

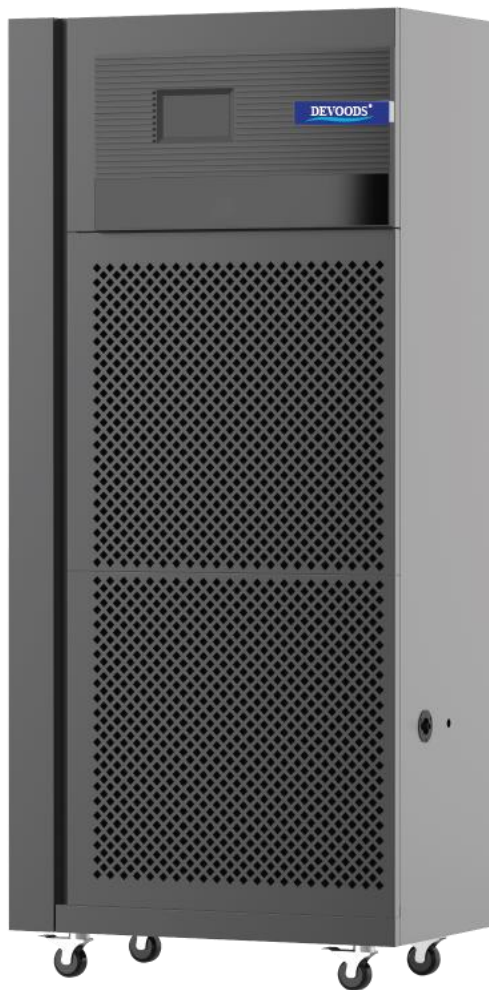
DEVOODS®

Model MDH-180B

(Single Phase)

Industrial Dehumidifier

User Manual



**Please read this instruction manual carefully before you use your dehumidifier*

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INTRODUCTION

Please read this instruction manual carefully before you use this dehumidifier.

DEVOODS Industrial dehumidifiers are designed to work in the toughest conditions. It is commonly used for larger spaces like factories and warehouses, to remove excess moisture and generate the optimum level of relative humidity in the shortest period.

The MDH-180B removes water vapor from the air aggressively, which in turn elevates the drying of materials by movement of air thereby inducing evaporation of moisture from molecules to water vapor.

The MDH-180B is a floor standing industrial range of refrigerant dehumidifier designed for installation and use where the distribution of air by peripheral air pattern is required and preferred.

In warehouses or factories where machineries, products or high racking hinder the effective airflow distribution of smaller dehumidifiers, the MDH-180B overcomes this issue. When outside air permeates into the building due to non-tight construction design of certain warehouses, the MDH-180B is powerful enough to remove the moisture more efficiently and effectively than air conditioners and at a lower operation cost.

Relative Humidity is a measurement of how much moisture is in the air. It is the ratio that indicates the ability of the air to absorb more moisture, expressed in percent (%RH). For more information, see also specific/ absolute humidity.

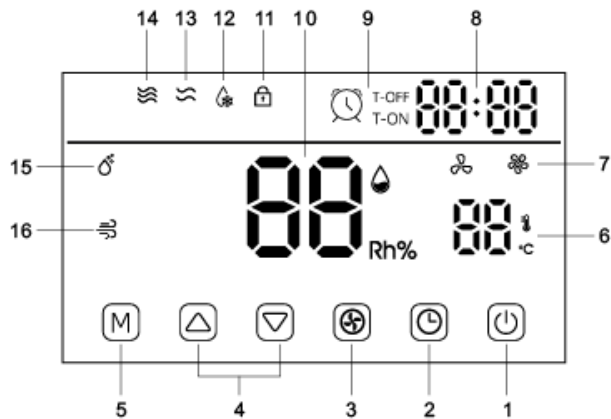
The lower the percentage in RH, the lower the moisture contents in the air and the greater the air's ability to absorb more moisture. When the air reaches 100% RH, it reaches its saturation point and the water vapor turns to liquid, forming droplets of condensation.



The DEVOODS range of Dehumidifiers is reputed in quality and reliability and is proven with thousands of applications all over. Your DEVOODS dehumidifier comes with two (2) years limited warranty against manufacturing defects.

IMPORTANT SAFETY INSTRUCTIONS

1. When using electrical appliances always apply basic safety precautions to reduce the risk of electrical shock, fire or injury to persons.
2. If the electrical supply cord or plug is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons.
3. Unit must be electrically grounded. Use only a 220-240 Volt 3-wire 1 phase supply with neutral and earth.
4. Always switch off at the main power socket when not in use and before unplugging. Always unplug the unit before cleaning and inspect connections for damages.
5. Do not use in the following locations or similar conditions:
 - 5.1 Do not operate in standing water.
 - 5.2 Do not operate in rain or areas where water is likely to splash motor.
 - 5.3 Do not operate next to a source of heat.
 - 5.4 Do not obstruct air Inlet or Outlet
6. Do not spray water on the dehumidifier. Keep all electrical components in dry condition. If electrical components are wet, ensure unit is inspected by a qualified electrician before operating.
7. Always store the unit upright to maintain the compressor in proper working condition.
8. Remove filter and clean with vacuum cleaner or wash with mild detergent. Do NOT wash with hot water or dish washer. Do NOT dry under direct sunlight.
9. The unit is fitted with an auto defrosting operation and starts when the evaporator generates frost. The function ensures continuous running when the temperature is between 5°C and 38°C. The moisture removal rate may vary depending on temperature and moisture load in the air stream. Caution – operating under condition below 10°C may result in constant frosting and less effective dehumidification.

CONTROL/DISPLAY PANEL



1. Press ON/OFF key to start and to shut down the dehumidifier.
2. Auto On and OFF can be set from 1-24 hours.
3. To change the fan speed between high fan and low fan.
4. Up and down key.
 - a. Press UP or DOWN key to set the desired humidity level from CO-30%-31%-32%-----80%-CO.
 - b. To set the current time and target timer on/off.
 - c. Press  and  keys at the same time for 2s to lock and unlock control panel.
5. Mode Selection: Press to select dehumidification mode, ventilation mode.
6. Humidity Reading: Real-time display of current ambient humidity.
7. Fan Speed Indicators: Display the fan speed.
8. Time Indicator: Real-time display of time.
9. Timer Indicators: Timer ON or OFF
10. Temperature Indicator: Real-time display of current ambient temperature.
11. Lock Indicator: Lighted during lock mode.
12. Defrost Indicator: Lighted during defrost mode.
13. Dehumidification Indicator: Lighted in dehumidification mode.
14. Ventilation Indicator: Lighted in ventilation mode.

ILLUSTRATIVE DIAGRAMS - PARTS



OPERATING INSTRUCTIONS

Setting Up and Installation

1. While every unit of DEVOODS Dehumidifier has been tested in factory and PDI by AAQ before delivery, transportation and handling may result in various levels of damages. It is imperative that installer/ Owner inspect the packaging and unit body prior to installation. Report all damages if goods is received not in its original condition.
2. The dehumidifier should be installed with consideration for service and maintenance. Sufficient space should be allowed for servicemen/ technicians to access with safety considerations.
3. The dehumidifier should not be installed in an area where the temperature is lower than the process air's dew point to prevent condensation.
4. Condensate drain pipe should be carefully fitted to prevent leakages.
5. Check to ensure there is no debris or any loose components inside the compartment that may damage the fan motor.

DEVOODS MDH series uses an external power supply of 220-240V/1PH/50Hz. Connect the five wires (neutral and ground) with three wires labelled “U”, “V”, “W”, and the wire mark of “⊕” to the ground. (the unit should have a circuit breaker of 20A to achieve an independent control).

1. Fan Speed

Press fan speed “⊕” key to change the fan speed between high fan and low fan.

2. Humidity Setting

Press the up “⬆” down “⬇” key to select your preferred humidity from 20% to 95%.

3. Ventilation mode

Press the mode “Ⓜ” key once to select ventilation mode, unit runs with high fan speed without dehumidifying.

4. Manual Mode


Press the mode “M” key 2 times to select Manual mode.

5. Clock Setting


Press “△” key and “⊕” for 5s to access clock setting mode.

The hour segment will blink. Use the “△” & “▽” to set the required hour. While hour segment is blinking, press “△” key and “⊕” for 5s and change to the minutes segment. In the minutes segment, while the display is blinking, use the “△” & “▽” to set the required minutes.

6. Timer Setting

Press “M” key for 5s, the “ T-OFF T-ON” timer indicator will light on, and then press the “M” key twice to switch on timer setting, the original value is 00, press up or down key to set 01, the unit will run for 23 hours and 45 minutes, and shut down within 15 minutes for a cycle to run normally. Auto timer setting will be cancelled if the value setting on 00.

7. Automatic Defrost

When the unit has operated for a while at a low temperature, moisture in the air would condense on the evaporator coil, automatic defrosting will be ON. During defrost mode, compressor stops running, the fan motor runs at high fan, and defrost “” indicator lights up.

8. Compressor Delay Protection

To ensure the appliance operate normally for a long time in a safe condition, 3 minutes delay protection function is designed to ensure that the time between operating and stopping the compressor is not less than 3 minutes.

TECHNICAL SPECIFICATIONS

Model No	DEVOODS MDH-180B
Power Supply (5-wire)	220-240/ 1Ph/ 50Hz
Capacity (30°C, 80%RH)	180L/day
Power Consumption	3400W
Compressor type	Rotary type
Refrigerant	R410A
Operating Temp.	5°C – 35°C
Filter efficiency	G4
Sound level	63dBA
Net Weight	110kg
Dimension (WxDxH)	780mm x 465mm x 1775mm

SERVICE AND MAINTENANCE

Error Code Display




Displayed Code	E1	E2	E3
Error	Temperature Sensor Error	Humidity Sensor Error	Abnormal Dehumidifying Error
Display	Flash "E1" every 30s for 2s	Flash "E2" every 30s for 2s	Slowly flash "E3"
Working State	The unit keeps running at previous humidity setting status, defrosting mode changes into timing defrosting.	The unit keeps running at continuous dehumidifying status.	The unit automatically judges that the refrigeration effect is poor and cannot normally dehumidify, the unit will stop working.

Memory Function

When switched on or the power is reset, the unit can automatically recover to its previous status.

Note: After power failure, the working mode, target humidity, fan speed, timer setting, and lock key setting all keep its previous status.

Lock Key Function

Lock key program is designed for this unit, press “” and “” at the same time for 2s, lock key “” indicator lights, all keys on panel will be locked. To release the lock, you just need to repeat the previous operation again.

Contact **AAQ Service Department at 603 – 9202 7295 or enquiry@aaq.com.my** for technical assistance.

TROUBLESHOOTING

Before contacting the manufacturer or agent for service, please check for the following conditions:

Situations	Reason		Corrective Action
Unit does not operate	No power supply display off	• No power supply	• Recover power supply
		• The fuse of the control panel is burned out.	• Change new fuse
	Power supply display off	• Ambient humidity is lower than target humidity.	• Set the humidity again
		• Checked neutral wire	• Add neutral wire
E3	Motor is abnormally	Capacitor is damaged	Change Capacitor
		Shaft is stuck	Change motor
		Inside loop is damaged	Change motor
	Compressor is abnormally working	Capacitor of compressor is damaged	Change Capacitor
		Piston is stuck	Change compressor
		Inside loop is damaged	Change compressor
Lack of refrigerant	Check the point of leakage, recover it. Create a vacuum again, add refrigerant.		
FF	Communication failure between control panel and main board		Connection wire between display and main board is loose or disconnected.
F5	High temperature protection	Ambient temperature exceeds 40°C	/
	Low temperature protection	Ambient temperature is lower than 2°C	/