

# User Manual

## Wine Cellar Cooling System Self-contained



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- 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.



## **WARNING**

To avoid the risk of electrical shock ,property damage ,personal injure 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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## Introduction

The now wine cellar cooling self-contained unit best suited to the wine room and wine cabinet. The device is suitable for wine cabinets or wine storage rooms below 5m<sup>3</sup>. The purpose of this device is to keep the room temperature in its range 10~16 degrees Celsius, the humidity stays at the best level of 50% to 70%, and these temperature and humidity are good for long term wine storage. Compact and easy to install even without any duct work or piping, which also helps to reduce overall installation costs.

We have different models for different occasions, widely used in household, wine cabinet, underground wine cellar, wine wall and so on.

### Features:

- Condenser and evaporator combined inside one appliance, easy and fast to install.
- Intelligent control panel.
- Suitable temperature between 10~16°C and humidity maintenance within 50~70% RH.
- Unique appearance design, little vibration, lower noise.
- Commercial-grade, corrosion resistant components and spray painting frame for long-term durability.
- Available with a heater and humidifier option (HSN-J15-Z).

## Working Principle

### 1. Refrigeration

Using cycling vapor compression refrigeration system, when the compressor work, indraft low temperature and pressure refrigerant gas from evaporator, compressed by compressor into high temperature and pressure gas, and then into the condenser to condense into liquid, meantime release heat, after throttling under the function of the thermal expansion valve, entering into the evaporator and absorbed heat, then evaporate into gas, finally back to the compressor through the suction tube and complete 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 Principle (Optional)

- a. Electric heating compensation
- b. 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 Principle

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.

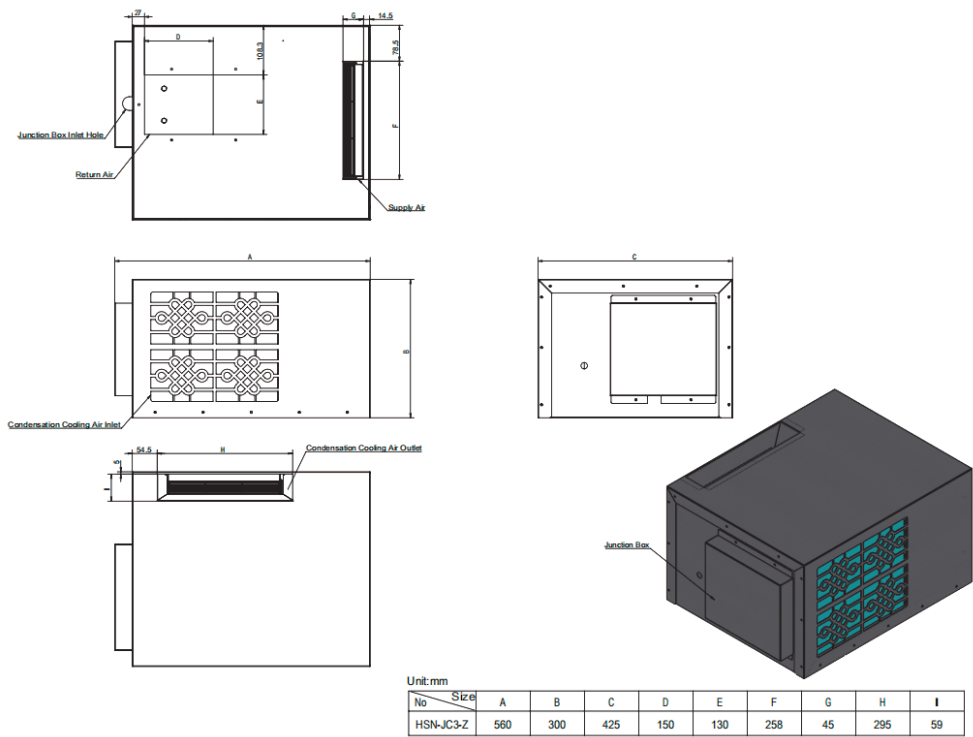
### 4. Humidification Principle (Optional)

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

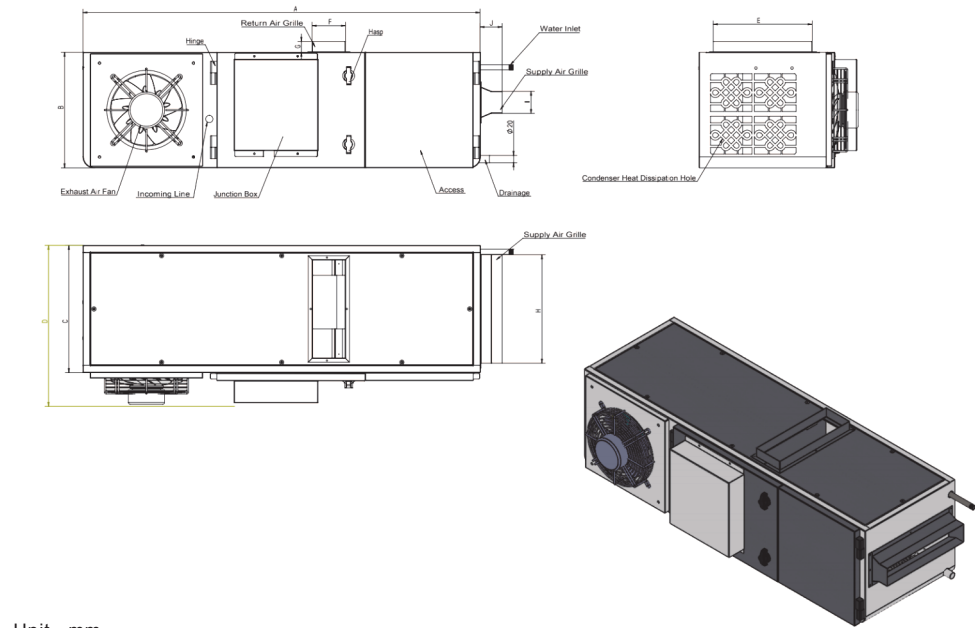
# Main Technical Datas

## Unit Dimension

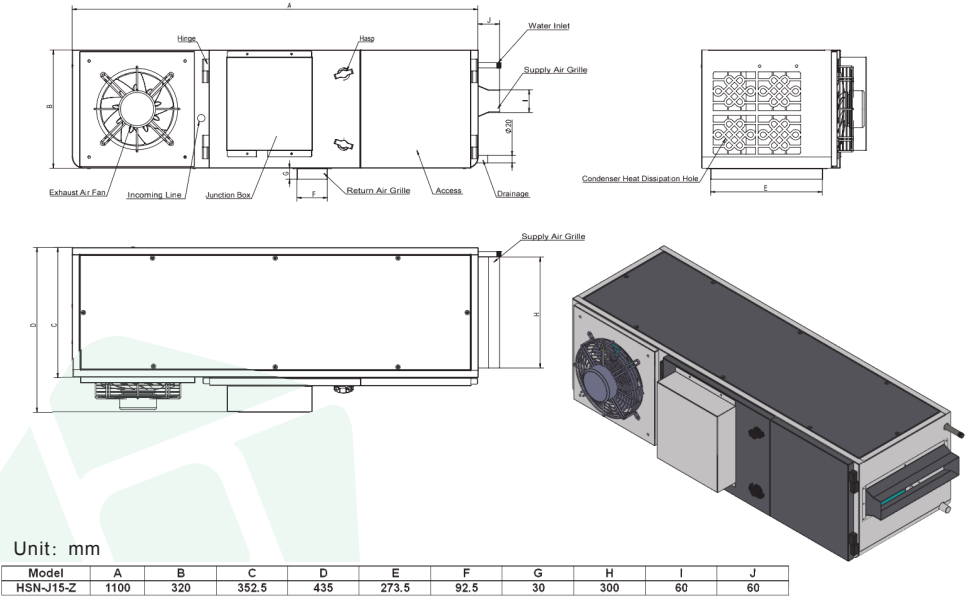
Dimensions HSN-JC3:



Dimensions HSN-J15-Z (Side Supply Air/Top Return Air)



Dimensions HSN-J15-Z (Side Supply Air/Bottom Return Air)





## Technical Datas

Model	Unit	HSN-JC3	HSN-J15-Z
Cellar Size (Up to )	m <sup>3</sup>	3	5
HP	P	0.3	0.5
Power	V/Hz	220V/50HZ	
<b>Cooling</b> (Cellar inside dry-bulb t=16℃ 60% Outside dry-bulb t=35℃, wet-bulb t=28℃)	KW	0.15	0.45
Heating (Electrical)	KW	/	1
Air Flow(M)	m <sup>3</sup> /h	90	170
Static Pressure	Pa	/	20
Nosie	dB (A)	38	42
Refrigerant	R134a		
Control	Intelligent control panel		
Temperature	℃	10-18℃, ±2℃	
Humidity	℃	50~70%, ±5%	
Total Power	KW	1	1.5
Humidifier	Type	/	Wet-film
Humidification	Kg/h	/	1
Unit Size	L*W*H (mm)	560*425*300	1160*440*350
Drainage	mm	Self-absorption	20

Note: There are several factors such as glass, stone, concrete, insulation, ambient temperature, ventilation etc. which will change the required amount of Kw/BTU needed to properly cool your wine room or wine cabinet. We strongly recommend you contact with us or our distributors beforehand to help you to choose the model matched. We do not bear the losses caused by the selection errors caused by the above reasons.

## Installation & Debugging





### 1. Pre-installation Inspection

- (1) Check the outer packing for breakage.
- (2) Machine model (nameplate), check whether it is consistent with what you ordered.
- (3) The appearance of the whole machine is intact
- (4) Check attached accessories (as follows)

Installation: HSN-J15-Z

Item No.	Item	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	Inlet Valve	1 pc	/	
5	Thread taper	1 pc	Ø14	
6	Drain-pipe	1 pc	Ø20 Length-15cm	
7	Hoop	1 pc	Ø22~Ø28	
8	Inlet flange	1 pc	303.5*82.5mm	
9	Screw	4pcs	ST4.2*9.5	

HSN-JC3:

Item No.	Description	Q'ty	Photo
1	Unit	1pc	
2	User Manual	1pc	
3	Control panel	1set	
4	Certificate of qualification	1pc	

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

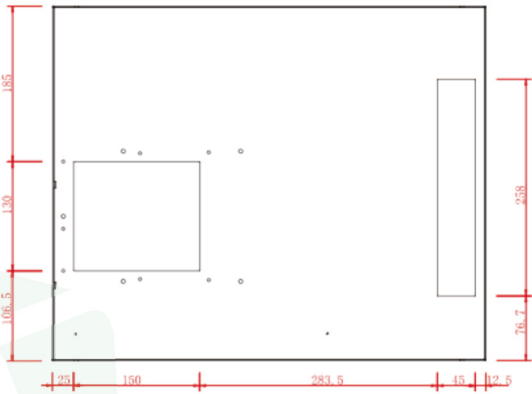
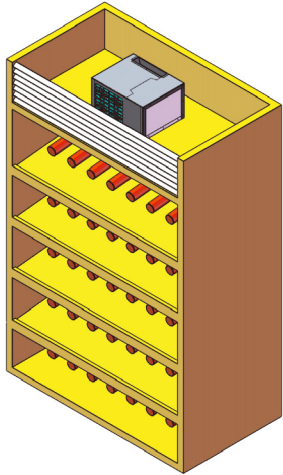
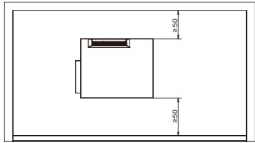
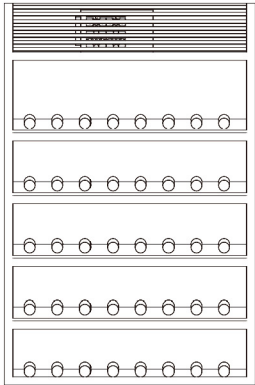
2. Installation

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

Note: Because of potential safety hazards under a certain condition, we strongly recommend against the use of an extension cord. However, if you still elect to use an extension cord, it is absolutely necessary that it will be a related national standard LISTED 3-wire grounding type appliance extension cord having a 3- blade grounding plug and a 3-slot receptacle that will plug into the appliance.

A.Wine Cabinet Installation

HSN-JC3



## Installation Conditions HSN-JC3

- (1) Place the wine cabinet in a properly ventilation location.  
Otherwise, heat exhausted by the cooling unit will build up and it will not operate properly.
- (2) Equipment should install on horizontal ground or platform, tilt angle must not exceed one degrees, platform or ground should be able to load-bearing unit weight.
- (3) To keep good ventilation and easy maintenance, requires that the wine cabinet grill can be flexibly disassembled.
- (4) Never install the unit in danger areas, such as strong magnetic, steam, dust, heating source, corrosion and combustible gases etc.
- (5) Unobstructed airflow to and from the unit is critical to unit's overall performance and lifespan, make sure there is a minimum of 50mm (100mm is better) of horizontal clearance in every direction around the unit.
- (6) Before install the unit, foam tape needs to be placed in the bottom and side of the unit.
- (7) Working environment: Temperature 5°C-35°C, Humidity RH<90%.

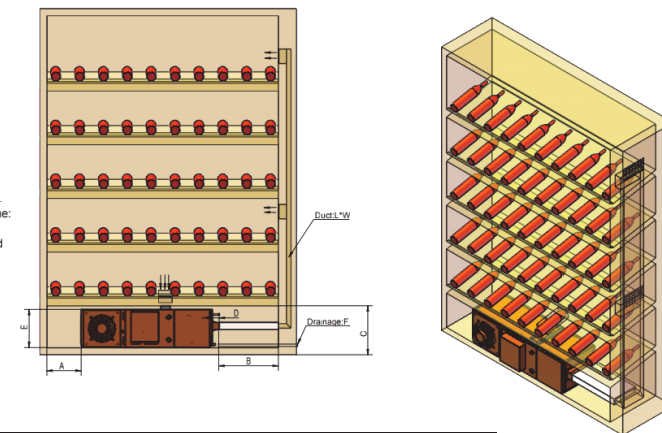


**In order to avoid fire or electric shock hazard, please do not expose the equipment to damp environment.**

## HSN-J15-Z

### Side Supply Air/Top Return Air

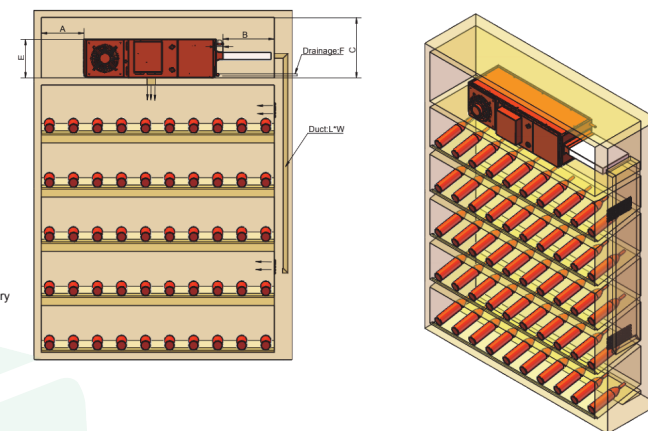
Ambient temperature: 5°~35°, humidity: ≤90% RH.  
HSN-J15-Z applicable wine cellar cabinet volume: 1.5~3m³.  
**Note:** The unit must be installed in ventilated and dry areas, and make sure it works at the right temperature.



Mode	A	B	C	D	E	F	L	W
HSN-J15-Z	≥50	≥100	≥375	60	320	Ø20	300	60

### Side Supply Air/Bottom Return Air

Ambient temperature: 5°~35°, humidity: ≤90% RH.  
HSN-J15-Z applicable wine cellar cabinet volume: 1.5~3m³.  
**Note:** The unit must be installed in ventilated and dry areas, and make sure it works at the right temperature.

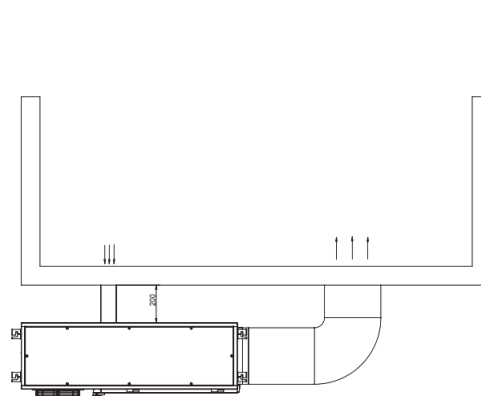


Mode	A	B	C	D	E	F	L	W
HSN-J15-Z	≥50	≥100	≥355	60	320	Ø20	300	60

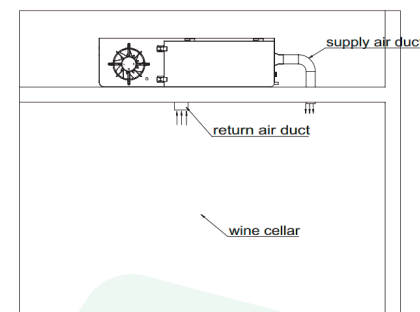
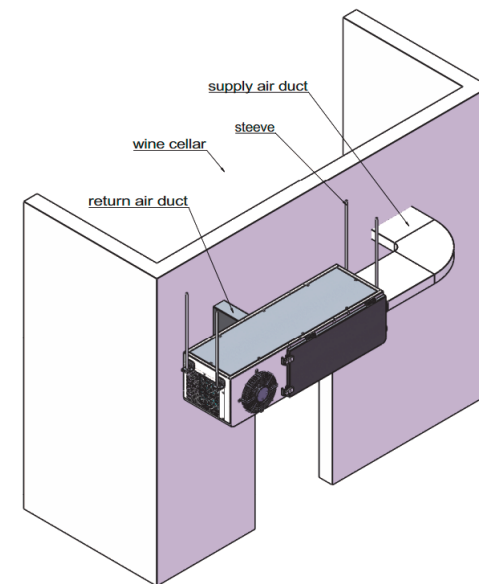
## Installation Conditions HSN-J15-Z

- (1) Place the wine cabinet in a properly ventilation location.  
Otherwise, heat exhausted by the cooling unit will build up and it will not operate properly.
- (2) Equipment should install on horizontal ground or platform, tilt angle must not exceed one degrees, platform or ground should be able to load-bearing unit weight;
- (3) To keep good ventilation and easy maintenance, requires that there must be more than  $\geq 450 \times 600 \text{mm}$  maintenance space around and at the top of the equipment.
- (4) Never install the unit in danger areas, such as strong magnetic, steam, dust, heating source, corrosion and combustible gases etc.
- (5) Ensure that the distance between the condensing side of the machine and the wine cabinet is at least 50mm, the HSN--J15-Z unit air outlet should be at least 100mm away from the wine cabinet.
- (6) The HSNJ15-Z unit height of machine installation space shall not be lower than 360mm.
- (7) To ensure better heat dissipation and ventilation of the machine, the back of the wine cabinet must be reserved ventilation holes. The heat dissipating end cover plate of the machine is a shutter or a cover plate which is conducive to heat dissipation.
- (8) The wine cabinet and the machine are reserved with fixed machine support, add shock absorber at machine and bracket.
- (9) Recommended materials for commonly used air duct:
  - A: Thermal insulation board, 15-20mm thickness.
  - B: Stainless steel air duct, 20mm insulation outside.
- (10) Ambient temperature:  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$ , relative humidity is not more than 90%

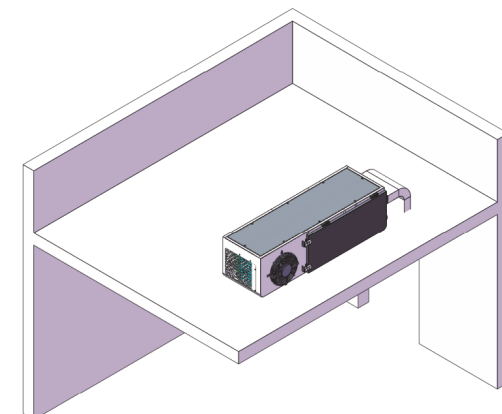
## B. Wine Room Installation

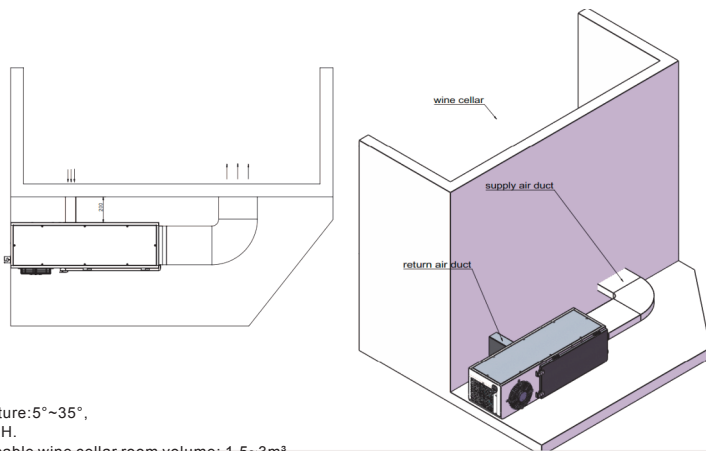


Ambient temperature:  $5^{\circ}\sim 35^{\circ}$ ,  
Humidity:  $\leq 90\% \text{RH}$ .  
HSN-J15-Z applicable wine cellar room volume:  $1.5\sim 3\text{m}^3$ .  
**Note:** The unit must be installed in ventilated and dry areas, and make sure it works at the right temperature.



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**Note:** The unit must be installed in ventilated and dry areas, and make sure it works at the right temperature.



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

## 1. Online Debugging

**Note:** The bottom of the equipment must be fixed with an expansion bolt, and ground connection has to be completely correctly. Confirm that the power supply of the user's power distribution box is single-phase 220V, the fluctuation range does not exceed 10%, and the distribution box capacity meets the requirements for equipment use. Refer to the internal electrical schematic of the unit. Check that the embedded pipe conforms to the requirements of inlet and outlet air and outlet water direction of the equipment, and the drain pipe should be curved to ensure smooth drainage

1. Power the machine.

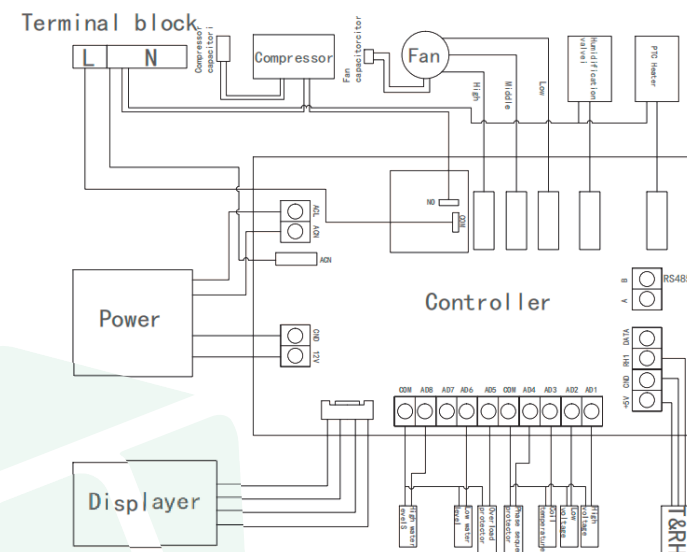
2. Set the operation mode at "Auto", temperature at 12~16°C and humidity at 50%~60% (For setting methods, please check the operation section of the controller in the user manual). Then cooling, heating or humidification will be calling to work automatically according to the setting value.

3. Keep the machine running at least 2 hours.

**After the machine runs for 2 hours:**

## Wiring Schematic

### HSN-JC3 & HSN-J15-Z PCB Wiring Schematic



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 and humidity are at or near its setting value.
4. If the cooling, heating and humidification of the equipment can operate normally and there is no water leakage, the debugging work is finished.

\*The humidification part mentioned above is only valid for HSN-J15-Z

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

## Introduction And Use of the Control Panel



### 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:

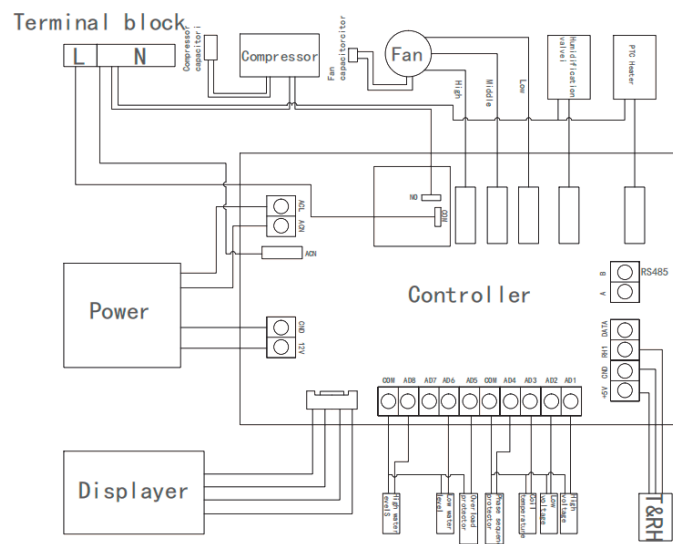
1. With 4-inch capacitive full-touch screen to display clear texture.
2. Temperature and humidity ,clock real time display .
3. Can be controlled regularly.
4. Wind speed manual/automatic control selection.
5. Multiple operating mode options.
6. Built-in advanced parameter settings, manufacturers can 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 $\pm$ 10% 50/60HZ
	The control panel DC12V
The shall material	Flame retardant ABS+PC
Power	<12W
Pitch-row	60mm
size	PCB 123mm $\times$ 85mm
	The control pan 91mm $\times$ 90mm
Storage environment	-10 $\sim$ 70 $^{\circ}$ C 5% $\sim$ 95%RH
Work condition	-10 $\sim$ 70 $^{\circ}$ C 5% $\sim$ 95%RH

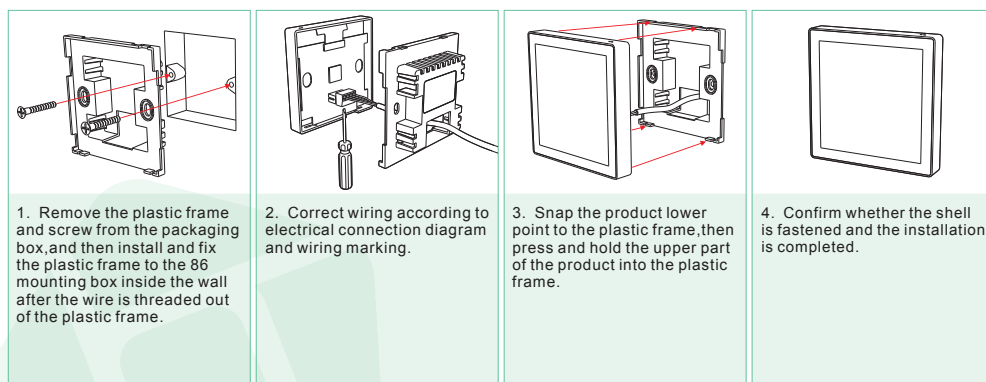


## Schematic diagram of electrical connection:

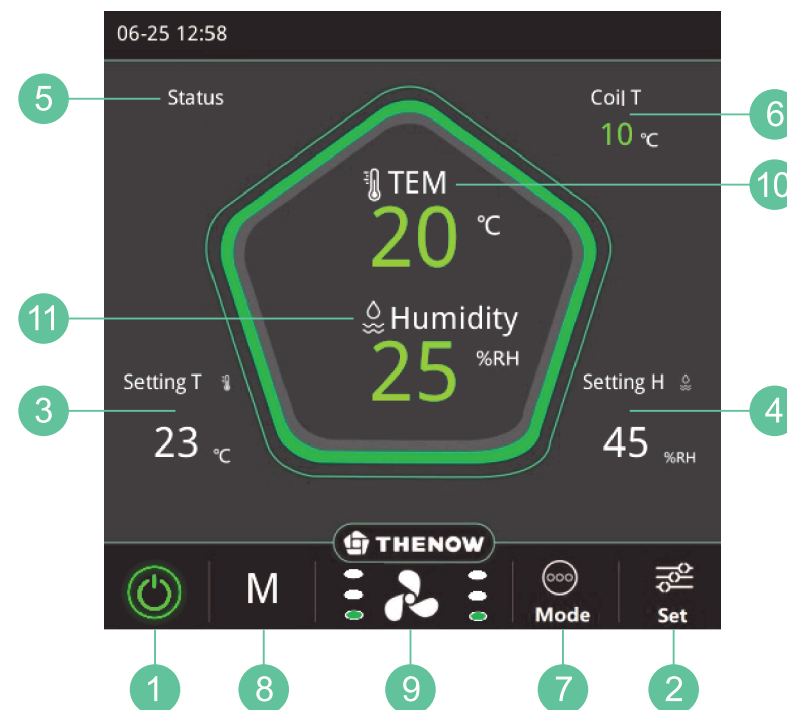


Please connect in strict accordance with the product wiring diagram ,wiring must be disconnected from the power supply ,if any abnormality occurs ,please cut off the power supply and contact the manufacturer as soon as possible. Non-professionals should not disassemble it in order to avoid danger.

## Product installation:









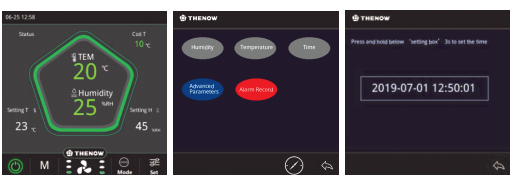








## Use the steps Description:



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

## Maintenance

### 1.Using Requirements

- (1) Working conditions: Surrounding temperature at 5°C-35°C, relative humidity lower than 90% ;
- (2) Please make certain power supply is specified voltage, it's strictly prohibited to operate equipment with phase missing or under voltage;
- (3) 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.**

- (1) 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 orrect or replace.
- (2) When dust collects on the air filter,will affect the effect of the equipment,or even breakdown, so must clean the filter regularly, at least once per month; if the environment is dusty,it must be cleaned weekly or daily, except for connecting with pipes. (cleaning method: remove the filter from the side of the inlet of the unit, knocking gently when cleaning or use cleaner to remove the dust on the net, or put thefilter in warm water below 40 degrees and add a small amount of neutral detergent washing,then rinse with water and dry it in the air).



**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

Status	Reason	Suggestion
Cooling unit not running	<ol style="list-style-type: none"> <li>1. No power.</li> <li>2. power cord unplugged.</li> <li>3. low voltage</li> <li>4. Incorrect or loose wirings.</li> <li>5. Ambient temperature above 35°C or lower 5°C.</li> <li>6. Setting higher than ambient temperature.</li> <li>7. Defrosting mode on .</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power at receptacle &amp;fuses.</li> <li>2. Plug-in power cord plug.</li> <li>3. Contact an authorized electrician.</li> <li>4. Check all wirings and connections.</li> <li>5. Ambient temperature not meet unit working conditions.</li> <li>6. lower temperature setting .</li> <li>7. Wait 5-30minutes.</li> </ol>
Cannot dehumidification	<ol style="list-style-type: none"> <li>1. Inlet or outlet air grille is stuck.</li> <li>2. Air filter is stuck.</li> <li>3. Refrigerant leakage.</li> <li>4. Compressor not working.</li> <li>5. Fan not working.</li> </ol>	<ol style="list-style-type: none"> <li>1. Please check the air grille and clean it.</li> <li>2. Air filter is stuck.</li> <li>3. Add refrigerant.</li> <li>4. Check whether the compressor is normal.</li> <li>5. Check the fan.</li> </ol>
No air exhaust	<ol style="list-style-type: none"> <li>1. The air supply is blocked.</li> <li>2. Fan not working.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and clean air outlet.</li> <li>2. Check the fan.</li> </ol>
Louder noise	<ol style="list-style-type: none"> <li>1. Loose parts.</li> <li>2. Air filter is stuck.</li> <li>3. The unit is not installed smoothly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check parts.</li> <li>2. Clean filter.</li> <li>3. Install the machine smoothly.</li> </ol>

Status	Reason	Suggestion
Temperature too high	<ol style="list-style-type: none"> <li>1. Setting too high.</li> <li>2. Improper cabinet seals.</li> <li>3. Ambient temperature too high.</li> <li>4. Cabinet/room too large.</li> <li>5. Fan fault.</li> <li>6. Refrigerant leakage.</li> </ol>	<ol style="list-style-type: none"> <li>1. lower setting.</li> <li>2. Check gasket and door opening.</li> <li>3. Check installation location.</li> <li>4. Check for excessive size or the machine model choice is improper.</li> <li>5. Check both evaporator and condenser fans.</li> <li>6. Add refrigerant.</li> </ol>
Unit running too long or continually	<ol style="list-style-type: none"> <li>1. The machine model choice is improper or improper room sealing.</li> <li>2. Ambient temperature too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check machine mode or check room tightness.</li> <li>2. Check installation location or increase setting.</li> </ol>
Evaporator icing	<ol style="list-style-type: none"> <li>1. Evaporator airflow restricted.</li> <li>2. Unit not stopping due to air leak, high ambient temperature or low setting.</li> <li>3. Low ambient temperature</li> <li>4. Bad thermostat or sensor</li> <li>5. Refrigerant leaking</li> <li>6. Expansion valve blockage</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the fan.</li> <li>2. Check for seal, door opening, ambient temperature and setting.</li> <li>3. Defrost the unit.</li> <li>4. Check for thermostat and sensor.</li> <li>5. Check for sealed system leakage.</li> <li>6. Check for low side pressure.</li> </ol>
The fan keeps running	<ol style="list-style-type: none"> <li>1. Fan protection procedure</li> <li>2. Wrong wiring harness connection</li> </ol>	<ol style="list-style-type: none"> <li>1. Wait 3 minutes.</li> <li>2. Check harness links.</li> </ol>
No cooling but compressor running	<ol style="list-style-type: none"> <li>1. Refrigerant leakage.</li> <li>2. Evaporator airflow restricted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check of refrigerant.</li> <li>2. Check for airflow through evaporator.</li> </ol>

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



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.**

## After service

**1** year guarantee from installation is provided for the indoor & outdoor unit.

**2** years guarantee from installation is provided for the fan.

During the warranty period any defects due to the workmanship or materials of the unit will be repaired and/or replaced free of charge.

## WARNING

**ALL WARRANTIES WILL BE CEASED IF:**  
Installation IS NOT undertaken by a licenced & registered ARC technician & electrician.

The installation is not to the instructions provided.

Dust, corrosive liquid or any other non-machine quality reasons for damage.

**ON-GOING MAINTENANCE:**  
Filter to be cleaned regularly every 6 months.

**ON-GOING SERVICE:**  
Any service and/or repair needs that arise must be undertaken by a licenced & registered ARC technician.