

Hien<sup>®</sup>

# DC INVERTER AIR TO WATER HEAT PUMP

MONOBLOC

Heating+Cooling+DHW



ECOFORCE SERIES



# R290



# Hien



Founded in 1992, Hien firstly started as an electronic component manufacturer. With a registered capital of 300 million RMB, Hien entered the air source industry in 2000. It is a leading enterprise of air source heat pumps in the area of product R & D, production, sales, and after-sales service. Hien owns one of the largest production bases of heat pumps in China, as well as the CANS certified state-level comprehensive laboratory.

## PRODUCTION LINE

With a total of 60,000 m<sup>2</sup> of construction area and over 1,000 processing equipments, the main factory comprises 6 assembly lines, while the branch factory consists of 3 production workshops. Main products include air source heat pumps for residential, commercial, and industrial use. The capacity of our products ranges from 3 kW to 320 kW, primarily for heating, cooling, and domestic hot water. Heat pump dryers are also used for the production of tobacco, aroma wicks, medicinal herbs, tea, fruits, vegetables, and other products.



# R290

**NATURAL REFRIGERANT**

# GWP=3

**CONTRIBUTE TO CARBON NEUTRALITY.**

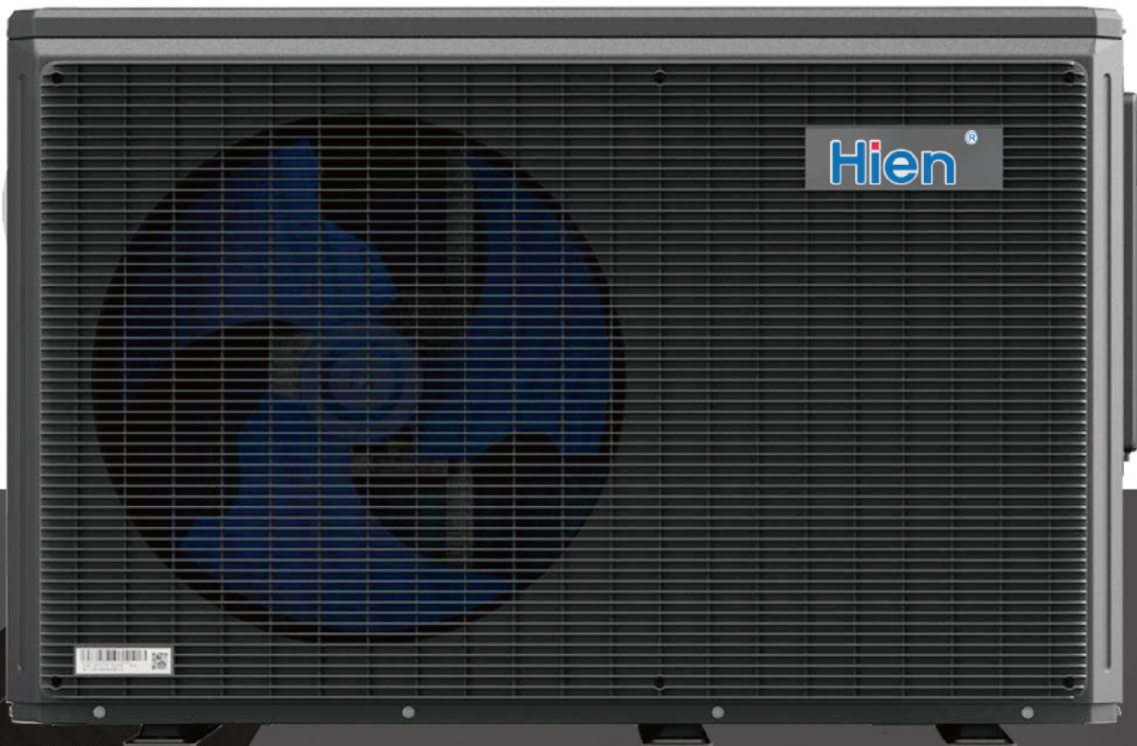
**REDUCED CO<sub>2</sub> EMISSIONS AND  
ENVIRONMENTAL IMPACT**

# AIR TO WATER HEAT PUMP

HEATING+COOLING+DHW

**ECOFORCE  
SERIES**


R290 



 **A+++ High Efficiency A+++ Energy Level**

 **Energy - Saving up to 80%**

 **Wi-Fi App Smart Controlled**

 **Stable Running at -25°C Ambient Temperature**

## Multi-function Selections

There are 5 operation modes to be selected :

- Heating + Hot Water
- Cooling + Hot Water
- Heating
- Cooling
- DHW

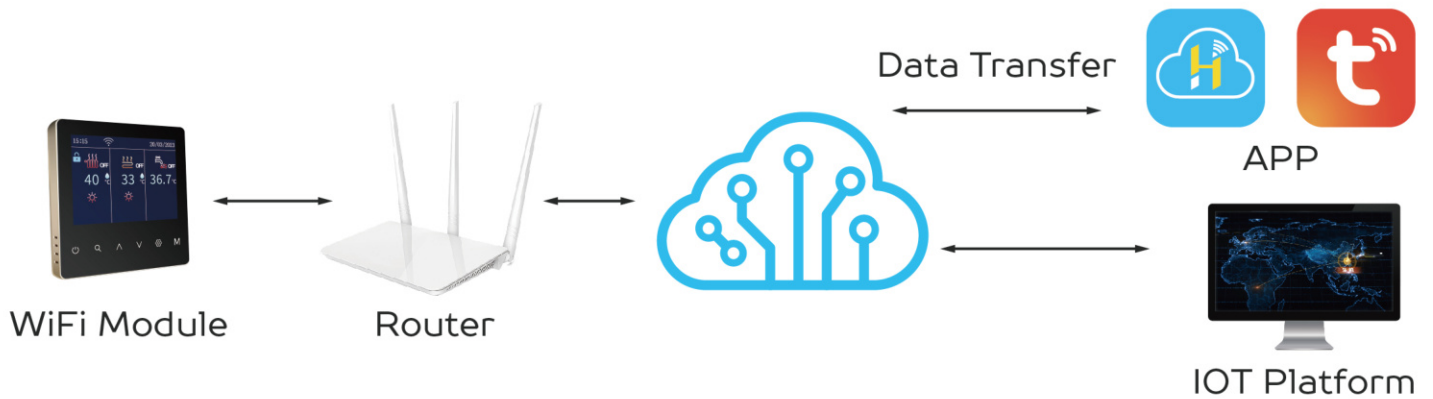


# SMART TOUCH DISPLAY



- Color Screen
- Intuitive Interface
- Touch Key Design
- Builtin Wifi Module
- APP Control

# SMART CONTROL FAMILY

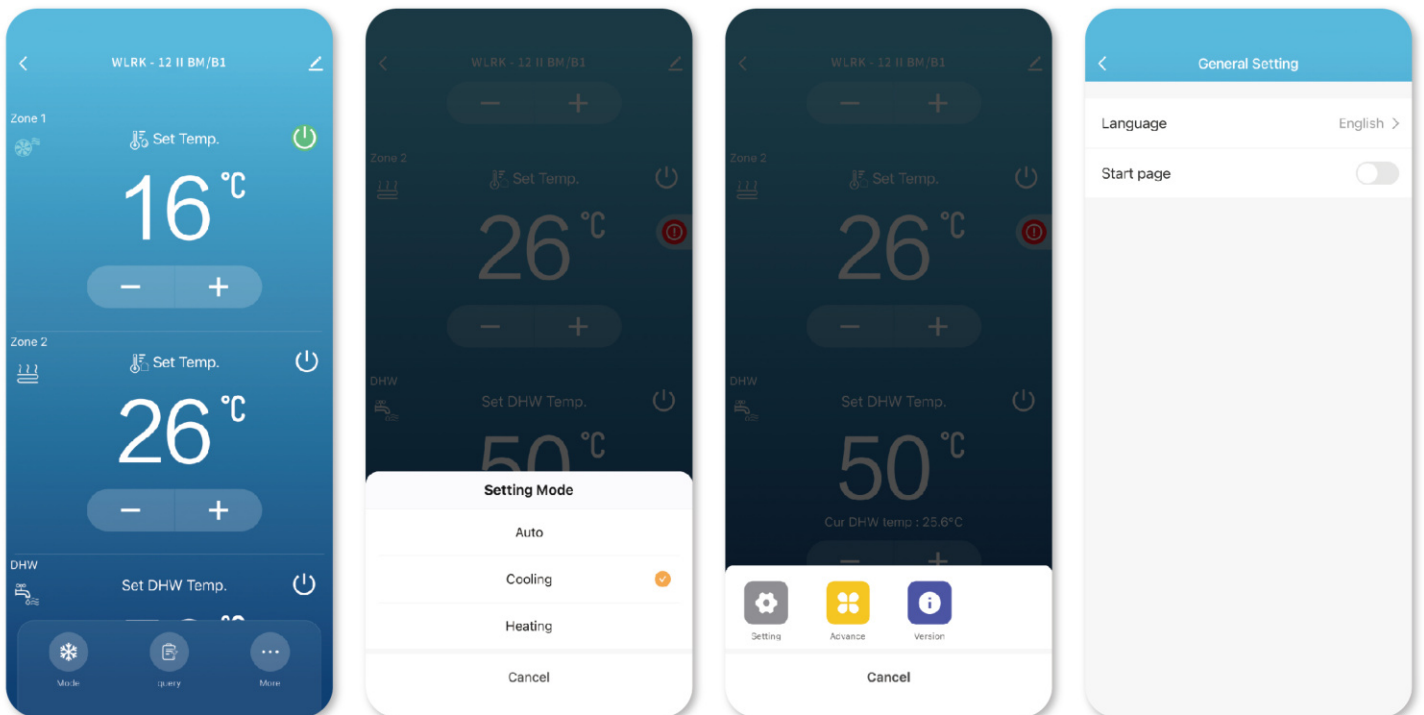


## RS485

The intelligent controller with RS485 is adopted to realize the linkage control between the heat pump unit and the terminal end. Multiple heat pumps can be controlled and connected to be well monitored.

## WiFi DTU

To deliver the best user experience, EcoForce series is designed with a DTU module for remote data transferring, and then you can easily monitor the running status of your heating system.



## Smart APP control

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



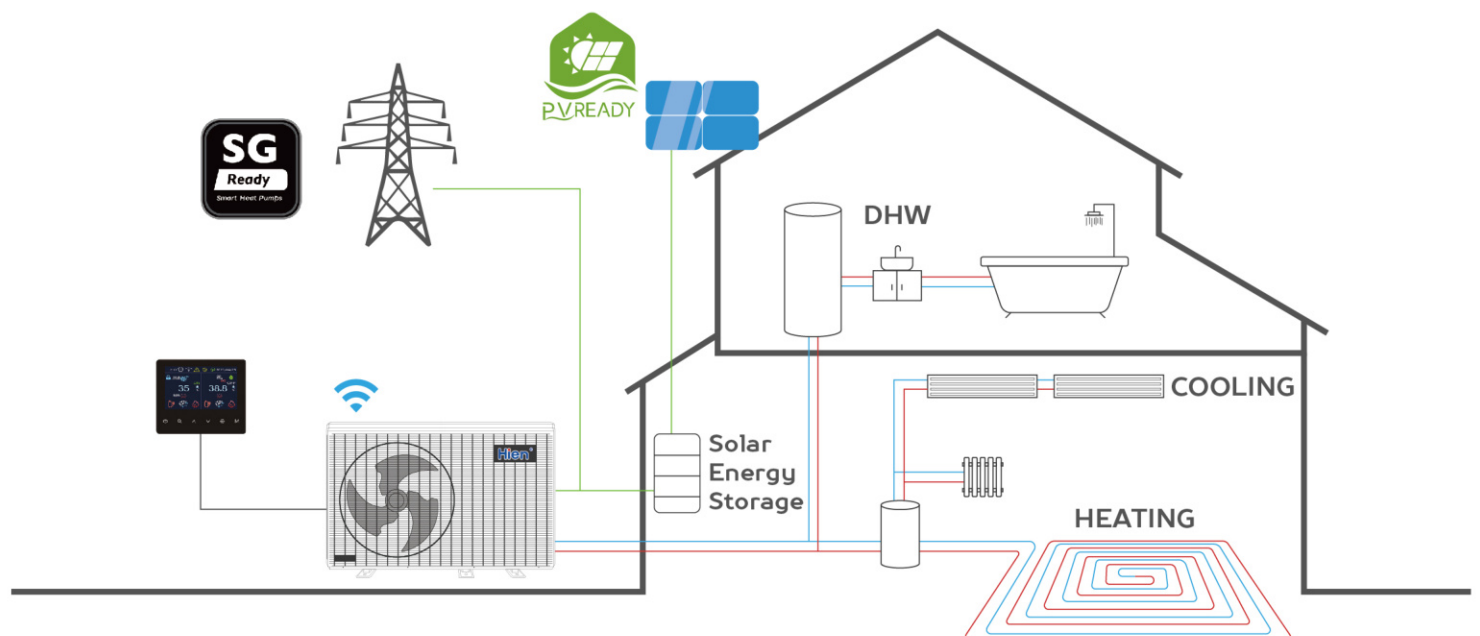
# SUPER HIGH EFFICIENCY A+++

## Can be operated in combination with:

1. Electric Water Heater
2. Conventional Boiler
3. Solar Hot Water Systems

Ecoforce Series delivers heat through a heating distribution system, such as radiators, underfloor heating, fan coils, or air conditioners, for reliable heating, cooling, and domestic hot water throughout the seasons. Depending on the season and air temperature, the heat pump automatically adjusts and operates optimally in the heating or cooling modes for optimal energy savings.

Suits a wide variety of applications, including space heating, domestic hot water for residential and commercial projects.



# STERILIZING MODE

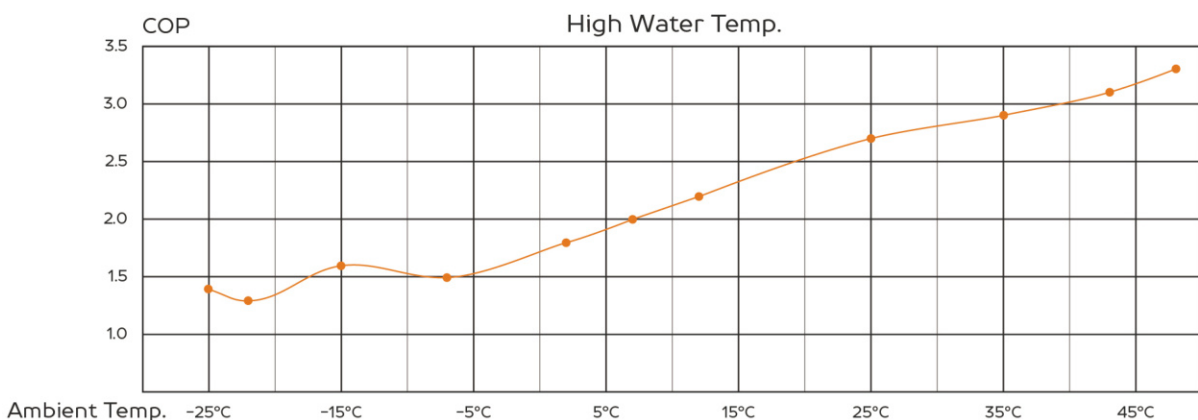
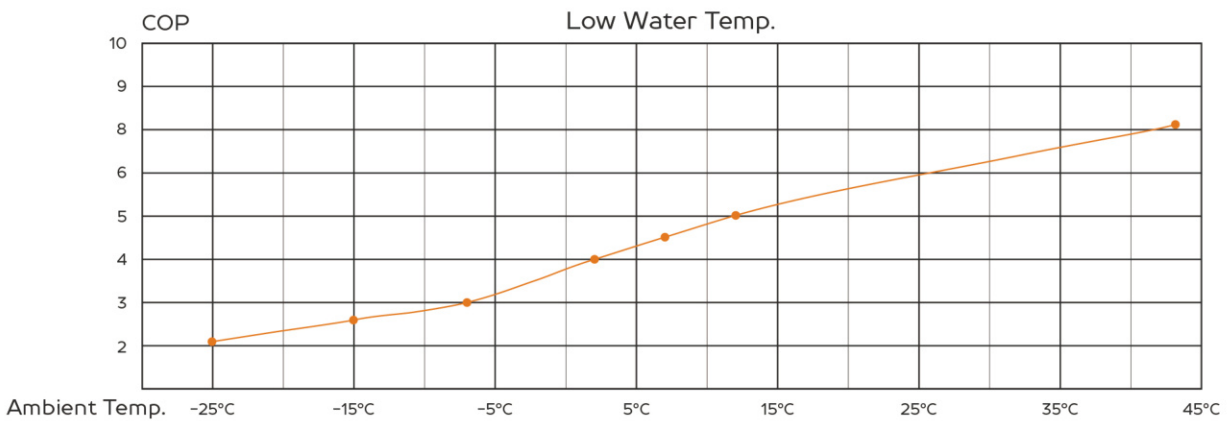
Thanks to its ability to reach temperatures as high as 75°C, this cutting-edge product eliminates harmful Legionella bacteria and viruses, ensuring the highest level of water safety.

Invest in your health and your family's well-being with our state-of-the-art heat pump. Experience the unparalleled convenience, energy efficiency, and superior performance that this product offers.

Don't compromise on safety and hygiene when it comes to your water supply. Choose our heat pump with its exceptional sterilizing mode, and enjoy the reassurance of pristine water quality every day.



## HEATING COP CURVE





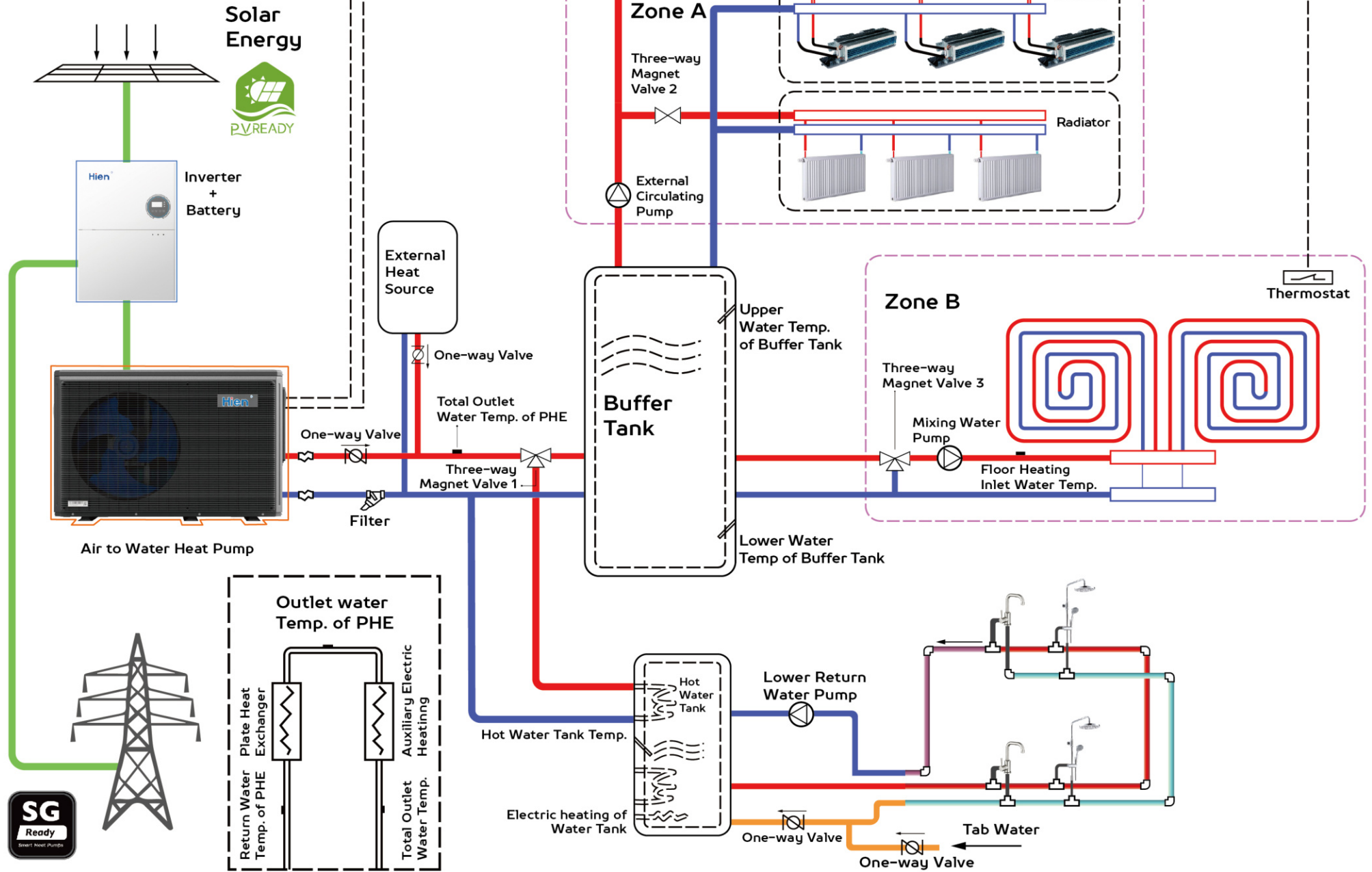
# CASCADE SYSTEM DIAGRAM



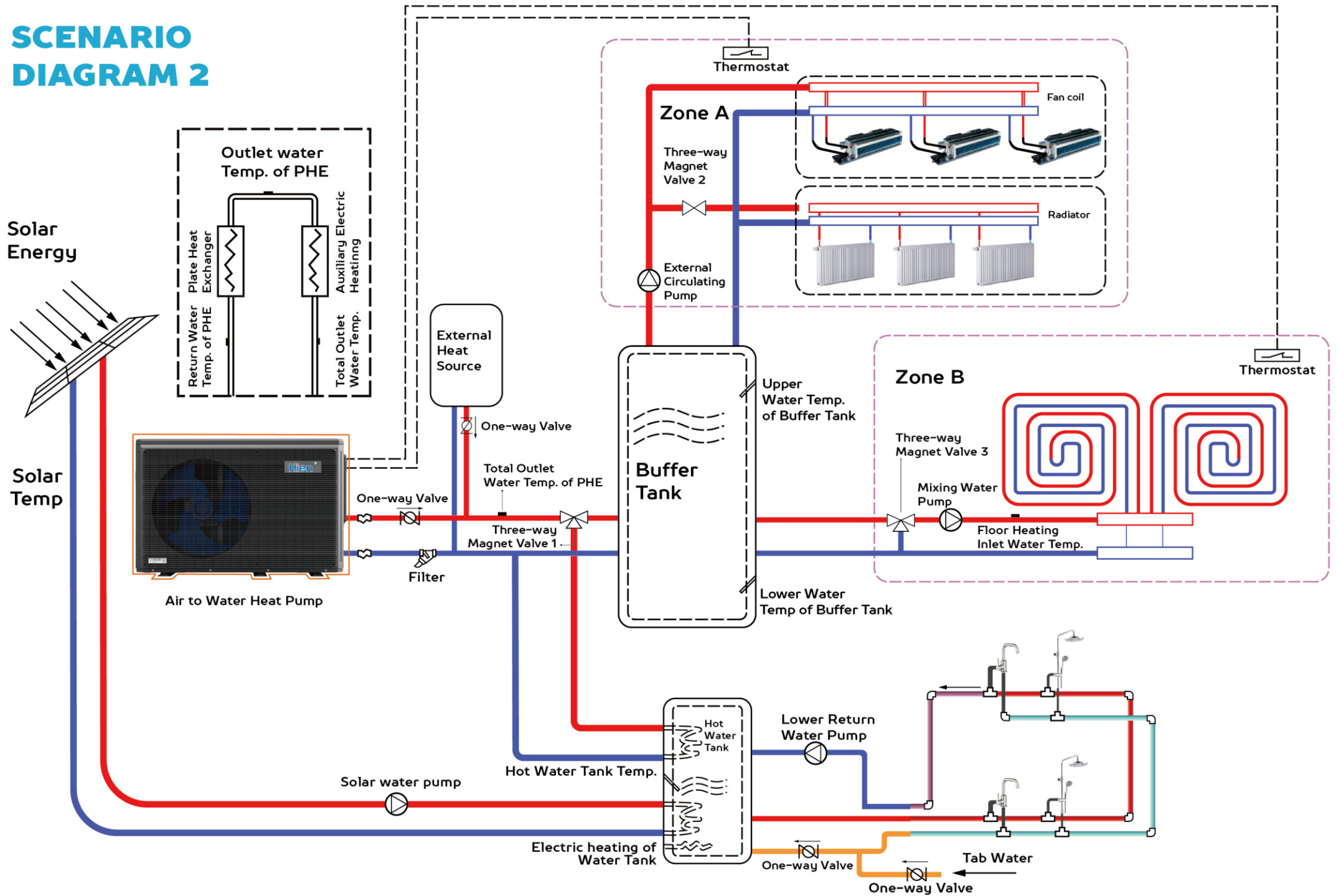
- Maximum of 8 units can be controlled with one touch screen.
- Connect 1 master to 7 slaves for networking.
- Can be operated independently or in group.
- Automatically control the start and stop of the machine based on water temperature.
- Multiple heat pumps can work together to improve the efficiency and energy efficiency of the system.



# SCENARIO DIAGRAM 1



# SCENARIO DIAGRAM 2



# SPECIFICATIONS



Dc Inverter Heat Pump		WLRK-8IBM/B3	WLRK-10IBM/B3	WLRK-12IBM/B3	WLRK-14IBM/B3	WLRK-12IIBM/B3	WLRK-14IIBM/B3	WLRK-16IIBM/B3	
<b>Cooling Conditions</b>		Outdoor Air Temperature : DB 35°C/ WB 24°C, Indoor Water Temperature Inlet/Outlet : 23°C / 18°C.							
<b>Rated Cooling Capacity</b>	kW	1.5 ~ 5.8	2.2 ~ 7.6	2.8 ~ 13.0	3.3 ~ 14.2	2.8 ~ 9.5	3.3 ~ 11.3	3.8 ~ 13.2	
<b>Cooling Power Input</b>	kW	0.34 ~ 2.15	0.51 ~ 2.81	0.64 ~ 3.90	0.75 ~ 4.40	0.64 ~ 3.51	0.75 ~ 4.18	0.86 ~ 4.89	
<b>Current Input Range</b>	A	1.55 ~ 9.83	2.33 ~ 12.88	2.93 ~ 16.92	3.43 ~ 19.17	1.12 ~ 5.79	1.25 ~ 6.92	1.42 ~ 8.16	
<b>Cooling EER</b>	W/W	4.4 ~ 2.7	4.4 ~ 2.7	4.4 ~ 3.33	4.4 ~ 3.22	4.4 ~ 2.7	4.4 ~ 2.7	4.4 ~ 2.7	
<b>Heating Conditions</b>		Outdoor Air Temperature : DB 7°C / WB 6°C , Indoor Water Temperature Inlet/Outlet : 30°C / 35°C .							
<b>Rated Heating Capacity</b>	kW	3.3 ~ 8.6	3.8 ~ 9.9	4.3 ~ 12.0	4.8 ~ 14.0	4.35 ~ 12.7	4.86 ~ 14.8	5.3 ~ 16.8	
<b>Heating Power Input</b>	kW	0.55 ~ 1.88	0.64 ~ 2.19	0.72 ~ 2.60	0.81 ~ 3.04	0.73 ~ 2.78	0.81 ~ 3.31	0.88 ~ 3.67	
<b>Current Input Range</b>	A	2.51 ~ 8.59	2.93 ~ 10.51	3.30 ~ 11.32	3.71 ~ 13.23	1.21 ~ 4.59	1.35 ~ 5.52	1.48 ~ 6.15	
<b>Heating COP</b>	W/W	6.02 ~ 4.58	6.02 ~ 4.52	6.02 ~ 4.61	6.02 ~ 4.60	6.02 ~ 4.58	6.02 ~ 4.58	6.02 ~ 4.58	
<b>Heating Conditions</b>		Outdoor Air Temperature : DB 7°C / WB 6°C , Indoor Water Temperature Inlet / Outlet : 50°C / 55°C							
<b>Rated Heating Capacity</b>	kW	3.1 ~ 7.8	3.5 ~ 9.6	3.9 ~ 11.4	4.4 ~ 13.1	4.0 ~ 11.6	4.5 ~ 13.5	4.9 ~ 15.3	
<b>Heating Power Input</b>	kW	0.67 ~ 2.67	0.76 ~ 3.29	0.85 ~ 3.91	0.96 ~ 4.49	0.87 ~ 3.98	0.98 ~ 4.63	1.12 ~ 5.25	
<b>Current Input Range</b>	A	3.12 ~ 12.21	3.52 ~ 15.13	3.93 ~ 17.88	3.16 ~ 21.3	1.45 ~ 6.67	1.68 ~ 7.68	1.86 ~ 8.96	
<b>Heating COP</b>	W/W	4.63 ~ 2.92	4.63 ~ 2.92	4.63 ~ 2.92	4.63 ~ 2.92	4.63 ~ 2.92	4.63 ~ 2.92	4.63 ~ 2.92	
<b>Voltage</b>	V/Hz	220V ~ 240V ~ /50Hz				380V ~ 420V 3N ~ /50Hz			
<b>Rated Water Flow</b>	m³/h	1.48	1.7	2.06	2.4	2.18	2.55	2.89	
<b>Rated of Waterproof</b>	/	IPX4							
<b>Control Mode</b>	/	Heating , Cooling , DHW , Heating + DHW , Cooling + DHW							
<b>Refrigerant</b>	/	R290	R290	R290	R290	R290	R290	R290	
<b>Compressor</b>	<b>Form</b>	/	Double - rotor	Double - rotor	Double - rotor	Double - rotor	Double - rotor	Double - rotor	
	<b>Brand</b>	/	Highly	Highly	Highly	Highly	Highly	Highly	
<b>Net Size</b>	mm	1200*470*765	1200*470*765	1370*500*935	1370*500*935	1370*500*935	1370*500*935	1370*500*935	
<b>Weight</b>	kg	100	110	130	138	135	142	148	
<b>Sound Pressure Level</b>	dB (A)	≤55							
<b>Fan</b>	<b>Form</b>	/	Intelligent variable frequency fan motor						
<b>Operation ambient temperature</b>	°C	-25 ~ 43							
<b>Max.Outlet Water Temperature</b>	°C	75							
<b>Inlet Pipe Diameter</b>	mm	G1"	G1"	G1"	G1"	G1"	G1"	G1"	
<b>Outlet Pipe Diameter</b>	mm	G1"	G1"	G1"	G1"	G1"	G1"	G1"	
<b>Packing Size</b>	mm	1270*555*808	1270*555*808	1440*570*1080	1440*570*1080	1440*570*1080	1440*570*1080	1440*570*1080	
<b>Wifi Function</b>	/	√	√	√	√	√	√	√	
<b>ErP Energy Class</b>	/	35°C A+++/ 55°C A++							
<b>Test Standard</b>	/	EN 14825							

The above parameters, if there are slight differences due to technical improvements, please refer to the relevant specifications of the actual product for accuracy.



**Hien**®

**Hien New Energy Equipment Co.,Ltd.**

Head Office : No.9, Chuangxin Rd, Yueshang  
Pioneer Park, Yueqingwan Port District,  
Yueqing, Zhejiang, China

info@hien-ne.com

T/F : +86-0577-62121888



[www.hien-ne.com](http://www.hien-ne.com)