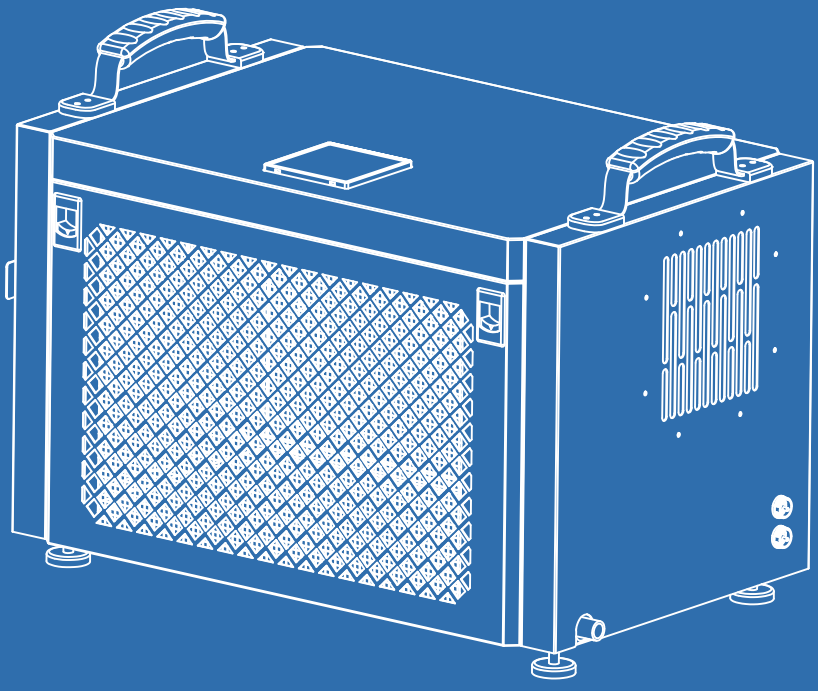
AIRPLUS

DEHUMIDIFIER

USER MANUAL (US STANDARD)



Thank you very much for choosing our brand's product. To ensure your safety, proper, and efficient use of this product, please read the instructions carefully and keep them properly.

NINGBO AQUART ENVIRONMENTAL APPLIANCE CO.,LTD.

WARNINGS

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Customer Service Email

service@edendirect-brand.com

CONTENTS

SAFETY INSTRUCTIONS

WARNING

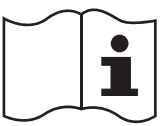
Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.

Do not pierce or burn.

Be aware that refrigerants may not contain an odour.

Refer operators manual



Read technical manual

Read operators

●Qualification of workers

Every working procedure that affects safety means shall only be carried out by competent persons.

Examples for such working procedures are:

• breaking into the refrigerating circuit;
• opening of sealed components;
• opening of ventilated enclosures.

●Checks to the area

Prior to beginning work on systems containing FLAMMABLE REFRIGERANTS, safety checks are necessary to ensure that the risk of ignition is minimised.

●Work procedure

Work shall be undertaken under a controlled procedure so as to minimise the risk of a flammable gas or vapour being present while the work is being performed.

●General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

●Checking for presence of refrigerant
The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

●Presence of fire extinguisher
If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

●No ignition sources
No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.

●Ventilated area
Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

●Checks to the refrigerating equipment
Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer’ s maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer’ s technical department for assistance.
The following checks shall be applied to installations using FLAMMABLE REFRIGERANTS:
– the actual REFRIGERANT CHARGE is in accordance with the room size within which the refrigerant containing parts are installed;
– the ventilation machinery and outlets are operating adequately and are not obstructed;
– if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
– marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
– refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

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●Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include:

• that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;

• that no live electrical components and wiring are exposed while charging, recovering or purging the system;

• that there is continuity of earth bonding.

●Repairs to sealed components

Sealed electrical components shall be replaced.

●Repair to intrinsically safe components

Intrinsically safe components must be replaced.

●Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

●Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of FLAMMABLE REFRIGERANTS, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
If a leak is suspected, all naked flames shall be removed/extinguished.
If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Removal of refrigerant shall be according to **Removal and evacuation.**

●Removal and evacuation

When breaking into the refrigerant circuit to make repairs – or for any other purpose –
conventional procedures shall be used. However, for flammable refrigerants it is important
that best practice be followed, since flammability is a consideration. The following procedure shall be adhered to:
– safely remove refrigerant following local and national regulations;
– evacuate;
– purge the circuit with inert gas ;
– evacuate;
– continuously flush or purge with inert gas when using flame to open circuit; and
– open the circuit.
The refrigerant charge shall be recovered into the correct recovery cylinders if venting is
not allowed by local and national codes. For appliances containing flammable refrigerants,
the system shall be purged with oxygen-free nitrogen to render the appliance safe for
flammable refrigerants. This process might need to be repeated several times.
Compressed air or oxygen shall not be used for purging refrigerant systems.
For appliances containing flammable refrigerants, refrigerants purging shall be achieved
by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until
the working pressure is achieved, then venting to atmosphere, and finally pulling down to a
vacuum. This process shall be repeated until no refrigerant is within the system.
When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. The outlet for the vacuum pump shall not be close to any potential ignition sources, and ventilation shall be available.

●Charging procedures

In addition to conventional charging procedures, the following requirements shall be followed.

• Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.

• Cylinders shall be kept in an appropriate position according to the instructions.

• Ensure that the REFRIGERATING SYSTEM is earthed prior to charging the system with refrigerant.

• Label the system when charging is complete (if not already).

• Extreme care shall be taken not to overfill the REFRIGERATING SYSTEM.

Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

●Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.

b) Isolate system electrically.

c) Before attempting the procedure, ensure that:

• mechanical handling equipment is available, if required, for handling refrigerant cylinders;

• all personal protective equipment is available and being used correctly;

• the recovery process is supervised at all times by a competent person;

• recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.

e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.

f) Make sure that cylinder is situated on the scales before recovery takes place.

g) Start the recovery machine and operate in accordance with instructions.

h) Do not overfill cylinders (no more than 80 % volume liquid charge).

i) Do not exceed the maximum working pressure of the cylinder, even temporarily.

j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

k) Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked.

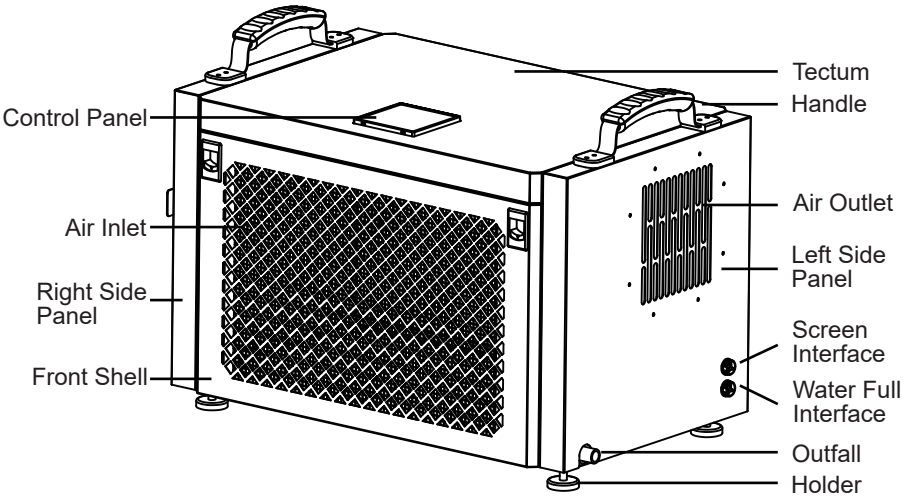
●Labelling

Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing FLAMMABLE REFRIGERANTS, ensure that there are labels on the equipment stating the equipment contains FLAMMABLE REFRIGERANT.

●Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order.
Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of the
flammable refrigerant. If in doubt, the manufacturer should be consulted. In addition, a set
of calibrated weighing scales shall be available and in good working order. Hoses shall be
complete with leak-free disconnect couplings and in good condition.
The recovered refrigerant shall be processed according to local legislation in the correct
recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in
recovery units and especially not in cylinders.
If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not
remain within the lubricant. The compressor body shall not be heated by an open flame or
other ignition sources to accelerate this process. When oil is drained from a system, it
shall be carried out safely.

PRODUCT STRUCTURE



INSTALLATION METHOD OF EXTERNAL FLANGE

1.This machine is equipped with an external flange(an external flange can also be omitted according to customer's demands). The flange parts are inside the machine.
The specific operation process is as follows:
Unscrew the screws of the machine's rear shell (Figure 1)(a total of 3 pcs),open the rear shell(Figure 2), take out the external flange, and fix the rear shell. At this point, fix the flange joint (Figure 3) on the left plate (a total of 6 pieces).

Reminder
1. After the entire machine is installed, please let it stand for 2 hours before turning it on for use.
2. The drainage method of this machine adopts direct drainage, or it can be connected to the drainage pipe for drainage. The height of the drainage pipe outlet must not exceed the height of the water tank.

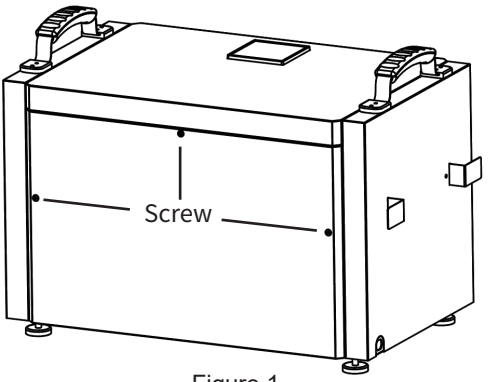


Figure 1

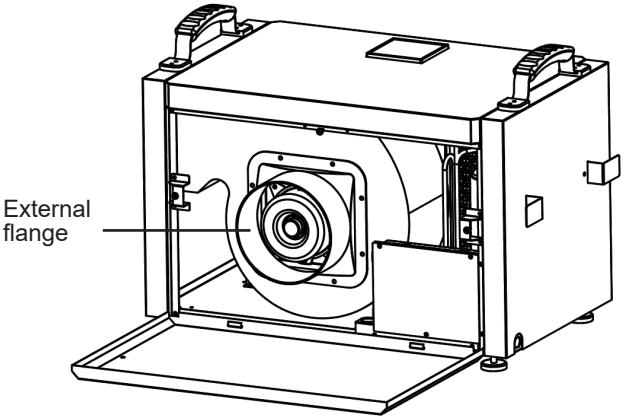


Figure 2

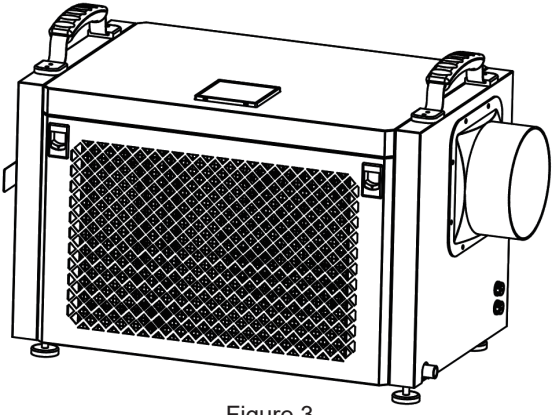
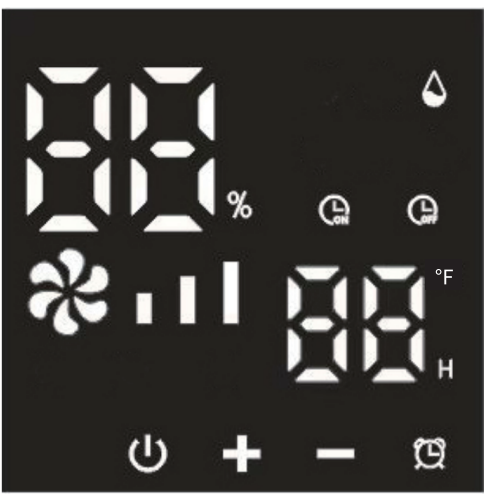


Figure 3

PRODUCT INTRODUCTION

The dehumidifier is used to reduce the air humidity in the installed space to make it suitable for people's living and item storage. Our dehumidifier uses a branded compressor and micro-computer humidity control. Humidity display is clear and intuitive. The appearance is beautiful, the performance is superior and the operation is simple. It is widely used in scientific research, industry, medical and health, instru-mentation, commodity storage, underground engineering, computer rooms, data rooms, archives, warehouses, baths, etc., to prevent instruments, meters, computers, telecommunication materials, commodities, and materials from moisture, corrosion, and mildew.

CONTROL PANEL INSTRUCTIONS



KEYPAD	DESCRIPTION
POWER	Press once to toggle between on and off.
+	Adjust different settings in different states. 1.Increase humidity setting value (range RH10%～95%) 2.Increase timer setting value (range 00～24 hours)
-	Adjust different settings in different states. 1.Decrease humidity setting value (range RH10%～95%) 2.Decrease timer setting value (range 00～24 hours)
MODE	Press briefly once to cycle through setting timer and humidity adjustment functions and exit.

FUNCTION DESCRIPTION

1、Humidity Control:

When the set humidity is reached, the fan still operate and compressor stop.
When the humidity exceeds the set level, both the fan and compressor operate.
Notes
●When the humidity setting is at the lowest value, it defaults to continuous dehu- midification mode.
If the humidity sensor fails, it switches to continuous dehumidification mode.
●If the coil sensor fails, it switches to a fixed timed defrost mode (see Defrost Method).
●Upon startup, the compressor delays 3 seconds, and upon shutdown, the fan delays 3 seconds.
●When the humidity drops to the condition where the compressor stops, the fan operates normally.
●Power outage memory: If the system suddenly encounters a power outage while working, it automatically stores the current operating state. When powered on again, the system will automatically enter the previous operating state and continue opera- tion.

2、Detailed Function Description:

●After the first power connection, press the power button to enter the startup mode. The humidity defaults to 50%RH, displaying the current humidity and temperature. The entire machine operates with both the compressor and fan starting.
●Press the Mode button to enter the timer setting function. Press “+”or “-”to set the shutdown timer. The timer indicator on the screen will flash.Adjust the time with “+”or “-”(range 0～24H). If no operation is made within 5 seconds, the system automatically executes the current timer function setting.
● Press the Mode button again to enter the humidity adjustment function.- Press “+” or “-”to set the humidity (range 10%-95%-CO). The “CO”mode is a forced dehumidi- fication mode, regardless of temperature and humidity, with the fan and compressor continuously operating.

3、Defrost Method:

Defrosting Method	Description	
Automatic Defrost	Sensor is normal	Conditions: When the compressor runs continuously for 30 minutes and the coil temperature is ≦ 30°F, it enters defrost mode. During defrost, the compressor stops and the fan continues to run.
Timed Defrost	In defrost mode, the system defrosts for 8 minutes. After the time is up, it exits defrost mode.	

4、Timer Switch Instructions:

● In the on state, a shutdown timer can be set. In the off state, a startup timer can be set. Setting both simultaneously enters a cyclic timer state.
● Timer Startup Setting: In the off state, press the “mode” button. The “timer on” icon flashes, and the time display area flashes the set time. Adjust the time with “+” or “-”.The buzzer beeps once for each press. Holding the button for 2 seconds allows continuous adjustment. After 10 seconds without operation, the machine accepts the setting, and the “timer on” icon flashes (range 0～24H).
● Timer Shutdown Setting: In the on state, press the “Mode” button. The “timer off” icon flashes, and the time display area flashes the set time. Adjust the time with “+” or “-”. The buzzer beeps once for each press. Holding the button for 2 seconds allows continuous adjustment. After 10 seconds without operation, the machine accepts the setting, and the “timer off” icon flashes (range 0～24H).

PRECAUTIONS TROUBLESHOOTING

1.If the dehumidifier malfunctions, immediately cut off the power and check the following items:

Malfunction	Cause Analysis	Solution
Machine won' t run	No power display	
	Power outage or socket without power	Check if the power is normal
	Power plug not inserted properly	Insert the power plug into the socket
	Fuse on control board blown	Replace the fuse
	Transformer on control board damaged	Replace the transformer
	Power display	
	Environment humidity lower than set humidity	Reset as needed
	Entire machine is defrosting	Wait for defrost to finish
Poor dehumi-dification	Inlet/outlet is obstructed	Remove obstruction
	Windows are open	Close doors and windows
	Room temperature is too low	Do not use
Noise	Uneven ground	Reposition the machine
	Machine not placed stably	Reposition stably
Noise	Machine is tilted	Level the machine
	Drain pipe/drain outlet blocked	Remove front panel and clean blockage

Error Codes

Malfunction	Cause Analysis	Solution
E1	Coil sensor fault	Switch to timed defrost, cancel system fault function, recoverable
E2	Temperature sensor fault	Replace temperature sensor
E3	Humidity sensor fault	Replace humidity sensor

2.If the above checks do not resolve the issue, contact the manufacturer or dealer directly. Do not disassemble the machine yourself.
3.During operation, the sound of refrigerant circulating is normal. The exhaust air outlet discharges warm air, causing a 34-37°F increase in room temperature, which is normal.
4.When moving, do not tilt the machine more than 45 degrees to prevent compressor damage.
5.The machine operates at 41-95°F .
6.When the room temperature is below 50°F and absolute humidity is very low, using the dehumidifier may not be necessary.
7. Keep the air inlet and outlet at least 1 meter away from walls or obstructions to avoid affecting the dehumidification effect.
8.Dust accumulation on the air filter will affect dehumidification and may cause malfunctions. Clean it regularly, at least once a month. In dusty environments, clean weekly or even daily. Gently tap the filter or use a vacuum cleaner to remove dust. For severe dust, rinse with water and dry before reinstalling.
9. If there is a fault code during the operation of the machine, please shut down and stop running. Immediately report to the after-sales staff for repair
10. Continuous 24-hour operation of the machine will affect its service life. It is recom- mended to stop the machine for 2 hours after every 10 hours of operation. If the user has special requirements, the machine must be operated 24 hours a day and must be supervised by dedicated personnel. Otherwise, in case of accidents, our company will not be held responsible.

SPECIAL REMINDER

1.Humidity sensors are precision components that can cause sensor failure when used in environments with strong corrosive gases and large dust.
2. This machine does not have explosion-proof function and is strictly prohibited from use in environments with special requirements such as flammable, explosive gases, dust, chemical products, and biological products.
3. If used in the above environment, causing damage to the machine is not covered by the warranty.
4. When installing this machine, be sure to take grounding protection measures to ensure safe use.
5. After running the machine for a period of time, water will be discharged. Please pay attention to the treatment of drainage.
6.To reduce malfunctions and extend service life, do not use brute force when operat- ing buttons.
7. The humidity sensor may deviate slightly from the actual humidity due to its location, environment, and temperature, which is a normal phenomenon.
8.During machine operation, the cooled air will be discharged through the condenser after drying, and the outlet temperature is higher than the ambient temperature. It is normal to discharge hot air.
9. The dehumidification capacity is related to the ambient temperature and humidi- ty. High temperature and humidity result in a large dehumidification capacity; Under low temperature or low humidity conditions, the dehumidification capacity will decrease, which is a normal phenomenon.

SPECIFICATIONS

Specification Table:

MODEL	AP60-2401
Power Supply	AC 115V/60Hz
Rated Power	520W
Rated Current	4.7 A
Low Side Pressure	290psig
High Side Pressure	650psig
Refrigerant:	R32/(9.7oz)(275g)
Motor Compressor	RLA:5.52A ; LRA:27A
Product Size	25.79*13.78*14.57 in
Net Weight	59.5 lb
Applicable Temperature	41-95°F

AIRPLUS

订单号	ZJ0012506001
文件名称	2401说明书 美规
更新时间	20250811
版本号	E-0.0.0
尺寸规格	138×210mm
材质	128g铜版纸
印刷要求	彩印 泼墨