



JIANGSU THREE CIRCLE NEW ENERGY CO.,LTD.

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PRODUCTION LINES

Multiple production lines, advanced equipment, experienced workers and standard production procedures provide us with strong production capacity over 40,000 set heat pumps per year .



R&D CENTER

Advanced Heat Pump Performance Testing Laboratory

Able to simulate the operating performance of heat pump units at ambient temperature from -40°C to 50°C.
Able to test heat pumps of input power ranging from 0.5kW to 100kW, as well as frequency of 50Hz/60Hz.



Technical Support by Our Engineers

- Test the performance of newly developed heat pumps.
- Inspect, refine and adjust new heat pumps before their delivery.
- Provide support for any questions concerning the heat pumps and installation.
- Improve our heat pumps continually to meet the needs of our customers.
- Assist in getting certificates such as CE and SAA for the heat pumps.
- Provide training and materials on heat pumps, installation & maintenance.



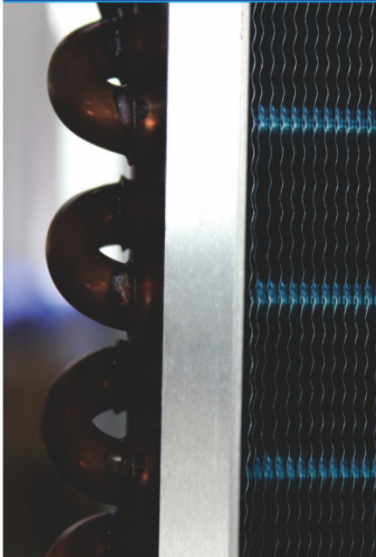
PRODUCTION-MANUFACTURING

Heat Pumps Standardized Production Details

Lower Noise
Thickened acoustic jacket and
powerful shock absorbing pads



Anti-corrosion
Aluminium frame



Excellent Welding
Guarantee No Leakage and
welding protection



Prevent Energy Loss
10-20mm Thickness Insulation



User-friendly design
Use anti-slip and anti-rust
screws



Reliable Wire Connection
Adopting automatic stamping
machine



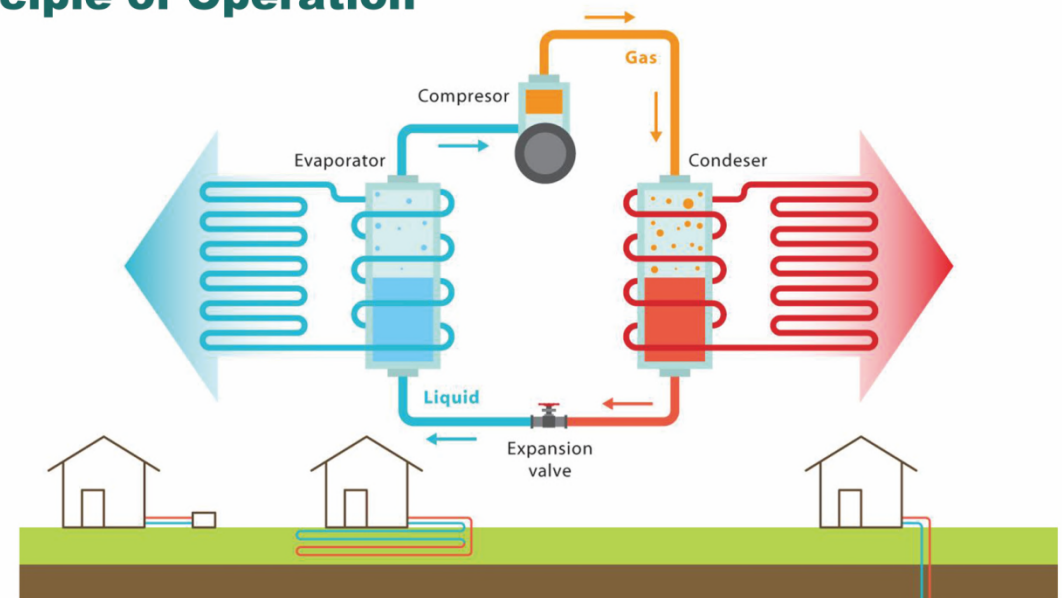
QUALITY CONTROL

Ensure Our Heat Pumps Are 100% Tested Before Delivery!



HEAT PUMPS TECHNOLOGY

Principle of Operation



Based on reverse Carnot cycle, the refrigerant in the evaporator absorbs a large amount of energy from the air, which is then compressed into high temperature and high pressure gas by the compressor and finally exchanging heat through the heat ex-changer, so as to provide house heating and hot water.

Advantages

Environment-friendly
No combustion
No exhaust emission

TECECO
Heat Pump

Save 50-80% energy
compared with electric
heating

All-weather hot water supply
Heating in winter
Cooling in summer

Electricity & water separated
No safe hidden danger

DC INVERTER TECHNOLOGY

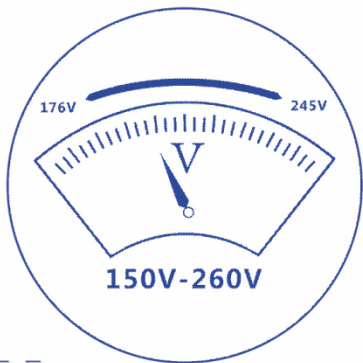


Strong Heating In Cold Climates

With the use of DC inverter compressor and DC inverter control unit it can automatically adjust the operating frequency according to the ambient & water temperature and greatly improve the heating capacity in low temperature environment.

Flexible Wide Voltage Operation

Start at low frequency and low current, without impact on power grid and electricity meter, reducing the interference to other indoor electrical appliances. 150V-260V (1N~) or 330V-450V (3N~) wide voltage operation is applicable to solve safety problems caused by voltage instability.



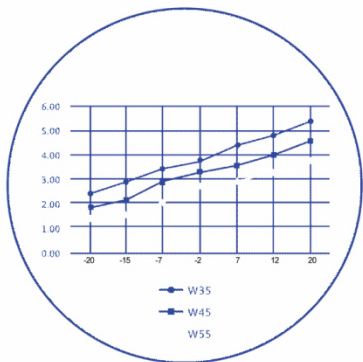
Comfortable Super Low Noise

Equipped with the DC inverter brushless fans and designed based on aerodynamics, TECECO DC inverter heat pumps use multiple noise reduction and sound insulation measures so that noise is reduced to a low level.



Faster Heating & Higher Efficiency

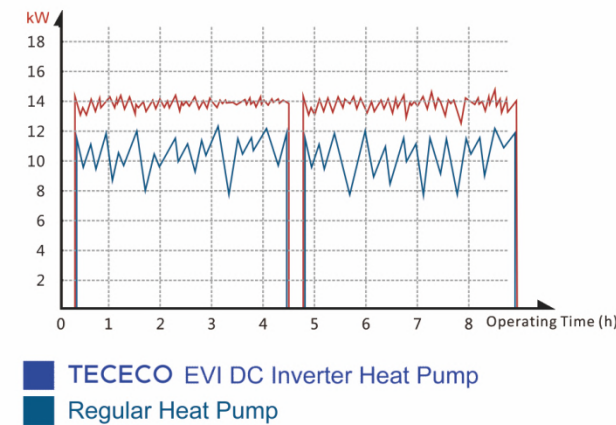
Heat pumps can operate at high frequency to heat water at a faster speed. When the temperature reaches the set temperature, it will operate at a low frequency with less energy consumed to maintain temperature.



ADVANTAGES OF EVI & DC INVERTER HEAT PUMPS

Comparison of Heating Capacity

Heating Capacity



TECECO EVI & DC Inverter Heat Pumps:

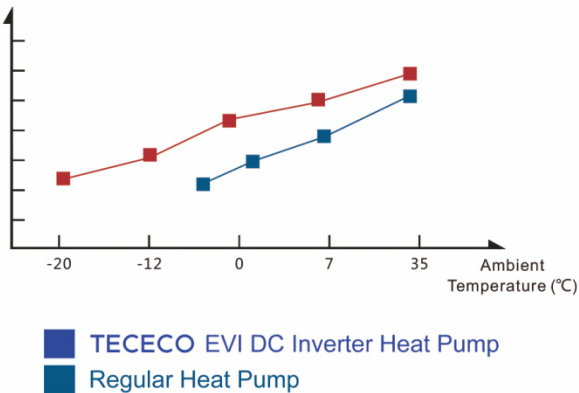
Strong heating, stable heating performance, over 38% heating capacity more than ordinary heat pump in cold climate.

Regular Heat Pumps:

Short heating time and weak heating stability.

EVI Low Temp. Heating

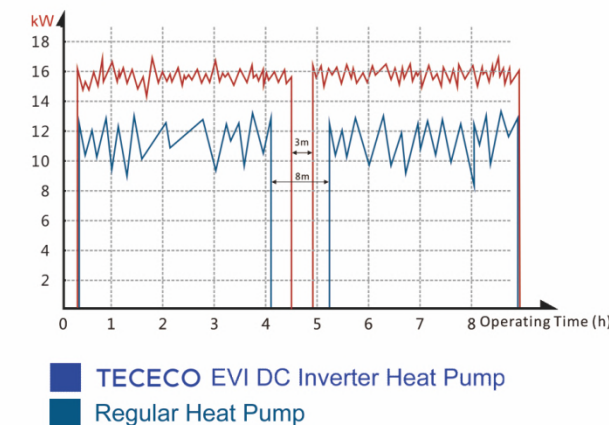
Heating Capacity



TECECO applies brand EVI rotary compressor, which greatly improves the heating capacity of the unit at low temperature. In cold climate, the heating capacity is increased by 30% compared with traditional heat pumps.

Comparison of Defrosting Capability

Heating Capacity



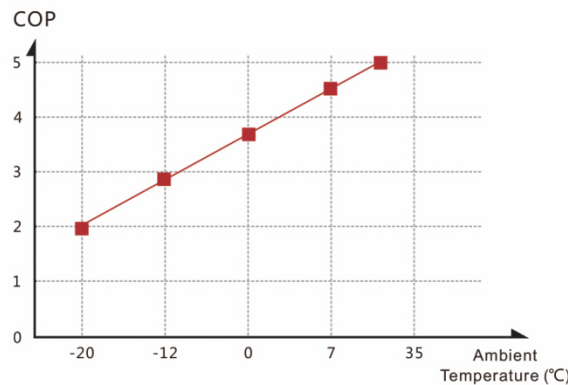
TECECO EVI & DC Inverter Heat Pumps:

Smart and efficient defrosting, efficiency being over 2.2 times faster Long heating time and short defrosting time.

Regular Heat Pumps:

Low heating capacity, long defrosting time.

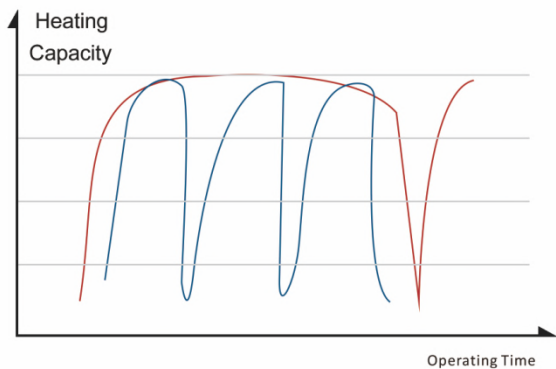
Low Temperature Energy Efficiency



When the ambient temperature is -20°C, The COP is higher than 2.2

Smart Defrosting Technology

TECECO independently developed its own smart defrosting control mode. The defrosting time does not exceed 20% of the operation cycle. By detecting the ambient temperature, evaporator coil temperature & pressure and compressor return gas temperature, the smart defrosting control mode calculates the temperature difference and the accumulated working time of the compressor to judge the frosting conditions of the evaporator. When the defrosting conditions are met, the defrosting mode will be automatically entered to prevent the unit from defrosting confusion and energy consumption, which will improve the reliability and economy of the whole unit.

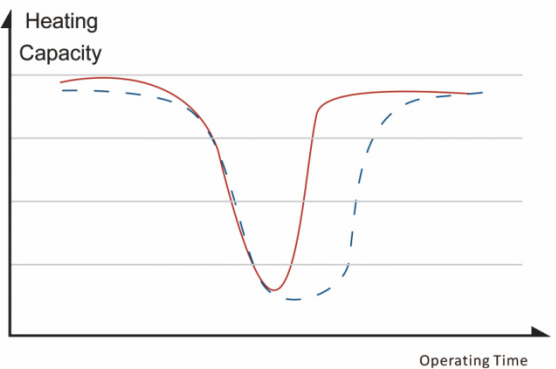


TECECO Smart Defrosting

Traditional Defrosting

Cycle Comparison:

TECECO Smart Defrosting vs. Traditional Defrosting



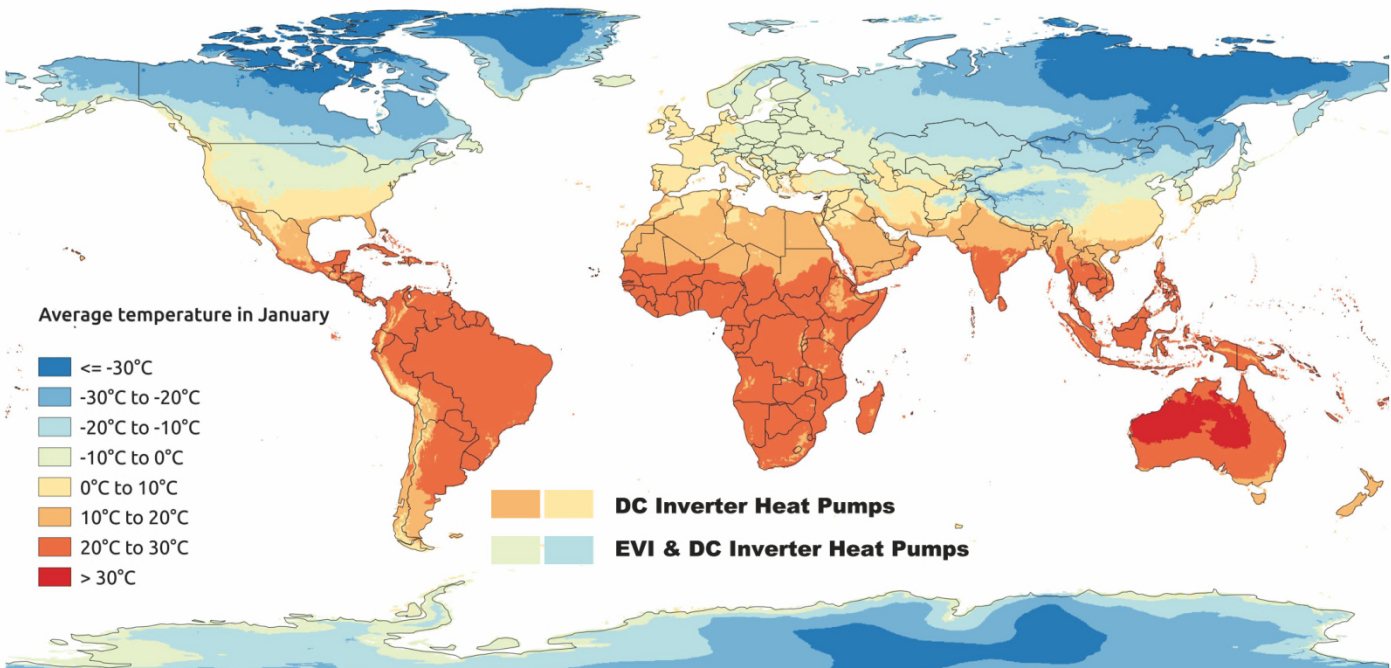
TECECO Smart Defrosting

Traditional Defrosting

Speed Comparison:

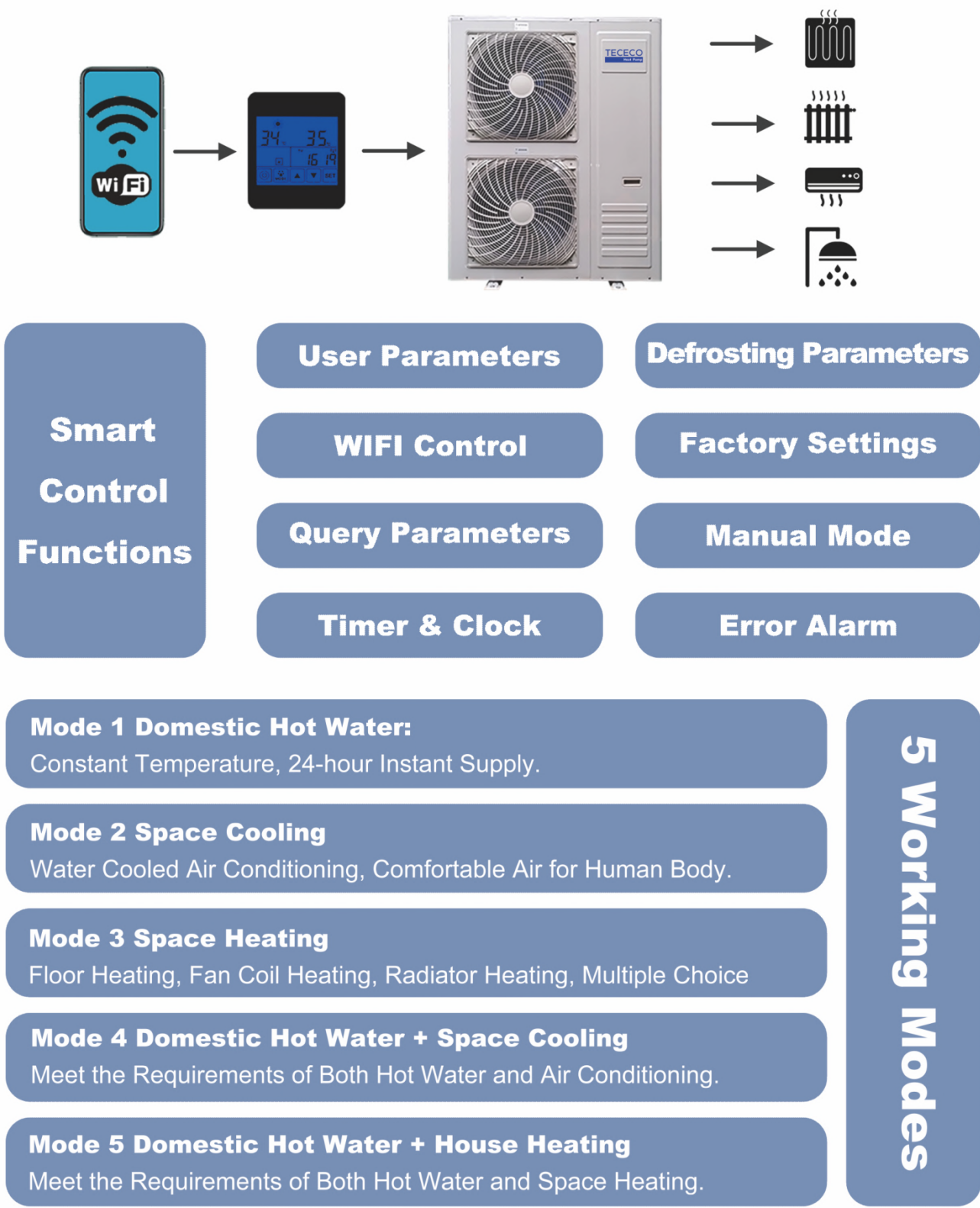
TECECO Smart Defrosting vs. Traditional Defrosting

Application Areas



SMART REMOTE CONTROL SYSTEM

TECECO 's smart online remote control system is equipped with highly integrated control functions, which can be operated via a remote APP. The system is easy to manipulate, stable in performance, and is truly a smart operating system that realizes man-machine separation.



ALL SERIERS HEAT PUMPS



OUR PRODUCTS

Monoblock DC Inverter & EVI Air to Water Heat Pump	
R32 DC Inverter & EVI - Monoblock Type	R410A DC Inverter & EVI - Monoblock Type
Models	

R32

A+++

WiFi Control (Optional)

-30°C

Max.COP: 6.01

EVI

R410A

A+++

WiFi Control (Optional)

-35°C

Max.COP: 5.83

EVI



Max. Heating Capacity: 11kW-27kW

Max. Heating Capacity: 10kW-34kW

- | Functions | |
|---|--|
| <ul style="list-style-type: none">• Multi-functions: hot water, house heating & cooling.• Enhanced vapor injection (EVI)• Ambient temperature: -30-45°C.• High efficiency with ERP A+++ energy level.• Low noise with DC inverter fans & the inverter compressor shock absorption.• Smart control with LCD controller, WIFI online monitoring & intelligent protections.• Guaranteed safety with explosion proof measures.• Anti-freezing function & smart defrosting.• Power supply: 220V~240V/50Hz/1N~or 380V - 420V/50Hz/3N~.• Refrigerant: R32.• Max. heating capacity: 11KW-27KW.• Max. cooling capacity: 8KW-22KW. | <ul style="list-style-type: none">• Multi-functions: hot water, house heating & cooling.• Enhanced vapor injection (EVI)• Ambient temperature: -35-45°C.• Brand rotary compressor and DC inverter brushless fans enable the units to run quietly.• Equipped with highly integrated control functions,can be operated via a remote APP.• Full frequency work is more comfortable heat pump• Multiple automatic protection function is more stable and durable heat pump• Power supply: 220V~240V/50Hz/1N~ or 380V - 420V/50Hz/3N~.• Refrigerant: R410A• Max. heating capacity: 10KW-34KW.• Max. cooling capacity: 8KW-28KW. |

Monoblock DC Inverter Air to Water Heat Pump	
R32 DC Inverter - Monoblock Type	R410A DC Inverter - Monoblock Type
Models	

R32

-25°C

WiFi Control (Optional)

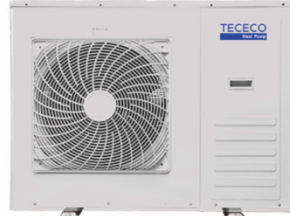
Max.COP: 5.71

R410A

-25°C

WiFi Control (Optional)

Max.COP: 5.65



Max. Heating Capacity: 11kW-27kW

Max. Heating Capacity: 10kW-34kW

- | Functions | |
|---|---|
| <ul style="list-style-type: none">• Multi-functions: hot water, house heating & cooling.• Ambient temperature: -25-45°C.• Super low noise with brushless DC inverter fans & the compressor shock absorption.• Smart control with LCD controller, WIFI online monitoring & intelligent protections.• Guaranteed safety with explosion proof measures.• Anti-freezing function & smart defrosting.• Power supply: 220V~240V/50Hz/1N~or 380V - 420V/50Hz/3N~.• Refrigerant: R32.• Max. heating capacity: 11KW-27KW.• Max. cooling capacity: 8KW-22KW. | <ul style="list-style-type: none">• Multi-functions: hot water, house heating & cooling.• Ambient temperature: -25-45°C.• Brand rotary compressor and DC inverter brushless fans enable the units to run quietly.• Equipped with highly integrated control functions,can be operated via a remote APP.• Full frequency work is more comfortable heat pump• Multiple automatic protection function is more stable and durable heat pump• Power supply: 220V~240V/50Hz/1N~ or 380V - 420V/50Hz/3N~.• Refrigerant: R410A• Max. heating capacity: 10KW-34KW.• Max. cooling capacity: 8KW-28KW. |

OUR PRODUCTS

Commercial Air To Water Heat Pumps
- Heating / Cooling

R410A DC Inverter & EVI - Monoblock Type

Models

R410A

Inverter

WiFi Control
(Optional)

-35°C

Max.COP:
4.15



Max. Heating Capacity: 30kW-80kW

Domestic Air to Water Heat Pumps
- Hot Water Heater

R410A/R134A Fixed Speed - Monoblock Type

Models

R410A
R134A

ON/OFF

WiFi Control
(Optional)

Max.Water Temp.
60/80°C

Max.COP:
4.2/4.15



Max. Heating Capacity: 4 kW- 9 kW

- Functions
- Multi-functions: house heating & cooling.
 - Enhanced vapor injection (EVI)
 - Ambient temperature: -35-45°C.
 - Scroll or rotary compressor and DC inverter brushless fans enable the units to run quietly.
 - Equipped with highly integrated control functions,can be operated via a remote APP.
 - Full frequency work is more comfortable heat pump.
 - Multiple automatic protection function is more stable and durable heat pump
 - Power supply: 380V - 420V/50Hz/3N~.
 - Refrigerant: R410A
 - Max. heating capacity: 30KW-80KW.
 - Max. cooling capacity: 23KW-60KW.

- Function: domestic hot water heating.
 - Max. outlet water temperature: 60/80°C
 - Ambient temperature: -10°C-45°C.
 - Side discharge type.
 - High heating efficiency with brand compressor.
 - Circulating Water pump built-in
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply: 220V~240V/50Hz/1N~.
 - Refrigerant: R410A/R134A.
 - Heating capacity: 4 KW-9 KW

Commercial Air to Water Heat Pump Hot Water Heater

R410A Fixed Speed

Models

R410A
R407C

ON/OFF

WiFi Control
(Optional)

Max.Water Temp.
60°C



Max. Heating Capacity: 12kW-103kW

R410A Fixed Speed & EVI

Models

R410A
R407C

ON/OFF

WiFi Control
(Optional)

Max.Water Temp.
60°C

EVI

Max. Heating Capacity: 12kW-103kW

- Functions
- Function: domestic hot water heating.
 - Ambient temperature: -7-45°C.
 - Max. outlet water temperature: 60°C
 - Top discharge type.
 - High heating efficiency with brand compressor.
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply: 220V~240V/50Hz/1N~ or 380V~415V/50Hz/3N~.
 - Refrigerant: R410A/R407C
 - Heating capacity: 12 KW-103 KW

- Multi-functions: domestic hot water heating.
 - Ambient temperature: -25-45°C.
 - Enhanced vapor injection (EVI)
 - Max. outlet water temperature: 60°C
 - Top discharge type.
 - High heating efficiency with brand compressor.
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply:220V~240V/50Hz/1N~ or 380V~415V/50Hz/3N~.
 - Refrigerant: R410A/R407C.
 - Heating capacity: 12 KW-103 KW

OUR PRODUCTS

Domestic SPA / Swimming Pool Air to Water Heat Pumps

R32 DC Inverter - Monoblock Type

R410A Fixed Speed - Monoblock Type

Models

R32

DC
Inverter



R410A

ON/OFF



Max. Heating Capacity: 9kW-22kW

Max. Heating Capacity: 4kW-10kW

Functions

- Function: domestic pool water heating/cooling.
- Ambient temperature: -25-45°C.
- Constant pool water temperature.
- Anti-corrosion with titanium tube-in-shell heat exchanger.
- Save energy and speed up heating time with COP up to 13.30.
- Stay silent in your backyard with super low noise 40 dB(A).
- Intelligent control with LCD screen controller and WIFI app.
- Power supply: 220V~240V/50Hz/1N~.
- Refrigerant: R32.
- Max. Heating Capacity: 9KW-22KW
- Max. Cooling Capacity: 5KW-11KW

- Multi-functions: domestic pool water heating/cooling.
- Ambient temperature: -7-45°C.
- Constant pool water temperature.
- Anti-corrosion with titanium tube-in-shell heat exchanger.
- Save energy and speed up heating time with COP up to 5.2
- Stay silent in your backyard with super low noise 45 dB(A).
- Intelligent control with LCD screen controller and WIFI app.
- Power supply: 220V~240V/50Hz/1N~.
- Refrigerant: R410A.
- Max. Heating Capacity: 4KW-10KW

Commercial SPA / Swimming Pool Air to Water Heat Pumps

R410A Fixed Speed

R410A Fixed Speed & EVI

Models

R410A
R407C

ON/OFF



R410A
R407C

ON/OFF



Max. Water Temp.
40°C/45°C

Max. Water Temp.
40°C/45°C

EVI



Max. Heating Capacity: 15kW-120kW

Max. Heating Capacity: 15kW-120kW

Functions

- Function: commercial pool water heating/cooling.
- Ambient temperature: -7-45°C.
- Constant pool water temperature max. 40°C (45°C optional).
- Anti-corrosion with titanium tube-in-shell heat exchanger.
- Absorb heat from the air with high COP up to 5.2.
- Smart control with RS485 and Cascade function (optional).
- Power supply: 220V~240V/50Hz/1ph or 380V~415V/50Hz/3ph.
- Refrigerant: R410A/R407C.
- Heating capacity: 15KW-120KW.
- Cooling capacity: 10KW-78KW.

- Multi-functions: domestic pool water heating/cooling.
- Ambient temperature: -25-45°C.
- Enhanced vapor injection (EVI)
- Constant pool water temperature max. 40°C (45°C optional).
- Anti-corrosion with titanium tube-in-shell heat exchanger.
- Absorb heat from the air with high COP up to 5.2.
- Smart control with RS485 and Cascade function (optional).
- Power supply: 220V~240V/50Hz/1ph or 380V~415V/50Hz/3ph.
- Refrigerant: R410A/R407C.
- Heating capacity: 15KW-120KW.
- Cooling capacity: 10KW-78KW.

OUR PRODUCTS

Commercial Air to Water Heat Pump Heating / Cooling

R410A Fixed Speed

R410A Fixed Speed & EVI

Models

R410A

ON/OFF

Wi-Fi

WIFI Control
(Optional)

R410A

ON/OFF

Wi-Fi

WIFI Control
(Optional)

-7°C

-25°C

EVI



Max. Heating Capacity: 42kW-87kW

Max. Heating Capacity: 42kW-87kW

Functions

- Function: Space Heating / Cooling.
 - Ambient temperature: -7-45°C.
 - Top discharge type.
 - High heating efficiency with brand compressor.
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply: 220V~240V/50Hz/1N~ or 380V~415V/50Hz/3N~.
 - Refrigerant: R410A/R407C
 - Heating capacity: 42 KW-87 KW
 - Cooling capacity: 36 KW-78 KW
- Multi-functions: Space Heating / Cooling.
 - Ambient temperature: -25-45°C.
 - Enhanced vapor injection (EVI)
 - Top discharge type.
 - High heating efficiency with brand compressor.
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply:220V~240V/50Hz/1N~ or 380V~415V/50Hz/3N~.
 - Refrigerant: R410A/R407C.
 - Heating capacity: 42 KW-87 KW
 - Cooling capacity: 36 KW-78 KW

Commercial Air to Water High Water Temp. Heat Pump Water Heater

R134A Fixed Speed

R134A Fixed Speed & EVI

Models

R134A

ON/OFF

Wi-Fi

WIFI Control
(Optional)

R134A

ON/OFF

Wi-Fi

WIFI Control
(Optional)

-7°C

Max.Water Temp.
80°C

-25°C

EVI

Max.Water Temp.
80°C



Max. Heating Capacity: 13kW-63kW

Max. Heating Capacity: 6kW-89kW

Functions

- Function: Commercial Hot Water Heating.
 - Ambient temperature: -7-45°C.
 - Max. outlet water temperature: 80°C
 - Top discharge type.
 - High heating efficiency with brand compressor.
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply: 220V~240V/50Hz/1N~ or 380V~415V/50Hz/3N~.
 - Refrigerant: R134A
 - Heating capacity: 13 KW-63 KW
- Multi-functions: Commercial Hot Water Heating.
 - Ambient temperature: -25-45°C.
 - Max. outlet water temperature: 80°C
 - Enhanced vapor injection (EVI)
 - Top discharge type.
 - High heating efficiency with brand compressor.
 - Electronic expansion valve.
 - Smart control with WIFI
 - Automatic multiple protections.
 - Automatic and forced defrosting function.
 - Power supply:220V~240V/50Hz/1N~ or 380V~415V/50Hz/3N~.
 - Refrigerant: R134A
 - Heating capacity: 6 KW-89 KW

R32 Monoblock DC Inverter Air to Water Heat Pump



Model	WHP030-R3DC	WHP045-R3DC	WHP060-R3DC	WHP045.3N- R3DC	WHP060.3N-R3DC	WHP080.3N-R3DC
Power Supply - Refrigerant	220-240V/1N~/ 50Hz - R32			380-415V/3N~/ 50Hz - R32		
Heating Performance: A7/6°C, W30/35°C;						
Heating Capacity (kW)	10.8	15.4	21.1	15.6	21.5	27.1
Rated Input Power (kW)	2.44	3.38	4.72	3.38	4.72	6.37
COP (W/W)	4.43	4.56	4.47	4.62	4.56	4.25
Heating Performance: A7/6°C, W47/55°C;						
Heating Capacity (kW)	9.65	14.2	18.3	14.3	18.4	22.9
Rated Input Power (kW)	3.18	4.96	5.99	4.96	5.99	7.6
COP (W/W)	3.04	2.86	3.06	2.88	3.07	3.01
DHW Performance: A20/15°C, W15/55°C.						
Hot Water Capacity	9.7	15.1	19.3	15.1	19.3	25.7
Rated Input Power (kW)	2.05	3.17	3.9	3.17	3.9	5.2
COP (W/W)	4.73	4.76	4.95	4.76	4.95	4.94
Cooling Performance: A35/24°C, W12/7°C.						
Cooling Capacity (kW)	8.3	12.2	15.5	12.3	15.6	22.1
Rated Input Power (kW)	2.76	4.1	5.03	4.1	5.03	7.16
EER (W/W)	3.01	2.98	3.08	3	3.1	3.09
Max. Input Power (kW)	3.4	5.5	6.6	5.5	6.6	9
Max. Input Current (A)	16	25	30	8	10	14
Compressor	Panasonic or Highly or Mitsubishi					
Core Technology	Inverter - Twin Rotary					
Fan	DC inverter brushless fans					
Fan Quantity	1	1	2	1	2	2
Fan Airflow (m³/h)	3000	5000	6000	5000	6000	10000
Fan Rated Power (W)	80	170	160	170	160	340
Circulating Water Pump	No built-in (Optional)					
Expansion Pressure Tank	No built-in (Optional)					
Heat Exchanger	High efficiency plate type heat exchanger -SUS 316					
Water Side Pressure Drop (kPa)	22	39	41	39	41	60
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN25	DN25	DN
Min. Water Flow (m³/h)	>1.7	>2.6	>3.6	>2.6	>3.6	>4.6
Noise (dB(A))	≤66	≤66	≤60	≤66	≤60	≤60
Heating Water Temp.°C	20 ~ 60°C					
Cooling Water Temp.°C	5 ~ 20°C					
Operating Ambient Temp.°C	- 30°C~45°C					
Unit Dimension (mm)	1100*400*850	1100*400*1010	1100*400*1420	1100*400*1010	1100*400*1420	1100*400*1570
Weight (KG)	72/80	105/112	125/132	107/115	127/135	158/168

R410A Monoblock DC Inverter Air to Water Heat Pump



Model	WHP030-R4DC	WHP045-R4DC	WHP060-R4DC	WHP045.3N-R4DC	WHP060.3N-R4DC	WHP080.3N-R4DC
Power Supply - Refrigerant	220-240V/1N~/ 50Hz - R410A			380-415V/3N~/ 50Hz - R410A		
Heating Performance: A7/6°C, W30/35°C;						
Heating Capacity (kW)	10.8	15.4	21.1	15.6	21.5	27.1
Rated Input Power (kW)	2.57	3.56	4.97	3.56	4.97	6.71
COP (W/W)	4.20	4.33	4.25	4.38	4.33	4.04
Heating Performance: A7/6°C, W47/55°C;						
Heating Capacity (kW)	9.65	14.2	18.3	14.3	18.4	22.9
Rated Input Power (kW)	3.28	5.11	6.17	5.11	6.17	7.83
COP (W/W)	2.94	2.78	2.97	2.80	2.98	2.92
DHW Performance: A20/15°C, W15/55°C.						
Hot Water Capacity	9.7	15.1	19.3	15.1	19.3	25.7
Rated Input Power (kW)	2.11	3.27	4.02	3.27	4.02	5.36
COP (W/W)	4.60	4.62	4.80	4.62	4.80	4.79
Cooling Performance: A35/24°C, W12/7°C.						
Cooling Capacity (kW)	8.3	12.2	15.5	12.3	15.6	22.1
Rated Input Power (kW)	2.76	4.1	5.03	4.1	5.03	7.16
EER (W/W)	3.01	2.98	3.08	3	3.1	3.09
Max. Input Power (kW)	3.4	5.5	6.6	5.5	6.6	9
Max. Input Current (A)	16	25	30	8	10	14
Compressor	Panasonic or Highly or Mitsubishi					
Core Technology	Inverter - Twin Rotary					
Fan	DC inverter brushless fans					
Fan Quantity	1	1	2	1	2	2
Fan Airflow (m³/h)	3000	5000	6000	5000	6000	10000
Fan Rated Power (W)	80	170	160	170	160	340
Circulating Water Pump	No built-in (Optional)					
Expansion Pressure Tank	No built-in (Optional)					
Heat Exchanger	High efficiency plate type heat exchanger -SUS 316					
Water Side Pressure Drop (kPa)	22	39	41	39	41	60
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN25	DN25	DN
Min. Water Flow (m³/h)	>1.7	>2.6	>3.6	>2.6	>3.6	>4.6
Noise (dB(A))	≤56	≤56	≤60	≤56	≤60	≤60
Heating Water Temp.°C	20 ~ 60°C					
Cooling Water Temp.°C	5 ~ 20°C					
Operating Ambient Temp.°C	- 35°C~45°C					
Unit Dimension (mm)	1100*400*850	1100*400*1010	1100*400*1420	1100*400*1010	1100*400*1420	1100*400*1570
Weight (KG)	72/80	105/112	125/132	107/115	127/135	158/168

R32 Monoblock DC Inverter & EVI Air to Water Heat Pump



R32

-30°C

Max.COP:
6.01

A+++

EVI

WiFi
WiFi Control
(Optional)

Model	WHP030-R3DC+	WHP045-R3DC+	WHP060-R3DC+	WHP045.3N-R3DC+	WHP060.3N-R3DC+	WHP080.3N-R3DC+
Power Supply - Refrigerant	220-240V/1N~/ 50Hz - R32			380-415V/3N~/ 50Hz - R32		
Heating Performance: A7/6°C, W30/35°C;						
Heating Capacity (kW)	10.8	15.4	21.1	15.6	21.5	27.1
Rated Input Power (kW)	2.44	3.38	4.72	3.38	4.72	6.37
COP (W/W)	4.43	4.56	4.47	4.62	4.56	4.25
Heating Performance: A-12°C, W41°C;						
Heating Capacity (kW)	7.4	11	14.9	11.1	15	18.1
COP (W/W)	2.69	2.7	2.71	2.71	2.72	2.69
Heating Performance: A-20°C, W41°C;						
Heating Capacity (kW)	6.5	9	11.7	9	12	15.2
COP (W/W)	2.2	2.34	2.37	2.36	2.4	2.35
Heating Performance: A7/6°C, W47/55°C;						
Heating Capacity (kW)	9.65	14.2	18.3	14.3	18.4	22.9
Rated Input Power (kW)	3.18	4.96	5.99	4.96	5.99	7.6
COP (W/W)	3.04	2.86	3.06	2.88	3.07	3.01
DHW Performance: A20/15°C, W15/55°C.						
Hot Water Capacity	9.7	15.1	19.3	15.1	19.3	25.7
Rated Input Power (kW)	2.05	3.17	3.9	3.17	3.9	5.2
COP (W/W)	4.73	4.76	4.95	4.76	4.95	4.94
Cooling Performance: A35/24°C, W12/7°C.						
Cooling Capacity (kW)	8.3	12.2	15.5	12.3	15.6	22.1
Rated Input Power (kW)	2.76	4.1	5.03	4.1	5.03	7.16
EER (W/W)	3.01	2.98	3.08	3	3.1	3.09
Max. Input Power (kW)	3.4	5.5	6.6	5.5	6.6	9
Max. Input Current (A)	16	25	30	8	10	14
Compressor	Panasonic or Highly Twin Rotary					Mitsubishi
Core Technology	Twin Rotary - EVI					
Fan	DC inverter brushless fans					
Fan Quantity	1	1	2	1	2	2
Fan Airflow (m³/h)	3000	5000	6000	5000	6000	10000
Fan Rated Power (W)	80	170	160	170	160	340
Circulating Water Pump	No built-in (Optional)					
Expansion Pressure Tank	No built-in (Optional)					
Heat Exchanger	High efficiency plate type heat exchanger -SUS 316					
Water Side Pressure Drop (kPa)	22	39	41	39	41	60
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN25	DN25	DN
Min. Water Flow (m³/h)	>1.7	>2.6	>3.6	>2.6	>3.6	>4.6
Noise (dB(A))	≤56	≤56	≤60	≤56	≤60	≤60
Heating Water Temp.°C	20 ~ 60°C					
Cooling Water Temp.°C	5 ~ 20°C					
Operating Ambient Temp.°C	- 30°C~45°C					
Unit Dimension (mm)	1100*400*850	1100*400*1010	1100*400*1420	1100*400*1010	1100*400*1420	1100*400*1570
Weight (KG)	72/80	105/112	125/132	107/115	127/135	158/168

R410A Monoblock DC Inverter & EVI Air to Water Heat Pump



R410A

-35°C

Max.COP:
5.83

WiFi

WiFi Control
(Optional)

EVI

Model	WHP030-R4DC+	WHP045-R4DC+	WHP060-R4DC+	WHP045.3N-R4DC+	WHP060.3N-R4DC+	WHP080.3N-R4DC+
Power Supply - Refrigerant	220-240V/1N~/ 50Hz - R410A			380-415V/3N~/ 50Hz - R410A		
Heating Performance: A7/6°C, W30/35°C;						
Heating Capacity (kW)	10.8	15.4	21.1	15.6	21.5	27.1
Rated Input Power (kW)	2.57	3.56	4.97	3.56	4.97	6.71
COP (W/W)	4.20	4.33	4.25	4.38	4.33	4.04
Heating Performance: A-12°C, W41°C;						
Heating Capacity (kW)	7.4	11	14.9	11.1	15	18.1
COP (W/W)	2.56	2.57	2.57	2.57	2.58	2.56
Heating Performance: A-20°C, W41°C;						
Heating Capacity (kW)	6.5	9	11.7	9	12	15.2
COP (W/W)	2.1	2.27	2.3	2.29	2.33	2.28
Heating Performance: A7/6°C, W47/55°C;						
Heating Capacity (kW)	9.65	14.2	18.3	14.3	18.4	22.9
Rated Input Power (kW)	3.28	5.11	6.17	5.11	6.17	7.83
COP (W/W)	2.94	2.78	2.97	2.80	2.98	2.92
DHW Performance: A20/15°C, W15/55°C.						
Hot Water Capacity	9.7	15.1	19.3	15.1	19.3	25.7
Rated Input Power (kW)	2.11	3.27	4.02	3.27	4.02	5.36
COP (W/W)	4.60	4.62	4.80	4.62	4.80	4.79
Cooling Performance: A35/24°C, W12/7°C.						
Cooling Capacity (kW)	8.3	12.2	15.5	12.3	15.6	22.1
Rated Input Power (kW)	2.76	4.1	5.03	4.1	5.03	7.16
EER (W/W)	3.01	2.98	3.08	3	3.1	3.09
Max. Input Power (kW)	3.4	5.5	6.6	5.5	6.6	9
Max. Input Current (A)	16	25	30	8	10	14
Compressor	Panasonic or Highly Twin Rotary					Mitsubishi
Core Technology	Twin Rotary - EVI					
Fan	DC inverter brushless fans					
Fan Quantity	1	1	2	1	2	2
Fan Airflow (m³/h)	3000	5000	6000	5000	6000	10000
Fan Rated Power (W)	80	170	160	170	160	340
Circulating Water Pump	No built-in (Optional)					
Expansion Pressure Tank	No built-in (Optional)					
Heat Exchanger	High efficiency plate type heat exchanger -SUS 316					
Water Side Pressure Drop (kPa)	22	39	41	39	41	60
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN25	DN25	DN
Min. Water Flow (m³/h)	>1.7	>2.6	>3.6	>2.6	>3.6	>4.6
Noise (dB(A))	≤56	≤56	≤60	≤56	≤60	≤60
Heating Water Temp.°C	20 ~ 60°C					
Cooling Water Temp.°C	5 ~ 20°C					
Operating Ambient Temp.°C	- 35°C~45°C					
Unit Dimension (mm)	1100*400*850	1100*400*1010	1100*400*1420	1100*400*1010	1100*400*1420	1100*400*1570
Weight (KG)	72/80	105/112	125/132	107/115	127/135	158/168

R410A Commercial DC Inverter & EVI Air to Water Heat Pump

R410A

Inverter



-35°C

Max.COP:
4.15



Model	WHP100.3N-R4DC	WHP120.3N-R4DC	WHP200.3N-R4DC	WHP250.3N-R4DC
Power Supply - Refrigerant	380-415V/3PH/50HZ - R410A			
Heating Performance Condition: A7°C/6°C, W40/45°C;				
Heating Capacity (KW)	33	40	66	80
Rated Input Power (KW)	9.1	11.1	18.1	22
COP (W/W)	3.63	3.60	3.65	3.64
Heating Performance Condition: A-12°C/-14°C, W41°C				
Heating Capacity (KW)	22	27	44	54
Rated Input Power (KW)	8.65	10.5	17.3	21.2
COP (W/W)	2.54	2.57	2.54	2.55
Cooling Performance Condition: A35/24°C, W12/7°C				
Cooling Capacity (KW)	23	30	46	60
Rated Input Power (KW)	8	11.3	16	22.8
EER (W/W) - C	2.88	2.65	2.88	2.63
Max. Input Power (KW)	13	16	23	28
Max. Input Current (A)	20	25	35	43
Compressor	Mitsubishi Rotary / Hitachi Scroll - EVI Technology			
Fan Type	High Efficiency Axial Flow Fan			
Fan Quantity (Pcs)	1	1	2	2
Fan Airflow (m3/h)	14000	14000	28000	28000
Fan Rated Power (W)	750	750	1500	1500
Heat exchanger	Tank&Coil Heat Exchanger / Tube&Shell Heat Exchanger / Plate heat exchanger			
WaterSide Pressure Drop (Kpa)	65	65	65	65
Inlet/Outlet Pipe Size (mm)	DN40	DN40	DN50	DN50
Min. Flow (m3/H)	>6.2	>7.8	>11	>15
Noise (dB(A))	≤63	≤65	≤67	≤67
Heating Water Temp. °C	20 ~ 60°C			
Cooling Water Temp. °C	5 ~ 20 °C			
Operating Ambient Temp. °C	-35°C~45°C			
Unit Dimension (mm)	970*1000*1900	970*1000*1900	1930*980*1890	1930*980*1890
Weight (KG)	300kg	310kg	550kg	700kg

R410A/R134A ON/OFF Air to Water Heat Pump Domestic Hot Water Heater - Monoblock Type

R410A

ON/OFF



Max.Water Temp.
60°C

Max.COP:
4.2



Model	WHP010HW-R4	WHP015HW-R4	WHP020HW-R4	WHP025HW-R4
Recommended DHW Storage Tank	150 Liters	200/300 Liters	300/400 Liters	500/600 Liters
Power supply - Refrigerant	220V / 1N~ / 50Hz - R410A			
Heating Performance Condition: A20/15°C, W15~55°C				
Heating Capacity (kW)	3.6	5.1	7.1	9
Input Power (kW)	0.9	1.2	1.7	2.2
COP	4.2	4.3	4.2	4.2
H.W Production Capacity	75 L/H	108 L/H	150 L/H	190 L/H
Max. Current (A)	5.5	7.7	11.2	13.8
Max. Input Power (kW)	1.2	1.7	2.5	3
Min.Water Circulating Volume	600 L/H	900 L/H	1200 L/H	1500 L/H
Max. Outlet Water temp.	60℃			
Working Temp. Range	-7~43℃			
Compressor	Highly / Panasonic / Mitsubishi Twin-Rotary			
Built-in Water Pump	Shinhoo GPD20-6S			
Condenser / Evaporator / Fan	High Efficiency Tank Heat Exchanger / Copper Tubes&Hydrophilic Aluminum Fins / 40 W*1(3μF)			
Noise -dB(A)	≤42	≤42	≤45	≤45
Connection Pipe Size	DN25			
Water Pressure Drop - Kpa	≤15	≤18	≤25	≤27
Net Weight	40	46	55	62
Dimension (L*W*H)	1000*350*620			

R134A

ON/OFF



Max.Water Temp.
80°C

Max.COP:
4.15

Model	WHP010HW-R1		WHP015HW-R1	WHP020HW-R1
Recommended DHW Storage Tank	150 Liters		200/300 Liters	300/400 Liters
Power supply - Refrigerant	220V / 1N~ / 50Hz - R134A			
Heating Performance Condition: A20/15°C, W15~55°C				
Heating Capacity (kW)	3.7		5.2	7.6
Input Power (kW)	0.85		1.18	1.7
COP	4.35		4.41	4.47
H.W Production Capacity	75 L/H		108 L/H	150 L/H
Heating Performance Condition: A20/15°C, W15~75°C				
Heating Capacity (kW)	2.8		3.9	5.8
Input Power (kW)	1		1.4	2.1
COP	2.80		2.79	2.76
Max. Current (A)	5.5		7.7	11.2
Max. Input Power (kW)	1.2		1.7	2.5
Min.Water Circulating Volume	600 L/H		900 L/H	1200 L/H
Max. Outlet Water temp.	80°C			
Working Temp. Range	-7~43°C			
Compressor	Highly / Panasonic / Mitsubishi Twin-Rotary			
Built-in Water Pump	Shinhoo GPD20-6S			
Condenser / Evaporator / Fan	High Efficiency Tank Heat Exchanger / Copper Tubes&Hydrophilic Aluminum Fins / 40 W*1(3μF)			
Noise -dB(A)	≤42		≤42	≤45
Connection Pipe Size	DN25			
Water Pressure Drop - Kpa	≤15		≤18	≤25
Net Weight	40		46	55
Dimension (L*W*H)	1000*350*620			

R32 DC Inverter SPA / Swimming Pool Air to Water Heat Pumps

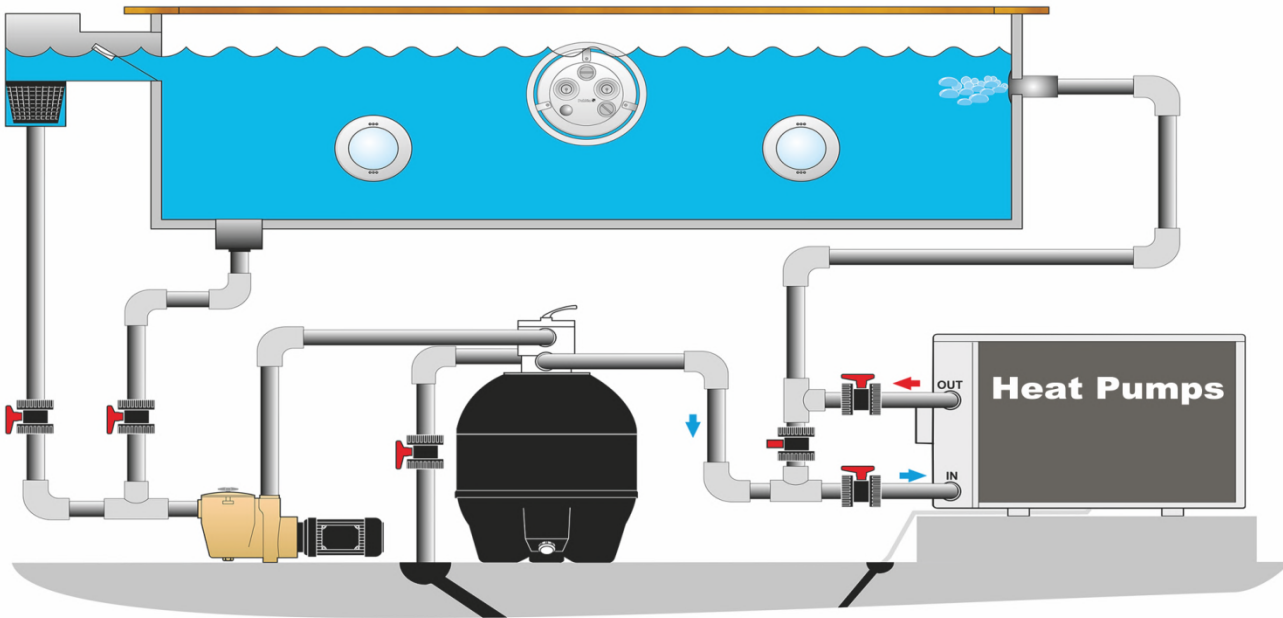


Model	WHP015HP-R3DC	WHP020HP-R3DC	WHP 35HP-R3DC	WHP050HP-R3DC
Advised pool size	20m³ - 40m³	30m³ - 60m³	30m³ - 70m³	40m³ - 80m³
Power supply- Refrigerant Type	220 - 240V /1N~/50Hz - R32			
Heating Condition A: (A26°C, RH70% / W26°C/28°C)				
Heating capacity (kW)	2.01 - 8.65	2.5-13.2	3.81-17.31	6.00-22.3
Power input (kW)	0.20 - 1.56	0.26-2.54	0.37-3.33	0.45-3.60
COP (W/W)	10.23 - 5.54	9.61-5.20	10.3-5.2	13.3-6.20
Heating Condition B: (A15°C, RH70% / W26°C/28°C)				
Heating capacity (kW)	1.23 - 7.06	1.83-10.09	3.6-14.52	4.80- 18.29
Power input (kW)	0.23 - 1.90	0.36-2.70	0.58-3.56	0.60- 4.03
COP (W/W)	5.25 - 3.72	5.06-3.74	6.2-4.08	8.00- 4.54
Heating Condition C: (A7°C, RH70%/W26°C/28°C)				
Heating capacity (kW)	1.00- 5.98	1.80-7.24	2.9-10.1	4.10- 14.36
Power input (kW)	0.21- 1.75	0.38-2.05	0.52-2.46	0.55- 4.00
COP (W/W)	4.71- 3.41	4.68-3.53	5.5-4.1	7.45- 3.59
Cooling Condition D: (A35°C, W28°C/26°C)				
Cooling capacity (kW)	1.75-4.50	2.5-6.07	3.0-6.59	3.80-10.50
Power input (kW)	0.30-1.50	0.42-1.66	0.48-1.6	0.52-3.20
EER	5.83-3.00	5.95-3.66	6.2-4.12	7.30-3.28
Max. power input (W)	2,185	2875	3850	4600
Max. current (A)	9.5	12.5	17.5	20
Water flow (m3/h)	2~5	5~7	6~8	5~10
Water pressure drop (kPa)	17	18	19	20
Running temperature range	-25°C - 43°C			
Compressor type	DC inverter			
Air side heat-exchanger type	Copper tube + hydrophilic aluminum fin			
Fan Motor type	Brushless DC motor			
Throttling type	Electronic Expansion Valve			
Water side heat-exchanger Type	PVC titanium tube heat exchanger			
Sound pressure level dB(A)	47	48	50	53
Water pipe connection (mm)	Φ50			
Controller	LCD, built-in Wifi module			
Water resistance	IPX4			
Unit Dimension (mm)	855×285×660	990×345×670	990×345×670	1,090×415×720
Gross Weight	52	70	74	95

R410A Fixed Speed SPA / Swimming Pool Air to Water Heat Pumps



Model	WHP010PH-R4	WHP015PH-R4	WHP020PH-R4	WHP025PH-R4
Advised pool size	9m³ - 18m³	12m³ - 24m³	17m³ - 34m³	20m³ - 40m³
Power Supply -Refrigerant	220-240V/1N~/50Hz-R410A			
Heating Performance condition: A: 24/16℃; W27~29℃.				
Heating Capacity-KW	4.2	5.5	8.2	9.5
Input Power -KW	0.8	1.1	1.6	1.9
COP (W/W)	5.1	5.08	5.09	5.08
Rated Current-A	3.9	5.2	7.7	8.9
Fan Motor Power-W	40	40	40	50
Fan Motor Quantity	1	1	1	1
Condenser	Titanium Tube in PVC Shell Heat Exchanger			
Water Flow - L/h	1450	1900	2800	3270
Water Pressure -Kpa	≤25	≤27	≤28	≤30
Net Weight-kg	43	48	53	60
Gross Weight-kg	45	50	55	58
Noise-db	45	45	48	49
Waterproof	IPX4			
Electric Shock	I			
Pipe Size -mm	50	50	50	50
Dimension -mm	1000*350*620			
Packing -mm	1070*380*650			



R410A Fixed Speed SPA / Swimming Pool Commercial Air to Water Heat Pumps



Model	WHP030 PH-R4	WHP030 PH.3N-R4	WHP050 PH.3N-R4	WHP100 PH.3N-R4	WHP150 PH.3N-R	WHP200 PH.3N-R4	WHP250 PH.3N-R4	WHP300 PH.3N-R4
Advised Pool Volume (m3)	25-60	25-60	40-90	80-180	120-270	160-360	200-450	240-540
Heating Performance Condition: A26°C, W26/28°C								
Heating Capacity (kW)	15	15	20	40	60	80	100	120
Rated Input Power (kW)	2.93	2.91	3.91	7.8	11.7	15.53	19.38	23.26
COP (W/W)	5.12	5.15	5.12	5.13	5.13	5.15	5.16	5.16
Cooling Performance Condition: A35°C, W28/26°C								
Cooling Capacity (kW)	9.8	10.1	13	26	39	52	65	78
Rated Input Power (kW)	3.3	3.3	4.24	8.45	12.67	16.8	20.9	25.2
EER (W/W)	2.97	3.06	3.07	3.08	3.08	3.1	3.11	3.1
Max Input Power (kW)	4.4	4.3	6.1	11.5	17.5	23.6	29	35
Max Input Current (A)	7.9	19.5	10.9	20.6	31.3	42.2	51.8	62.6
Power Supply	220V/1N~/ 50Hz	380V/3N~/ 50Hz						
Electric Shock Protection Grade	I							
Waterproof Grade	IPX4							
Operating Ambient Temp. °C	-7°C~45°C							
Inlet/Outlet Pipe Size (mm)	DN50		DN50	DN63	DN63	DN90	DN90	DN110
Min. Flow (m3/h)	>5.2		>6.5	>13	>19	>25	>33	>33
Water Side Pressure Loose	≤50KPa							
Discharge Side Over Pressure	4.2MPa							
Sunction Side Lower Pressure	0.08MPa							
Compressor	Emerson Copeland Scroll							
Refrigerant	R410A							
Fan	High efficiency axial flow fan							
Heat exchanger	Efficient titanium tube pool PVC heat exchanger							
Noise (dB(A))	≤54	≤54	≤56	≤60	≤62	≤64	≤65	≤65
Unit Dimension (mm)	680*680*870	680*680*870	770*770*980	1500*760*1080	1450*660*1600	1850*1000*2000	2000*1000*1850	2200*1100*2210
Weight (KG)	108	110	115	225	450	680	860	930

R410A EVI & Fixed Speed SPA / Swimming Pool Commercial Air to Water Heat Pumps



Model	WHP030 PH-R4+	WHP030 PH.3N-R4+	WHP050 PH.3N-R4+	WHP100 PH.3N-R4+	WHP150 PH.3N-R4+	WHP200 PH.3N-R4+	WHP250 PH.3N-R4+	WHP300 PH.3N-R4+
Advised Pool Volume (m3)	25-60	25-60	40-90	80-180	120-270	160-360	200-450	240-540
Heating Performance Condition: A26°C, W26/28°C								
Heating Capacity (kW)	15	15	20	40	60	80	100	120
Rated Input Power (kW)	2.93	2.91	3.91	7.8	11.7	15.53	19.38	23.26
COP (W/W)	5.12	5.15	5.12	5.13	5.13	5.15	5.16	5.16
Heating Performance Condition: A0°C, W26/28°C								
Heating Capacity (kW)	9	9	12	24	36	48	60	72
Rated Input Power (kW)	2.92	2.9	3.89	7.77	11.8	15.57	19.34	23.21
COP (W/W)	3.08	3.1	3.08	3.09	3.05	3.08	3.1	3.1
Cooling Performance Condition: A35°C, W28/26°C								
Cooling Capacity (kW)	9	10.1	13	26	39	52	65	78
Rated Input Power (kW)	3.3	3.3	4.24	8.45	12.67	16.8	20.9	25.2
EER (W/W)	2.73	3.06	3.07	3.08	3.08	3.10	3.11	3.1
Max Input Power (kW)	4.4	4.3	6.1	11.5	17.5	23.6	29	35
Max Input Current (A)	7.9	19.5	10.9	20.6	31.3	42.2	51.8	62.6
Power Supply	220V/1N~/50Hz	380V/3N~/50Hz	380V/3N~/50Hz		380V/3N~/50Hz		380V/3N~/50Hz	
Electric Shock Protection Grade	I		I		I		I	
Waterproof Grade	IPX4		IPX4		IPX4		IPX4	
Operating Ambient Temp. °C	-7°C~45°C		-7°C~45°C		-7°C~45°C		-7°C~45°C	
Inlet/Outlet Pipe Size (mm)	DN50		DN50	DN63	DN63	DN90	DN90	DN110
Min. Flow (m3/h)	>5.2		>6.5	>13	>19	>25	>33	>33
Water Side Pressure Loose	≤50KPa							
Discharge Side Over Pressure	4.2MPa							
Sunction Side Lower Pressure	0.08MPa							
Compressor	Emerson Copeland Scroll							
Refrigerant	R410A							
Fan	High efficiency axial flow fan							
Heat exchanger	Efficient titanium tube pool PVC heat exchanger							
Noise (dB(A))	≤54	≤54	≤56	≤60	≤62	≤64	≤65	≤65
Unit Dimension (mm)	680*680*870	680*680*870	770*770*980	1500*760*1080	1450*660*1600	1850*1000*2000	2000*1000*1850	2200*1100*2210
Weight (KG)	111	113	120	230	450	680	870	940

R410A/R407C Commercial Fixed Speed Air to Water Heat Pump Water Heater



Model	WHP030HW-R4	WHP030HW.3N-R4	WHP050HW.3N-R4	WHP100HW.3N-R4	WHP150HW.3N-R4	WHP200HW.3N-R4	WHP250HW.3N-R4	WHP300HW.3N-R4
Heating Performance Condition: A20/15°C, W15~55°C;								
Heating Capacity (KW)	12	12	19	38	52	70	86	103
Rated Input Power (KW)	2.8	2.8	4.5	8.8	12.5	17	22.6	35.2
COP (W/W)	4.29	4.29	4.22	4.32	4.16	4.12	3.81	2.93
Hot Water Capacity (L/H)	258	258	408	817	1100	1500	1850	2215
Max Input Power (KW)	3.6	3.7	5.8	11.2	17.5	22.5	27.1	35.2
Max Input Current (A)	16.4	5.6	8.8	17	26.6	34.2	41.2	53.5
Power Supply	220V/1PH/50HZ	380V/3PH/50HZ						
Electric Shock Protection Grade	I							
Waterproof Grade	IPX4							
Max. Heating Water Temp. °C	55°C							
Operating Ambient Temp. °C	-10°C~45°C							
Compressor	EMERSON Copeland Scroll							
Refrigerant	R410A / R407C							
Fan	High efficiency axial flow fan							
Heat exchanger	High efficient tank&coil type heat exchanger							
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN40	DN40	DN50	DN50	DN65
Min. Water Flow (m3/H)	2.1	2.1	3.3	6.5	9	12	14.8	17.7
Water Side Pressure Drop (kPa)	≤45	≤45	≤50	≤60	≤70	≤70	≤75	≤75
Noise (dB(A))	≤56	≤56	≤56	≤60	≤62	≤64	≤65	≤65
Unit Dimension (mm)	680*680*870	680*680*870	770*770*780	1500*753*1080	1510*810*1530	1850*1000*2000	2000*1000*1850	2200*1100*2210
Weight (KG)	108	110	140	340	400	680	860	930

R410A/R407C Commercial EVI & Fixed Speed Air to Water Heat Pump Water Heater



Model	WHP030 HW-R4+	WHP030 HW.3N-R4+	WHP050 HW.3N-R4+	WHP100 HW.3N-R4+	WHP150 HW.3N-R4 +	WHP200 HW.3N-R4+	WHP250 HW.3N-R4+	WHP300 HW.3N-R4+
Heating Performance Condition: A20/15°C, W15~55°C								
Heating Capacity (KW)	12	12	19	38	52	70	86	103
Rated Input Power (KW)	2.8	2.8	4.5	8.8	12.5	17	22.6	27.1
COP (W/W)	4.29	4.29	4.22	4.32	4.16	4.12	3.81	3.8
Hot Water Capacity (L/H)	258	258	408	817	1100	1500	1850	2215
Heating Performance Condition: A7/6°C, W9~55°C								
Heating Capacity (KW)	9	9	15	29	43	56	70	86.2
Rated Input Power (KW)	2.6	2.6	4.3	8.4	12.3	16.5	20.8	25
COP (W/W)	3.46	3.46	3.49	3.45	3.5	3.39	3.37	3.45
Heating Performance Condition: A-12/-14°C, W6~55°C								
Heating Capacity (KW)	5.5	5.5	9.2	17.2	25.9	35.2	43	54.3
Rated Input Power (KW)	2.4	2.4	3.9	7.6	10.9	15.2	18.5	23.4
COP (W/W)	2.29	2.29	2.36	2.26	2.38	2.32	2.32	2.32
Max Input Power (KW)	3.6	3.7	5.8	11.2	17.5	22.5	27.1	35.2
Max Input Current (A)	16.4	5.6	8.8	17	26.6	34.2	41.2	53.5
Power Supply	220V/1PH/50HZ	380V/3PH/50HZ						
Electric Shock Protection Grad	I							
Waterproof Grade	IPX4							
Max. Heating Water Temp. °C	55°C							
Operating Ambient Temp. °C	-30°C~45°C							
Compressor	EMERSON Copeland Scroll - EVI Technology							
Refrigerant	R410A / R407C							
Fan	High efficiency axial flow fan							
Heat exchanger	High efficient tank&coil type heat exchanger							
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN40	DN40	DN50	DN50	DN65
Min. Water Flow (m3/H)	2.1	2.1	3.3	6.5	9	12	14.8	17.7
Water Side Pressure Drop (	≤45	≤45	≤50	≤60	≤70	≤70	≤75	≤75
Noise (dB(A))	≤56	≤56	≤56	≤60	≤62	≤64	≤65	≤65
Unit Dimension (mm)	680*680*870	680*680*870	770*770*780	1500*753*1080	1510*810*1530	1850*1000*200	2000*1000*185	2200*1100*221
Weight (KG)	108	110	140	340	400	680	860	930

R410A Fixed Speed Commercial Air to Water Heat Pump - Heating / Cooling



Model	WHP150HC.3N-R4	WHP200HC.3N-R4	WHP250HC.3N-R4	WHP300HC.3N-R4
Heating Performance Condition: A7/6°C, W40/45°C;				
Heating Capacity (kW)	42	58	72	87
Rated Input Power (kW)	12.3	16.5	21.1	25.8
COP (W/W)	3.41	3.52	3.41	3.37
Cooling Performance Condition A35°C/24°C, W:12/7°C.				
Cooling Capacity (kW)	36	52	65	78
Rated Input Power (kW)	13.3	18.8	23.3	27.5
EER (W/W)	2.71	2.77	2.79	2.84
Rated Input Current (A)	32.6	45.2	59.4	67.8
Max Input Current (A)	46	59	68.6	88.2
Power Supply	380V/3PH/ 50Hz			
Electric Shock Protection Grade	I			
Waterproof Grade	IPX4			
Heating Water Temp.*°C	20 ~ 55°C			
Cooling Water Temp.*°C	5 ~ 20°C			
Operating Ambient Temp.*°C	-10°C~45°C			
Compressor	EMERSON Copeland			
Core Technology	Scroll Technology			
Refrigerant	R410A / R407C			
Heat exchanger	Plate type / Shell&tube / Double Pipes / High Efficiency Tank Heat Exchanger			
Inlet/Outlet Pipe Size (mm)	DN40	Flange DN50	Flange DN50	Flange DN50
Min. Water Flow (m3/H)	6.2	8.9	11	13.4
Water Side Pressure Drop	≤50KPa			
Fan	High efficiency axial flow fan			
Noise (dB(A))	≤65	≤70	≤75	≤75
Unit Dimension (mm)	1450*660*1600	1850*1000*2000	2000*1000*1850	2200*1100*2210
Weight (KG)	400	680	860	930

R410A EVI & Fixed Speed Commercial Air to Water Heat Pump - Heating / Cooling



Model	WHP150HC.3N-R4+	WHP200HC.3N-R4+	WHP250HC.3N-R4+	WHP300HC.3N-R4+
Heating Performance Condition: A7/6°C, W40/45°C;				
Heating Capacity (kW)	42	58	72	87
Rated Input Power (kW)	12.3	16.5	21.1	25.8
COP (W/W)	3.41	3.52	3.41	3.37
Heating Performance Condition: A-12/-14°C, W41°C				
Heating Capacity (kW)	29	40	50	59
Rated Input Power (kW)	13.6	18.4	23.2	26.9
COP (W/W)	2.13	2.17	2.16	2.19
Cooling Performance Condition A35°C/24°C, W:12/7°C.				
Cooling Capacity (kW)	36	52	65	78
Rated Input Power (kW)	13.3	18.8	23.3	27.5
EER (W/W)	2.71	2.77	2.79	2.84
Rated Input Current (A)	32.6	45.2	59.4	67.8
Max Input Current (A)	46	59	68.6	88.2
Power Supply	380V/3PH/ 50Hz			
Electric Shock Protection Grade	I			
Waterproof Grade	IPX4			
Heating Water Temp.*°C	20 ~ 55°C			
Cooling Water Temp.*°C	5 ~ 20°C			
Operating Ambient Temp.*°C	-30°C~45°C			
Compressor	EMERSON Copeland			
Core Technology	Scroll - EVI Technology			
Refrigerant	R410A / R407C			
Heat exchanger	Plate type / Shell&tube / Double Pipes / High Efficiency Tank Heat Exchanger			
Inlet/Outlet Pipe Size (mm)	DN40	Flange DN50	Flange DN50	Flange DN50
Min. Water Flow (m3/H)	6.2	8.9	11	13.4
Water Side Pressure Drop	≤50KPa			
Fan	High efficiency axial flow fan			
Noise (dB(A))	≤65	≤70	≤75	≤75
Unit Dimension (mm)	1450*660*1600	1850*1000*2000	2000*1000*1850	2200*1100*2210
Weight (KG)	400	680	860	930

R134A Commercial Fixed Speed High Water Temp. Air to Water Heat Pump Water Heater



Model	WHP050HW.3N-R1	WHP060HW.3N-R1	WHP070HW.3N-R1	WHP100HW.3N-R1	WHP150HW.3N-R1	WHP200HW.3N-R1	WHP250HW.3N-R1
Heating Performance Condition: A20/15°C, W 15°C ~ 55°C;							
Heating Capacity (kW)	12.8	15.5	16.6	25.6	33.2	51.8	63
Rated Input Power (kW)	3.2	3.9	4.2	6.4	8.4	13	15.8
COP (W/W)	4	3.97	3.95	4	3.95	3.98	3.99
Hot Water Capacity (L/H)	274	332	356	549	711	1110	1350
Heating Performance Condition: A 20/15°C, W 15°C ~ 65°C;							
Heating Capacity (kW)	12	14.4	15.8	24	31.6	29.2	60
Heating Performance Condition: A 20/15°C, W 15°C ~ 75°C;							
Heating Capacity (kW)	11.5	13.8	14.9	23	29.8	46.2	56.4
Max Input Power (A)	7.05	7.83	8.15	14.1	16.3	24.2	30
Max Input Current (A)	10.7	11.9	12.4	21.4	24.8	36.8	45.6
Power Supply	380V/3PH/50HZ			380V/3PH/ 50Hz			
Electric Shock Protection Grade	I						
Waterproof Grade	IPX4						
Max. Heating Water Temp.	75°C						
Operating Ambient Temp.	-10°C~45°C						
Compressor	EMERSON Copeland Scroll						
Refrigerant	R134A						
Heat exchanger	High efficient tank&coil type heat exchanger						
Fan	High efficiency axial flow fan						
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN40	DN40	DN50	DN50
Min. Water Flow (m3/H)	2.1	2.5	2.7	4.4	5.7	8.9	10.8
Water Side Pressure Drop	≤50	≤50	≤55	≤60	≤60	≤65	≤65
Noise (dB(A))	≤56	≤56	≤56	≤60	≤62	≤64	≤65
Unit Dimension (mm)	770*770*780	770*770*780	770*770*780	1500*753*1080	1510*810*1530	1850*1000*2000	2000*1000*1850
Weight (KG)	105	116	128	340	400	680	860

R134A Commercial EVI & ON/OFF High Water Temp. Air to Water Heat Pump Water Heater



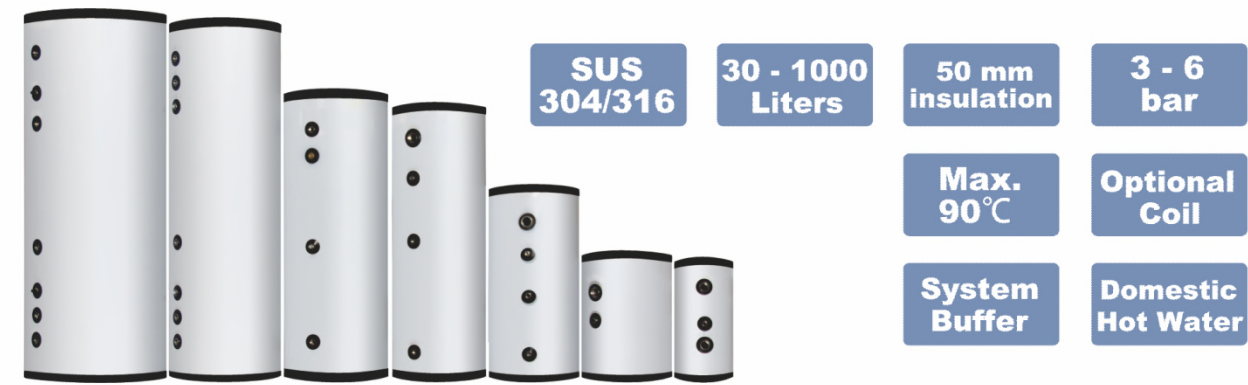
Model	WHP020HW-R1+	WHP030HW-R1+	WHP040HW-R1+	WHP020HW.3N-R1+	WHP030HW.3N-R1+	WHP040HW.3N-R1+
Heating Performance Condition: A20/15°C, W 15°C ~ 55°C;						
Heating Capacity (KW)	6.2	8.4	12	6.2	8.4	11.9
Rated Input Power (KW)	1.5	2.05	2.87	1.49	2.02	2.85
COP (W/W)	4.13	4.1	4.18	4.16	4.16	4.18
Hot Water Capacity (L/H)	133	180	257	133	180	255
Heating Performance Condition: A 20/15°C, W 15°C ~ 75°C;						
Heating Capacity (KW)	5.9	7	11.4	5.9	8	11.3
Heating Performance Condition: A 7/6°C, W 9°C ~ 75°C;						
Heating Capacity (KW)	4.4	6	8.6	4.4	6	8.5
Heating Performance Condition: A -12/-14°C, W 6°C ~ 75°C;						
Heating Capacity (KW)	2.8	3.8	5.3	2.8	3.73	5.28
Max Input Power (kW)	2.31	3.11	4.38	2.28	3.1	4.3
Max Input Current (A)	10.5	14.1	19.9	3.5	4.7	6.5
Power Supply	220V/1PH/50HZ			380V/3PH/50HZ		
Electric Shock Protection Grade	I					
Waterproof Grade	IPX4					
Max. Heating Water Temp.℃	75℃					
Operating Ambient Temp.℃	-25℃~45℃					
Compressor	Invotech - EVI Scroll					
Refrigerant	R134A					
Heat exchanger	High efficient tank&coil type heat exchanger					
Fan	High efficiency axial flow fan					
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN25	DN25	DN25
Min. Water Flow (m3/H)	1.1	1.4	2.1	1.1	1.4	2
Water Side Pressure Drop	≤20	≤30	≤45	≤20	≤30	≤45
Noise (dB(A))	≤51	≤53	≤56	≤51	≤53	≤56
Unit Dimension (mm)	680*680*870	680*680*870	680*680*870	680*680*870	680*680*870	680*680*870
Weight (KG)	101	109	115	103	111	118

R134A Commercial EVI & ON/OFF High Water Temp. Air to Water Heat Pump Water Heater

Model	WHP050HW.3N-R1+	WHP060HW.3N-R1+	WHP070HW.3N-R1+	WHP100HW.3N-R1+	WHP120HW.3N-R1+	WHP130HW.3N-R1+
Heating Performance Condition: A20/15°C, W 15°C ~ 55°C;						
Heating Capacity (KW)	14.6	17.3	18.5	29.2	34.6	37
Rated Input Power (KW)	3.47	4.1	4.45	6.94	8.2	8.9
COP (W/W)	4.21	4.22	4.16	4.21	4.22	4.16
Hot Water Capacity (L/H)	313	371	396	626	741	793
Heating Performance Condition: A 20/15°C, W 15°C ~ 75°C;						
Heating Capacity (KW)	13.8	16.3	17.5	27.6	32.6	35
Heating Performance Condition: A 7/6°C, W 9°C ~ 75°C;						
Heating Capacity (KW)	10.4	12.3	13.1	20.8	24.6	26.2
Heating Performance Condition: A -12/-14°C, W 6°C ~ 75°C;						
Heating Capacity (KW)	6.45	7.61	8.15	12.9	15.21	16.3
Max Input Power (kW)	5.22	6.13	6.56	10.44	12.26	13.12
Max Input Current (A)	7.9	9.3	10	15.9	18.6	19.9
Power Supply	380V/3PH/50HZ					
Electric Shock Protection Grade	I					
Waterproof Grade	IPX4					
Max. Heating Water Temp.℃	75℃					
Operating Ambient Temp.℃	-25℃~45℃					
Compressor	Invotech - EVI Scroll					
Refrigerant	R134A					
Heat exchanger	High efficient tank&coil type heat exchanger					
Fan	High efficiency axial flow fan					
Inlet/Outlet Pipe Size (mm)	DN25	DN25	DN25	DN40	DN40	DN40
Min. Water Flow (m3/H)	2.5	3	3.2	5	6	6.4
Water Side Pressure Drop	≤50	≤50	≤55	≤60	≤60	≤65
Noise (dB(A))	≤56	≤56	≤56	≤60	≤60	≤60
Unit Dimension (mm)	770*770*780	770*770*780	770*770*780	1500*753*1080	1500*753*1080	1510*810*1530
Weight (KG)	140	152	165	340	365	400

Model	WHP180HW.3N-R1+	WHP200HW.3N-R1+	WHP250HW.3N-R1+	WHP300HW.3N-R1+
Heating Performance Condition: A20/15°C, W 15°C ~ 55°C;				
Heating Capacity (KW)	51.2	58.8	66.7	89.4
Rated Input Power (KW)	12.3	14.6	16.5	22.3
COP (W/W)	4.16	4.03	4.04	4.01
Hot Water Capacity (L/H)	1097	1260	1429	1916
Heating Performance Condition: A 20/15°C, W 15°C ~ 75°C;				
Heating Capacity (KW)	24.2	55.6	63	83.2
Heating Performance Condition: A 7/6°C, W 9°C ~ 75°C;				
Heating Capacity (KW)	19	44	50	63.6
Heating Performance Condition: A -12/-14°C, W 6°C ~ 75°C;				
Heating Capacity (KW)	11.3	26	29.4	42
Max Input Power (A)	9.1	20.8	23.6	39.2
Max Input Current (A)	13.8	31.6	35.9	59.6
Power Supply	380V/3PH/50HZ			
Electric Shock Protection Grade	I			
Waterproof Grade	IPX4			
Max. Heating Water Temp.℃	75℃			
Operating Ambient Temp.℃	-25℃~45℃			
Compressor	Invotech - EVI Scroll			
Refrigerant	R134A			
Heat exchanger	High efficient tank&coil type heat exchanger			
Fan	High efficiency axial flow fan			
Inlet/Outlet Pipe Size (mm)	DN50	DN50	DN50	DN65
Min. Water Flow (m3/H)	8.8	10.1	11.5	15.4
Water Side Pressure Drop	≤65	≤65	≤70	≤75
Noise (dB(A))	≤64	≤64	≤65	≤65
Unit Dimension (mm)	1850*1000*2000	1850*1000*2000	2000*1000*1850	2200*1100*2210
Weight (KG)	670	680	860	930

HEAT PUMPS BUFFER / DHW TANKS



Heat Pump Buffer Water Tank 30~80 Liters					
Model	IPWT 30	IPWT 50	IPWT 60	IPWT 80	
Capacity	30 L	50L	60 L	80 L	
Inner Tank Diameter	Φ370 mm				
Outer Tank Diameter	φ470 mm				
Inner Tank Material	SUS 304 -1.2mm				
	Working Pressure Max. 6 bar , Working Temperature Max. 90°C				
Outer Tank Material	Painted Galvanized Steel - 0.5mm				
Insulation Layer	High Density Polyurethane 50mm				
Circulation Connection	G1.25" * 4				
Unit Size	470*370 mm	470*560 mm	470*650 mm	470*840 mm	
Package Size	520*520*450 mm	520*520*640 mm	520*520*730 mm	520*520*920 mm	
20GP/40HQ Loading Qty	220 / 550 Sets	154 / 396 Sets	140 / 340 Sets	112 / 272 Sets	
Accessories	Electric Heater, Air vent Valve, Safe Valve, Pressure Gage, Water Refill Valve - Optional				
Heating Coil	Heat Exchanger Coil for Solar Heating System or Gas Boiler - Optional				
Heat Pump Buffer Water Tank 100~180 Liters					
Model	IPWT 100	IPWT 120	IPWT 150	IPWT 180	
Capacity	100 L	120 L	150 L	180 L	
Inner Tank Diameter	Φ370 mm				
Outer Tank Diameter	φ470 mm				
Inner Tank Material	SUS 304 -1.2mm				
	Working Pressure Max. 6 bar , Working Temperature Max. 90°C				
Outer Tank Material	Painted Galvanized Steel - 0.5mm				
Insulation Layer	High Density Polyurethane 50mm				
Circulation Connection	G1.5" * 4				
Unit Size	470*1020 mm	470*1210 mm	470*1470 mm	470*1750mm	
Package Size	520*520*1100 mm	520*520*1290 mm	520*520*1550 mm	520*520*1830 mm	
20GP/40HQ Loading Qty	93 / 226 Sets	76 / 176 Sets	66 / 161 Sets	58 / 141 Sets	
Accessories	Electric Heater, Air vent Valve, Safe Valve, Pressure Gage, Water Refill Valve - Optional				
Heating Coil	Heat Exchanger Coil for Solar Heating System or Gas Boiler - Optional				
Heat Pump Buffer Water Tank 200~500 Liters					
Model	IPWT 200	IPWT 250	IPWT 300	IPWT 400	IPWT 500
Capacity	200 L	250 L	300L	400 L	500 L
Inner Tank Diameter	Φ440 mm	φ470 mm	φ470 mm	550 mm	φ600 mm
Outer Tank Diameter	φ540 mm	φ570 mm	φ570 mm	650 mm	φ700 mm
Inner Tank Material	SUS 304 -1.5mm			SUS 304 -2.0mm	
	Working Pressure Max. 6 bar , Working Temperature Max. 90°C				
Outer Tank Material	Painted Galvanized Steel - 0.5mm				
Insulation Layer	High Density Polyurethane 50mm				
Circulation Connection	G1.5" * 4		G2" * 4		
Unit Size	540*1500 mm	570*1560 mm	570*1840 mm	650*1890 mm	700*1890 mm
Package Size	600*600*1580 mm	620*620*1640 mm	620*620*1920 mm	710*710*1970 mm	760*760*1970 mm
20GP/40HQ Loading Qty	58 /118 Sets	36 / 76 Sets	36 / 76 Sets	34 / 69 Sets	34 / 69 Sets
Accessories	Electric Heater, Air vent Valve, Safe Valve, Pressure Gage, Water Refill Valve - Optional				
Heating Coil	Heat Exchanger Coil for Solar Heating System or Gas Boiler - Optional				
Heat Pump Buffer Water Tank 600~1000 Liters					
Model	IPWT 600	IPWT 700	IPWT 800	IPWT 900	IPWT 1000
Capacity	600 L	700 L	800 L	900 L	1000 L
Inner Tank Diameter	650 mm	700 mm	750 mm	800 mm	850 mm
Outer Tank Diameter	750 mm	800 mm	850 mm	900 mm	950 mm
Inner Tank Material	SUS 304 -2.0mm			SUS 304 -2.5mm	
	Working Pressure Max. 6 bar , Woking Temperature Max. 90°C				
Outer Tank Material	Painted Galvanized Steel - 0.6mm				
Insulation Layer	High Density Polyurethane 50mm				
Circulation Connection	G1.5" * 8		G2" * 8		
Unit Size	750*2000 mm	800*2000 mm	850*2000 mm	900*2000 mm	950*2000 mm
Package Size	820*820*2150 mm	870*870*2150 mm	920*920*2150 mm	970*970*2150 mm	1020*1020*2150 mm
20GP/40HQ Loading Qty	14 / 28 Sets	12 / 26 Sets	12 / 25 Sets	12 / 24 Sets	10 / 22 Sets
Accessories	Electric Heater, Airvent Valve, Safe Valve, Pressure Gage, Water Refill Valve - Optional				
Optional Coil	For Solar Heating System or Boiler or Heating Exchange - Optional				
Remark : The tank diameter, tank height, connections quantity and size are allowed to be customized					