiers offer flexible placement options to suit various owner requirements. They can also be integrated with existing ventilation systems through duct connections.

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.

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 comply with ISO 7807 recommendations.

Connect ducting to unit flanges. Bolt protrusion into duct: ≤ 20mm.

Keep duct runs short to minimize static pressure loss.

All rigid duct fittings must be air-tight to ensure performance.

Insulate ducts adequately to prevent condensation and corrosion.

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

External sensors
Follow the requirements below when installing temperature and humidity sensors:

Mounting Height – Sensors should be installed at a height of 1m to 1.5m above floor level to ensure accurate detection of humidity in the conditioned space.

Avoid Airflow Interference – Do not install sensors near dry air supply outlets, moist air return inlets, or external airflow sources, as this may affect measurement accuracy.

Stay Clear of Cooling Equipment – Position sensors away from cooling equipment (e.g., air conditioning units or cooling coils).

Avoid Direct Sunlight – Do not install sensors in direct sunlight, as temperature fluctuations caused by solar exposure will affect the accuracy of humidity readings.

Compatibility with Control System – The external control system must be compatible with the low-voltage control circuit of the dehumidification equipment.

Drain pipe connection

A drain hose (not supplied) 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.

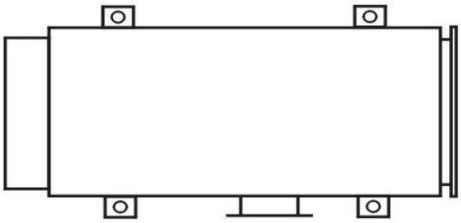
Power Supply Check – Before connecting power, verify that the supply voltage and frequency fluctuation does not exceed ±10% of the rated values.

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

PREPARING BEFORE INSTALLATION

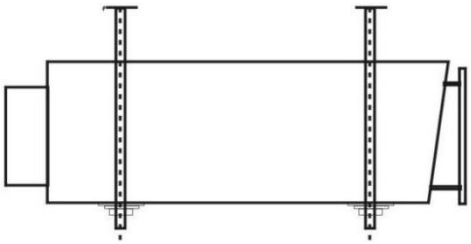
Disconnect power – Unplug the unit from the power outlet before installation.
Check supply & drain – Ensure power supply and drain line are ready.
Prepare tools – Have screwdrivers, threaded rods, wrenches, etc. on hand.

START INSTALLATION



TOP VIEW

Drill & anchor – Drill holes in the ceiling aligned with the unit's mounting holes. Insert expansion anchors and secure threaded rods.



SIDE VIEW

Mount & level – Lift unit onto the threaded rods. Adjust height to achieve a horizontal and level installation.

Connect drain – Attach drain hose. Check for leaks and ensure no blockages.

Connect power – Use a 208-240V~ 50Hz/60Hz supply. Install a suitable overload circuit breaker.

CAUTION IN INSTALLATION

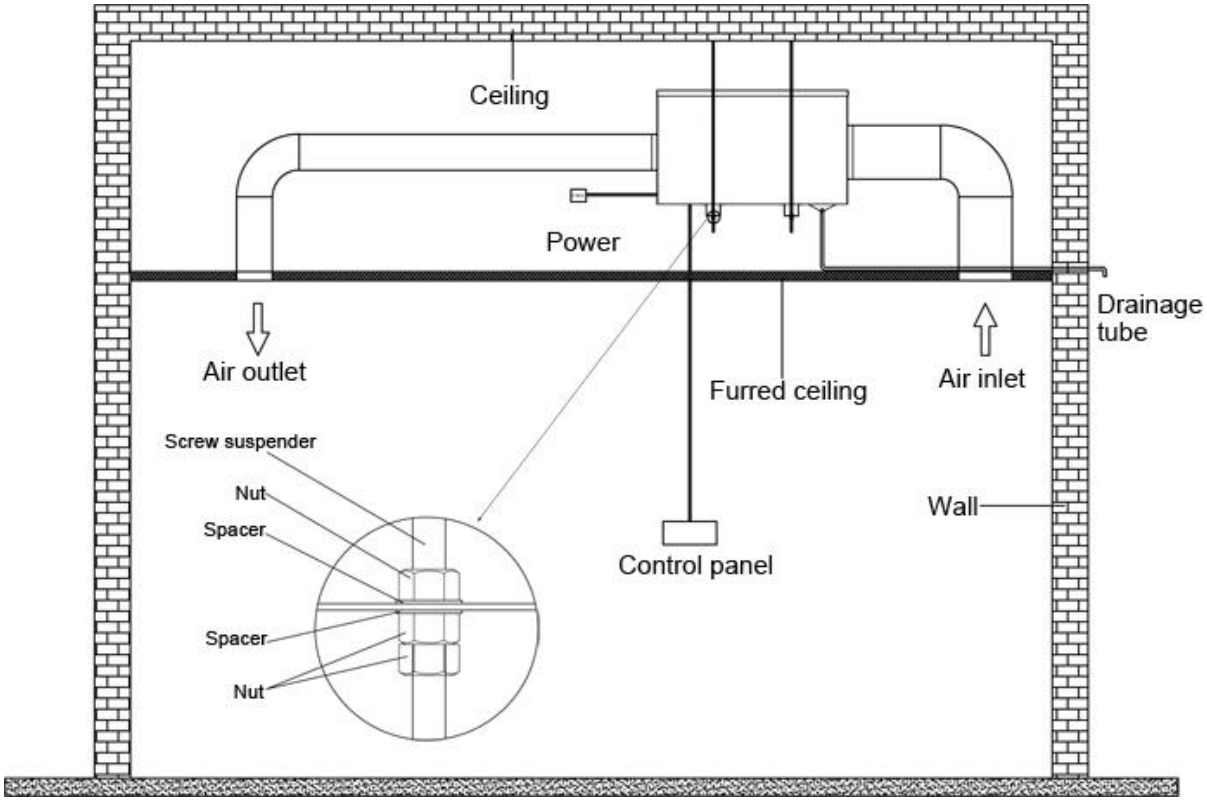
Disconnect power before installation. Take all necessary safety measures.

Use four threaded rods with appropriate screws to secure the unit to the ceiling.

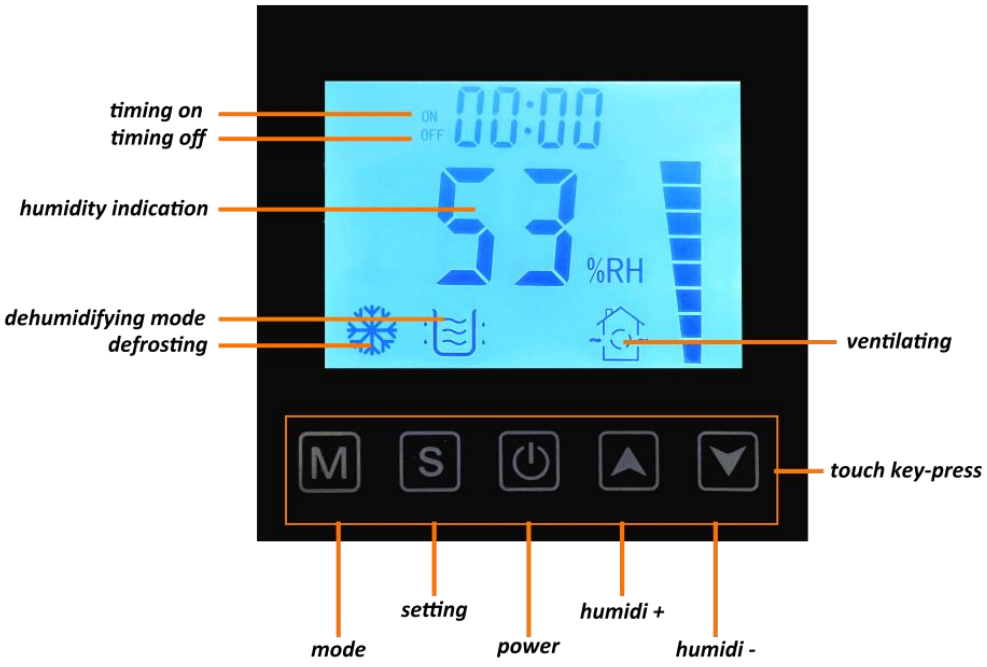
Ensure the unit is perfectly level to avoid leaks or performance issues.

Run the drain hose without sharp bends or kinks.

Maintain clearance around inlet/outlet – avoid corners or obstructions that may block airflow.



OPERATION GUIDE



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

Mode: Press to choose the fan satandby status

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

Setting: Press once to set the target humidity

OPERATION GUIDE

1. Press “Power” button to turn on the dehumidifier
2. In the dehumidifying mode
   Directly press “humidi +” or “humidi -” to set desired humidity.
   Press “setting” once to set timed on hours.
   Press “Setting” twice to set timed on hours minute.
   Press “Setting” thrice to set timed off hours.
   Press “Setting” quartic to set timed off minute.
3. “Humi +” Press the key to set the humidity value up with 1%RH scale in running mode. Press the key to set the hour or minute down with 1 hour or 1 minute scale in timed on/off or clock setting mode.
4. “Humi -” Press the key to set the humidity value down with 1%RH scale in running mode.Press the key to set the hour or minute down with 1 hour or 1 minute scale in timed on/off or clock setting mode.
5. “Humidity display” Current ambient humidity display when in standby / dehumidifying mode.
6. “Defrosting” symbol Blinking when the machine is automatic defrosting
7. “Timed on/off and clock display”Blinking when in timed on/off or clock setting mode
8. “Dehumidifying mode”Light on when dehumidifying mode and Blinking when in the 3 minutes delay protection mode.
9. Press “mode” to choose the fan status when room humidity meeting the desired humidity.
   When “ventilating” symbol display on screen, the fan will not stop working once room humidity meet the desired setting, only compressor will stop.
   When “ventilating” symbol not show on screen, both fan and compressor will stop working once room humidity meet the desired setting.

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 ceiling-mounted 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 WINDOWN • FILL REFRIGERANT OR CONTACT WITH MANUFACTURER
LEAKAGE	• MACHINE IS NOT HORIZONTAL • DRAIN TUBE IS BLOCKED	• PLACE THE MACHINE HORZONTAL • 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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