

Air to Water Heat Pump

EVI Full DC Inverter Model



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R32 REFRIGERANT HEAT PUMP CATALOGUE

AKL heat pump LKH and DAH Series products use green R32 refrigerant. The R32 refrigerant is the best combination of economy, safety, environmental protection and reliability. The R32 refrigerant improves the efficiency of the heat pump system and further reduces emissions. R32 refrigerant is the current trend of heat pump industry, and has been widely used in the market.

Refrigerant
R32 VS R410A

75%

Reduce global impact
with R32 heating

R32 Main characteristics of refrigerant

Environmental protection

The R32 refrigerant has a GWP of 675, which is one of the lowest GWP products available. It also does not damage the ozone layer and has a 75% lower global warming impact than R410A.

Security

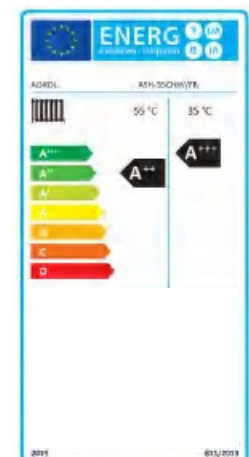
R32 refrigerant has low toxicity and is not flammable. Even if a system leak occurs, as long as it does not come into contact with an open flame, there is no risk to life and health.

The Erp directive indicates the energy efficiency rating of AKL heat pumps

Energy efficiency rating

Heat pump products sold in the EU market are labeled with energy. This is regulated by EU Directive 2010/30/EU. The label informs the user about the energy efficiency of the product. Energy efficiency is expressed by seasonal space heating efficiency. This value is based on the seasonal performance coefficient (SCOP).

The ErP instruction indicates the energy efficiency rating of the AKL heat pump
Achieve A+++ energy efficiency rating at 35°C water temperature
Achieve A++ energy efficiency rating at 55°C water temperature



EVI DC INVERTER COMPRESSOR



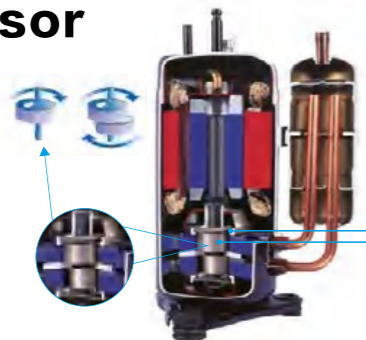
Inverter II Compressor

INVERTER II COMPRESSOR

The DC inverter technology in the AKL units reduces power consumption, which is related to the reduction of room cooling and heating costs. Its use translates to the quiet operation of the unit and faster achievement of the desired temperature. By using durable and high-pressure resistant materials, the compressor in AKL heat pumps is extremely reliable. In addition, which is why it can operate in extreme conditions in 24-hour mode and reach temperatures of up to 60°C.

Twin Rotary Compressor

The high performance of the compressor ensures the highest efficiency. The unique design minimizes vibration of moving parts and effectively reduces noise levels.



Better balance and very low vibration:

Double eccentric CAM
2 balance blocks

Compressor drive technology optimization:

Extremely strong bearings.
Compact design



DC DC Inverter Fan Motor

Dc inverter fan motor, according to the running state of the system, to achieve stepless speed regulation, reduce energy consumption. Large diameter low noise fan blades reduce operating noise and ensure that the system is always in optimal condition.



DC drive plate



Intelligent IPM DC frequency conversion chip realizes the automatic adjustment and intelligent control of high and low frequency operation of compressor, and comprehensively improves the stability and high energy efficiency of the system.

Pressure Sensor

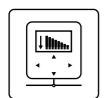


The Sensata Pressure Sensor, built with a ceramic core, is corrosion resistant, and the system pressure is converted into a signal source to ensure stable operation of the system.

DC inverter Water pump

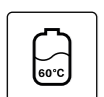
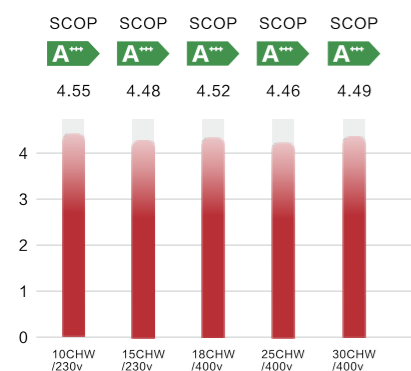
DC inverter efficient shielding type circulating water pump, high efficiency, energy consumption is 20% lower than the previous products, noise is 30% lower than the previous fixed frequency water pump, quiet energy saving, to ensure the long-term use of the unit reliable operation.





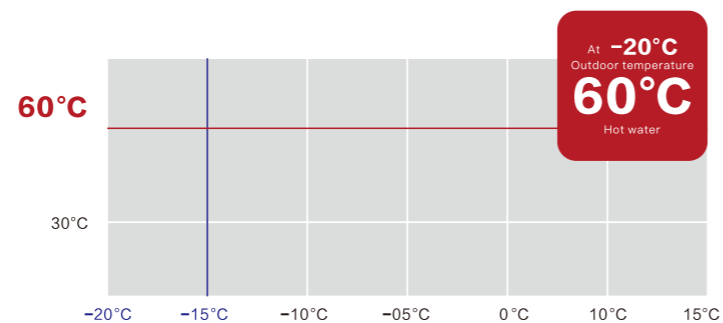
High Scop

The data were checked in accordance with EN14825 in a SGS approved low temperature air – water heat pump laboratory. And issued the ErP energy efficiency test report.



High Water Temperature

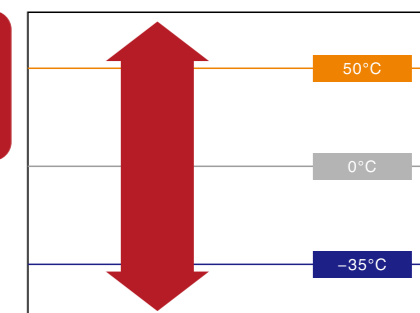
Without the use of electric auxiliary heating, outdoor temperature -20°C environment heating can reach the highest temperature of 60°C .



Wide-Range Operation

Low temperature DC inverter compressor, extended heat exchanger, optimized system design, A K L heat pump can operate in the outdoor ambient temperature of -30°C ~ 50°C .

Down to
 -30°C
Outdoor temperature





Heated floor

Inside, the low temperature geothermal medium creates a good temperature gradient from the soles of the feet to the head, making people feel warm feet and cold head. The comfort principle of "warm feet and cool feet" in traditional Chinese medicine is supported by radiant floor heating. It is the most comfortable way to heat your home and a representative of the contemporary quality of life.



Control By Wifi As Standard

AKL devices include a number of features that enhance user comfort. For instance, new WI-FI control choices have been added to make managing a heat pump easier and more convenient than ever before.

Utilizing a smart phone or tablet application, remote control features include monitoring current device status, zone switching supply, and temperature management. displaying error details showing current energy use.



Weather-Responsive Control

Climate curves –32 Meteorological temperature curves are pre-set as the norm, and the water temperature is automatically adjusted based on the outside temperature. In order to accommodate various temperature requirements, custom curves are also available.



Design Innovation For Lower Noise Level

When employing AKL heat pumps, complete comfort is guaranteed by the use of inverter compressors in outdoor units and the incredibly silent operation. The outdoor unit's small size, strong performance, and low noise level.









Security Of Use

The purpose of the intelligent automation system is to protect the heat pump against damage. the use of special explosion-proof electronic systems, maximizes operational safety, allowing the stable use of ecological R32 refrigerant, which is not only particularly environmentally friendly but also more efficient under extreme conditions.

Range of the devices



CAPACITY (kW) A7W35					
Split Type Heat Pump	<p>10kw</p>  <p>LKH-10CHW/VE</p>	<p>15kw</p>  <p>LKH-15CHW/VE</p>	<p>18kw</p>  <p>LKH-18CHW/VES</p>	<p>25kw</p>  <p>LKH-25CHW/VES</p>	<p>30kw</p>  <p>LKH-30CHW/VES</p>
Monobloc Type Heat Pump	<p>10kw</p>  <p>DAH-10CHW/VR</p>	<p>15kw</p>  <p>DAH-15CHW/VR</p>	<p>18kw</p>  <p>DAH-18CHW/VRS</p>	<p>25kw</p>  <p>DAH-25CHW/VRS</p>	<p>30kw</p>  <p>DAH-30CHW/VRS</p>

Split Type Heat Pump



Function

- a. Heating mode
- b. Hot water mode
- c. Cooling mode
- d. Heating and hot water modes
- e. Cooling and hot water modes

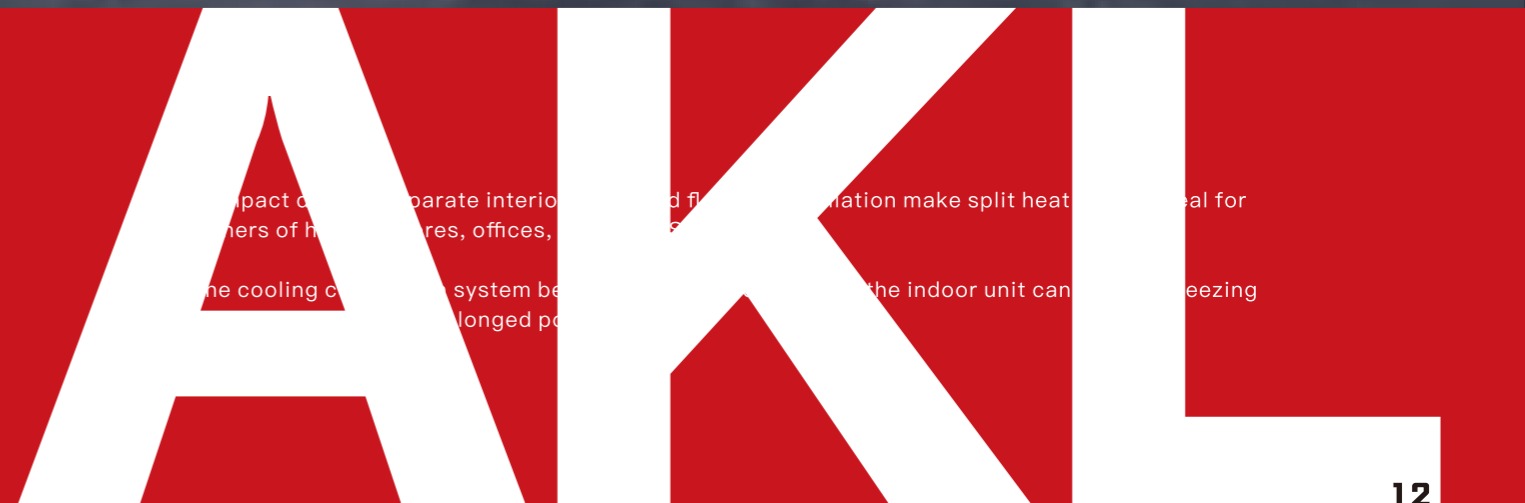
Domestic hot water is preferred when heating and hot water modes are selected

The main components of the split indoor unit include:

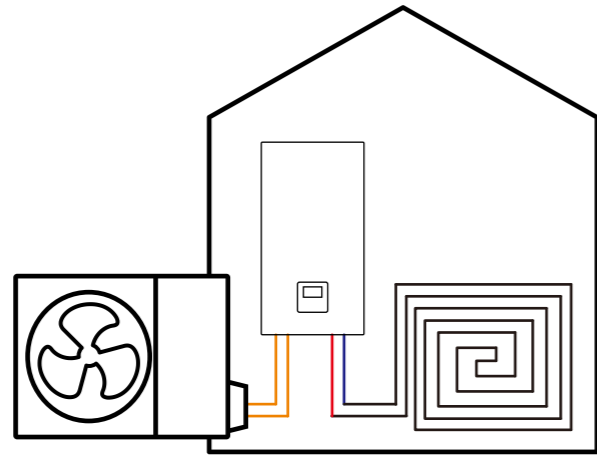
Water pump, differential pressure water flow switch, electric three-way valve, controller, electrical parts, brazed plate heat exchanger, auxiliary heating and other parts.

Features Of Split Heat Pump

- ★ Split design, to meet the cold areas in winter heating, summer refrigeration and domestic hot water demand all year round.
- ★ The indoor and outdoor units are connected by copper pipe, which is fashionable in design, compact in structure, multiple sound insulation protection and low noise in operation.
- ★ Simple, flexible and convenient installation, indoor unit can be installed in the kitchen, bathroom or basement. Making sure to reduce energy loss can also prevent water pipes from freezing in the cold winter and basking in the sun in the hot summer.



Split Type Heat Pump



Air-water heat pump for comfortable heating. Hot water and cooling

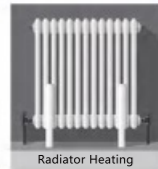
AKL heat pump can realize more types of heating modes, such as floor heating, radiator, central air conditioning, floor heating + radiator + central air conditioning, as well as intelligent operation mode, can connect a variety of terminal equipment. Use the rapid heating system, which combines the floor heating + radiator + central air conditioning, after the temperature reaches the floor heating and radiator to maintain a comfortable temperature in the room.

35°C



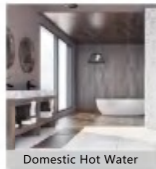
Floor Heating

55°C



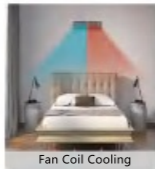
Radiator Heating

60°C

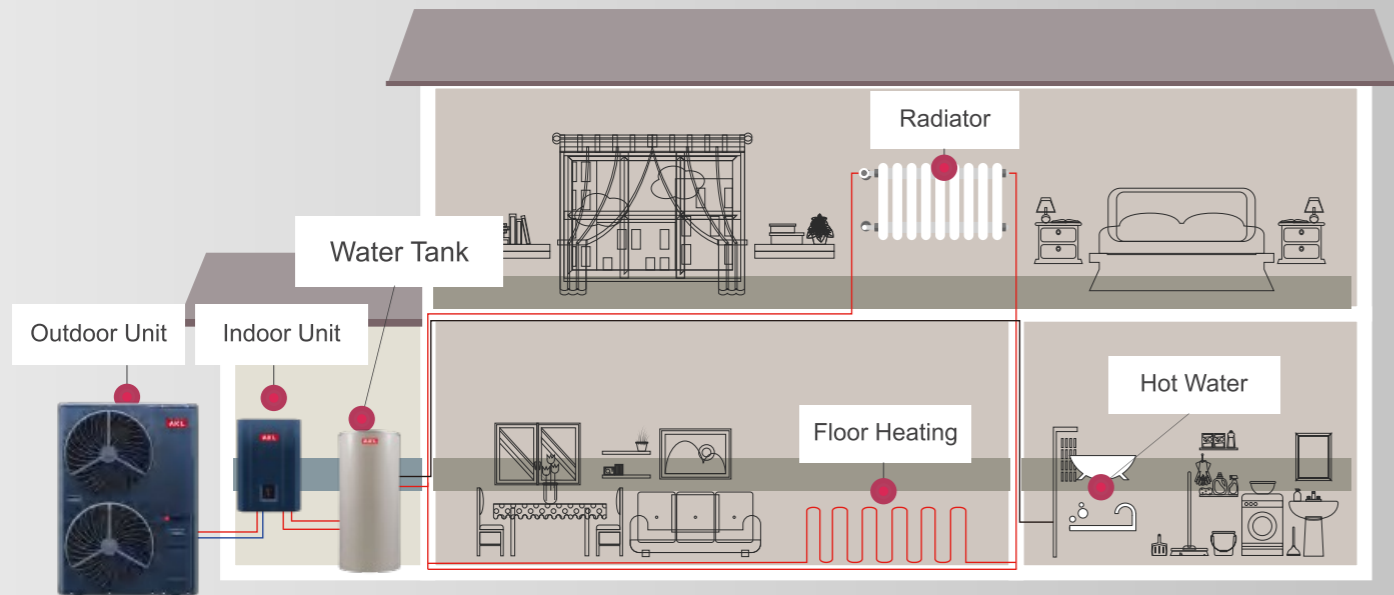


Domestic Hot Water

7°C



Fan Coil Cooling



Note: Reference only



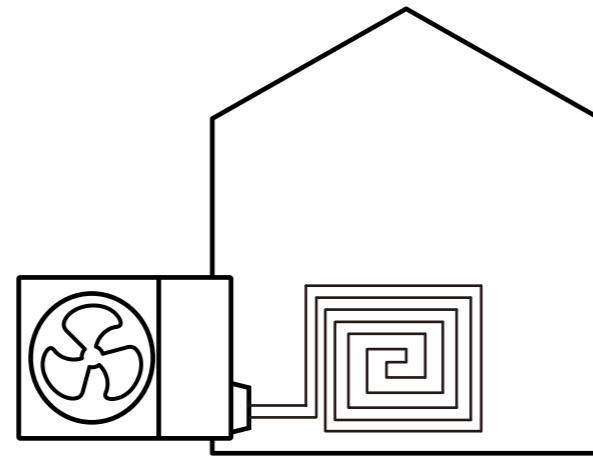
Model		LKH-10CHW/VE	LKH-15CHW/VE	LKH-18CHW/VE	LKH-25CHW/VE	LKH-30CHW/VE	
Power Supply	V/Hz	220-240/50	220-240/50	380-415/50	380-415/50	380-415/50	
ErP Level	35°C	A+++	A+++	A+++	A+++	A+++	
ErP Level	55°C	A++	A++	A++	A++	A++	
Nominal Heating Capacity(A7°C/W35°C)	kW	10	15	18	25	30	
Heating (A7°C/6°C) (W30°C-35°C)	Heating Capacity Range	kW	3.54-10.50	5.35-15.8	5.86-18.20	9.43-25.30	11.20-30.10
	Heating Input Power Range	kW	0.75-2.51	1.12-3.73	1.24-4.34	1.99-5.97	2.39-7.49
	COP Range	w/w	4.72-4.18	4.76-4.24	4.71-4.19	4.75-4.24	4.68-4.02
Heating (A7°C/6°C) (W50°C-55°C)	Heating Capacity Range	kW	3.25-8.95	4.82-13.65	5.56-15.80	8.54-22.30	10.50-26.40
	Heating Input Power Range	kW	0.87-3.54	1.28-5.29	1.49-6.22	2.23-8.71	2.85-11.06
	COP Range	w/w	3.74-2.53	3.78-2.58	3.73-2.54	3.83-2.56	3.69-2.48
Hot Water (A20°C/15°C) (W15°C-55°C)	Heating Capacity Range	kW	4.25-11.82	6.45-18.94	6.94-20.20	11.53-30.32	13.45-35.85
	Heating Input Power Range	kW	0.85-2.83	1.26-4.47	1.37-4.99	2.25-7.34	2.73-9.24
	COP Range	w/w	5.02-4.17	5.10-4.24	5.08-4.05	5.12-4.13	4.92-3.88
Cooling (A35°C/24°C) (W12°C-7°C)	Cooling Capacity Range	kW	3.28-8.20	5.85-12.30	6.15-13.10	9.40-18.50	11.50-22.40
	Cooling Input Power Range	kW	1.10-3.24	1.89-4.52	2.04-4.91	3.08-6.83	3.89-8.89
	EER Range	w/w	2.98-2.53	3.10-2.72	3.02-2.67	3.05-2.71	2.96-2.52
Max.Rated Input Power	kW/h	7.1	9.1	10.2	13.1	15.8	
Max.Pressure at high Pressure Side	Mpa	4.2	4.2	4.2	4.2	4.2	
Max.Pressure at low Pressure Side	Mpa	2.2	2.2	2.2	2.2	2.2	
Water Flowrate	m³/h	1.2	1.89	2.06	3.1	3.96	
Refrigerant Type / Input	kg	R32 /1.5	R32 /2.3	R32 /2.3	R32 /3.5	R32 /3.8	
CO2 Equivalent	Tonnes	1.02	1.56	1.56	2.37	2.57	
Compressor	Type	DC Inverter+EV1					
Fan Motor	Type	DC Inverter					
Water Pump	Type	DC Inverter					
Heating & Hot Water Temp	°C	30-60					
Outdoor Temperature limit	°C	-30-45					
Indoor Unit	Auxiliary Heating Power Input	kW	3	3	3	3	
	Water Connection	Inch	1.2/DN32	1.2/DN32	1.2/DN32	1.2/DN32	1.2/DN32
	Copper Pipe Connection	Inch	3/8+5/8	1/2+3/4	1/2+3/4	5/8+3/4	5/8+3/4
	Noise Level	dB(A)	32	32	32	35	35
	Net Weight	kg	47	50	52	55	58
	Net Dimension(L*W*H)	mm	590*430*890	550*430*800	550*430*800	550*430*800	550*430*800
Outdoor Unit	Noise Level	dB(A)	55	57	58	62	63
	Net Weight	kg	75	102	110	151	164
	Net Dimension(L*W*H)	mm	1000x390x860	1000x390x1380	1000x390x1380	1200*430*1550	1200*430*1550

◆The technical data above is compliant with the guidelines specified in the following standards: EN 14511,EN 14825.
◆The above data is for reference only;specific data is subject to the product nameplate.

Monobloc Type Heat Pump

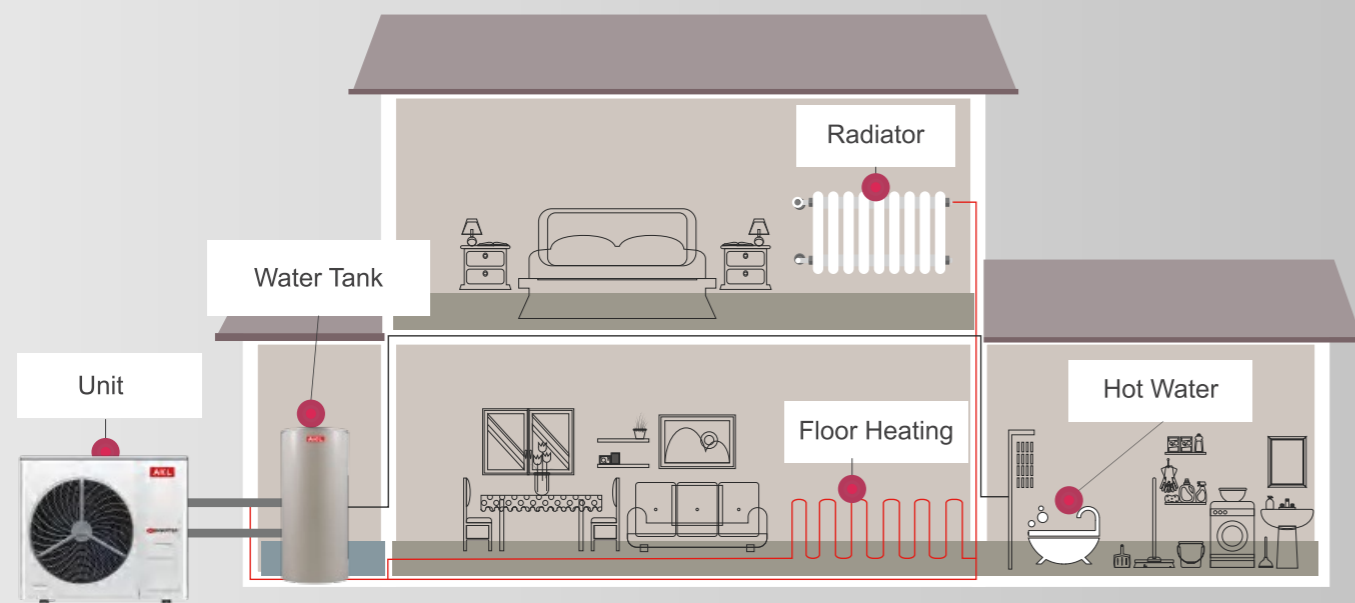
★ Integral equipment includes: low-temperature DC frequency conversion compressor, DC frequency conversion driving plate, DC frequency conversion motor, DC frequency conversion water pump, differential pressure water switch, electronic expansion valve, four-way valve, pressure sensor, hydrophilic aluminum foil and inner slot copper evaporator, brazed plate heat exchanger, deicing heater and other components.

Monobloc Type Heat Pump



Features of Monobloc heat pump

- ★ Monoblock design, easy to install, flexible and convenient.
- ★ Fashion design, compact structure, multiple sound insulation protection, low running noise.
- ★ Meet the cold area heating in winter, summer refrigeration and year-round domestic hot water demand.



Note: Reference only



Model		DAH-10CHW/VR	DAH-15CHW/VR	DAH-18CHW/VRS	DAH-25CHW/VRS	DAH-30CHW/VRS	
Power Supply	V/Hz	220~240/50	220~240/50	380~415/50	380~415/50	380~415/50	
ErP Level	35°C	A+++	A+++	A+++	A+++	A+++	
ErP Level	55°C	A++	A++	A++	A++	A++	
Nominal Heating Capacity(A7°C/W35°C)	kW	10	15	18	25	30	
Heating (A7°C/6°C) (W30°C~35°C)	Heating Capacity Range	kW	3.54~10.50	5.35~15.8	5.86~18.20	9.43~25.30	11.20~30.10
	Heating Input Power Range	kW	0.75~2.51	1.12~3.73	1.24~4.34	1.99~5.97	2.39~7.49
	COP Range	w/w	4.72~4.18	4.76~4.24	4.71~4.19	4.75~4.24	4.68~4.02
Heating (A7°C/6°C) (W50°C~55°C)	Heating Capacity Range	kW	3.25~8.95	4.82~13.65	5.56~15.80	8.54~22.30	10.50~26.40
	Heating Input Power Range	kW	0.87~3.54	1.28~5.29	1.49~6.22	2.23~8.71	2.85~11.06
	COP Range	w/w	3.74~2.53	3.78~2.58	3.73~2.54	3.83~2.56	3.69~2.48
Hot Water (A20°C/15°C) (W15°C~55°C)	Heating Capacity Range	kW	4.25~11.82	6.45~18.94	6.94~20.20	11.53~30.32	13.45~35.85
	Heating Input Power Range	kW	0.85~2.83	1.26~4.47	1.37~4.99	2.25~7.34	2.73~9.24
	COP Range	w/w	5.02~4.17	5.10~4.24	5.08~4.05	5.12~4.13	4.92~3.88
Cooling (A35°C/24°C) (W12°C~7°C)	Cooling Capacity Range	kW	3.28~8.20	5.85~12.30	6.15~13.10	9.40~18.50	11.50~22.40
	Cooling Input Power Range	kW	1.10~3.24	1.89~4.52	2.04~4.91	3.08~6.83	3.89~8.89
	EER Range	w/w	2.98~2.53	3.10~2.72	3.02~2.67	3.05~2.71	2.96~2.52
Max.Rated Input Power	kW/h	4.1	6.2	7.2	10.1	12.8	
Max.Pressure at high Pressure Side	Mpa	4.2	4.2	4.2	4.2	4.2	
Max.Pressure at low Pressure Side	Mpa	2.2	2.2	2.2	2.2	2.2	
Water Flowrate	m³/h	1.2	1.89	2.06	3.1	3.96	
Refrigerant Type / Input	kg	R32 /1.5	R32 /2.3	R32 /2.3	R32 /3.5	R32 /3.8	
CO2 Equivalent	Tonnes	1.02	1.56	1.56	2.37	2.57	
Compressor	Type	DC Inverter+EVI					
Fan Motor	Type	DC Inverter					
Water Pump	Type	DC Inverter					
Heating & Hot Water Temp	°C	30~60					
Outdoor Temperature limit	°C	-30~45					
Water Connection	Inch	1.2/DN32	1.2/DN32	1.2/DN32	1.2/DN32	1.2/DN32	
Noise Level	dB(A)	55	57	58	62	63	
Net Weight	kg	86	115	123	162	175	
Net Dimension(L*W*H)	mm	1000x390x860	1000x390x1380	1000x390x1380	1200*430*1550	1200*430*1550	

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