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# **Heat Pump Solutions**

- Home heating, cooling, DHW
- All-in-one hot water heater

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• Swimming pool heating & cooling

# POWER WORLD MACHINERY EQUIPMENT CO., LTD.

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EN

POWER WORLD Air to water heat pump 11 | 2024



Full DC Inverter Control Ambient Temp -25°C~43°C

Max hot water 75°C Photovoltaic + Smart Grid + Heat Pump

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# About Power World

### Founded in 2004, stock code 870092

Power World Machinery Equipment Co., Ltd. is one of the largest airto-water heat pump manufacturers and service providers in China, a leader in the EVI full DC inverter heat pump field and an innovative pioneer in the zero-carbon heat pump field, continuously honored with the top 10 leading brands in China. In the past 20 years, we have been focused on the R&D, production and sales of heat pumps, committed to providing high-quality heating and cooling solutions to users around the world. 256,000<sup>m<sup>2</sup></sup> 4 Comprehensive Production Bases

• Germany European Service Centers

Annual export volume

**1000+** Global Service Outlets

60-100 R & D team(people)



**500-1000** 

> 25Days Shortest lead time

# AN INNOVATIVE PIONEER IN THE ZERO-CARBON HEAT PUMP FIELD

- Top 10 Air Source Heat Pump Brands in China
- Top 10 brands of water heaters in Guangdong
- Top 10 outstanding brands in China's heat pump industry
- Outstanding industrial and agricultural drying brands in China's heat pump industry
- Outstanding contribution unit of coal-to-clean energy
- Air source Northern Heating Demonstration Award in China
- "Leading Brand in China's Heat Pump Industry" for 9 consecutive years.
- China Home Appliance Industry "Plug" Award
- National High-tech Enterprise
- Leading Brand of air source heat pumps in China

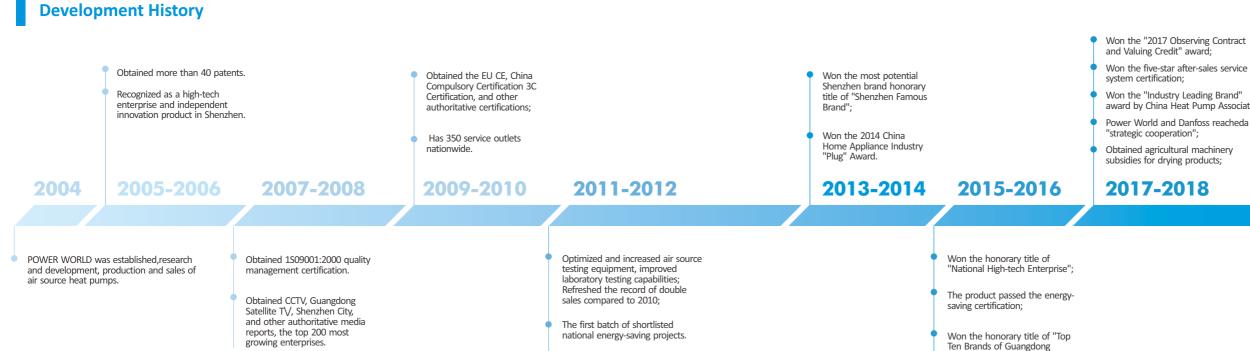
(01) 2022 Energy Saving Heat Pump System Application Design Competition

- (02) 2022 China Cooling & Heating Smart Innovation Brand Award
- (03) 2022 China Heat Pump Outstanding Contribution Award



(02)







award by China Heat Pump Association;

Water Heaters", on November

established and became a listed company (New OTC Market), stock code 870092.

29th Dongguan Branch of POWER WORLD was

• Won the Excellent Industrial and Agricultural Drying Brand in China's Heat Pump Industry;

- Consecutively Recognized as "China's High-tech Enterprise";
- Won the Outstanding Brand Award in China's Drying Industry;
- Won the China Heat Pump Outstanding Contribution Award;
- Won the China Heat Pump Association Industry Leading Brand Award.



- Invested in the R&D of the battery thermal management system, and established the Energy Storage Division;
- Enter the top three in the air source heat pump industry;
- Guangdong Power World Energy Storage Technology Co., Ltd. was established;
- Construction of Huizhou POWERWORLD New Energy Industrial Park started;
- Officially enter the "Photovoltaic+Energy-Storage+Charging+Heat Pump+Flexibility" (PECHF) zero-carbon building ecological field.

# Strategies for ZERO CARBON Buildings

One Stop Air-to-water Heat Pump Solutions



25 PW EMS Wi-Fi App Remote monitoring console

POWER WORLD

Pioneering Sustainable, Customizable Heat Pump Solutions for a Zero-Carbon Future.

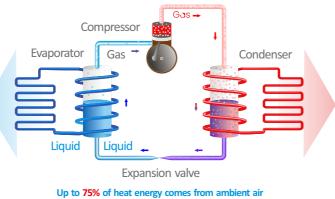
Whether it is design, production or service, we follow the concept of sustainable development. Power World relies on its comprehensive professional knowledge to provide customers around the world with excellent, customizable products and professional technical support, providing users with safe, environmentally friendly, and efficient heat pump system solutions to create a comfortable and intelligent

# Cutting-edge Core Technology

# > Zero carbon air source heat pump technology

Heat pump technology is based on the principles of the reverse Carnot cycle, which captures heat energy from the surrounding air and transfers it indoors or outdoors to achieve heating and cooling effects. It is widely used in the heating and cooling fields of homes and commercial buildings.

Power World has mastered this technology and continues to innovate in its applications, allowing its heat pump products to achieve exceptional high efficiency and energy savings.



# SG-Ready Technology

SG-Ready is a function that integrates your equipment with the national smart grid, making the equipment and the grid interconnected. With the expansion of energy-saving policies, SG-Ready will gradually become a necessary function to obtain subsidies.

Power World heat pumps have SG-Ready and PV-Ready functions, which can accept dispatch signals from the power grid, adjust and manage energy usage according to the needs of the power grid, maximize the use of home photovoltaic energy and energy storage battery energy, and reduce energy expenses.



# > Multiple heat source supply

Hybrid heat pump technology is an advanced heat pump system design with super compatibility and can be connected to a variety of heat sources, such as boilers, solar photovoltaic systems, electric heating, etc., and can automatically adjust the heat exchange mode according to the actual situation, allowing the system to with wider applicability and reliability, maximizing energy efficiency.

# > 2 zone temperature control technology

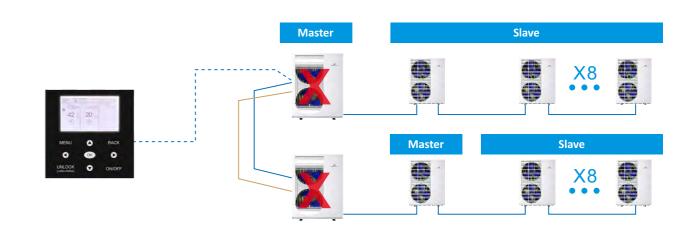
Power World heat pump 2 zone temperature control technology provides an efficient, flexible, smart and customizable solution for maintaining optimal temperatures in different areas of a house or building.

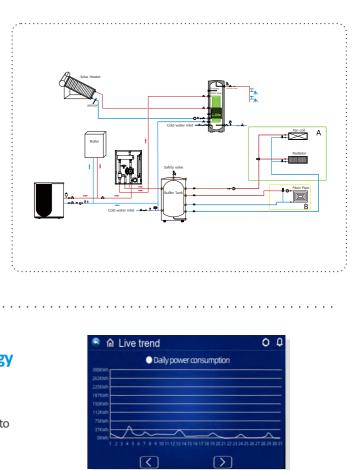
# > 24/7 Overall Energy Management Technology

Various curve data charts, real-time monitoring and intelligent recording of daily / weekly / monthly / yearly energy consumption data. Users could adjust strategies on time based on consumption to save unnecessary energy waste.

# > Super Cascading function

Various curve data charts, real-time monitoring and intelligent recording of daily/weekly/monthly/yearly energy consumption data. Users could adjust strategies on time based on consumption to save unnecessary energy waste.



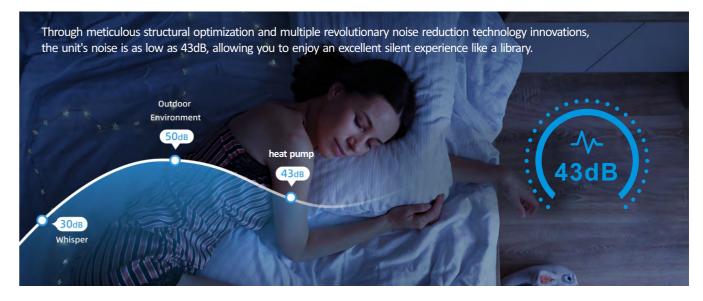




# > EVI ultra-low temperature technology

With Power World EVI technology, the heat pump system has a wider operating range and can provide strong heating in extremely cold environments as low as -30°C. Compared with ordinary heat pumps, it operates at a more efficient frequency, making the system more stable and energy-saving.

# > Innovative Silent technology

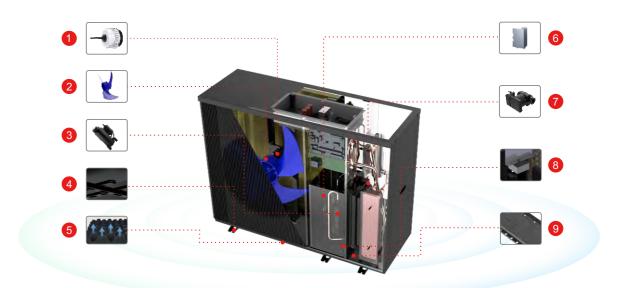




# > Full DC Inverter technology

Power World heat pump unit utilizes full DC inverter technology, boasting a precision temperature control of up to  $\pm 0.1^{\circ}$ C. The system responds rapidly to temperature changes, automatically detecting variations in environmental temperatures and adjusting power output accordingly, ensuring a consistently comfortable indoor temperature. Compared to ON/OFF units, this technology can save up to 20-30% in energy consumption.

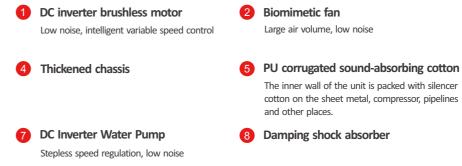
# > Key Noise Reduction Innovation Highlights





# Comprehensive protection technology

Our cutting-edge technology provides fully intelligent identification and control of key functions such as defrost, antifreeze, power outage, voltage, and water flow, ensuring that the entire unit system is optimally protected and always operates at peak performance.





cotton on the sheet metal, compressor, pipelines



### 3 DC inverter compressor

Small vibration, low noise, stepless frequency conversion of power

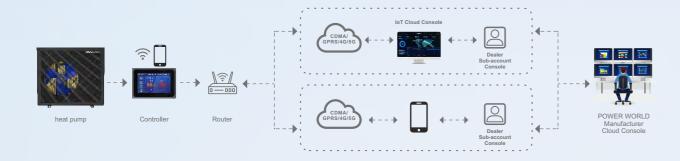


### 6 Sound insulation sealing shell (With soundproof cotton)

9 Thicker chassis to reduce high and low frequency resonance

## Smart Remote Management System WiFi App+loT Cloud Management Platform

## Real-time monitoring, data operation and maintenance, and intelligent management mode can maximize the energy efficiency of the building and reduce labor operation and maintenance costs and user energy bills.





## Big data management:

> IoT Cloud Management Platform

Global device data collection, statistics, analysis and management.

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### pment management:

mation statistics/operation status/parameter viewing and setting/fault diagnosis report/operation log, etc.

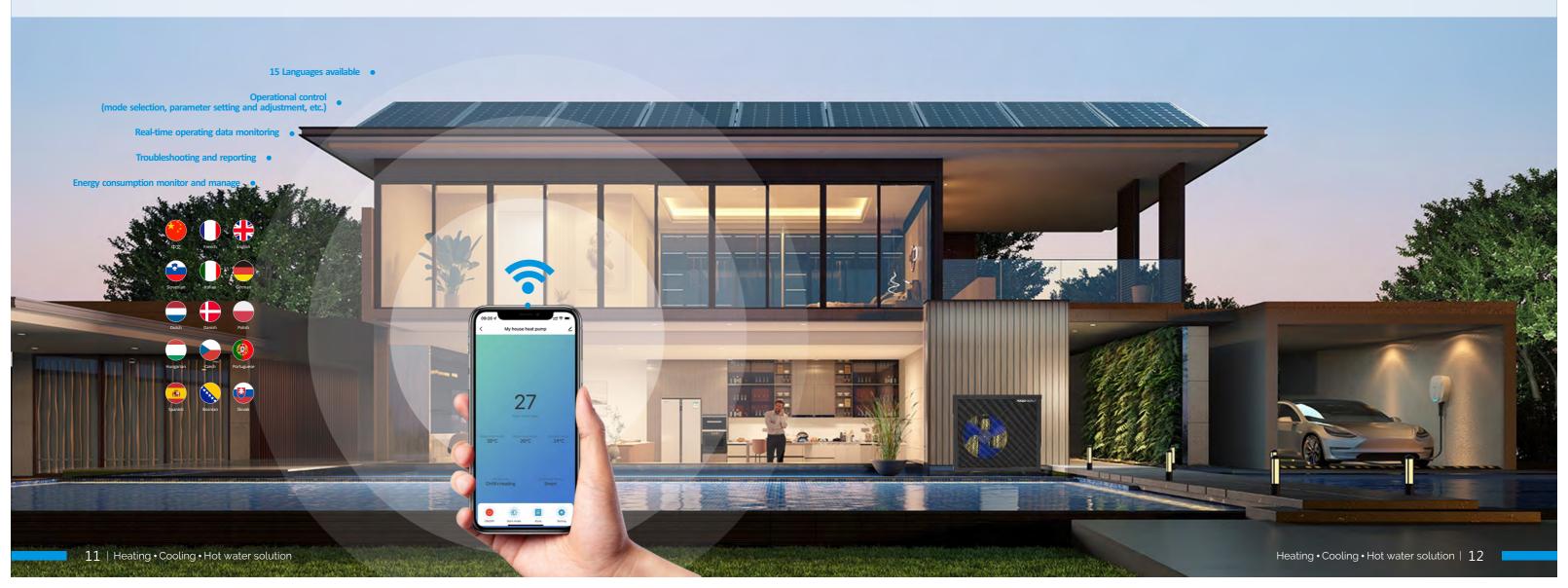


## OTA upgrade:

quickly fix code defects and remotely iteratively upgrade product mainboards.

# Smart Life/Tuya Smart App Control

Built-in WiFi module, can directly connect to the Internet without installing a WIFI box. Anytime, anywhere, easily monitor and control your heat pump system.



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# Market Development Support

# **Comprehensive Global Authoritative Certification**

CE, CB, RoHS, TUV(ERP), KEYMARK, MCS, BAFA Heat Pump Subsidy List, WaterMark, OceanaMark, ISO 9001, ISO 14001, ISO 45001, etc. Power World's products can all pass these certifications and are eligible for heat pump subsidies in relevant countries.



# **Extensive Market Applications**

Power World heat pump products get great reviews. Each year, over 300,000 heat pump units are sold to more than 60 countries and regions worldwide, including Poland, the UK, Australia, Sweden, the Czech Republic, Germany, France, Spain, South Africa, India, Australia, the United States, Brazil, etc. Our export volume ranks among the top 5 in the Chinese industry.



# > Marketing Material Synchronization

Power World provides our clients with in-house marketing materials, including factory videos, installation cases, product brochures/catalog, and posters, to help you better expand your market.







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**Technical training materials** 

# Customer service support

# **>** European Customer Service Center (Germany)

We are dedicated to delivering high-quality heat pump solutions that meet the unique requirements of the European market, while maintaining our reputation for innovation, efficiency, and reliability. In order to better demonstrate Power World's commitment to localization support and excellent service, we have set up European customer service centers in Germany.





# ✓ 2 YEARS FULL MACHINE WARRANTY

## 5 YEARS COMPRESSOR WARRANTY

# ✓ 7 YEARS HEAT EXCHANGER WARRANTY



Note: Warranty terms and durations vary by product series and are negotiable.



Based on the evaluation of the actual after-sales situation, Power World dispatches engineers to the local area to be responsible for after-sales service or remotely provides after-sales guidance, or Power World agents are responsible for after-sales service. Our professional after-sales team is available 24/7 to provide prompt assistance.

# Zero Carbon Heating Cooling & DHW Solutions

R290 refrigerant can be obtained directly from natural gas. With its low GWP value, high heat exchange efficiency, good and stable performance, zero carbon emissions, and low charge, it is considered by the industry to be the most environmentally friendly refrigerant with the most potential in the world.



R290 CLEANLIFE ULTRA SERIES

EVI DC INVERTER HYBRID HEAT PUMP

POWER WORLD



# -R 2 9 0 SERIES-CLEANLIFE



# R290 **Cleanlife Series**

The preferred heat pump solution for zero-carbon buildings, specially designed for smart energy-saving home.

# Features

- R290 refrigerant, low GWP(GWP=3)
- Energy class: A+++/35°C, A++/55°C
- Outlet water temperature up to 75°C
- 4 Operating modes: Powerful/Smart/Silent/Vacation
- Noise as low as 43dB(A) at 1Meter
- Maximum cascading 8 units
- Available in 15 languages
- Smart sterilization every 7 days
- 20~70°C Smart temp adjustment
- Smart Life WIFI App & IoT Cloud Management Platform
- Reserved electric auxiliary heating port & RS485 Communication Port
- Various curve data charts, 24/7 comprehensive energy monitoring and management

Water pump optional: built-in/none Compressor optional: HIGHLY DC Inverter Compressor / Panasonic EVI DC Inverter Compressor Wide Ambient Temp -25°C~43°C Model: 8.3/11.4/14.8/18.2/22/24KW













## HIGHLY DC Inverter Compressor

230V/1Ph/50Hz/60Hz

Residential heat pump (built-in water pump)

М	odel	PW020- DKZLRS-E/S	PW030- DKZLRS-E/S	PW040- DKZLRS-E/S	PW050- DKZLRS-E/S	PW055- DKZLRS-E/S	PW060- DKZLRS-E/S	PW070- DKZLRS-E/S
Heating Conditior	n - Ambient Temp.(DB/WB	):7/6°C,Water	[emp.(In/Out):	30/35°C				
Heating Capacity Range (kw)		2.5~6.0	3.3~8.3	4.5~11.4	5.9~14.8	7.2~18.2	8.8~22.0	9.6~24.0
Heating Power Input Range(kw)		0.48~1.44	0.64~2.18	0.85~2.95	1.13~3.83	1.38~4.65	1.68~5.77	1.83~6.30
Cop Range	Cop Range		3.81~5.17	3.86~5.29	3.86~5.22	3.91~5.22	3.81~5.24	3.81~5.24
DHW Condition-A	mbient Temp.(DB/WB)7/6	6°C,Water Temp	o.(In/Out):15/5	5°C	1		1	1
Heating Capacity Ra	ange (kw)	2.6~5.3	3.7~7.4	5.2~10.2	6.6~13.2	7.2~16.2	7.8~17.6	8.8~19.6
Heating Power Inpu	ıt Range(kw)	0.56~1.50	0.79~2.10	1.10~2.87	1.41~3.73	1.54~4.58	1.67~5.01	1.89~5.60
Cop Range		3.53~4.64	3.52~4.69	3.55~4.71	3.54~4.67	3.54~4.67	3.51~4.66	3.50~4.66
Heated Water Outp	out (l/h)	114	159	219	283	348	377	421
Cooling Condition	- Ambient Temp.(DB/WB)	35/24°C,Wate	Temp.(In/Out	):12/7°C	1		1	1
Cooling Capacity Ra	inge (kw)	1.7~4.2	2.4~5.8	3.3~8.2	4.3~10.8	5.6~14.1	6.2~15.3	6.9~17.0
Cooling Power Inpu	t Range(kw)	0.53~1.37	0.79~2.19	1.08~3.07	1.39~3.99	1.80~5.38	1.99~5.60	2.21~6.49
EER Range		3.06~3.20	2.65~3.04	2.67~3.06	2.71~3.10	2.62~3.11	2.73~3.12	2.62~3.12
Space	Rated heat output (kW)	4.19	5.82	7.89	9.95	12.20	13.97	16.01
Heating (According to	ErP Level	A+++						
EN14825:2022) Average Climate	Sound pressure level (dB(A)) at 1 meter	35	44	43	45	41	37	43
Water Outlet 35°C	Sound power level (dB(A))	49	58	57	59	57	53	58
Space	Rated heat output (kW)	4.15	5.59	8.70	9.23	12.16	14.08	15.80
Heating (According to	ErP Level	A++						
EN14825:2022)	Sound pressure level (dB(A)) at 1 meter	35	44	47	46	43	40	43
Average Climate Water Outlet 55°C	Sound power level (dB(A))	49	58	61	60	59	56	58
Power Supply				23	0V/1Ph/50Hz/	60Hz		
Diameter Of Pipe (r	nm)	DN25	DN25	DN25	DN25	DN25	DN25	DN32
Max water head(m	)	7.5	9	9	9	12	12	12
Net Weight (kg)		95	112	120	138	165	170	220
Body size(W*D*H)	(mm)	1080×440×761	1080×460×820	1080×460×960	1080×480×1060	1080×480×1372	1080×480×1372	1160×480×1580
Operation Ambient	Temp. (°c)				-25~43			
Operating Water Te	emperature (°c)				28~65(DHW)			
Operating Water Te	emperature (°c)				15~70(Heating	)		
Operating Water Te	emperature (°c)				7~35(Cooling)			

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

## HIGHLY DC Inverter Compressor

Commercial heat pump (built-in water pump)

N	lodel	PW040- DKZLRS-E	PW050- DKZLRS-E	PW055- DKZLRS-E	PW060- DKZLRS-E	PW070- DKZLRS-E
Heating Condition	n - Ambient Temp.(DB/WB)	:7/6°C,Water Temp.	(In/Out):30/35°C			
Heating Capacity Ra	ange (kw)	4.5~11.4	5.9~14.8	7.2~18.2	8.8~22.0	9.6~24.0
Heating Power Inpu	Heating Power Input Range(kw)		1.13~3.83	1.38~4.65	1.68~5.77	1.83~6.30
Cop Range		3.86~5.29	3.86~5.22	3.91~5.22	3.81~5.24	3.81~5.24
DHW Condition-A	mbient Temp.(DB/WB)7/6	°C,Water Temp.(In/C	Dut):15/55°C	1	1	1
Heating Capacity Ra	ange (kw)	5.2~10.2	6.6~13.2	7.2~16.2	7.8~17.6	8.8~19.6
Heating Power Inpu	ıt Range(kw)	1.10~2.87	1.41~3.73	1.54~4.58	1.67~5.01	1.89~5.60
Cop Range		3.55~4.71	3.54~4.67	3.54~4.67	3.51~4.66	3.50~4.66
Heated Water Output (I/h)		219	283	348	377	421
Cooling Condition	- Ambient Temp.(DB/WB)	35/24°C,Water Temp	o.(In/Out):12/7°C			
Cooling Capacity Ra	ange (kw)	3.3~8.2	4.3~10.8	5.6~14.1	6.2~15.3	6.9~17.0
Cooling Power Inpu	t Range(kw)	1.08~3.07	1.39~3.99	1.80~5.38	1.99~5.60	2.21~6.49
EER Range		2.67~3.06	2.71~3.10	2.62~3.11	2.73~3.12	2.62~3.12
Space	Rated heat output (kW)	7.61	10.27	12.17	14.05	15.96
Heating (According to	ErP Level	A+++	A+++	A+++	A+++	A+++
EN14825:2022) Average Climate	Sound pressure level (dB(A)) at 1 meter	43	44	41	45	42
Water Outlet 35°C		58	59	56	60	58
Space	Rated heat output (kW)	8.10	12.17	12.03	13.47	15.86
Heating (According to	ErP Level	A++	A++	A++	A++	A++
EN14825:2022) Average Climate	Sound pressure level (dB(A)) at 1 meter	42	45	43	46	43
Water Outlet 55°C		57	59	58	62	58
Power Supply				380V/3Ph/50-60Hz		
Diameter Of Pipe (r	nm)	DN25	DN25	DN25	DN25	DN32
Max water head(m	)	9	9	12	12	12
Net Weight (kg)		120	138	165	170	220
Body size(W*D*H)	(mm)	1080×460×960	1080×480×1060	1080×480×1372	1080×480×1372	1160×480×1580
Operation Ambient	Temp. (°c)			-25~43		
Operating Water Te	emperature (°c)			28~65(DHW)		
Operating Water Te	emperature (°c)			15~70(Heating)		
Operating Water Te	emperature (°c)			7~35(Cooling)		

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

POWER WORLD

## 380V/1Ph/50Hz~60Hz

# HIGHLY DC Inverter Compressor

Without Circulating Water Pump

Model	PW030- DKZLRS-E/S	PW040- DKZLRS-E/S	PW050- DKZLRS-E/S	PW040- DKZLRS-E	PW050- DKZLRS-E	PW060- DKZLRS-E	
Heating Condition - Ambient Temp.(DB/WB	)7/6°C,Water Terr	np.(In/Out):30/35	°C				
Heating capacity range (kw)	3.3~8.3	4.5~11.4	5.9~14.8	4.5~11.4	5.9~14.8	8.8~22.0	
Heating Power Input Range(kw)	0.64~2.18	0.85~2.95	1.13~3.83	0.85~2.95	1.13~3.83	1.68~5.77	
Cop range	3.81~5.17	3.86~5.29	3.86~5.22	3.86~5.29	3.86~5.22	3.81~5.24	
DHW Condition-Ambient Temp.(DB/WB)7/6	6°C,Water Temp.(I	n/Out):15/55°C					
Heating Capacity Range (kW)	3.7~7.4	5.2~10.2	6.6~13.2	5.2~10.2	6.6~13.2	7.8~17.6	
Heating Power Input Range(kW)	0.79~2.10	1.10~2.87	1.41~3.73	1.10~2.87	1.41~3.73	1.67~5.01	
COP Range	3.52~4.69	3.55~4.71	3.54~4.67	3.55~4.71	3.54~4.67	3.51~4.66	
Heated water output (L/H)	159	219	283	219	283	377	
Cooling Condition - Ambient Temp.(DB/WB	)35/24°C,Water Te	emp.(In/Out):12/	7°C				
Cooling Capacity Range (kW)	2.4~5.8	3.3~8.2	4.3~10.8	3.3~8.2	4.3~10.8	6.2~15.3	
Cooling Power Input Range(kW)	0.79~2.19	1.08~3.07	1.39~3.99	1.08~3.07	1.39~3.99	1.99~5.60	
EER Range	2.65~3.04	2.67~3.06	2.71~3.10	2.67~3.06	2.71~3.10	2.73~3.12	
ErP Level (35°C)	A+++	A+++	A+++	A+++	A+++	A+++	
ErP Level (55°C)	A++	A++ A++ A++ A++		A++	A++		
Power supply	23	80V/1Ph/50Hz/60	IHz	380V/3Ph/50-60Hz			
Diameter of pipe (mm)	DN25	DN25	DN25	DN25	DN25	DN25	
Water Flow(m3/h)	1.43	1.96	2.55	1.96	2.55	3.78	
Water Pressure Drop (max) kPa	30	35	40	35	40	45	
Sound pressure level (dB(A))	44	43	45	43	44	45	
Net Weight (kg)	110	118	135	118	135	168	
Body size(W*D*H) (mm)	1080×460×820	1080×460×960	1080×480×1060	1080×460×960	1080×480×1060	1080×480×137	
IP Grade (Level of protection)	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4	
Anti-electric shock Rate	I	I	I	I	I	I	
Refrigerant	R290	R290	R290	R290	R290	R290	
Compressor Brand	HIGHLY	HIGHLY	HIGHLY	HIGHLY	HIGHLY	HIGHLY	
Operation Ambient Temp. (°C)			-25	~43			
Operating water temperature (°C)			28~65	(DHW)			
Operating water temperature (°C)			15~70(H	Heating)			
Operating water temperature (°C)			7~35(C	Cooling)			

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

## Panasonic EVI DC Inverter Compressor

Model	PW030-DKZLRS-E2/S	PW040-DKZLRS-E2	PW050-DKZLRS-E2	PW060-DKZLRS-E2		
Heating Condition - Ambient Temp.(D	B/WB)7/6°C,Water Temp.(In/Ou	t):30/35°C				
Heating capacity range (kw)	3.8~9.5	4.5~12.0	6.6~16.0	8.5~20.5		
Heating Power Input Range(kw)	0.73~2.43	0.85~3.06	1.26~4.08	1.63~5.25		
Cop range	3.90~5.20	3.92~5.29	3.92~5.23	3.90~5.21		
DHW Condition-Ambient Temp.(DB/W	/B)7/6°C,Water Temp.(In/Out):1	5/55°C				
Heating Capacity Range (kW)	3.8~8.0	5.2~11.0	7.2~15.0	8.8~17.6		
Heating Power Input Range(kW)	0.81~2.27	1.10~3.12	1.54~4.26	1.89~5.01		
COP Range	3.52~4.69	3.52~4.72	3.52~4.68	3.51~4.66		
Heated water output (L/H)	171	236	326	377		
Cooling Condition - Ambient Temp.(DB	3/WB)35/24°C,Water Temp.(In/0	Out):12/7°C				
Cooling Capacity Range (kW)	2.4~5.8	3.3~8.2	4.3~10.5	6.1~15.0		
Cooling Power Input Range(kW)	0.79~2.32	1.08~3.28	1.39~4.29	1.96~5.73		
EER Range	2.50~3.04	2.50~3.06	2.45~3.10	2.62~3.11		
Power supply	230V/1Ph/50Hz/60Hz	230V/1Ph/50Hz/60Hz 380V/3Ph/50-60Hz				
Diameter of pipe (mm)		DN	125			
Noise dB(A)	≤47	≤50	≤52	≤53		
Net Weight (kg)	117	125	143	175		
Body size(W*D*H) (mm)	1080×460×820	1080×460×960	1080×480×1060	1080×480×1372		
Packing size(W*D*H)(carton)	1100×490×960	1100×490×1110	1100×490×1210	1100×490×1510		
Packing size(W*D*H)(Polywood)	1140×520×974	1140×520×1120	1140×520×1220	1140×520×1520		
Loading quantity (carton)	48/96	48/96	24/96	24/48		
Loading quantity (Polywood)	44/88	44/88	22/88	22/44		
IP Grade (Level of protection)	IPX4	IPX4	IPX4	IPX4		
Anti-electric shock Rate	I	I	I	I		
Compressor Brand		Pana	sonic			
Operation Ambient Temp. (°C)		-25	~43			
Operating water temperature (°C)		28~65	(DHW)			
Operating water temperature (°C)		15~70(	Heating)			
Operating water temperature (°C)		7~35(0	Cooling)			

# -R 2 9 0 S E R I E S-CLEANLIFE

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# R290 **Cleanlife Plus Series**

Zero-carbon building heat pump solutions with greater compatibility and flexibility.

## Features

- R290 refrigerant, low GWP(GWP=3)
- Combined supply of multiple heat sources
- · Auxiliary heat source (AHS ) control
- · Solar energy smart control
- Tank booster heater smart control
- 2-zone temperature control
- Outlet water temperature up to 75°C
- Noise as low as 47dB(A) at 1Meter
- Maximum cascading 8 units
- Available in 8 languages
- Smart sterilization(custom time)
- Built-in thermal sensor in controller
- 32 Climate temp curves for automatic temp adjustment
- Smart Life WIFI App & IoT Cloud Management Platform
- Reserved electric auxiliary heating port & RS485 Communication Port

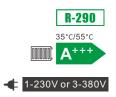


Model: 8.3/11.4/14.8/18.2/22KW Wide Ambient Temp -25°C~43°C



+ :

POWER WORLD

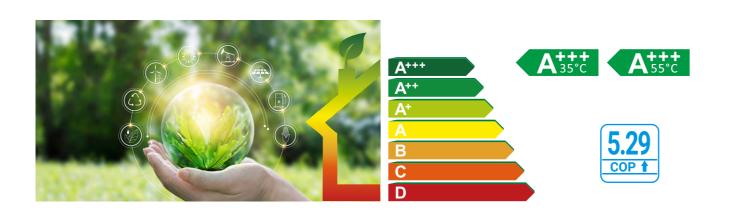






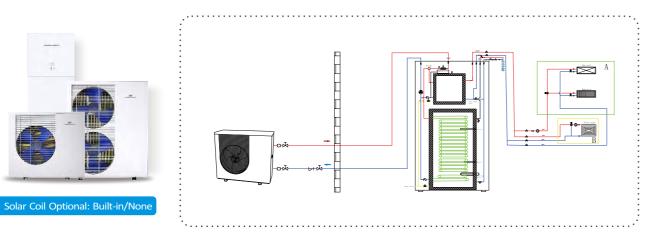






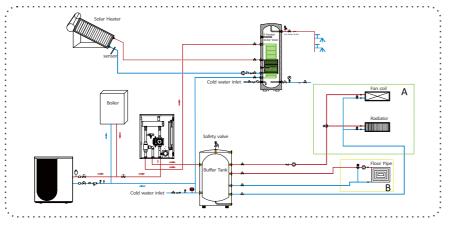
# Compatible boiler Multiple heat sources joint supply





# (02) HEAT PUMP (OUTDOOR UNIT) + HYDRO BOX (INDOOR UNIT)





## Outdoor unit

## (Mitsubishi Compressor)

DC INVERTER HEAT PUMP FOR	R COOLING HEATING AN	D DHW (R290)		
Model	PW030- DKZLRS-E1/S(ODU)	PW040- DKZLRS-E1/S(ODU)	PW050- DKZLRS-E1(ODU)	PW055- DKZLRS-E1(ODU
Heating Condition - Ambient Temp.(D	B/WB):7/6°C,Water Temp.(In/O	ut):30/35°C		
Heating Capacity Range (kw)	6.0	8.0	10	14
Heating Power Input Range(kw)	1.25	1.67	2.08	2.92
Cop Range	4.80	4.79	4.80	4.80
Heating Condition - Ambient Temp.(D	B/WB):7/6°C,Water Temp.(In/O	ut):47/55°C	·	·
Heating Capacity Range (kw)	6.0	8.0	9.6	14
Heating Power Input Range(kw)	1.86	2.49	2.95	4.38
Cop Range	3.22	3.21	3.25	3.20
DHW Condition-Ambient Temp.(DB/W	/B)7/6°C,Water Temp.(In/Out):	L5/55°C		1
Heating Capacity Range (kw)	7.0	9.0	10.6	15.6
Heating Power Input Range(kw)	1.61	2.07	2.47	3.62
Cop Range	4.36	4.35	4.29	4.31
Heated Water Output (I/h)	150	150 194		335
Cooling Condition - Ambient To	emp.(DB/WB)35/24°C,Wa	ater Temp.(In/Out):1	2/7°C	
Cooling Capacity Range (kw)	6.0	8.0	8.9	12.8
Cooling Power Input Range(kw)	1.89	2.53	2.74	4.25
EER Range	3.18	3.16	3.25	3.01
Power Supply	230V/1Ph/	/50Hz/60Hz	380V/3P	h/50-60Hz
ERP Level (35°c)		A	++	
ERP Level (55°c)		A-	·++	
Refrigerant		R2	90	
Diameter Of Pipe (mm)	DN25	DN25	DN25	DN25
Noise dB(a)	≤46	≤48	≤52	≤53
Net Weight (kg)	118	126	130	166
Net Dimension (L/W/H) mm	1202×520×1060	1202×520×1060	1147×539×1396	1147×539×1396
Compressor Brand		Μ	GC	
Operation Ambient Temp. (°c)		-25	~43	
Operating Water Temperature (°c)		20~65	(DHW)	
Operating Water Temperature (°c)		20~70(	Heating)	
Operating Water Temperature (°c)		7~35(0	Cooling)	

POWER WORLD





HYDRO MODULE		INDOOR UNIT		
Model	PW030/040-E/S(IDU)	PW050/060-E(IDU)		
3-Way Valve	ACOL/DN25	ACOL/DN25		
Electric Heater	3kW/220V	3kW/220V		
DC Inverter Water Pump	Shimge	Shimge		
Max water head(m)	9	12		
Expansion Tank(L)	8L	8L		
Diameter of pipe (mm)	DN25	DN25		
Safety valve(MPa)	0.3	0.3		
Leakage Switch(A)	Schneider/40A	Schneider/32A		
Cabinet	Galvanized pow	der coated steel		
Package	Splint/	'Carton		
Power Supply	230V/1Ph/50-60Hz	380V/3Ph/50-60Hz		
Net Weight(kg)	4	12		
Gross Weight(kg)	55			
Net Dimension(mm)	675*540*280			
Applicable Models	PW030/PW040(Single phase)	PW050/PW060(Three-phase)		



Integrated		Toma
	DHW	/ lank
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INTEGRATED DHW TANK		INDOOR UNIT			
Model	PW030/040-E/S(IDU)	PW050/060-E(IDU)			
3-Way Valve	ACOL/DN25	ACOL/DN25			
Hot water tank	190L 240L				
Electric Heater	3kW+3kW/220V				
DC Inverter Water Pump	Shimge				
Max water head(m)	1	2			
Buffer Tank Volume(L)	3	0			
Expansion Tank(L)	8	L			
Max working temp(°c)	75				
Max working pressure(MPa)	1	L			
Diameter of pipe (mm)	4-DN25,	/2-DN15			
Safety valve(MPa)	0.	3			
Leakage Switch(A)	Schneid	ler/40A			
Cabinet	Galvanized pow	der coated steel			
Package	Splint/	Carton			
Power Supply	230V/1Ph/50-60Hz	380V/3Ph/50-60Hz			
Noise dB(A)	<u></u>	45			
Net Weight(kg)	165	200			
Gross Weight(kg)	190	230			
Net Dimension(mm)	640*598*1850 640*598*2135				
Packing Dimension(mm)	710*638*1970	710*638*2255			
Applicable Models	PW030/PW040(Single phase)	PW050/PW060(Three-phase)			

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.



# R 2 9 0 SERIES CLEANLIFE



# R290 **Cleanlife Ultra Series**

## Features

- R290 refrigerant, low GWP(GWP=3)
- Combined supply of multiple heat sources
- Auxiliary heat source (AHS) control
- Solar energy smart control
- Tank booster heater smart control
- 2-zone temperature control
- Outlet water temperature up to 75°C
- Noise as low as 43dB(A) at 1Meter
- Maximum cascading 8 units
- Available in 8 languages
- Smart sterilization(custom time)
- Built-in thermal sensor in controller
- 32 Climate temp curves for automatic temp adjustment
- Smart Life WIFI App & IoT Cloud Management Platform
- Reserved electric auxiliary heating port & RS485 Communication Port



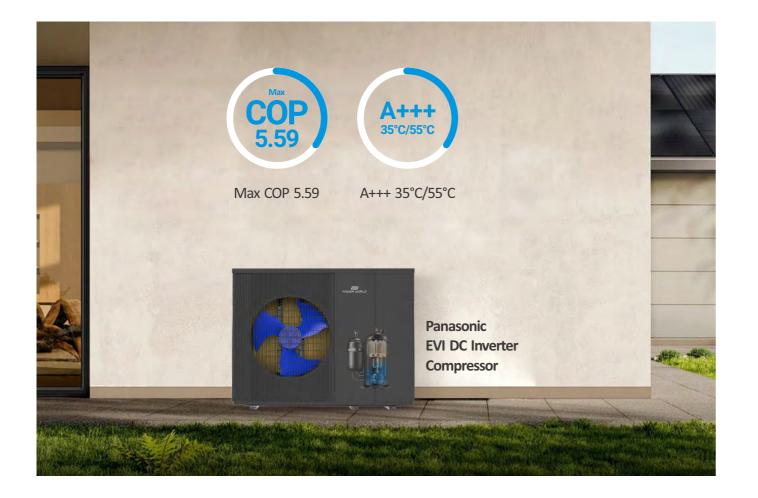
POWER WORLD





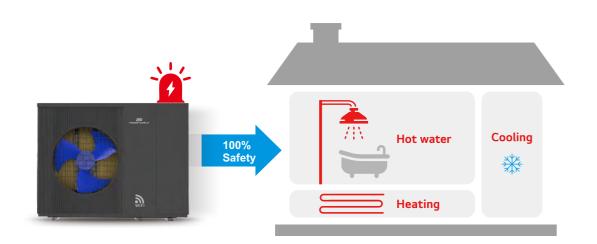


# **R290 Cleanlife Ultra Series**



# R290 LeakAlert system

An alarm will be triggered when the concentration reaches 15%.



Outdoor unit

Model	PW030-DKZLRS-ED/S	PW040-DKZLRS-ED/S				
Heating Condition - Ambient Temp.(DB/V	VB):7/6°C,Water Temp.(In/Out):30/35°C					
Heating Capacity Range (kw)	3.8~9.5	4.5~12.0				
Heating Power Input Range(kw)	0.68~2.33	0.81~2.95				
Cop Range	4.07~5.59	4.07~5.56				
DHW Condition-Ambient Temp.(DB/WB)	7/6°C,Water Temp.(In/Out):15/55°C	·				
Heating Capacity Range (kw)	3.8~8.0	5.2~11.0				
Heating Power Input Range(kw)	0.80~2.25	1.10~3.10				
Cop Range	3.55~4.75	3.55~4.72				
Heated Water Output (I/h)	171	236				
Cooling Condition - Ambient Temp.(DB/W	/B)35/24°C,Water Temp.(In/Out):12/7°C	I				
Cooling Capacity Range (kw)	2.4~6.2	3.3~8.2				
Cooling Power Input Range(kw)	0.73~2.06	1.01~2.82				
EER Range	3.00~3.29	2.91~3.27				
Power supply	230V/1Ph/	50Hz/60Hz				
Diameter of pipe (mm)	DN	132				
Water Flow(m3/h)	1.63	2.06				
Water Pressure Drop (max) kPa	45	50				
Net Weight (kg)	128	135				
Body size(W*D*H) (mm)	1380×480×1055	1380×480×1055				
IP Grade (Level of protection)	IPX4	IPX4				
Anti-electric shock Rate	I	I				
Refrigerant	R2	90				
Auxiliary electric heater(kW)		3				
Expansion vessel(L)		8				
Safety valve(MPa)	0	.3				
Compressor	Pana	sonic				
Water pump	SHIMGE					
Operation Ambient Temp. (°c)	-25	-25~43				
Operating Water Temperature (°c)	28~65	(DHW)				
Operating Water Temperature (°c)	15~70(	Heating)				
Operating Water Temperature (°c)	7~35(0	Cooling)				

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

# R 2 9 0 SERIES COMMERCIAL





# R290 **Commercial Series**

A cutting-edge solution designed for maximum efficiency and versatility in commercial applications.

# Features

- R290 refrigerant, ODP=0, low GWP(GWP=3)
- Dual DC Inverter Technology: Delivers precise and efficient heating with a maximum output temperature of 78°C.
- Top Efficiency Ratings: Achieves ErP Level A+++ (at 35°C) with a high SCOP of 4.57.
- Built-in Wi-Fi Module: Provides seamless connectivity and control.
- Multilingual Support: Easy operation in various languages. SG Smart Grid Functionality: Enhances energy management and integration.
- Automatic Temperature Adjustment: Ensures optimal performance.
- Night Operation Mode: Convenient control during off-hours.
- Cascade Control: Supports up to 8 units for flexible scaling.
- Timed High-Temperature Disinfection: Ensure the safe and healthy use of hot water.
- IoT Cloud Management Platform
- Customizable Features: Options for built-in pumps and Refrigerant leak sensors, as well as external heat source and water tank control.

**TWO-SYSTEM CONFIGURATION,** LARGE CAPACITY, **SUPERIOR STABILITY** 





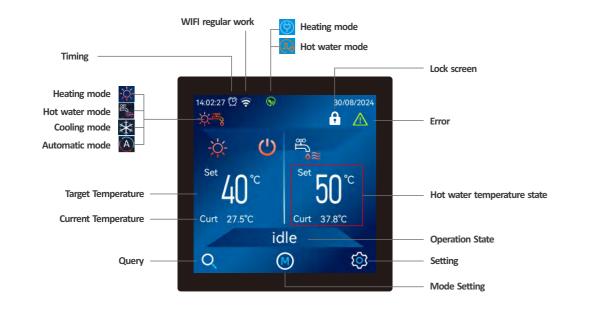


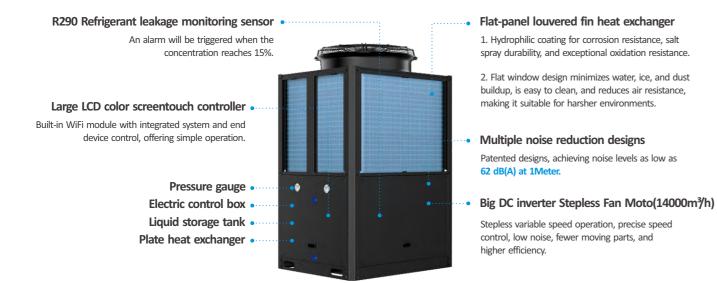






# Premium Configuration, Reliable Quality







Chassis drainage hole design Directly drains condensate water to prevent ice formation from water accumulation.



### HIGHLY Full DC Inverter Compressor (Dual system)

Low vibration, quiet operation, and efficient performance in extreme cold weather down to -25°C.

## DC INVERTER HEAT PUMP FOR COOLING HEATING AND DHW (R290)

Model	PW150-DKZLRS-E	PW300-DKZLRS-E		
DHW Condition-Ambient Temp.(DB/WB):20/	15°C,Water Temp.(In/Out):15/55°C			
Heating Capacity Range (kW)	23.8~68	40.0~130		
Heating Power Input Range(kW)	4.23~15.46	9.0~29.5		
COP Range	4.46~5.62	4.4~5.5		
Heated water output (L/H)	1462	2580		
Heating Condition - Ambient Temp.(DB/WB):	7/6°C,Water Temp.(In/Out):30/35°C	·		
Heating Capacity Range (kW)	18.4~49.25	35.2~92		
Heating Power Input Range(kW)	4.23~12.96	7.0~23.8		
COP Range	3.8~4.3	3.86~5.02		
Cooling Condition - Ambient Temp.(DB/WB):	35/24°C,Water Temp.(In/Out):12/7°C	·		
Cooling Capacity Range (kW)	13.8~34.5	25~66		
Cooling Power Input Range (kW)	5.2~16.2	8.92~30.7		
EER Range	2.12~2.65	2.15~2.8		
ErP Level (35°C)	A+++	A+++		
ErP Level (55°C)	A++	A++		
Power supply	380V/3Ph/50-60Hz	380V/3Ph/50-60Hz		
Max. power input (kW)	20	40		
Max. current (A)	32	64		
Fuse or circuit breaker (A)	40	80		
Wire diameter (mm²)	10mm²	22mm <sup>2</sup>		
Diameter of pipe (mm)	G1.5"	G2"		
Sound power level (dB(A))	≤77	≤85 65		
Sound pressure level (dB(A))	62			
Water Flow(m3/h)	5.8	11.6		
Water Pressure Drop (max) kPa	80	120		
Net Weight (kg)	370	745		
Body size(W*D*H) (mm)	1195×980×1900	2510×979×1882		
Packing size(W*D*H)(Polywood)	1275*1060*2100	2560×1030×2000		
IP Grade (Level of protection)	IPX4	IPX4		
Anti-electric shock Rate	I	I		
Refrigerant	R290	R290		
Compressor Brand	HIGHLY	HIGHLY		
Operation Ambient Temp. (°C)	-25~43°C	-25~43°C		
Water outlet temperature (°C)	20~78°C(DHW )	20~78°C(Heating)		
Water outlet temperature (°C)	20~78°C(Heating)			
Water outlet temperature (°C)	7~35°C(Cooling)	7~35°C(Cooling)		

# R290 All In One Water Heater Solutions

Unleash the power of air and provide a steady stream of hot water with an air-to-water heat pump!





# R 2 9 0 Water Heater ALL-IN-ONE

# ON/OFF system-Enamel Inner tank



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ON/OFF system-Enamel Inner tank

# R290 All-in-one Water Heater

R290 All-in-one Water Heater is a new low-GWP air-to-water water heater developed to create a zero-carbon future. This innovative product is designed to efficiently heat water while reducing energy consumption and saying goodbye to high energy bills.

## Features

- R290 low GWP refrigerant (GWP=3, ODP=0).
- Energy efficient class A+
- WIFI smart control
- Stable silent operation
- Working temperature range -7°c ~ 43°c
- Micro-channel heat exchanger.
- CMEV: Central mechanical extract ventilation
- Max. outlet hot water temperature up to 75°c
- Heating capacity/water tank size/appearance: Customizable

Solar coil: Built-in or without Inner tank: Enamel tank



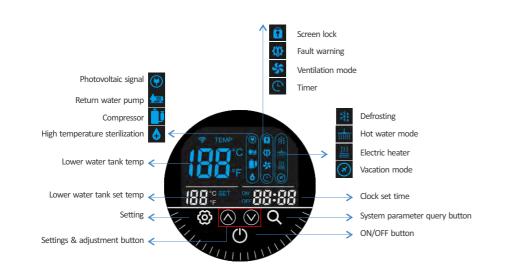






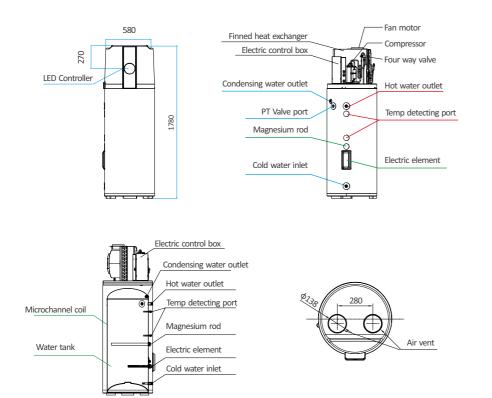
# Smart Touch Screen Controller

Centralize all controls on the panel, touch operation, easy and simple.



# All-in-one Structural Design

It perfectly integrates the heat pump and water storage tank into one unit, saving greater space and cost for users.



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**ON/OFF** Type

Model	
HEAT PUMP	
Heating capacity (kW)	
Rated Power (W)	
Rated Current (A)	
COP	
Energy efficiency class *	
Max Input Power(W)	
Refrigerant	
Ambient temp range (°C)	
Maxi water outlet temp (°C)	
Noise(dB) sound pressure	
Noise(dB) sound power	
POWER SUPPLY	
Specification	
Max Input Current(A)	
Fuse/circuit breaker (A)	
Power cable diameter(mm)	
WATER TANK	
Water tank volume (L)	
Max tank pressure (Mpa)	
Inner tank material	
Water pipes connector size (mm)	
Magnesium rod joint (mm)	
PT valve	
ELECTRIC HEATER	
Electric Heater Rated Power (W)	
Rated current(A)	
Ambient temp range (°C)	
Max water outlet Temp (°C)	
AIR DUCT	
Duct diameter(mm)	
Suggested duct length(mm)	
OTHERS	
Electric shock rating	
IP Grade (Level of protection)	
Net Weight (KG)	
Gross Weight (KG)	
Net Dimension(mm)	
Package Dimension(mm)	
Testing condition:Water Temperature from 15°C to	55°C, Dry bulb temperature 2

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

POWER WORLD

PW005-KZJRS(A)/200L	
1.4	
345	
1.58	
4.06	
A+	
2700	
R290	
-7~43	
65	
40	
55	
220-240V/ 50Hz / Ph	
12.4	
16	
3*2.5mm <sup>2</sup>	
190	
0.7	
Enameled water tank	
Dn20	
25.4	
Standard	
2000	
9.2	
-15~43	
75	
145-150	
≤ 2000	
I	
IPX1	
104	
120	
ф580×1780	
660×660×1920	
20°C, Wet bulb temperature15°C.	



DC inverter system-Enamel Inner tank

# R290 All-in-one Water Heater

It perfectly integrates the heat pump and water storage tank into one outdoor unit, fast producing hot water and save 80% energy costs for users.

## Features

- R290 is a new high-efficiency natural refrigerant with low Global Warming Potential(GWP)=3, ODP=0.
- High-efficiency DC inverter technology saves 30% energy than ON/OFF units.
- · Zero-cold water control, compatible with AC/DC Pumps, provides instant hot water on demand, maximizing energy efficiency.
- Power/Standard/Silent Mode, 3 operating modes to meet different heating needs.
- · Dual heating technology with incorporated electric element to provide hot water up to 75°c.
- Equipped with SG-Ready and PV-Ready ports, compatible with smart grid and photovoltaic systems, maximizing energy bill reduction.
- Built-in Wi-Fi module, no additional Wi-Fi box needed, control with smart App anytime anywhere.
- Equipped with IoT cloud management platform, data visualization, and the mainboard can be upgraded remotely.
- Fully intelligent protection system provides effective safety protection for the unit.
- Equipped with premium configuration, ensuring top-notch performance and unparalleled convenience.
- Eligible for solar and heat pump water heater rebates schemes such as STC & NSW ESS.









# **Outstanding Performance**

R290 All-in-One Water Heater

All-in-one units combine the functionalities of a water heater and a heat pump, eliminating the need for separate equipment and saving valuable space in your home.

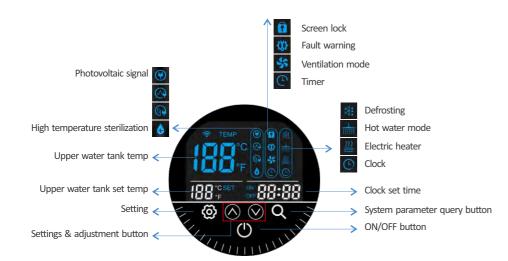
## R290 DC Inverter Heat Pump System

- 1. Multi-level noise reduction technology
- 2. Multiple insulation design
- 3. Anti-freezing design for water tank
- 4. Comprehensive protection features
- 5. Dual water tank temperature sensing probe design



# **Smart Touch Screen Controller**

Centralize all controls on the panel, touch operation, easy and simple.

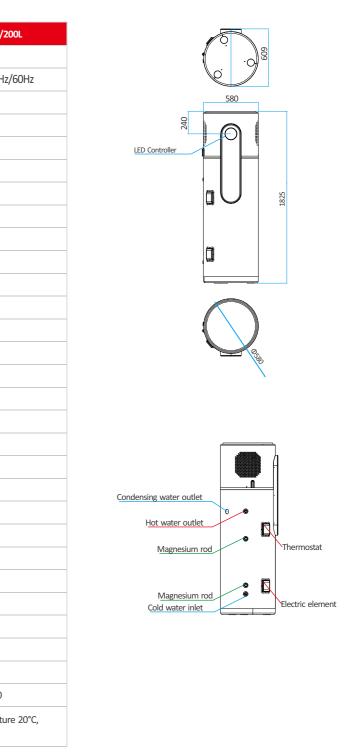


R290 All-in-one Water Heater

Full DC Inverter

Model		PW010-KZJRS(B)/	
Water tank volume (L) Power Supply		200	
		220-240V/1Ph/50H	
Heating capacity (kW)		3.6	
Rated Power (W)	Dower mode	0.8	
Rated Current (A)	Power mode	3.7	
COP		4.50	
Heating capacity (kW)		2.8	
Rated Power (W)		0.57	
Rated Current (A)	Standard mode	2.7	
COP		4.92	
Heating capacity (kW)		2.0	
Rated Power (W)		0.44	
Rated Current (A)	Slient mode	2.1	
COP		4.58	
Electric Heater Rated Pov	ver (W)	2000	
Max Input Power(W)		3200	
Max Input Current(A)		14.6	
Max water pressure(MPa)		0.8	
Max exchanger working pressure(MPa)		3.2	
Refrigerant		R290	
Working temperature range (°C)		-7~43	
Noise(dB)		56	
Tank material		Enamel	
Water pipes connector size		DN20	
IP Grade (Level of protection)		IPX4	
Net Weight (KG)		108	
Gross Weight (KG)		120	
Net Dimension(mm)		Ф580×1825	
Package Dimension(mm)		680×680×1980	

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.



# R 2 9 0 ALL-IN-ONE

ON/OFF system-Stainless steel Inner tank



ON/OFF system-Stainless steel Inner tank

# R290 All-in-one Water Heater

It's a cost-effective and worry-free residential hot water heating solution. With an efficiency up to 3-4 times higher than conventional gas boilers or electrical heaters, it could provide a stable supply of hot water for the bathroom and kitchen 24 hours a day.

## Features

- R290 low GWP refrigerant (GWP=3, ODP=0).
- Energy efficient class A+
- WIFI smart control
- Stable silent operation
- Working temperature range -7°c ~ 43°c
- Micro-channel heat exchanger.
- CMEV: Central mechanical extract ventilation
- Max. outlet hot water temperature up to 75°c
- · Heating capacity/water tank size/appearance: Customizable

Solar coil: Built-in or without Stainless steel Inner tank









R290 All-in-one Water Heater

ON/OFF Type

Model	PW005-KZJRS(A)/80L	PW005-KZJRS(A)/100L		
Water tank volume (L)	80	100		
Power Supply	220-240V/ 50Hz			
Heating capacity (kW)	1			
Rated Power (W)	245			
Rated Current (A)	1.11			
СОР	4.08			
Electric Heater Rated Power (W)	1500			
Electric Heater Rated Current (A)	6.	8		
Max Input Power (W)	182	20		
Max Input Current (A)	8.	3		
Max water pressure (MPa)	0.	8		
Max exchanger working pressure (MPa)	3			
Refrigerant	R25	90		
Max water temperature (°C)	-7~43			
Working temperature range (°C)				
Noise (dB)	43			
Water pipes connector size	DN15			
IP Grade (Level of protection)	IPX1			
Net Weight (KG)	45 47			
Gross Weight (KG)	57 59			
Net Dimension (mm)	Φ510×1058 Φ510×1198			
Package Dimension (mm)	580×580×1185 580×580×1295			

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

# R290 All-in-one Water Heater

er ON/OFF Type

Model	PW005-KZJRS(B)/150L	PW005-KZJRS(B)/200L	PW005-KZJRS(B)/250L	PW005-KZJRS(B)/300L
Water tank volume (L)	150L	200L	250L	300L
Power Supply	220-240V/ 50Hz	220-240V/ 50Hz	220-240V/ 50Hz	220-240V/ 50Hz
Heating capacity (kW)	1.8	1.8	1.8	1.8
Rated Power (W)	431	426	424	421
Rated Current (A)	1.97	1.95	1.94	1.92
COP	4.18	4.23	4.25	4.28
lectric Heater Rated Power (W)	1500			
lectric Heater Rated Current (A)	7.1			
Max Input Power (W)	2200			
Max Input Current (A)	10.6			
Max water pressure (MPa)	0.8			
Max exchanger working pressure (MPa)	3.2			
nside body material of tank	SUS 304/316L/2205			
Compressor brand	HIGHLY			
Refrigerant	R290			
Norking temperature range (°C)	-5~43			
Noise (dB)	46			-
Nater pipes connector size	DN20			1
P Grade (Level of protection)	IPX1			
Net Weight (KG)	62	72	90	108
Gross Weight (KG)	70	82	102	122
Net Dimension(mm)	Ф560×1470	Ф560×1765	Ф640×1630	Ф640×1860
Package Dimension(mm)	630×630×1650	630×630×1945	720×720×1810	720×720×2040
oading quantity (carton)	27/57		24/48	

Note: The data above is for reference only, please refer to the nameplate on the unit if for more specific data.

POWER WORLD

# R 2 9 0 SERIES ULTRAQUET

## DC Inverter



Introducing Power World's first upgraded high-end pool heat pump! It features the most environmentally friendly and market-promising R290 zero-carbon refrigerant, combined with full DC inverter technology, advanced noise reduction techniques, smart grid and photovoltaic compatible technology. This ensures ultra-quiet and eco-friendly sustainable heating for your pool!

# **UPCOMING!**



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