

SDD SERIES

CEILING MOUNTED DEHUMIDIFIER
DUCTED 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.



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.

DIRECTORY

SAFTY INSTRUCTIONS ----- 4

SPECIFICATIONS ----- 6

UNPACKING THE DEHUMIDIFIER ----- 7

STRUCTURE & RUNNING ----- 8

INSTALLATION GUIDE ----- 11

OPERATION GUIDE ----- 17

PROTECT FUNCTIONS ----- 19

MAINTENANCES -----20

NORMAL MALFUNCTION REMOVAL ----- 21

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, 460~480 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.	SDD-26L	SDD-38L	SDD-58L	SDD-90L	SDD-138L	SDD-150L
Cooling Capacity	0.7KW	0.78KW	2.08KW	3.75KW	3.75KW	4.2KW
Water Removal Capacity @30°C, RH80%	26L/DAY	38L/DAY	58L/DAY	90L/DAY	138L/DAY	150L/DAY
Supply Voltage	208~240V	208~240V	208~240V	208~240V	208~240V	208~240V
Rated Power	0.50 Kw	0.5 Kw	0.8 Kw	1.0 Kw	1.2 Kw	1.5 Kw
Rated Amps	2.2 A	2.3A	3.2 A	4.0 A	4.5 A	7A
Air Volume	260m³/h	450m³/h	550m³/h	1000m³/h	1300m³/h	1350m³/h
Static Pressure	40~60 Pa	40~60 Pa	40~60 Pa	50~80 Pa	50~80 Pa	50~80 Pa
Working Temperature	5°C~38°C	5°C~38°C	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%	40%~95%	40%~95%
Net Dimensions	685x310x211mm	734x344x300mm	830x490x370mm	900x540x480mm	900x540x480mm	900x540x480mm
Packed Dimesions	785x410x321mm	834x444x400mm	930x590x470mm	1000x740x600mm	1000x740x600mm	940x620x620mm
Net Weight	16Kg	24KG	35Kg	49Kg	53Kg	61Kg
Gross Weight	21Kg	33KG	43Kg	59Kg	67Kg	71Kg
Air Inlet Flange Size	Φ 150mm	Φ 150mm	Φ 160mm	300x340mm	300x340mm	265x265mm
Air Outlet Flange Size	Φ 100mm	Φ 100mm	Φ 160mm	225x190mm	225x190mm	166x166mm
Noise	≤45dB	≤45dB	≤45dB	≤60dB	≤60dB	≤60dB
Applying Area	10~25m²	10~25m²	30~70m²	70~120m²	90~130m²	110~170m²

Model no.	SDD-168L	SDD-240L	SDD-360L	SDD-480L	SDD-720L	SDD-960L
Cooling Capacity	6.2KW	7.8KW	15.6KW	15.6KW	23.4KW	31.2KW
Water Removal Capacity @30°C, RH80%	168L/DAY	240L/DAY	360L/DAY	480L/DAY	720L/DAY	960L/DAY
Supply Voltage	208~240V	208~240V	380 or 480V	380 or 480V	380 or 480V	380 or 480V
Rated Power	2.8 Kw	3.5 Kw	6.5 Kw	6.7 Kw	9.5 Kw	13 Kw
Rated Amps	12.5 A	16 A	9 A	11 A	26 A	30 A
Air Volume	1800m³/h	2800m³/h	4000m³/h	5600m³/h	8000m³/h	11000m³/h
Static Pressure	50~80 Pa	50~80 Pa	100~150 Pa	100~150 Pa	100~150 Pa	100~150 Pa
Working Temperature	5°C~38°C	5°C~38°C	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%	40%~95%	40%~95%
Net Dimensions	1050x700x700mm	1100x900x700mm	1100x1280x695mm	1100x1280x695mm	1500x1510x800mm	1500x1510x800mm
Packed Dimesions	1180X780X880mm	1160X960X860mm	1210X1320X845mm	1210X1320X845mm	1680X1590X980mm	1680X1590X980mm
Net Weight	100Kg	126Kg	210Kg	225Kg	330Kg	375Kg
Gross Weight	110Kg	130Kg	220Kg	235Kg	340Kg	385Kg
Air Inlet Flange Size	540x430mm	554x604mm	1004x524mm	1004x524mm	1234x654mm	1234x654mm
Air Outlet Flange Size	540x430mm	554x604mm	1004x524mm	1004x524mm	1234x654mm	1234x654mm
Noise	≤65dB	≤65dB	≤70dB	≤70dB	≤70dB	≤70dB
Applying Area	120~250m²	200~350m²	300~500m²	500~800m²	800~1000m²	1000~1200m²

*** 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

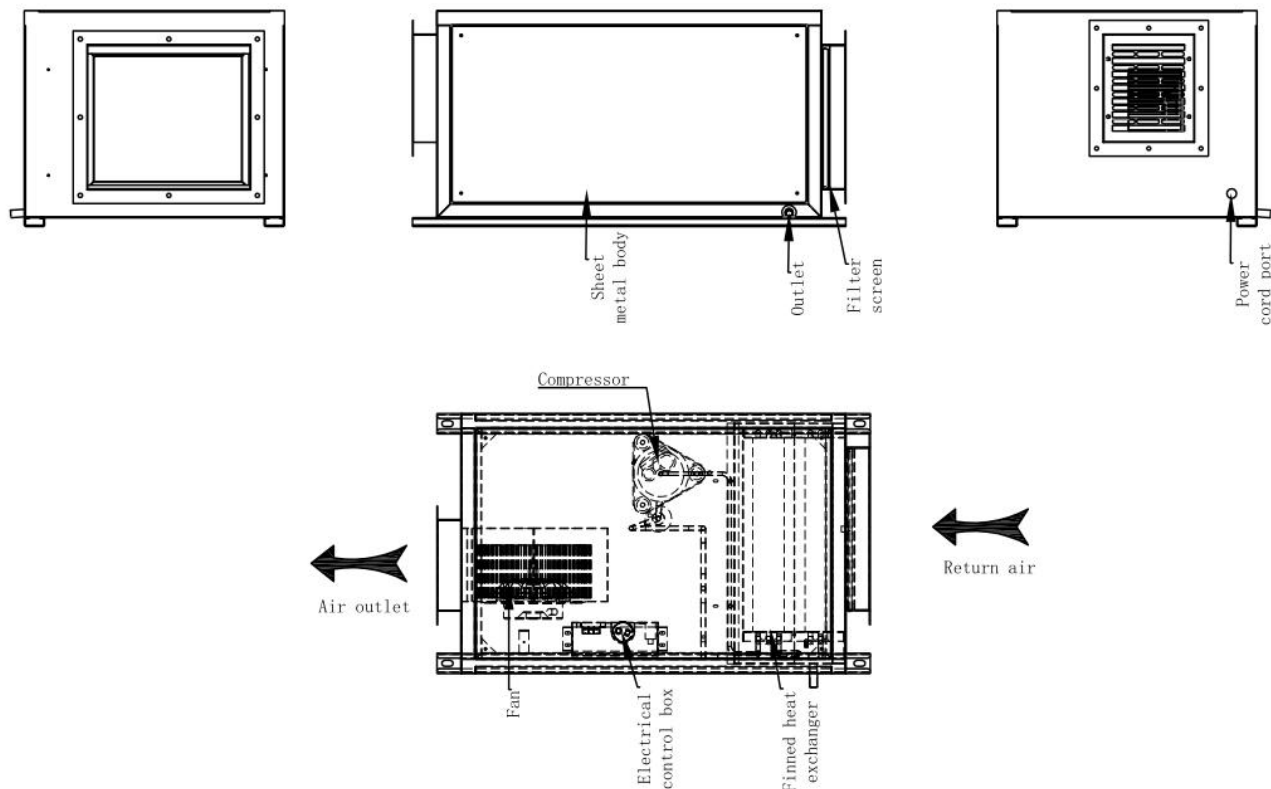
Unpack the outer ply-wooden case, and remove the protection film to take out the dehumidifier for installation.



WHAT'S IN THE CASE

Components		QTY
	Dehumidifier	1 pc
	Humidity Controller	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%.

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.
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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.

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 comply with ISO 7807 recommendations.

Connect ducting to unit flanges. Bolt protrusion into duct: $\leq 20\text{mm}$.

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 $\pm 10\%$ 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.

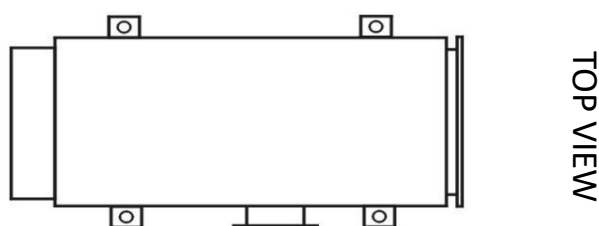
PREPARING BEFORE INSTALLATION

Disconnect power – Unplug the unit from the power outlet before installation.

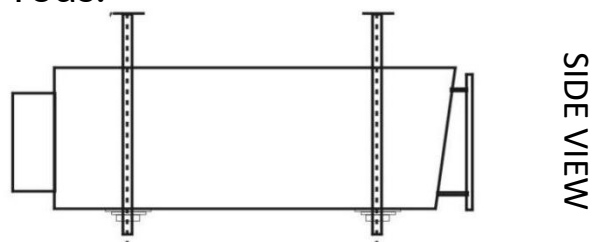
Check supply & drain – Ensure power supply and drain line are ready.

Prepare tools – Have screwdrivers, threaded rods, wrenches, etc. on hand.

START INSTALLATION



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



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, or 380~415V ~50Hz supply, or 460~480V ~60Hz supply. Install a suitable overload circuit breaker.

INSTALLATION GUIDE



CAUTION IN INSTALLATION

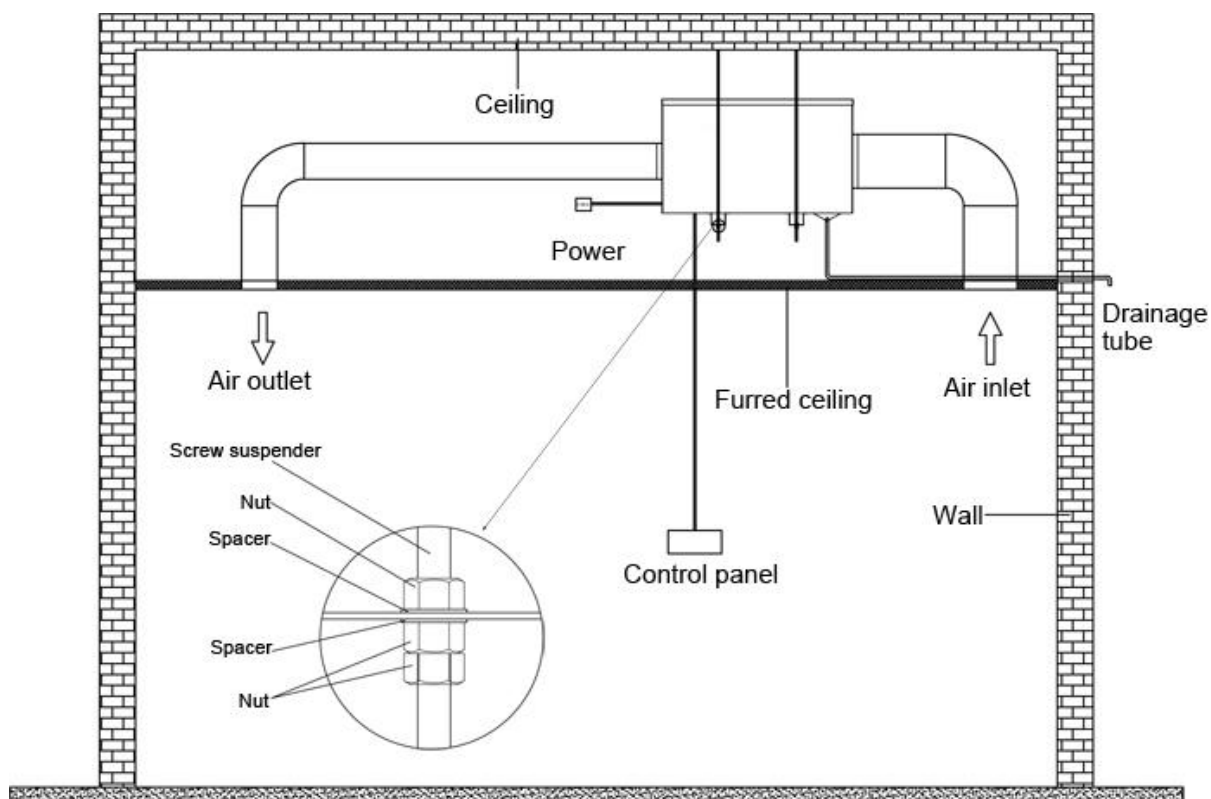
Disconnect power before installation. Take all necessary safety measures.

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

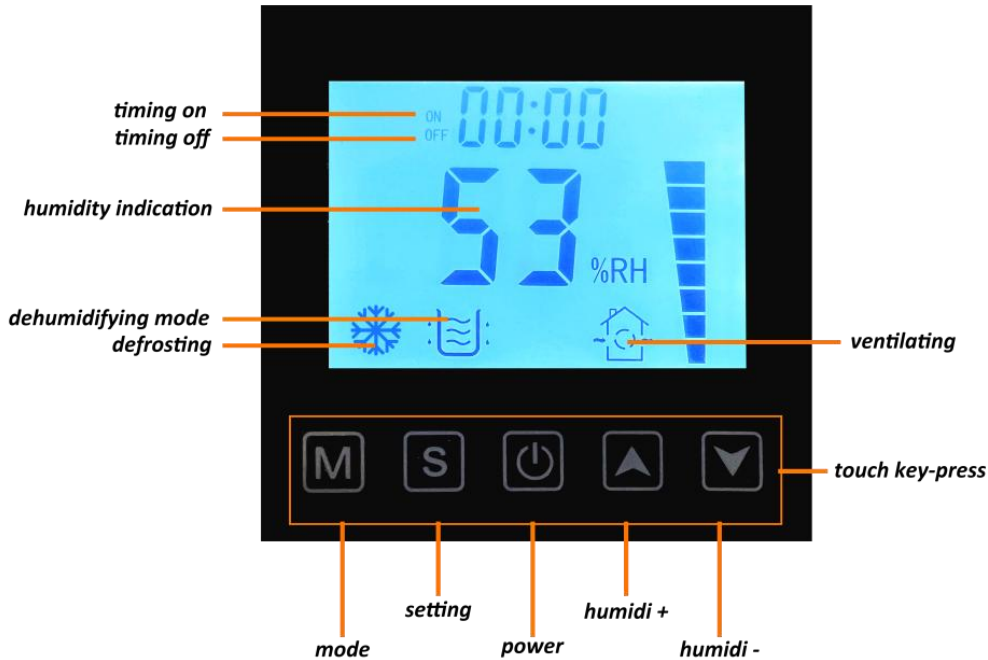
Ensure the unit is perfectly level to avoid leaks or performance issues.

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 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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