## THE WORLD'S OBAIR

In the vast global innovation landscape, "Obair" shines like a brilliant star, leading the wave of technological innovation.

We are not just a company, but also advocates and practitioners of the global upgrade in quality

In the world of Obair, technological innovation is not only a driving force but also the soul.

We firmly believe that "Obair" will resonate in every corner of the world, representing excellence,

We cross mountains and seas, connecting the five continents, adding a bright color to the global stage of life, becoming a synonym for beauty in the hearts of people around the world, and together writing a glorious chapter in human civilization.















## Haojin Oubo Technology Co.,Ltd

Address: Oubo Industrial Park, Oubo Road, Oubo Avenue, Ganzhou City, Jiangxi Province Website: www.oubokt.com

National Free Service Hotline: 400-915-8448





## **AHP**

Low-temperature Air Source Heat Pump Unit





Version NO.: OB-202502A Haojin Oubo Technology CO., LTD



## > COMPANY PROFILE

Haojin Oubo Technology Co., Ltd. is a large-scale purification central air conditioning national high-tech enterprise integrating research and development, production, sales, and service.

Obair has always adhered to technological innovation, participated in the formulation of national and industry standards as a member unit of China's "Cold Standard Committee", and has obtained multiple invention patents and utility model patents. It has established industry-university-research bases with Nanchang University and Jiangxi University of Science and Technology. It is a key demonstration enterprise for deep integration of informatization and industrialization in Jiangxi Province, a demonstration enterprise for service-oriented manufacturing in Jiangxi Province, and the company has successively won honors such as Jiangxi Province Technology Center, Ganzhou City Industrial Design Center, Jiangxi Famous Brand Product, national green factory, and national specialized and innovative "little giant" enterprise.

Obair currently has two phases in Ganzhou, Jiangxi, using digital park management, with over 120 digital production equipment, achieving an annual production capacity of 100,000 units.

Obair currently has more than 1000 models of high-quality air conditioning products independently developed, and the products have obtained energy-saving certification, CRAA, EU CE certification, American AHRI certification and other authoritative institutions' testing and certification, widely used in hospitals, dust-free workshops, pharmaceutical factories, electronics, tobacco, painting, photovoltaic, new energy, semiconductor, laboratory and other industries, and has the industry reputation of "King of Cleanliness" and "King of Constant Temperature and Humidity Non-standard".

Obair strictly implements the ISO9001/ISO14001/ISO45001 management system, always practices the purpose of "willing to explain the price for a while, but not to apologize for the quality for a lifetime", proposes the "6-hour" on-site service concept for all customers and for all customers, and provides the most professional and high-quality technical support and after-sales service.

From the mission, born for purification!

Obair, your regret-free choice!

170,000 square meters of complete machine production base

70+
National Service Contact Point

1000 employees

BENEFIT IS LIFE

100,000+
Pilot Project Air Conditioning Solutio



# HONORARY QUALIFICATIONS



Advanced equipment, professional technology and strict management have created the high quality of "OBAIR" brand products.

It has successively won dozens of honors such as national high-tech enterprise, China's well-known brand, specialized and special new enterprise, cold standard committee enterprise, provincial service-oriented manufacturing demonstration enterprise, provincial enterprise technology center, Jiangxi famous brand product, etc.

"OBAIR" products are your reliable choice.























Haojin Oubo Technology CO., LTD



**Heating and Cooling Dual Supply** 

Refrigeration and Heating Combined Supply Mode: It meets the dual demands for both cooling and heating based on the varying load requirements for refrigeration and heating.

**Hermetic High-efficiency Compressor** 

Equipped with hermetic high-efficiency EVI flexible scroll compressors from internationally renowned brands, it effectively reduces the leakage of refrigerant and improves the volumetric efficiency of the compressor.

**Energy-efficient** 

Adopting the bidirectional control technology of suction and discharge superheat, it effectively improves the heat exchange efficiency of the heat exchanger, ensuring the unit operates safely and energy-efficiently at all times.

**Intelligent Control** 

Advanced air conditioning dedicated controllers achieve intelligent control and comprehensive protection of the unit, with intuitive operation and easy readability.

### **CONTENTS**

Product Overview ————————————————————————————————————	01	Refrigeration Performance Correction Factor	07
Model Description	01	Heating Performance Co <del>rrection Factor</del>	08
Product Introduction	02	Unit Outline Diagram	09
Product Features ————————————————————————————————————	03	Unit Lifting and Handling —————	11
Unit System Schematic Diagram ————	05	Installation Requirements————————————————————————————————————	11
Unit Operating Range	06	Installation Foundation —————	12
Water Quality Requirements —————	06	Water System Piping —————	13
Technical Parameters Tables	07	Electrical Installation	14





#### >>> Product Overview

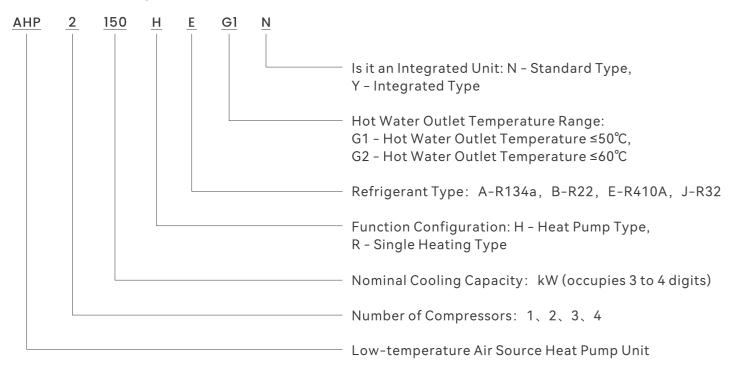
OBAIR Low-temperature Air Source Heat Pump Units use air as the source of heat and cold, and water as the heat transfer medium for central air conditioning systems. They can be combined with various terminal equipment such as fan coils, air handling units, and radiant floor heating to form a centralized air conditioning system.

The OBAIR Low-temperature Air Source Heat Pump Units are a series of models launched by OBAIR in response to the climate characteristics of China, combined with the application needs of the modular unit market, especially the demand for "coal-to-electricity" heating in the north. These units meet users' requirements for high energy efficiency, high comfort, high safety, and intelligent control. The units can stably provide heating in environments as low as -25°C, making them more widely applicable, especially suitable for places that need heating in the northern winter.



### >> Model Description

P: 01



#### >> Product Introduction

#### 1 Low Noise Axial Flow Fan

 Equipped with Low Noise Large Blade Aluminum Alloy Blades

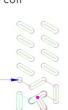


### 2 Effective Protection

·Standard Panels and Metal Protective Mesh Surrounding the Unit

## 3 Optimized Fin and Tube Design

Optimized design following the principle of more inlets and fewer outlets for refrigeration, and fewer inlets and more outlets for heating, resulting in higher heat transfer efficiency of the coil





## 4 Stainless Steel Economizer

•Famous Brand Plate Heat Exchanger, with high heat transfer efficiency, low heat loss, and long service life



## 5 High-efficiency Scroll Compressor

· High-capacity scroll compressor, operates efficiently, with low noise and minimal vibration



# 7The body is made of stainless steel bolts



The scroll units are installed outdoors, so all the connecting fasteners of the machine body shell are made of stainless steel bolts, which have better corrosion resistance.

P: 02

# **6** Single High-efficiency Shell-and-Tube Heat Exchanger

•The spacing between the heat exchange tubes is large, making them less likely to be blocked or damaged by impurities. The optimized shell-and-tube liquid distribution and heat exchange process result in better heat transfer performance.







#### >> Product Features

#### **High-efficiency EVI Jet Enhancement Compressor**

The unit adopts a fully enclosed and highly efficient EVI flexible scroll compressor of an internationally renowned brand. The optimized scroll disk and sealing ring design effectively reduces the leakage of refrigerant and improves the volumetric efficiency of the compressor. In addition, the design of the compressor with ejector augmentation has one more refrigerant suction port compared to conventional compressors. It sucks in some medium-pressure gas and realizes quasi-two-stage compression of the refrigerant inside the compressor, increasing the suction volume of the compressor. The refrigerant circulation volume of the system and the heat exchange capacity of the heat exchanger are greatly enhanced. The capacity of the unit is about 15% higher than that of units with ordinary compressors.



#### High-precision electronic expansion valve

The unit's throttling device adopts an electronic expansion valve of a highquality brand. It has high control precision and is suitable for an extremely wide range of ambient temperatures. It can not only achieve heating in extremely low ambient temperatures in winter but also meet the refrigerant flow requirements for cooling in high ambient temperatures in summer. By adopting two-way control technology of suction and exhaust superheat, it effectively improves the heat exchange efficiency of the heat exchanger and ensures that the unit always operates safely and energy-efficiently.



#### High-efficiency water-side heat exchanger

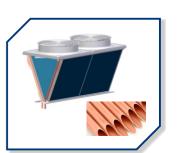
P: 03

The water-side heat exchanger of the unit adopts a high-efficiency shell-andtube heat exchanger. The unique refrigerant distributor and pipeline flow design greatly improve the heat transfer efficiency. Further enhance the cooling and heating effects of the unit. At the same time, compared with the plate heat exchanger, the internal waterway circulation cross-sectional area of the shell and tube is larger, the water resistance is smaller, and it is not easy to be blocked by scale or impurities. It has lower requirements for water quality, stronger frost resistance, and is not easy to crack due to freezing.



#### High-efficiency air-side heat exchanger

The air-side heat exchanger of the unit adopts a unique "V"-shaped or double "V"-shaped structure. The air flow is evenly distributed and the heat exchange efficiency is high. Moreover, there is ample maintenance and inspection space. Among them, the heat exchanger is composed of corrugated hydrophilic aluminum foil and high-efficiency internal threaded tubes. It is fixed by a reinforced metal frame on all sides. While ensuring higher firmness and stability of the whole machine structure, it has the characteristics of large heat exchange area, strong corrosion resistance, and smooth drainage during the defrosting process.



#### High-performance axial flow fan

The air-side heat exchanger adopts a high-efficiency, low-noise, large-airvolume axial flow fan. Through the air volume grading control technology, the grading control of the fan is realized. The number of fans is automatically loaded and unloaded to achieve the optimal matching between the air volume change of the unit and the load change. There will be no frequent start and stop of the fan. Thus, the system pressure is stable and the water temperature fluctuation is small, and the modular unit operates more reliably.



P: 04

#### Intelligent control system

The advanced dedicated controller for air conditioners realizes intelligent control and all-round protection of the unit. The operation is intuitive and easy to read. The leading intelligent control program ensures that the unit can achieve precise control of water temperature under various working conditions. It can also automatically control the unit to operate safely and reliably in the most energy-efficient way. At the same time, the advanced advanced control function can take corresponding suppression measures in time before a fault occurs to avoid frequent shutdowns of the unit.

#### Display and parameter setting function

- ◆ Display in all Chinese characters
- ◆ Query of unit operating status and parameters
- ◆ Corresponding temperature display
- ◆Setting of cooling and heating operation
- ◆Setting of cooling and heating inlet/outlet water temperatures
- ◆ Setting of timed power on/off of the unit
- ◆The unit automatically starts up when power is restored
- ◆ Query of unit faults, etc.

#### Multiple protection functions

- ◆Power phase sequence protection (reverse phase, phase loss, undervoltage, overvoltage).
- ◆ Compressor high and low pressure protection.
- ◆ Overcurrent protection for compressor and axial flow fan.
- ◆ Protection for excessively high or low exhaust temperature of compressor.
- ◆ Winter antifreeze protection for the unit.
- ◆ Protection for excessively high or low inlet and outlet water temperatures.
- ◆ Temperature sensor fault protection.
- ◆ Water flow switch protection, etc.

www.oubokt.com | 400-915-8448 www.oubokt.com | 400-915-8448





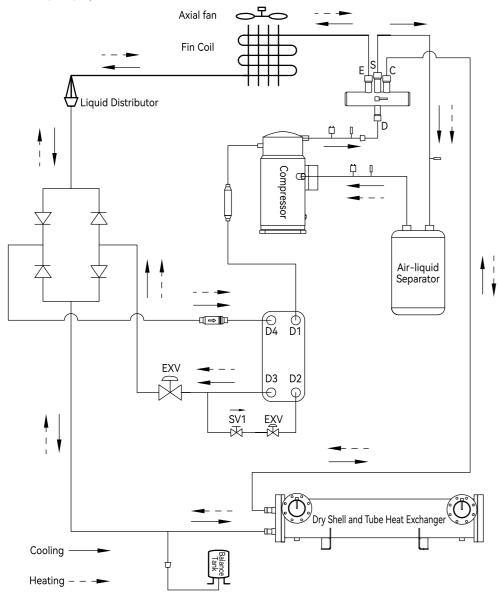
#### >> Unit System Schematic Diagram

The compressor sucks in low-pressure superheated refrigerant vapor from the evaporator (shell-and-tube heat exchanger). After being compressed by the compressor, it becomes high-temperature and high-pressure superheated vapor. Through the four-way valve, it dissipates heat to the environment in the condenser (finned heat exchanger), thus condensing into subcooled refrigerant liquid. After undergoing heat exchange in the plate economizer, it is throttled and depressurized by the expansion valve, then flows into the evaporator (shell-and-tube heat exchanger). After absorbing the heat from the refrigerant water and vaporizing, it is sucked in and compressed by the compressor again, starting a new cycle. In this way, the refrigerant water passing through the evaporator is cooled and then sent into the air-conditioned area.

#### Heating Cycle Mode:

P: 05

The compressor sucks in low-pressure superheated refrigerant vapor from the evaporator (finned heat exchanger). After being compressed by the compressor, it turns into high-temperature, high-pressure superheated vapor. Then, it directly enters the condenser (shell-and-tube heat exchanger) through the four-way valve and releases heat to the refrigerant water, thus generating a heating effect. After that, the refrigerant liquid, which has undergone heat exchange in the plate economizer, flows through the expansion valve for throttling and pressure reduction. In the finned heat exchanger, it absorbs heat from the environment and evaporates, and then is sucked into the compressor again to form the heat pump cycle.



#### >> Unit Operating Range (Under Rated Water Flow)

Project	Ambient Temperature	Outlet Water Temperature			
Cooling Condition	15~45℃	5~15℃			
Heating Condition	-25~25℃	35~55℃			

Note: When the actual operating conditions of the unit exceed the range in the above table, please contact our company for customized engineering design.

#### >> Water Quality Requirements

Note: Since the water quality varies in different regions, it should be checked before entering the unit's heat exchanger. If the water quality does not meet the requirements for air conditioning water use, water treatment is necessary. The water quality should meet the requirements in the table below and be regularly sampled and tested.

Our company does not guarantee the use of improperly treated or untreated non-compliant water, and does not commit that this series of units can use saltwater.

Project	Unit	Make-up Water	Chilled Water		
PH Value (25°C)	-	6.5~8.0	6.5~8.0		
Conductivity (25°C)	uS/cm	<200	<800		
Chloride lons	mgCl <sup>-</sup> /L	<50	<200		
Sulfate Ions	mgSO <sub>4</sub> <sup>2-</sup> /L	<50	<200		
Acid Demand (PH4.8)	mgCaCO₃/L	<50	<100		
Total Hardness	mgCaCO <sub>3</sub> /L	<70	<200		
Iron	mgFe/L	<0.3	<1.0		
Sulfide lons	mgSO <sub>4</sub> <sup>2-</sup> /L	Not Detected	Not Detected		
Ammonium Ions	mgNH₄⁺/L	<1.0	<1.0		
Silica Dioxide	mgSiO <sub>2</sub> /L	<30	<50		

www.oubokt.com | 400-915-8448 www.oubokt.com | 400-915-8448





#### >> Technical Parameters

Mode	AHP***HEG1N		75	150	300	450		
Detect Coolings (25°C)	Cooling Capacity	kW	75	150	300	450		
Rated Cooling (35°C)	Input Power	kW	21.8	43.7	88	131.1		
Rated Heating (7°C)	Heating Capacity	kW	87.5	168	335	504		
Rated Heating (7 C)	Input Power	kW	24	46	91.2	137.9		
Nominal Cooling (-12°C)	Heating Capacity	kW	57	110	220	330		
Norminal Cooling (-12 C)	Input Power	kW	20.3	38.9	77.4	116.8		
	Power		Thre	e-phase, five-wire	system AC380V/	50Hz		
Compressor	Туре		ŀ	Hermetic Scroll-Ty	pe Compressor (E	VI)		
Compressor	Number	Units	2	2	4	6		
Axial Fan	Туре		Water-proof, weather-resistant, low-noise, high-efficiency axial fan					
Axiaii aii	Number	Units	2	2	4	6		
	Type/ Water-Side Press	sure	Shell-and-Tube Heat Exchanger / 1.0MPa					
Water-Side Heat	Water Flow Rate	m³/h	13	26	52	77		
Exchanger	Water Pressure Drop	kPa	50	50	55	55		
	Connecting Pipe Diameter	DN	65	80	100	125		
	L	mm	2200	2200	2425	3630		
Outline Dimensions	W	mm	1100	1300	2350	2350		
	Н	mm	2330	2330	2500	2500		
Thi	rottling Method		Electric Expansion Valves					
	Refrigerant		R410A					
Unit V	Veight	kg	760	960	1920	2870		
Operatin	g Weight	kg	900	1040	2010	3020		

P: 07

- 1. Cooling condition: ambient temperature 35°C, entering/leaving water temperature 12°C/7°C;
- 2. Heating condition 1: ambient dry bulb temperature 7°C, wet bulb temperature 6°C, leaving water temperature 45°C;
- 3. Heating condition 2: outdoor dry bulb temperature -12°C, wet bulb temperature -14°C, leaving water temperature 41°C.

## >> Refrigeration Performance Correction Factor Table

	Outlet Water Temperature	Ambient Temperature/℃													
1		15℃		20°C		25°C		30°C		35°C		40°C		45°C	
	/°C	Cooling Capacity	Power	Cooling Capacity	Power	Cooling Capacity	Power	Cooling Capacity	Power	Cooling Capacity	Power	Cooling Capacity	Power	Cooling Capacity	Power
	5	1.09	0.71	1.09	0.78	1.04	0.84	0.99	0.90	0.93	0.97	0.87	1.01	0.81	1.05
	7	1.17	0.74	1.16	0.81	1.11	0.87	1.06	0.93	1.00	1.00	0.94	1.04	0.88	1.08
	9	1.24	0.77	1.23	0.84	1.18	0.90	1.13	0.96	1.07	1.03	1.01	1.07	0.95	1.11
	12	1.31	0.80	1.30	0.87	1.25	0.93	1.20	0.99	1.14	1.06	1.08	1.10	1.02	1.14
	15	1.39	0.83	1.37	0.90	1.32	0.96	1.27	1.02	1.21	1.09	1.15	1.13	1.09	1.17

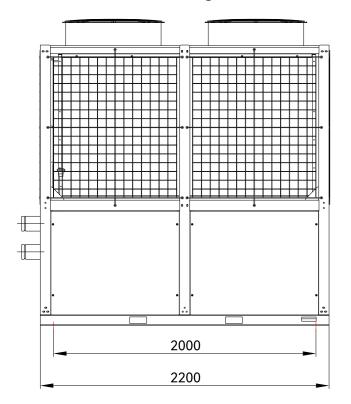
## >> Heating Performance Correction Factor Table

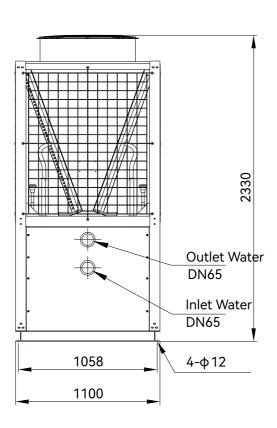
Outlet Water Temperature		Ambient Temperature/°C												
	-25°C		-20°C		-12°C		-6°C		0°C		7°C		21°C	
/°C	Heating Capacity	Power	Heating Capacity	Power	Heating Capacity	Power	Heating Capacity	Power	Heating Capacity	Power	Heating Capacity	Power	Heating Capacity	Power
35	0.43	0.74	0.52	0.77	0.64	0.78	0.75	0.81	0.84	0.82	0.99	0.81	1.21	0.85
41	0.47	0.84	0.55	0.85	0.65	0.88	0.74	0.89	0.83	0.90	0.99	0.90	1.22	0.95
45	0.48	0.87	0.56	0.89	0.65	0.92	0.75	0.94	0.84	0.96	1.00	1.00	1.22	1.02
50	0.50	1.01	0.58	1.04	0.66	1.06	0.75	1.07	0.84	1.08	1.00	1.09	1.23	1.12
55	0.51	1.09	0.59	1.13	0.67	1.19	0.76	1.19	0.85	1.21	1.01	1.25	1.24	1.29

www.oubokt.com | 400-915-8448 www.oubokt.com | 400-915-8448

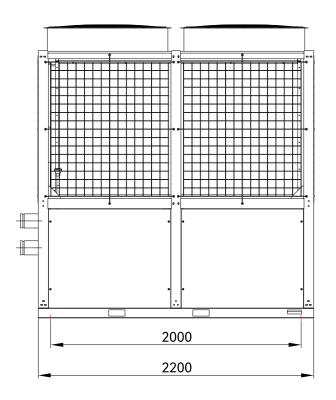


## >> Unit Outline Drawing

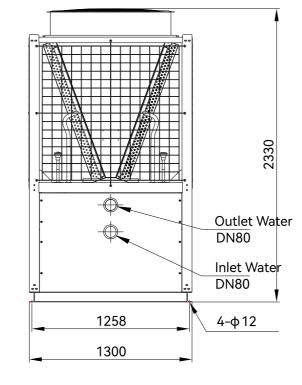




AHP275HEG1N

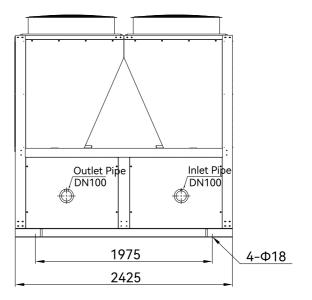


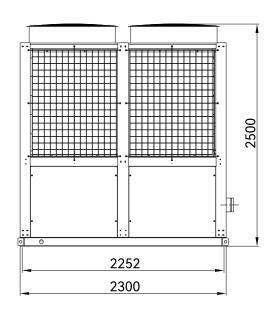
P: 09



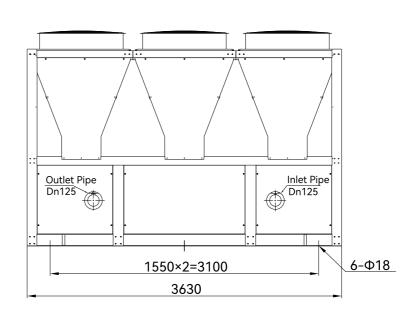
AHP2150HEG1N

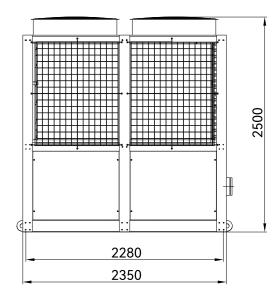
## >> Unit Outline Drawing





AHP4300HEG1N





P: 10

AHP6450HEG1N

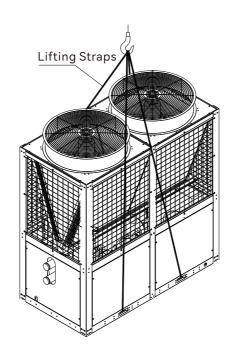


#### >> Unit Lifting and Handling

The unit can be lifted and transported by using a hydraulic dolly, forklift, etc. to support the unit from the base;

Before lifting, please understand the weight of the lifting components from the nameplate of the unit equipment or the technical specifications of the order, initially judge the center of gravity position, and conduct a lifting test off the ground to inspect and improve the lifting method to ensure the center of gravity is stable during lifting, and transport the unit to the designated location. When transporting, take shock absorption measures to prevent collision and damage to the external coating of the unit. The unit should be kept in a vertical state, and it is strictly forbidden to tilt the unit at an angle exceeding 30°;

Crane operations must take safety protection measures to ensure the safety of people, machinery, and materials.

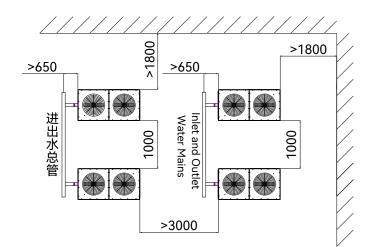


#### >> Installation Requirements

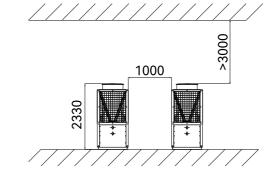
The unit must be installed in a place with good ventilation and heat dissipation. To prevent air backflow from the air-side heat exchanger, it is recommended to maintain the distance between the units as shown in the figure below. There should be no obstacles under the unit within the above distance;

If there is a building shelter above the unit, maintain a space height of at least 3 meters to avoid hindering the smooth flow of the unit's air;

Since hot air backflow can seriously affect the performance of the unit, it may lead to excessive condensation pressure or fan motor failure. Please ensure the above installation space requirements are met; The unit base and foundation should be isolated with vibration pads or vibration isolators, and the unit should be installed horizontally. To avoid possible displacement caused by earthquakes, typhoons, or long-term operation of the equipment that may cause twisting and subsequent rupture of the pipes, the unit should be firmly connected to the foundation.



P: 11

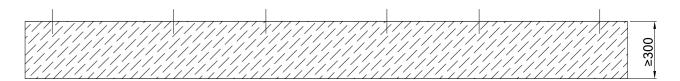


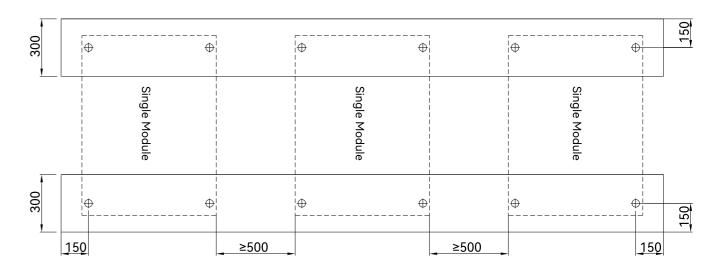
#### >> Installation Foundation

The unit should be installed on a solid, sturdy, and flat concrete foundation or metal steel frame, and the installation platform strength must be sufficient to bear the weight of the unit. If the strength is insufficient, it is very easy to produce vibration and noise.

To ensure quiet operation of the equipment and to avoid affecting the floor below the unit's location due to the transmission of vibration and noise, the unit base should be isolated from the foundation with shock absorbers, and care should be taken to keep the unit level during installation. If necessary, a vibration-proof base can be considered.

To avoid possible displacement caused by earthquakes, typhoons, or long-term operation of the equipment that may cause twisting and subsequent rupture of the pipes, the unit should consider taking proper fixing measures.







P: 14

#### >> Water System Piping

The unit's water inlet and outlet pipes and valves should be properly insulated, and the outdoor parts should also be covered with protective shells to prevent heat loss and condensation, as well as to prevent the air conditioning water from freezing in winter.

To ensure sufficient water flow in the water-side heat exchanger and piping system, and to avoid the heat exchanger from lacking water, which could lead to the freezing of the internal chilled water during refrigeration, resulting in too low pressure and poor system oil return; and abnormal high pressure during heating, causing compressor failure or even burning. Therefore, a flow switch should be installed at the outlet of the water-side heat exchanger corresponding to each compressor of the unit, and it should be interlocked with the unit control.

When using a closed-loop water system, to buffer the expansion or contraction of water volume and to isolate the impact of water replenishment pressure on water piping, an expansion tank should be installed at the unit's return water point. The water surface of the expansion tank should be at least 1 meter higher than the highest point of the water system piping, and a check valve should not be installed at the outlet of the expansion tank to prevent water pipe leakage or rupture.

The unit's pump should be installed on the inlet side of the evaporator. When the unit is used in series with an auxiliary heater, the pump should be located on the inlet side of the auxiliary heater.

To avoid air stagnation in the water system, automatic air vents should be installed at all high points of the water piping, and horizontal water pipes should be constructed with an upward slope of 1/250.

Joints, flange connections, and check valves for maintenance should be installed in the piping to facilitate future maintenance

The weight of the water pipes shall not be borne by the unit. Vibration-proof hoses or rubber joints should be used to connect the pump's inlet and outlet with the corresponding water pipes to avoid the transmission of vibration and noise and mutual interference.

Temperature gauges and pressure gauges should be installed at the unit's inlet and outlet to facilitate daily operation checks.

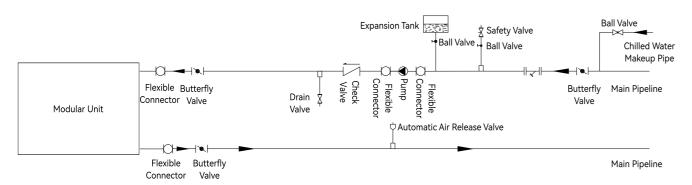
In the installation of multi-module units, balance valves should be installed at the inlet of the water-side heat exchanger of each unit module to keep the water flow through each heat exchanger balanced.

The unit's circulating water should not use groundwater, hard water, or other sewage. The water quality should be tested regularly to ensure it meets the requirements.

Two or more multi-module unit systems must be plumbed in a parallel manner.

A water filter with a stainless steel mesh of 16 to 20 meshes should be installed at the inlet side of the unit. When the plate heat exchanger is used as the unit's water-side heat exchanger, a water filter with a stainless steel mesh of not less than 30 meshes should be installed at the inlet side of the unit. The water filter should be cleaned at least once a month during operation.

To ensure comfort, the user-side water system should be equipped with a storage tank. Auxiliary electric heaters should be installed for heating units used in the north to compensate for the decline in the heating capacity of air source heat pumps.



#### >> Electrical Installation

When the unit is in operation, the power supply voltage must be stable. Considering all voltage drop factors, the working voltage of the unit needs to be kept within  $\pm 10\%$  of the rated value.

The voltage difference between phases shall not exceed ±2% of the rated value, and the difference between the highest and lowest phase currents shall be less than 3% of the rated value to avoid overheating of the compressor.

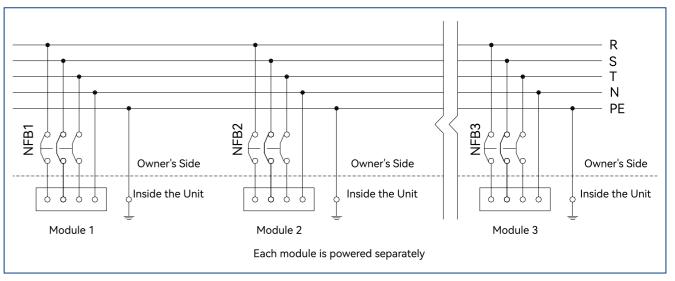
The power supply frequency should be kept within ±2% of the rated value.

The minimum starting voltage of the unit needs to be kept above 85% of the rated value.

If the power cord is too long, the compressor cannot start. The length needs to ensure that the voltage difference between the power line terminal and the tail end during operation is less than 2% of the rated value. If the length cannot be shortened, the power cord needs to be thickened.

The wiring from the power supply to the unit needs to be constructed in strict accordance with electrical regulations and standards, and the insulation is good. After the unit is wired, the insulation between the electrical fitting terminals and the unit body should be measured with a 500V megohmmeter. The insulation resistance should be at least  $3M\Omega$  or more.

In order to reduce the damage to electrical equipment such as transformers and wiring when a short-circuit accident occurs on the line and to facilitate independent control of the start and stop of the compressors of each unit module, each power supply incoming line of the unit needs to be equipped with a low-voltage circuit breaker (QF) of appropriate capacity. Each module unit requires a set of independent power supply incoming lines. The power wiring is shown in the figure below:



The input power and other parameters in the performance specification table refer to the test values under standard conditions. There will be a significant difference in actual operation with the actual load of the air conditioning system and the high or low outside air environmental temperature. If the outside air temperature is high and the air conditioning load is too large, the unit's operating current and input power will both increase. Therefore, the power source, transformer, low-voltage circuit breaker, and wiring capacity should be selected under possible adverse condition scenarios, and each unit module needs to be powered separately.

To protect personal safety, prevent leakage from the unit to avoid the danger of electric shock, the unit's shell should have a good and reliable grounding protection device to prevent electric shock accidents, and construction must be strictly carried out in accordance with electrical regulations.





For specific operations regarding the installation, use, and maintenance of the unit, please refer to the **Installation and Operation Manual** and **Electrical Operation Instructions** provided with the unit.

Note: Since OBAIR products are subject to continuous improvement and innovation, any changes to the product models, specifications, and parameters shown in this material will not be notified separately. Your understanding is appreciated.