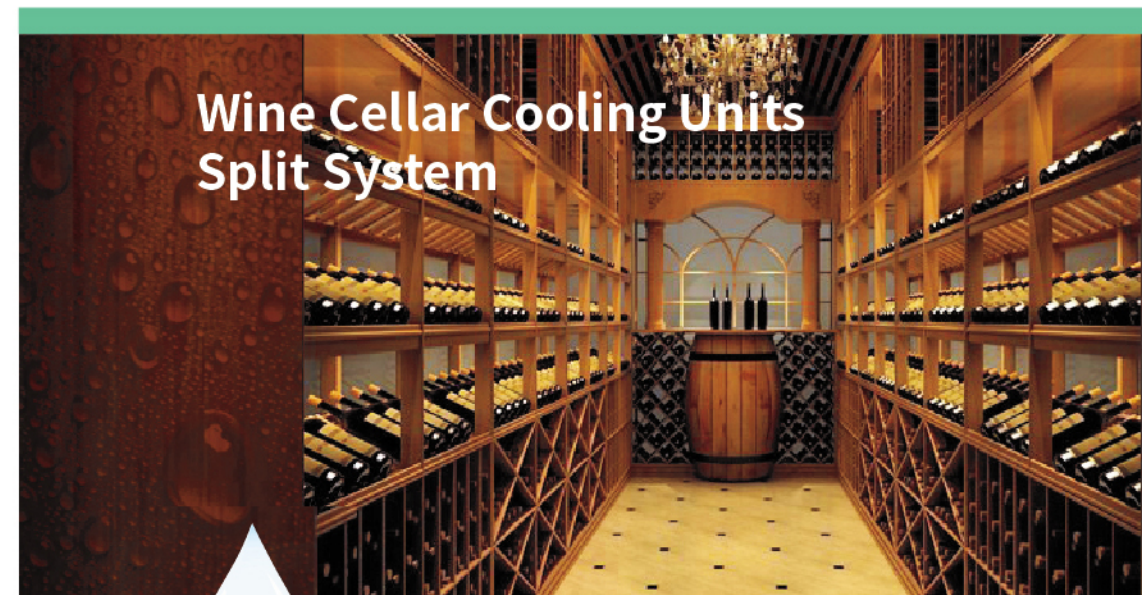


User Manual



- Thank you for purchasing this “Thenow” product;
- Please read this manual carefully before attempting to install, operate or service;
- Please retain this booklet for future reference.



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!!! WARNING !!!



To avoid the risk of electrical shock, property damage, personal injury or death, please read the following instructions carefully with safety or warning labels.

*During transportation or moving, please follow the correct direction on the packing case.

* After transportation or moved, it needs to be allowed to stand for more than 24 hours before it can be turned on.

* The power cord must be plugged into a 3-prong grounding-type wall receptacle.

*Do not attempt to carry out any measurement, device replacement or other maintenance work not covered in this manual, otherwise it may lead to warranty failure, endanger normal operation, extend equipment downtime and increase additional maintenance costs.



Disconnect electric power from the appliance before performing any maintenance or repairs, failure to do so could result in death or electrical shock.

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Product Introduction

The now wine cellar cooling units split system is intended for cellars without access to proper ventilation. They are known for their efficiency and longevity. Each unit is designed to maintain a consistent temperature and humidity in spaces where proper ventilation is not feasible. The evaporator is installed inside and the condensing unit can be placed as far as 25m away. Since it exhausts outside, split cooling systems operate quietly and reduce vibration inside the cellar, which is believed to negatively affect the quality of wine.

Features:

- Auto cooling and heating mode, keep wine cellar under constant temperature.
- The evaporator is nickel plated for corrosion protection.
- Adopt circulating water wet-film auto control humidification system, wet film is made of Swedish organic polymer material with sterilization and disinfection function.
- Intelligent control panel, integrated ModBus connection.
- Pull-out design wet film module, easy to replace.
- Control constant condensation temperature.
- Three speed air flow under auto control to maintain the ideal environment for long-term wine storage.
- Can be ceiling mounted, rack mounted, or floor mounted.

Working Principle

1. Refrigeration

Using cycling vapor compression refrigeration system, when the compressor works, it draws low temperature and pressure refrigerant gas from the evaporator, compresses it by the compressor into high temperature and pressure gas, and then into the condenser to condense into liquid, meantime releases heat, after throttling under the function of the thermal expansion valve, entering into the evaporator and absorbing heat, then evaporates into gas, finally back to the compressor through the suction tube and completes a refrigeration cycle; On the other hand, through changing of refrigerant flow direction, total or partial condensing heat generated from refrigeration can be exhausted to outside, to achieve the purpose of adjusting the indoor temperature.

2. Heating (Optional)

- Electric heating compensation.
- Heat pump heating: Using the working principle of the compressor, through a four-way reversing valve, the condenser and evaporator are interchangeable, to absorb heat from the outside and transfer it to the inside, so as to increase the room temperature.

3. Dehumidification

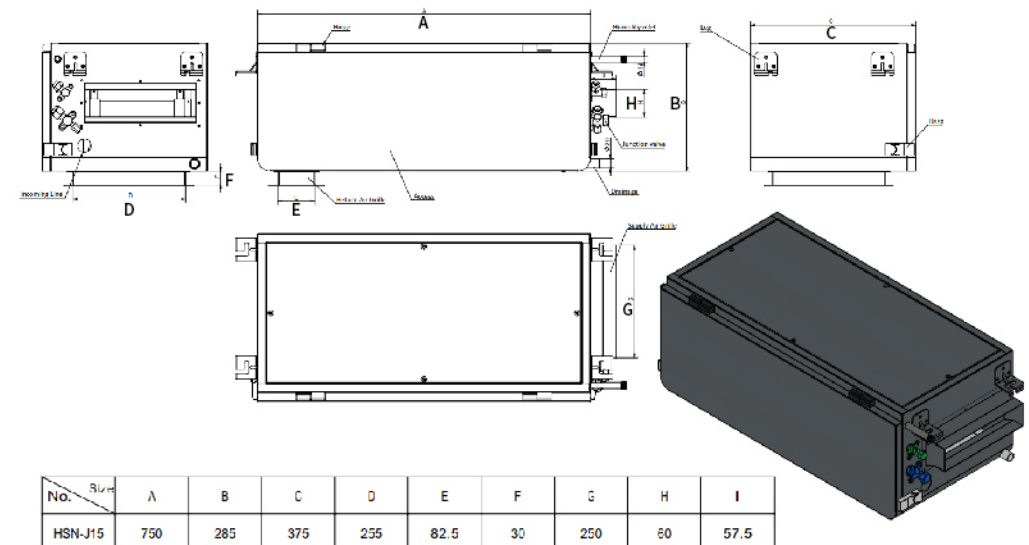
When the wet air flows through the evaporator surface, the air temperature will drop, when it falls below the dew point, the steam in the air will condense out, gathering and drainage of water pipes in the receiving plate, the controller automatically adjusts the compressor start-up time according to the setting humidity, so as to achieve the purpose of adjusting humidity.

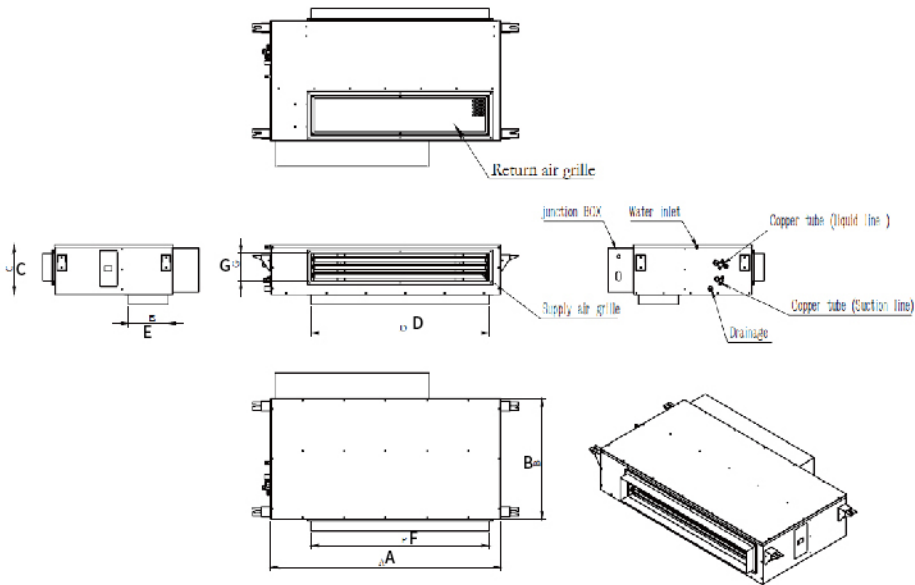
4. Humidification (Optional)

Using environmental protection wet curtain, water was spurted to the room area under large air volume to achieve the purpose of humidifying.

Unit Dimension

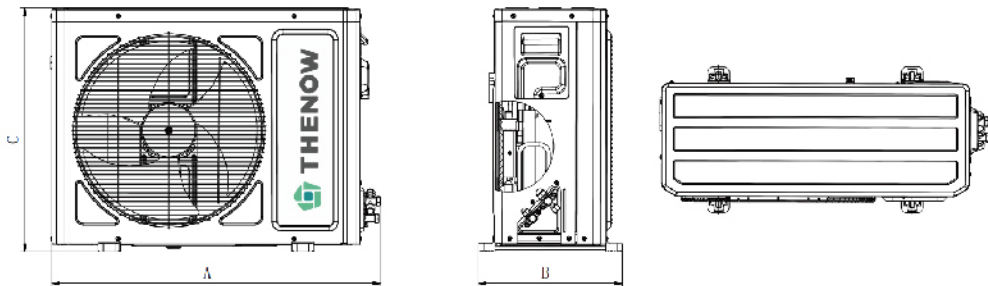
Evaporator Unit





No.	Model	Size:mm						
		A	B	C	D	E	F	G
1	HSN-J30	760	600	250	570	200	460	135
2	HSN-J60	1160	600	250	900	200	900	135
3	HSN-J90	1360	600	250	1200	200	1020	135
4	HSN-J150	1760	600	250	1600	200	1485	135

Condensing Unit



No.	Model	Size:mm		
		A	B	C
1	HSN-J15	700	300	460
2	HSN-J30	810	275	540
3	HSN-J60	810	275	540
4	HSN-J90	960	360	860
5	HSN-J150	1010	400	1250

Wine Cellar Cooling Units Technical Datas

Model	Unit	HSN-J15	HSN-J30	HSN-J60	HSN-J90	HSN-J150
Cellar Size (Up to)	m ³	15	30	60	90	150
Power	V/Hz	220V/50HZ		380V/50HZ		
Cooling	W	650	1320	3500	6000	8300
Cooling/m ³	W/m ³	130	52.8	58.3	66.7	55.3
Heating (Electrical)	W	2000	4000	6000	9000	12000
Air Flow(M)	m ³ /h	154	450	740	900	1300
Static Pressure	Pa	20	30	30	40	60
Nosie	dB (A)	40 (Indoor)	50 (Indoor)	50 (Indoor)	53 (Indoor)	62 (Indoor)
Refrigerant		R410A				
Control		PC Full-touch smart control				
Temperature	°C	10-18°C, ±2°C				
Humidity	°C	50-70%, ±5%				
Total Power	W	2700	5300	7400	11900	17000
Humidifier	Type	Wet-film				
Humidification	Kg/h	1	2	2	4	6
Indoor Unit Size	L*W*H (mm)	885*375*315	945*790*300	1345*790*300	1545*790*300	1945*890*350
Outdoor Unit Size	L*W*H (mm)	700*300*460	860*300*540	860*300*540	960*360*860	1010*425*1250
Tube Connection	Liquid(mm)	6.35	6.35	9.52	9.52	12.7
	Gas(mm)	9.52	9.52	12.7	15.88	19.05
Drainage	mm	20	20	20	20	20

Note:Cellar inside dry-bulb t=16°C 60% Outside dry-bulb t=35°C, wet-bulb t=28°C.

Receiving & Inspecting The Unit



Use caution when lifting and check package for damage

- (1) Check the outer packing for breakage.
- (2) Check the model number to ensure it is correct.
- (3) The appearance of the whole machine is intact.
- (4) A shipment may include one or more boxes containing accessories, please check all shipped boxes for the following contents.

Split System:

Item No.	Description	Q' ty	Size	Photo
1	Unit	1 Set	See the nameplate	
2	User manual	1 pc	A5	
3	Control Panel	1 pc	90*90mm	
4	Controller Cable	1 pc	3m	
5	Water valve line	1 pc	3m	
6	Power line	1 pc	3m	

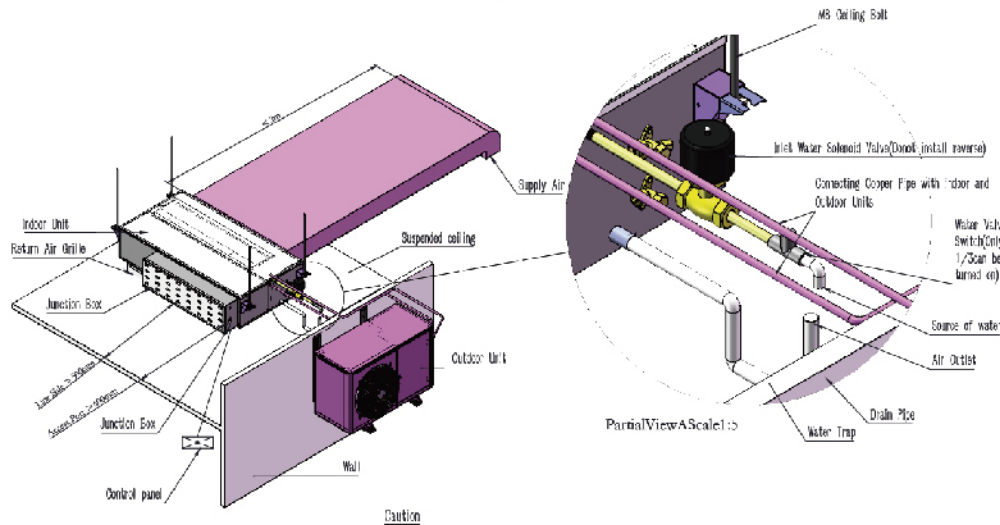
Item No.	Description	Q' ty	Size	Photo
7	Internal and external wiring	1 pc	3m	
8	Internal and external communication line	1 pc	3m	
9	Copper pipe	1 pc	3m	
10	Inlet Valve	1 pc	/	
11	Thread taper	1 pc	14	
12	Drain-pipe	1 pc	Ø20 15cm	
13	Hoop	1 pc	Ø22-Ø28	
14	Inlet flange	1 pc	HSN-J15 253.5*82.5mm HSN-J30 572.5*202.5mm HSN-J60 902.5*202.5mm HSN-J90 1142.5*202.5mm	
15	Screw	HSN-J15, HSN-J30:4pcs HSN-J60:6pcs HSN-J90:10pcs	ST4.2*9.5	

1. The drain pipe must be added with a hard pipe, the thread taper and the hose can be used as a connection.
2. A wine cellar cooling unit with a humidification function requires an inlet pipe. An independent valve must be installed on the inlet pipe to regulate the pressure of the machine's water pipe or turn off the water when the machine fails.
3. The indoor unit installation needs the boom, and nut, the outdoor unit needs the tripod.
4. Air duct (return duct, supply duct), no matter what the material, but it needs good heat insulation.
5. When necessary, the length of the copper tube can be increased as needed.

!!! WARNING !!!

Our company is not responsible for any accident caused by opening the panel and electric control cabinet without the permission of the company.

Installation & Debugging



1. Inspection port on the ceiling must be reserved under the junction box near the piping side, size must be confirmed with manufacturer or dealer beforehand.
2. To make sure the unit in good running, please install the unit strictly according to the above sketch and keep the supply air and return air smoothly.
3. Water inlet solenoid valve must be installed by qualified person(s), and connect the wiring to the reserved port of the junction box.
4. Standard pipe length is 5m, less than 5m no need to add refrigerant. If more than 5m, excess length adding refrigerant according to standard 70g/m.
5. PVC drain pipe is acceptable, the size must be greater than or equal to the condensate water pipe and the shorter the better, keeping at least 2% downward. Meanwhile, water trap and air outlet port must be installed according to the above sketch.
6. The installation length of the outlet pipe does not exceed 2m, otherwise it will affect the performance of the unit.

Installation Conditions



1. Test the system before installing it to check for non-visible shipping damage.
2. Do not modify the equipment, it may cause damage to the equipment and will void the warranty.
3. Never place anything on top of the unit.
4. Never block or cover any of the openings or outlets to the unit.

Evaporator unit:

- (1) The lifting and installation of the equipment shall ensure that the screw rod is vertical and the machine is horizontal, and the ceiling shall be able to bear the weight of the unit.
- (2) To keep good ventilation and easy maintenance, requires that there must be more than 450* 600mm maintenance space around and at the top of the equipment.
- (3) Never install the unit in danger areas, such as strong magnetic, steam, dust, heating source, corrosion and combustible gases etc.
- (4) Inlet valve has independent valve.
- (5) Don't reduce the drain diameter when connecting the drain pipe.
- (6) Air supply duct, return air duct (stainless steel duct) must be sealed, air duct insulation 20mm.
- (7) The machine achieves constant temperature and humidity through indoor circulation.

Condensing Unit:

- (1) Good heat dissipation must be ensured.
- (2) Installation personnel must be trained and certified to work.
- (3) This equipment is heavy. Place the unit on the floor or on a level and stable .
The carrying capacity of the mounting bracket shall not be less than 4 times the self-weight of the cooling units, and the carrying capacity of the condensing unit mounting bracket shall be at least 180 kg.
- (4) The condensing unit shall not be installed in a common area such as aisles, corridors, and exits inside the building.
- (5) The condensing unit should be as far as possible away from the adjacent doors and windows and green plants, and the distance between the door and the window shouldn't be less than 3 to 4 meters.
- (6) Copper pipe needs heat preservation, insulation cotton thickness \geq 2cm.



In order to avoid fire or electric shock hazard, please do not expose the equipment to damp environment.

Online Debugging

Note: Always operate this machine from a 220V 1 phase or 3-phase 380V, 50Hz power source, and the fluctuation amplitude does not exceed 10%, the junction box capacity meets the equipment electrical using requirements; Take reference to the internal electrical schematic diagram of the unit, connect the indoor unit and outdoor unit, and ensure that the unit is effectively grounded.

1. over the machine.
2. Set the operation mode, temperature and humidity (For setting methods, please check the operation section of the controller in the user manual)
3. Humidity setting value is 95% (higher than the ambient humidity) and temperature is set at 8 °C (lower than the ambient temperature), the setting operation mode is auto. Then cooling, heating and humidification will be calling automatically according to the setting value.
4. Keep the machine running at least 30 minutes.

After the machine runs for 30 minutes:

1. Check the alarm record. If all functions work well, no alarm record will be generated.
2. Check the machine for leaks. In case of leakage, first check whether the drainage is smooth. If so, reduce the opening of the ball valve to reduce the inlet water pressure. Run the machine for half an hour again and check whether the leakage problem is solved.
3. Check whether the temperature is lower than that when the machine is started. Generally, the coil temperature is reduced by 5-14°C as the normal range.
4. Check whether the humidity is higher or the same as when the machine is turned on.
5. If the cooling, heating and humidification of the equipment can operate normally and there is no water leakage, the debugging work is completed.

Note: After transportation or moved, it needs to be allowed to stand for more than 24 hours before it can be turned on.

Introduction of Controller



Product introduction:

CK-4C-86 series controller is a new type of controller to realize intelligent control of constant temperature and humidity for a wine cellar and wine cabinet cooling units, which is widely used in precise temperature control places with small volume.

The controller adopts 4-inch large -screen colorful display technology, timing control, automatic/manual control of wind speed , automatic operation of the appropriate wind speed , comfortable energy saving , accurate and reliable.

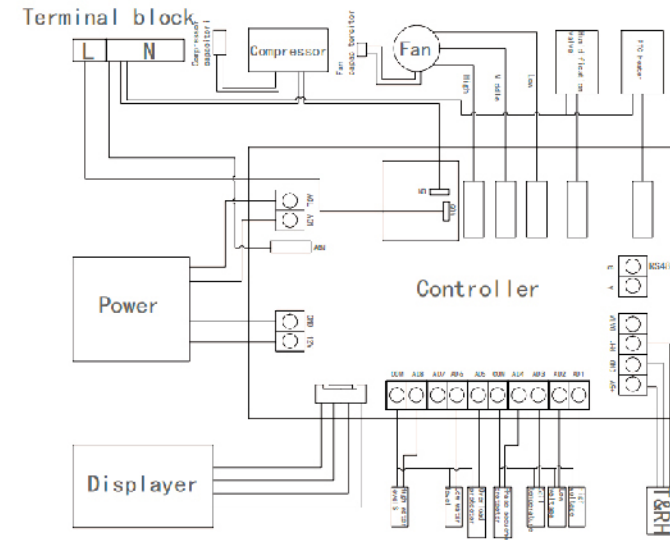
Functional features:

1. With 4-inch capacitive full-touch screen to display clear texture.
2. Temperature and humidity ,clock real time display .
3. Can be controlled regularly.
4. Wind speed manual/automatic control selection.
5. Multiple operating mode options.
6. Built-in advanced parameter settings,manufacturers can freely set according to different customer needs.
7. Standard 86 mounting bottom case for quick and easy installation.
8. Power off and restart function.
9. Alarm can be remembered.

Technical specifications:

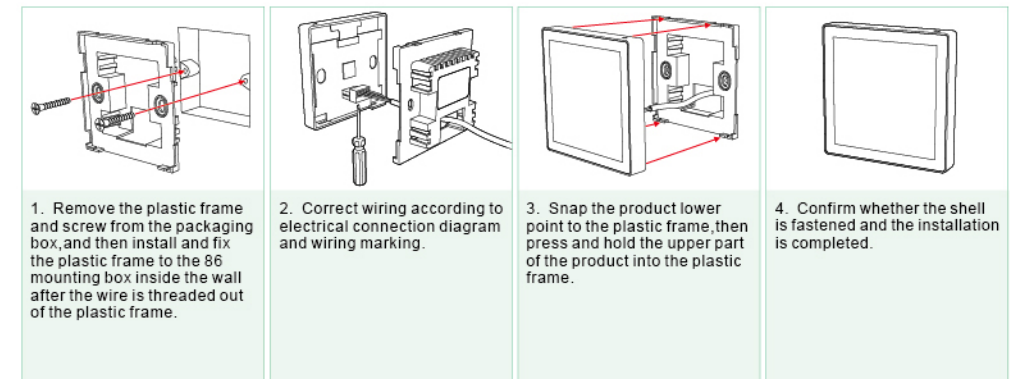
Power supply mode	PCB AC220V±10% 50/60HZ
	The control panel DC12V
The shall material	Flame retardant ABS+PC
Power	<12W
Pitch-row	60mm
size	PCB 123mm×85mm
	The control pan 91mm×90mm
Storage environment	-10~~70C 5%~~95%RH
Work condition	-10~~70C 5%~~95%RH

Schematic diagram of electrical connection:

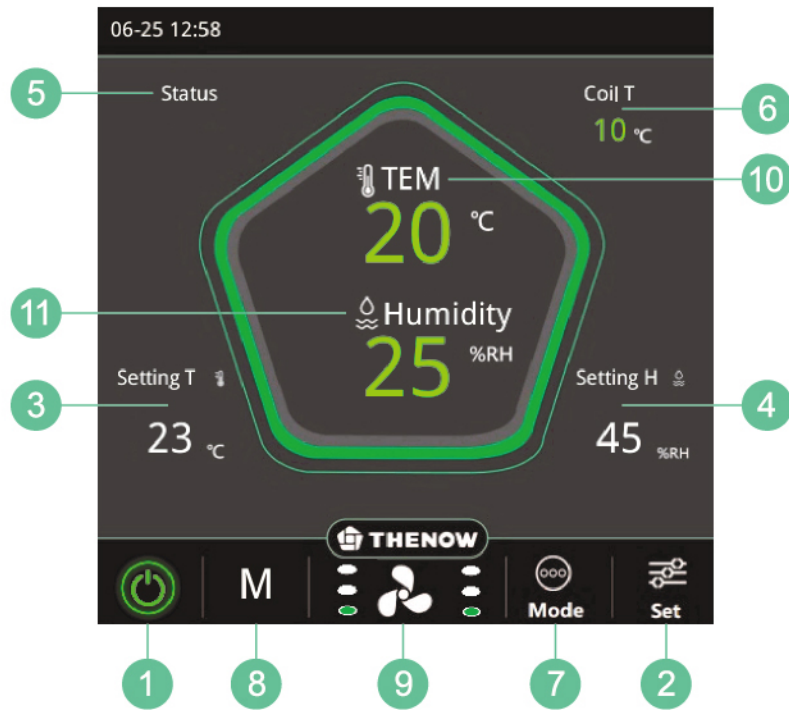


Please connect in strict accordance with the product wiring diagram ,wiring must be disconnected from the power supply ,if any abnormality occurs ,please cut off the power supply and contact the manufacturer as soon as possible. Non-professionals should not disassemble it in order to avoid danger.

Product installation:













Controller Functions



- 1 Power ON/OFF
- 2 Set (humidity/temperature/time)
- 3 Setting temperature
- 4 Setting humidity
- 5 Status (Showing the running mode of the unit)
- 6 Coil temperature
- 7 Mode (Setting running mode)
- 8 Manual/Auto
- 9 Air speed or set the air speed
- 10 Wine cabinet/cellar temperature
- 11 Wine cabinet/cellar humidity

Schematic diagram of electrical connection

How to :		
Turn system ON/OFF		<p>*Press the "ON/OFF" button once, make the  from red to green, then the unit is on.</p>
Set humidity		<ol style="list-style-type: none"> 1. Press the  button 2. Find , click to enter. 3. Set humidity
Set temperature		<ol style="list-style-type: none"> 1. Press the  button 2. Find , click to enter. 3. Set temperature
Set time		<ol style="list-style-type: none"> 1. Press the  button 2. Find , click to enter. 3. set time
Set the wind speed		<ol style="list-style-type: none"> 1. When  shows M, press  to manually set the wind speed. 2. When  shows A, the wind speed is in automatic mode.

Maintenance

1. Using Requirements

- (1). Working conditions: evaporator unit use temperature :5°C-35°C, relative humidity lower than 90% ;condensing unit use temperature:5-43°C.Please use the equipment strictly in accordance with the specified environmental and temperature conditions.
- (2). Please make certain power supply is specified voltage, it' s strictly prohibited to operate equipment with phase missing or under voltage.
- (3). This product is a non-explosion-proof product. Please do not use the unit in the environment with flammable or explosive gas.
- (4). It is forbidden to disassemble, process, modify or repair the machine without authorization. Otherwise there is a danger of abnormal movement, electric shock or fire.
- (5). If the equipment has not been used for a long time ,please make sure to turn off the power.

2. Cleaning



Disconnect electric power from the appliance before any operation, otherwise there will be the risk of electric shock.

Because the temperature probe is a sensitive element,in dusty place,please use low pressure water to clean regularly (for example,with the dust ball blowing wash),when the accuracy become poor, please correct or replace.

Note: In a high temperature and high humidity environment, if excess condensate may be generated in the wine cabinet, this part of the condensate needs to be manually removed.



Do not replace the filter while the machine is working.

Troubleshooting

!!! WARNING !!!

Disconnect electric power from the appliance before performing any maintenance or repairs, failure to do so could result in death or electrical shock.

*If maintenance is needed, wait for 3 minutes after power failure (let capacitor discharge on PCB), and then open the maintenance door.

*The surface temperature of the condenser may be very high. Do not touch it to prevent burns.

*Even if the fan and compressor have stopped ,there is still a dangerous voltage at the terminals of the starting capacitor.

Troubleshooting

This table cannot replace the training required to train a professional refrigeration maintenance technician, because it is not comprehensive enough.

Status	Reason	Suggestion
Cooling Unit Not Running	1.No Power. 2.Power Cord Unplugged. 3.Low Voltage 4.Incorrect Or Loose Wirings. 5.Ambient Temperature Above 35°C Or Lower 5°C. 6.Setting Higher Than Ambient Temperature. 7.Defrosting Mode On.	1.Check Power At Receptacle &fuses. 2.Plug-in Power Cord Plug. 3.Contact An Authorized Electrician. 4..Check All Wirings And Connections. 5.Ambient Temperature Not Meet Unit Working Conditions. 6.Lower Temperature Setting . 7.Wait 5-30minutes.

Status	Reason	Suggestion
Cannot Dehumidification	1. Inlet Or Outlet Air Grille Is Stuck 2. Air Filter Is Stuck 3. Refrigerant Leakage 4. Compressor Not Working 5. Fan Not Working	1. Please Check The Air Grille And Clean It 2. Air Filter Is Stuck 3. Add Refrigerant. 4. Check Whether The Compressor Is Normal 5. Check The Fan
No Air Exhaust	1. The Air Supply Is Blocked 2. Fan Not Working	1. Check And Clean Air Outlet 2. Check The Fan
Louder Noise	1. Loose Parts 2. Air Filter Is Stuck 3. The Unit Is Not Installed Smoothly	1. Check Parts. 2. Clean Filter 3. Install The Machine Smoothly
Temperature Too High	1. Setting Too High. 2. Improper Cabinet Seals. 3. Ambient Temperature Too High 4. Cabinet/room Too Large 5. Fan Fault 6. Refrigerant Leakage	1. Lower Setting. 2. Check Gasket And Door Opening 3. Check Installation Location. 4. Check For Excessive Size Or The Machine Model Choice Is Improper. 5. Check Both Evaporator And Condenser Fans. 6. Add Refrigerant.
Unit Running Too Long Or Continually	1. The Machine Model Choice Is Improper Or Improper Room Sealing. 2. Ambient Temperature To High.	1. Check Machine Mode Or Check Room Tightness. 2. Check Installation Location Or Increase Setting.
Evaporator Icing	1. Evaporator Airflow Restricted. 2. Unit Not Stopping Due To Air Leak, High Ambient Temperature Or Low Setting. 3. Low Ambient Temperature 4. Bad Thermostat Or Sensor 5. Refrigerant Leaking 6. Expansion Valve Blockage	1. Check The Fan 2. Check Fr Seal, door Opening, Ambient Temperature And Setting. 3. Defrost The Unit 4. Check For Thermostat And Sensor. 5. Check For Sealed System Leakage. 6. Check For Low Side Pressure.
The Fan Keeps Running	1. Fan Protection Procedure 2. Wrong Wiring Harness Connection	1. Wait 3 Minutes 2. Check Harness Links
No Cooling But Compressor Running	1. Refrigerant Leakage 2. Evaporator Airflow Restricted	1. Check Of Refrigerant 2. Check For Airflow Through Evaporator

The above information is for reference only. If the machine fails to work properly, please contact your local dealer or your local authorized repair station.



All electrical installation and maintenance work in this manual must be performed by a professional electrical engineer, our company is not responsible for opening the panel and electric control cabinet without the permission of the company.

Warranty

1. Limited Warranty

The machine provided by our company is guaranteed for one year and the fan is guaranteed for two years and the compressor for three years from the date of arrival. During the warranty period, any defects due to workmanship or materials, we guarantee to repair or replace the machine free of charge. (warning: the machine due to the use of dust ,corrosive liquid and other non-machine quality reasons for damage is not covered by the warranty.

2. Commitment in after-sales service

During the warranty period, our company is responsible for the maintenance of the equipment, if the equipment exceeds the warranty period, our company will charge for reasonable maintenance cost.

3. Other preferential terms

Our company provides free technical advisory services to users.

