

R290 SERIES CLEANLIFE

DC Inverter Hybrid Heat Pump

PLUS

envion
A brand of Envi-Group

R290 Cleanlife Plus Series

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

R-290

35°C/55°C

A+++

1-230V or 3-380V

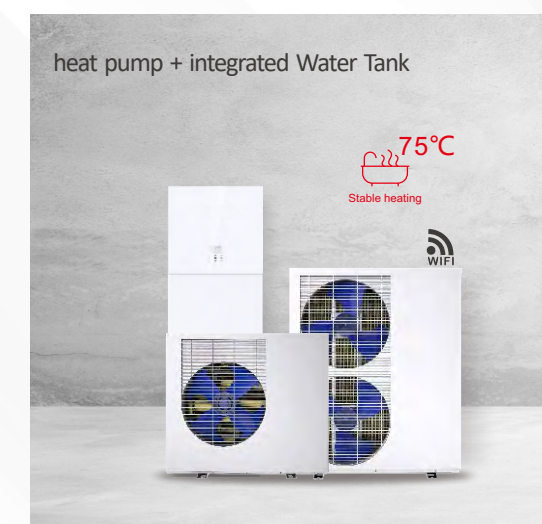
Features

- 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

Compressor



Model: 8.3/11.4/15.37/20KW
Wide Ambient Temp -25°C~43°C



R290
zero carbon

2
2 Zone Temp Control

A+++
Energy-Saving

75°C
High temp
Water outlet

SG
Ready
Smart Heat Pump

PL-READY

HEATING, COOLING AND DHW IN ONE SYSTEM

R290 Cleanlife Plus heat pump has a higher water outlet temperature, up to 75°C, it could be connected to smart grid/pv system, compatible with a variety of external heat sources, and equipped with dual-zone precise temperature control, also it could have a stable performance in extremely cold environments.



Automatically select energy supply source



WIFI



Timer setting



Noises≤47dB at 1 Meter



Languages



Max COP



32 climate curves



Intelligent defrost



25~75°C smart temp adjustment



Sterilization Each 7 days



Cascade control maximum 8 units



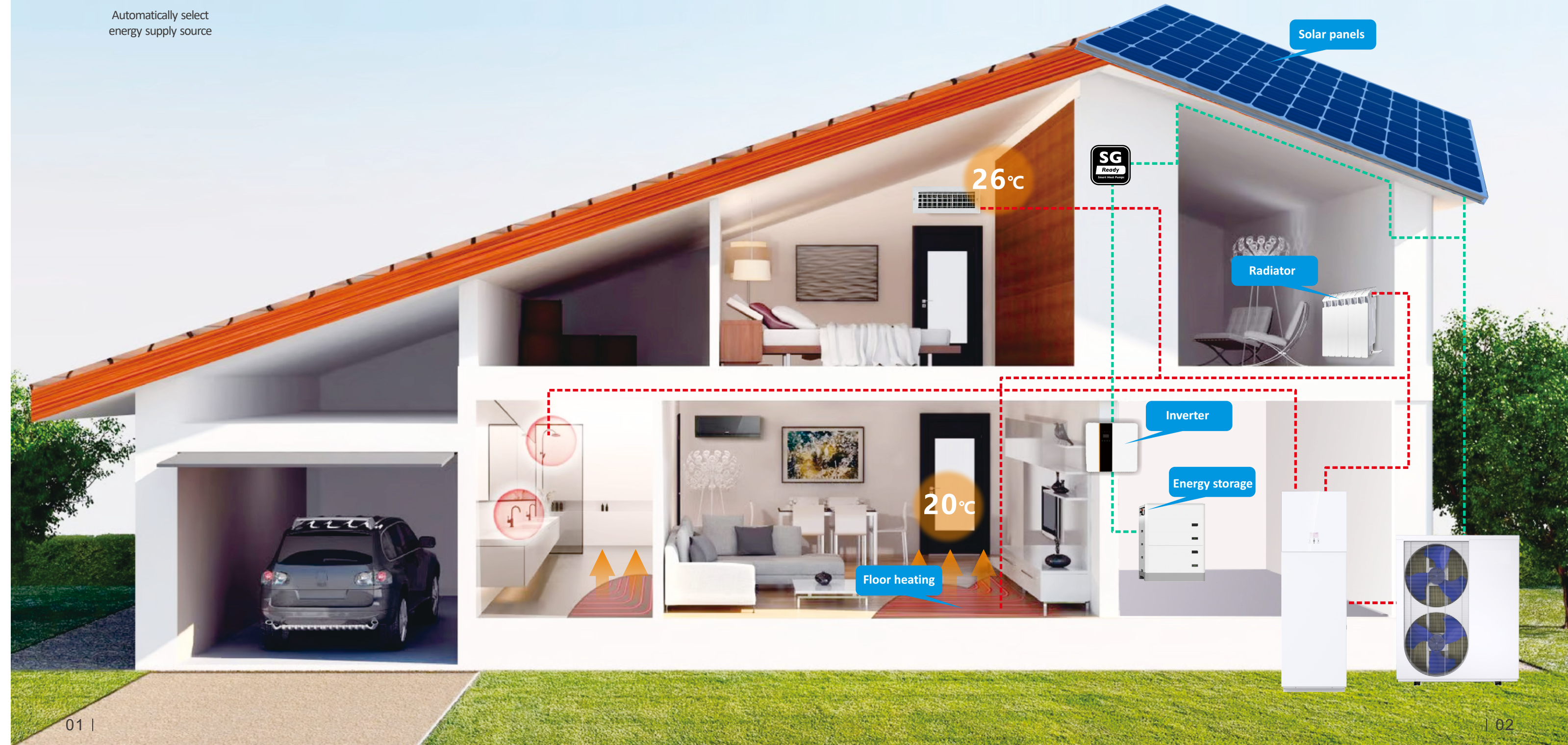
Real-time Energy monitoring



A+++ Energy class at 35°C



-25°C~43°C Ambient temp



HEAT PUMP SOLUTIONS

Two configurations: more complete functions, more efficient installation/maintenance, and can meet diverse system requirements.

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Combined supply of multiple heat sources
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Solar energy smart control
- 

AHS CONTROL Auxiliary heat source (AHS) control
- 

Tank booster heater smart control
- 

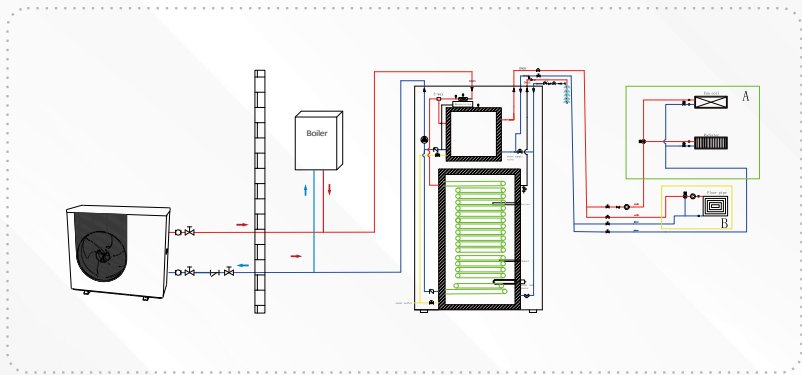
Max Cascade 8 Units
- 

2 Zone Temp Control

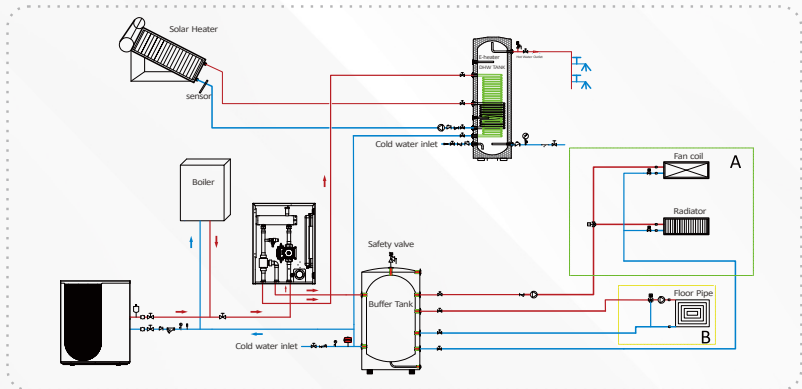
01 Outdoor Unit + Indoor Unit (Integrated DHW Tank)



Solar Coil Optional: Built-in/None



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

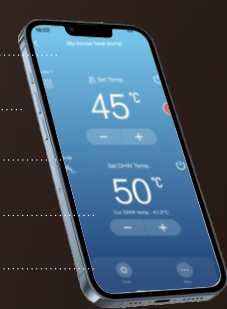


03 HEAT PUMP+EXTERNAL ELECTRIC CONTROL BOX

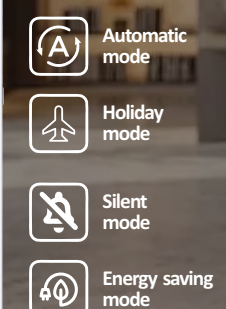




3.2 Inch smart LCD display



Real-time Monitoring
Operating Status
History Record
Timer setting
Languages



- Automatic mode
- Holiday mode
- Silent mode
- Energy saving mode

* Support RS485 and Modbus communication

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8 Languages
- 

3.2 Inch smart LCD display
- 

Built-in temperature sensor
- 

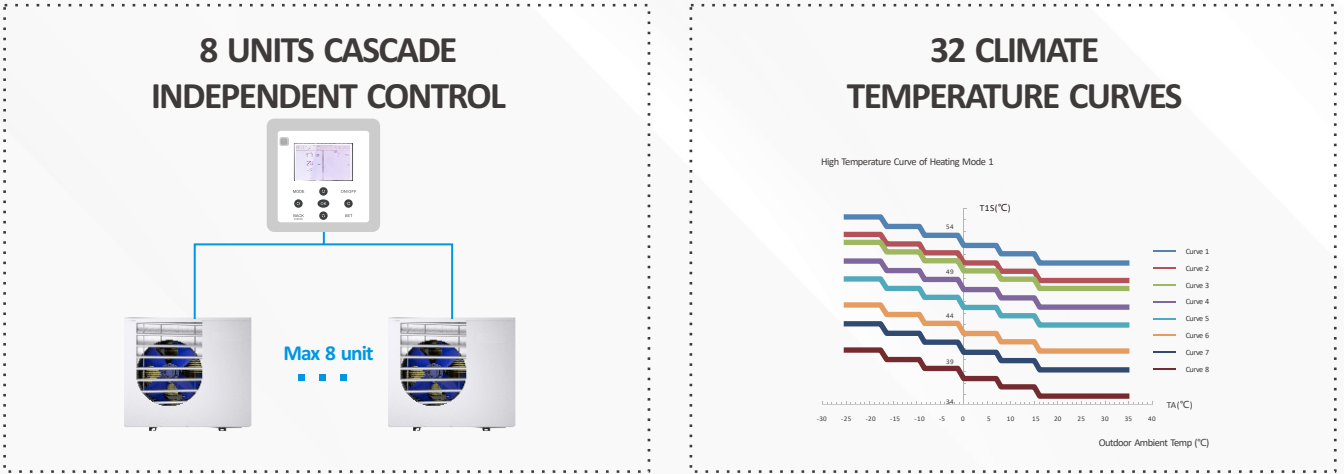
Built-in WIFI module, APP remote control
- 

High-temperature sterilization
- 

SG-Ready/ PV-Ready control
- 

Automatic fault diagnosis
- 

Dual/triple zone temperature display



FLEXIBLE MODULES, SIMPLIFY YOUR INSTALLATION

Integrated system, fast installation

The terminal control and waterway system components are integrated into a compact box, and the installer can flexibly adjust the installation plan according to the site, simplifying the installation steps and reducing installation difficulty and cost.

Internationally renowned brand components

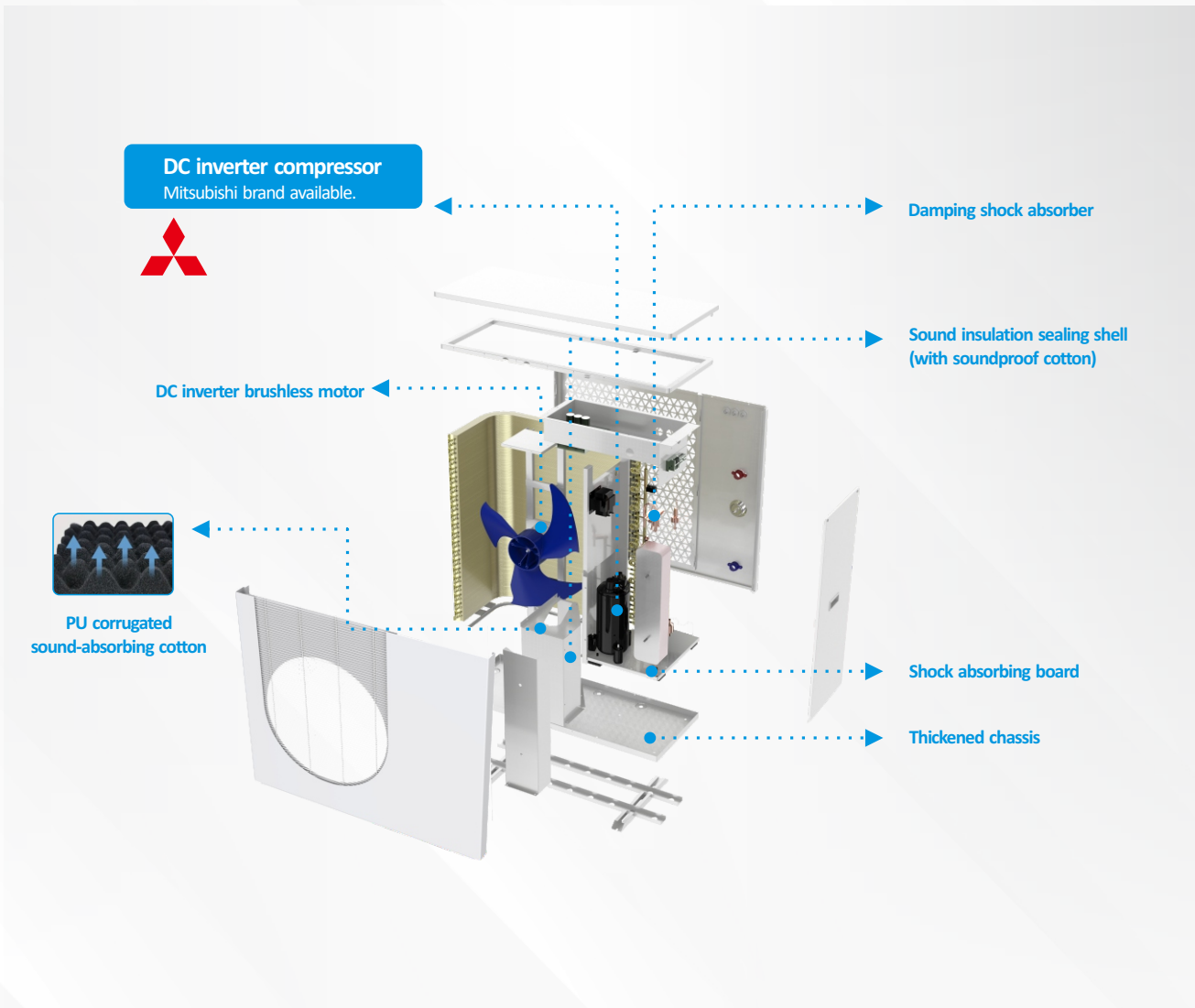
Stable performance, safe and reliable, long service life.

Appearance and specifications customizable

Tailor-made, easily create brand characteristics.

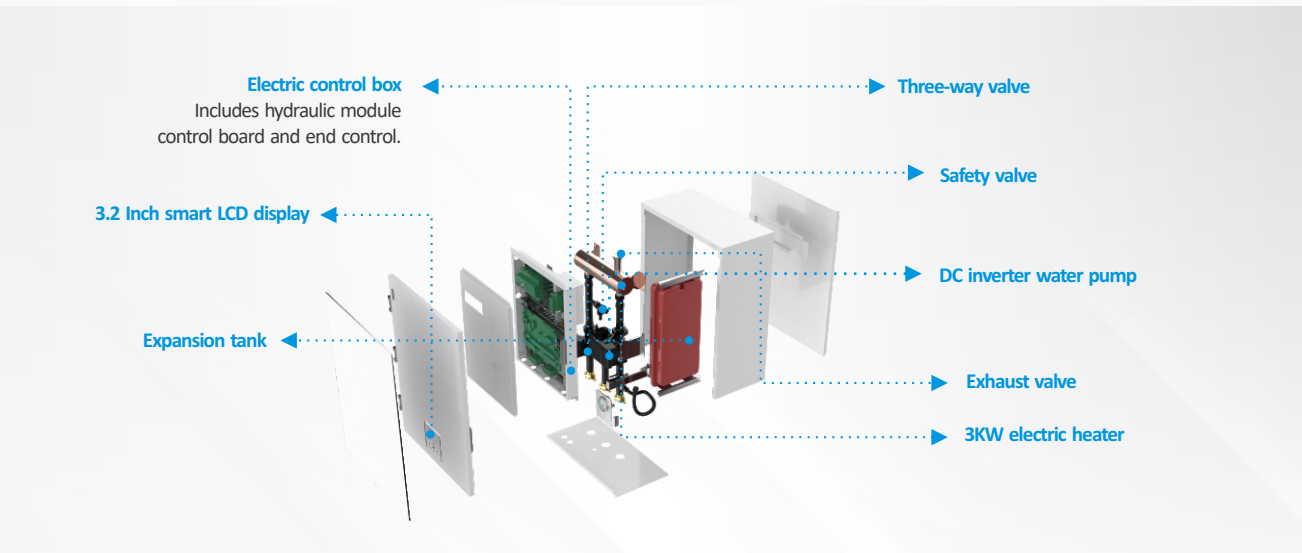
Outdoor Unit

Multiple noise reduction, noise as low as 47dB(A) at 1M



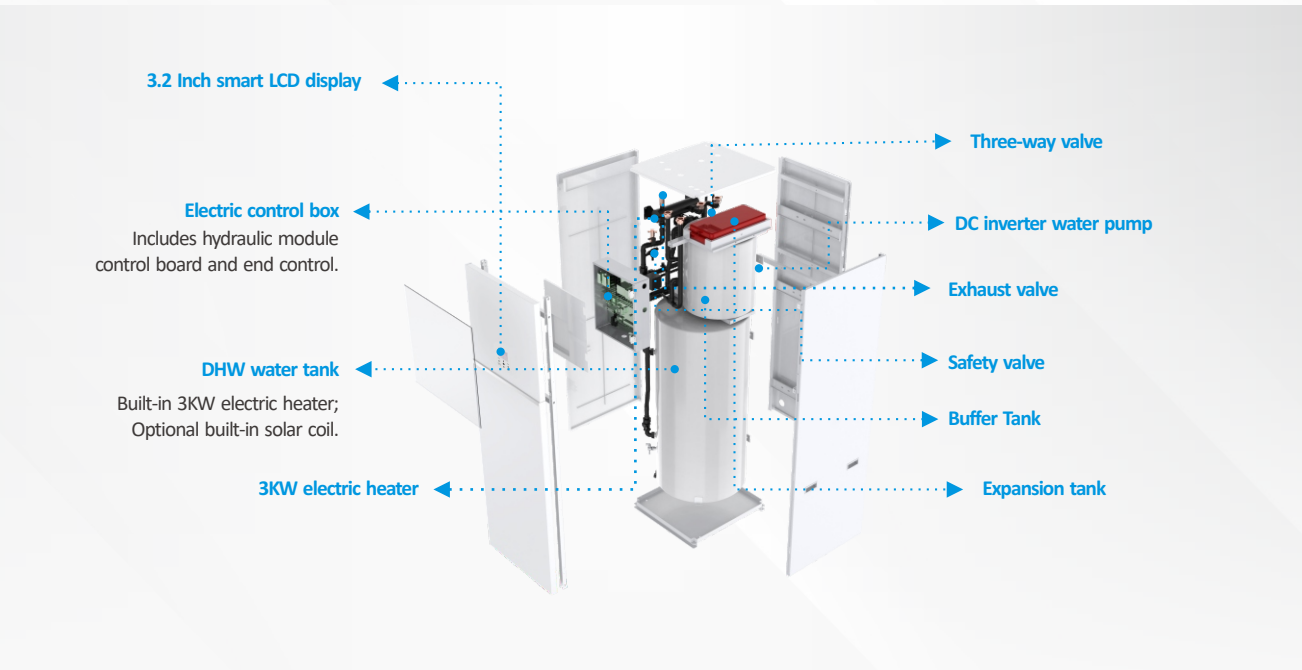
Hydro Box Unit

The best partner for heat pump systems, making installation/maintenance easier



Integrated DHW Tank

This integrated water tank system seamlessly combines hydraulic modules, DHW tanks, and buffer tanks within a compact casing, allowing for flexible installation and saving on installation space. Its carefully designed piping layout and configuration minimize heat loss during operation, enhancing the unit's performance and operational efficiency. It ensures reliable and efficient operation even in extreme environments, maintaining effectiveness down to -25°C. This system is engineered to provide year-round heating, cooling, and domestic hot water heating services with optimal efficiency for users' comfort and convenience.

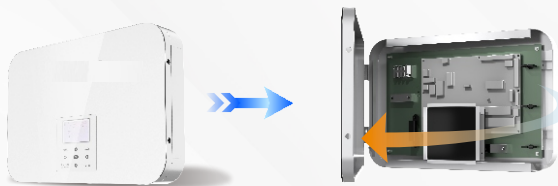


EXTERNAL ELECTRIC CONTROL BOX

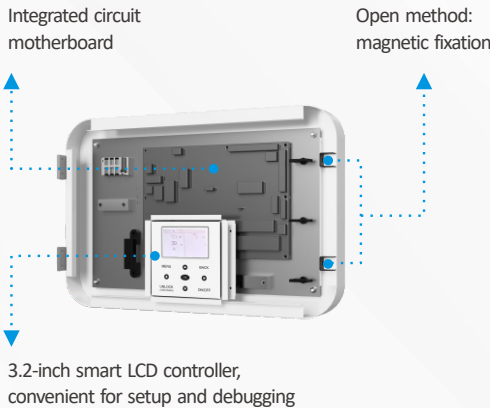
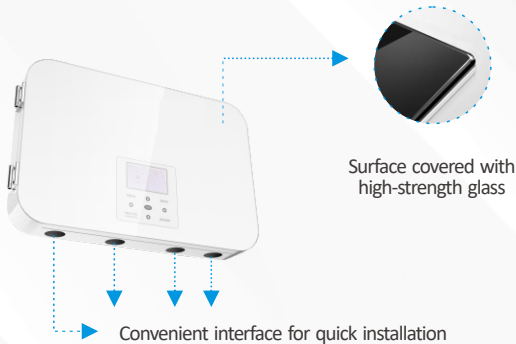
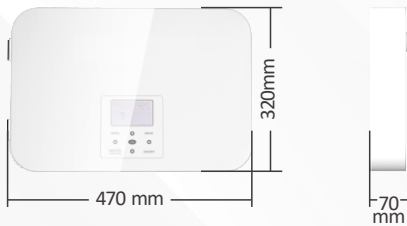
It combines the heat pump's electrical system and controller in a compact, standalone box with a magnetic flip cover design, making installation, setup, and maintenance quicker and easier without the need to disassemble the outdoor unit.



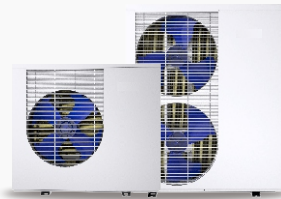
FLIP COVER DESIGN



COMPACT DESIGN



Outdoor unit



DC INVERTER HEAT PUMP FOR COOLING HEATING AND DHW (R290)				OUTDOOR UNIT
Model	PW030-DKZLRS-E1/S(ODU)	PW040-DKZLRS-E1/S(ODU)	PW050-DKZLRS-E1(ODU)	PW060-DKZLRS-E1(ODU)
Heating Condition - Ambient Temp.(DB/WB):7/6°C,Water Temp.(In/Out):30/35°C				
Heating Capacity Range (kw)	3.0~8.3	4.1~11.4	6.36~15.37	6.26~19.34
Heating Power Input Range(kw)	0.59~1.81	0.81~2.62	1.22~3.17	1.26~4.40
COP Range	4.59~5.08	4.35~5.06	4.85~5.21	4.40~4.98
Heating Condition - Ambient Temp.(DB/WB):7/6°C,Water Temp.(In/Out):47/55°C				
Heating Capacity Range (kw)	2.7~7.2	3.6~9.6	5.62~14.15	5.46~15.19
Heating Power Input Range(kw)	0.83~2.39	1.14~3.40	1.80~4.58	1.81~5.08
COP Range	3.01~3.25	2.82~3.16	3.09~3.12	2.99~3.02
DHW Condition-Ambient Temp.(DB/WB)20/15°C,Water Temp.(In/Out):15/55°C				
Heating Capacity Range (kw)	4.0~8.8	5.3~11.8	7.2~15.7	7.6~18.6
Heating Power Input Range(kw)	0.80~1.93	1.08~2.71	1.51~3.67	1.58~4.31
COP Range	4.56~4.99	4.35~4.91	4.28~4.77	4.32~4.81
Heated Water Output (L/H)	189	254	338	400
Cooling Condition - Ambient Temp.(DB/WB)35/24°C,Water Temp.(In/Out):12/7°C				
Cooling Capacity Range (kW)	2.0~5.8	3.3~8.5	4.81~12.3	4.12~12.86
Cooling Power Input Range(kW)	0.60~1.81	0.86~2.57	1.37~4.09	1.31~4.68
EER Range	3.20~3.33	3.31~3.84	3.01~3.51	2.75~3.15
Cooling Condition - Ambient Temp.(DB/WB)35/24°C,Water Temp.(In/Out):23/18°C				
Cooling Capacity Range (kw)	3.3~7.9	5.1~11.7	7.23~12.4	5.98~14.3
Cooling Power Input Range(kw)	0.59~1.86	0.85~2.63	1.32~2.88	1.24~4.13
EER Range	4.25~5.59	4.45~6.00	4.30~5.46	3.46~4.82
Power Supply	230V/1Ph/50Hz/60Hz		380V/3Ph/50-60Hz	
ErP Level (Average climate, W35)	A+++			
ErP Level (Average climate, W55)	A+++			
Max. power input(kW)	3.0	4.1	6.0	6.3
Max. current (A)	13.7	18.8	11.9	12.5
Water Flow(m3/h)	1.43	1.96	2.06	2.44
Water Pressure Drop (max) kPa	25	30	32	33
IP Grade (Level of protection)	IPX4			
Anti-electric shock Rate	I			
Diameter of pipe (mm)	DN25			
Compressor	MITSUBISHI ELECTRIC			
Net Weight (kg)	122	133	159	169
Body size(W*D*H) (mm)	1202×528×1060	1202×528×1060	1147×539×1396	1147×539×1396
Operation Ambient Temp. (°c)	-25~43			
Operating Water Temperature (°c)	25~75(DHW)			
Operating Water Temperature (°c)	25~75(Heating)			
Operating Water Temperature (°c)	5~30(Cooling)			

Hydro Module



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 powder coated steel	
Package	Splint/Carton	
Power Supply	230V/1Ph/50-60Hz	380V/3Ph/50-60Hz
Net Weight(kg)	42	
Gross Weight(kg)	55	
Net Dimension(mm)	675*540*280	675*540*280
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.

Integrated DHW Tank



INTEGRATED DHW TANK		INDOOR UNIT
Model	PW030/040-E/S(IDU)-190L	PW050/060-E(IDU)-240L
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)	12	
Buffer Tank Volume(L)	30	
Expansion Tank(L)	8L	
Max working temp(°c)	75	
Max working pressure(MPa)	1	
Diameter of pipe (mm)	4-DN25/2-DN15	
Safety valve(MPa)	0.3	
Leakage Switch(A)	Schneider/40A	
Cabinet	Galvanized powder coated steel	
Package	Splint/Carton	
Power Supply	230V/1Ph/50-60Hz	380V/3Ph/50-60Hz
Noise dB(A)	≤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)

External Electric Control Box



EXTERNAL ELECTRIC CONTROL BOX		INDOOR UNIT
Model	PW030/040/050/060-E/S(IDU)	
Cabinet	Galvanized powder coated steel with glass panel	
Package	Splint/Carton	
Power Supply	230V/1Ph/50Hz	
Net Weight(kg)	10	
Gross Weight(kg)	11	
Net Dimension(mm)	470*320*70	
Packing Dimension(mm)	540*380*130	
Applicable Models	PW030/040/050/060	

Note:
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