

PHNXX



Inverter Technology



Smart Control



Intelligent Defrosting



Colorful Touch Display

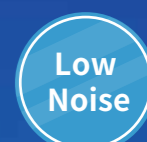
# GreenTherm Series

## Heating/Cooling+DHW Heat Pump

### Certification

Quality Guarantee

CE  UK CA MD PED



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Be Ready for a Low-Carbon Life.





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Transportation Test



Acoustic Test



-25 °C Extreme Cold Test

# About PHNIX

PHNIX is one of the largest manufacturers of heat pumps in China. PHNIX dedicates itself to being a reliable partner and building the highest quality standards to make its products stable and energy saving. PHNIX provides users with integrated energy-saving solutions and products, including House Heating & Cooling+DWH Heat Pumps, Swimming Pool Heat Pumps, Residential and Commercial Heat Pump Water Heaters.

As an international enterprise, PHNIX attaches great importance to overseas markets, exporting more than 60% of its products to Europe, North America, Middle East, Australia, South America, Africa and other regions.

Up to now, the production process has involved an advanced MES system and multiple automatic production devices, including Assembling Robot, Copper Pipe Cutter, Pipe Bender Robot, Automated Vacuum Circulatory System, Robotic Palletization, Packaging, AGV and soon.

To follow through on this commitment to quality, PHNIX has built a total of 22 labs with capability of testing heat pump products range from 3kW to 350kW. With world leading testing level, the lab can conduct tests for performance in every aspect, including noise level, low temperature resistant, UV, salt spray, RoHS, heat exchanger efficiency, constant temperature and humidity, pressure, temperature etc. It is worth noticing that PHNIX is the first Chinese company that obtains the KEYMARK certification for R290 heat pump.



# Installation with GreenTherm Series

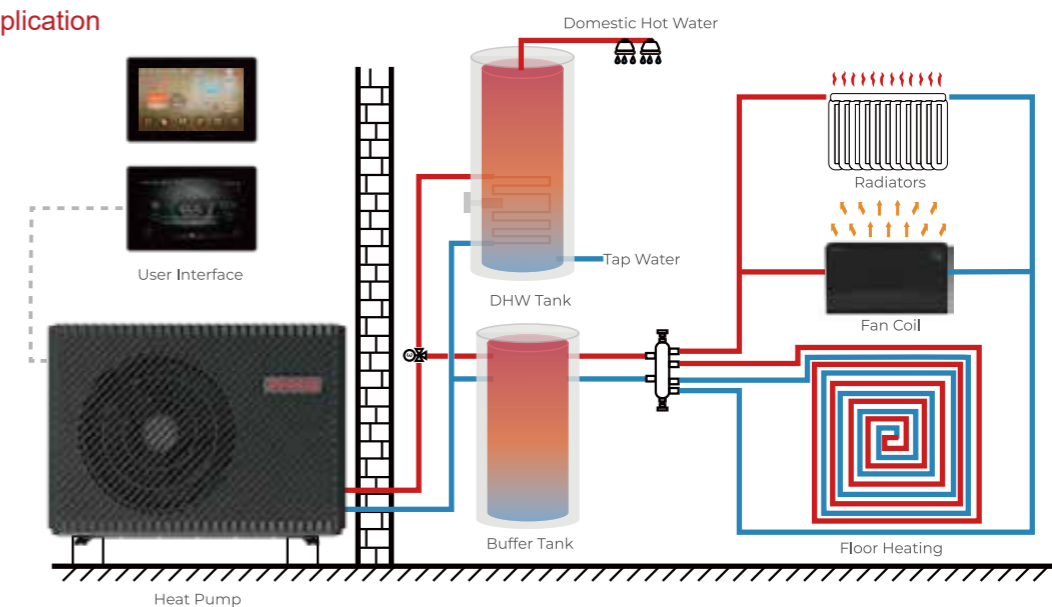
PHNIX monoblock heat pumps can provide heating/cooling and domestic hot water. Floor heating loops is used for space heating while fancoil unit can be used for space heating and cooling. Domestic hot water is supplied from the domestic hot water tank connected to the heat pump.



## Traditional Installation

PHNIX provides the monoblock heat pump with main circulation pump built inside. When installing the unit, installer should connect the heat pump with other parts including the buffer tank (for space heating/cooling), storage water tank (for domestic hot water) and water pumps (for space heating/cooling water circulation and domestic hot water). External fittings are also needed including the safety valve, water refill valve and hot water valves (three-way valve). Temperature sensor should be added in the storage water tank. Additional electric heater can be installed in the DHW tank or the buffer tank which can get the control signal from the heat pump.

### Application



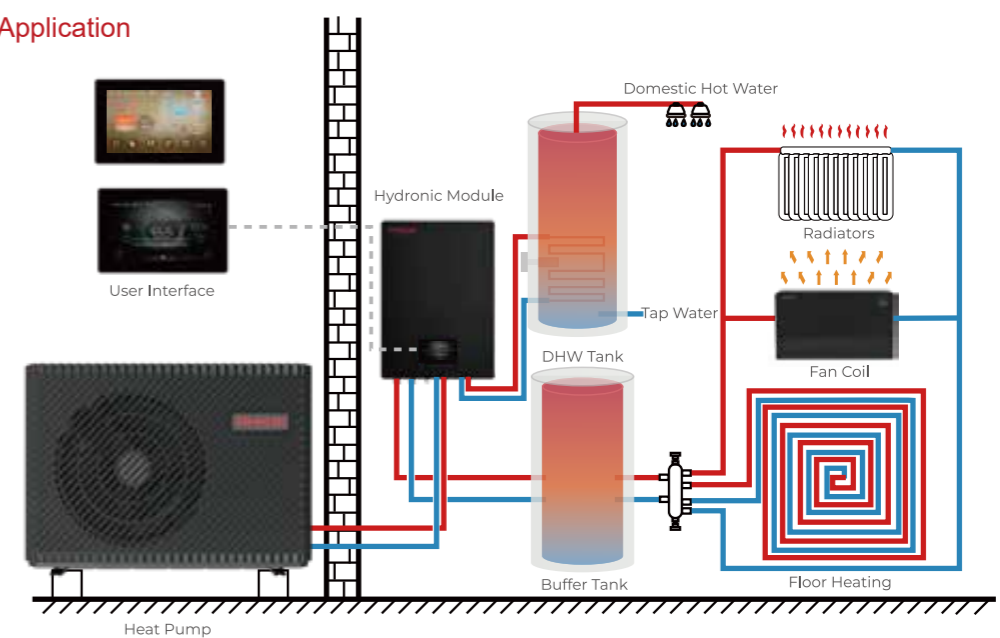




## Installation with Hydronic Module

PHNIX provides the monoblock heat pump and the Hydronic Module. Hydronic Module includes expansion tank, main circulation water pump (optional), one space heating/cooling circulation water pump (optional), one DHW pump (optional), safety valve, water refill valve, and electrical heater. When installing the unit, installer can connect the heat pump directly to the Hydronic Module, which saves labor cost and time. Storage water tank is needed for the domestic hot water application.

### Application

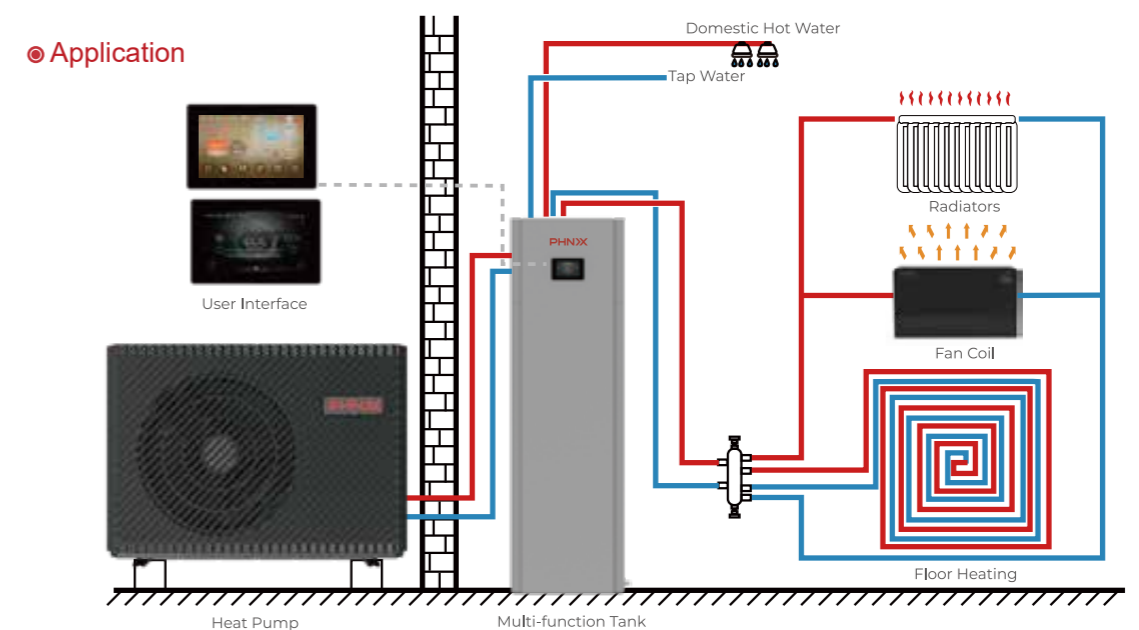






## Installation with Multi-function Tank

PHNIX provides the monoblock heat pump and the Multi-function tank. Multi-function tank includes a buffer tank and a storage tank, a circulation pump for heating/cooling(optional), safety valve, water refill valve and expansion tank. When installing the unit, installer just needs to connect the heat pump directly to the Multi-function tank.



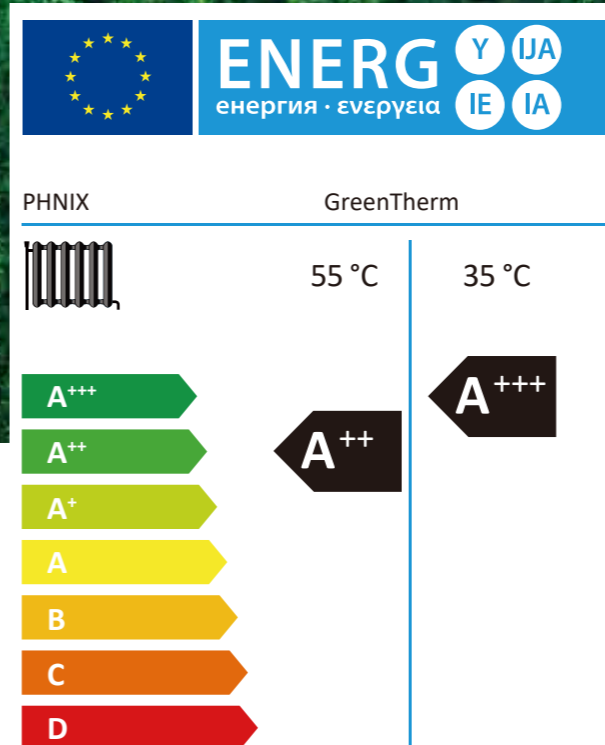


# Super High Efficiency A+++

## Environmental Refrigerant



To reduce carbon emission to the environment and curb global warming, PHNIX develops R290 air to water heat pump - GreenTherm Series. With many advantages such as low carbon emission and high efficiency, R290 refrigerant is recognized as a refrigerant with the most development potential in the industry, which contributes to the reduction of carbon emission and help achieve the global goal of carbon neutrality.



GreenTherm Series Air to Water Heat Pump is specially developed with the most cutting-edge heat pump technology and modern design to meet stringent requirements for efficiency, stability and quietness. Not only does GreenTherm series uses R290 green gas and inverter technology, but also is rated with A+++ energy label under 35 C water outlet. With a top energy rating A+++ , the unit is energy efficient and can greatly reduce energy bills for users.



# Full DC Inverter Technology

GreenTherm Series perfectly combines eco-friendly R290 refrigerant and inverter technology to produce efficient house heating/cooling and hot water even under extreme cold climate.



## DC Inverter Compressor

Compared to AC drive technology, DC inverter speed technology usually modulates control process of the compressor more precisely, thus improving transmission efficiency and reducing noise and energy consumption of the compressor.



## DC Inverter Fan Motor

With better dynamic balance and reducing turbulent flow noise, heat pump work efficiency is greatly improved.

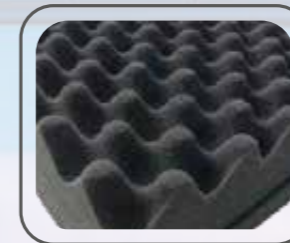
# Noise Reduction Technology

PHNIX dedicates to creating super quiet running environment for the user. GreeTherm Series adopts multiple noise reduction technologies, every product has been repeatedly tested and optimized.



## Shock Absorption & Noise Reduction Technology

GreenTherm Series offers suspension chassis which can greatly minimize vibration and reduce noise.



## Soundproof Isolation

All-sided of cabinet is fully wrapped with Soundproof sponge material, which can efficiently absorb and block out the noise from compressor operation.

**-25°C**  
**Ultra-low Temperature**

42-47dB(A)  
1 Meter Distance

- 70dB(A)—Car
- 30dB(A)—Whisper
- 20dB(A)—Rustle of leaves



# Key Components

## RS485 Centralized Control



Green Therm Series is highlighted with central control system as a RS485 serial port is designed for communications in every unit.

## Circulation Water Pump



Connect to the water inlet of the machine to make water flow in the pipe.

## SWEP Plate Heat Exchanger



Thin rectangular channels are formed between various plates, and heat exchange is carried out through the plates, which has the advantage of high heat exchange efficiency.

## Electronic Expansion Valve



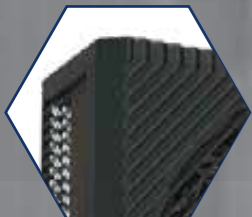
With electronic expansion valve, it can instantly adjust refrigerant flow to ensure the stability of the refrigeration system.

## Pressure Sensor



Pressure Sensor can detect system pressure and transmit the signal to the main board so as to protect the unit.

## Elegant Wave Screw-Free Design



GreenTherm Series features stylish and innovative cabinet design, no screws are visible on the surface

## ASA Material



The ASA panel and top cover are strongly corrosion-resistant and anti-weathering that ensures a long service life.





# Smart Touch Display

Two types of controllers are up to choice.

PHNIX Smart Display Inverter Heat Pump has a high-end controller with 5-inch colorful touch screen, which is one of the highlights of this trendy heat pump product. With temperature and power consumption curve, users can always be clear of the energy consumption at a glance. It is incredibly convenient for users from different countries at multi-language function can be chosen.



Available for Option

# PHNIX Smart Control Family

Smart APP control brings a lot of convenience to users. Temperature adjustment, mode switching, and timer setting can be achieved on your smart phone. Moreover, you can know power consumption statistics and fault record at anytime and anywhere.



# Web Platform

Central platform management can be realized with DTU or WiFi function, which effectively saves the cost for labor when service is needed.

The fault report button creates a direct error report channel to the local service provider. When an error is reported, the service provider can notice the error information of the target house heating heat pump from the background system, and contact users immediately to offer help.





# Sample Project

Application: House Heating +Hot Water  
 Location: Australia  
 Model: PASRW060-BP-PS-D  
 Project Year: 2021



Application: House Heating +Hot Water  
 Location: Belgium  
 Model: PASRW040-BP-PS-D  
 Project Year: 2021



# Specification



Model		PASRW020-BP-PS-D	PASRW040-BP-PS-D	PASRW040S-BP-PS-D	PASRW060-BP-PS-D	PASRW060S-BP-PS-D
Power Supply	/	230V~/30~90Hz	230V~/30~90Hz	380V/3N~/30~90Hz	230V~/30~90Hz	380V/3N~/30~90Hz
Heating Condition - Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 30/35°C						
Heating Capacity Range	kW	3.10~8.90	5.40~14.95	5.40~14.95	8.00~22.00	8.00~22.00
Heating Power Input Range	kW	0.65~2.10	1.05~3.85	1.05~3.85	1.60~6.90	1.60~6.90
Heating Current Input Range	A	2.9~9.2	4.6~16.9	1.9~6.8	7.0~30.3	2.8~12.2
Cooling Condition - Ambient Temp. (DB/WB): 35/24°C, Water Temp. (In/Out): 12/7°C						
Cooling Capacity Range	kW	1.20~5.72	3.60~10.50	3.60~10.50	4.20~15.00	4.20~15.00
Cooling Power Input Range	kW	0.65~2.40	1.12~4.47	1.12~4.47	1.80~7.30	1.80~7.30
Heating Current Input Range	A	2.9~10.5	4.9~19.6	2.0~7.9	7.9~32.1	3.2~12.9
Hot Water Condition - Ambient Temp. (DB/WB): 20/15°C, Water Temp. (In/Out): 15/55°C						
Hot Water Capacity Range	kW	3.92~10.68	6.50~18.50	6.50~18.50	10.00~27.00	10.00~27.00
Hot Water Power Input Range	kW	0.78~2.47	1.27~4.65	1.27~4.65	1.90~7.10	1.90~7.10
Hot Water Current Input Range	A	3.4~10.8	5.6~20.4	2.4~8.21	8.3~31.2	3.4~12.5
Max. Power Input	kW	3.0	5.3	5.3	7.5	9.0
Max. Current Input	A	13.5	24.5	10.5	35.0	15.8
Water Flow	m <sup>3</sup> /h	1.0	1.7	1.7	2.9	2.9
Refrigerant / Proper Input	kg	R290 / 0.50kg	R290 / 0.85kg	R290 / 0.85kg	R290 / 1.30kg	R290 / 1.30kg
CO <sub>2</sub> Equivalent	Ton	0.0015	0.0026	0.0026	0.0039	0.0039
Sound Pressure (1m)	dB(A)	43	42	42	48	46
Sound Power Level <sub>[EN12102]</sub>	dB(A)	60	57	58	64	61
Operating Ambient Temperature	°C	-25~43				
Max. Water Temperature	°C	75				
Fan Quantity	/	1	1	1	2	2
Fan Motor Type	/	DC				
Water Connection	inch	1				
Water Pressure Drop (max)	kPa	20	20	20	64	61
Circulation Pump	/	DC				
Circulation Pump Water Head	m	7.5	7.5	7.5	12.5	12.5
ErP Level(35°C)	/	A+++				
Cabinet Type	/	Galvanized sheet metal+ASA				
Unit Dimension(L/W/H)	mm	1167×407×795	1287×458×928	1287×458×928	1250×540×1330	1250×540×1330
Shipping Dimension(L/W/H)	mm	1300×485×940	1420×540×1080	1420×540×1080	1380×570×1480	1380×570×1480