

Heat Pump

Air to water

► Feature



Saving and Green



Healthy and Comfortable



Total solution



Intelligent operation

► Authentication



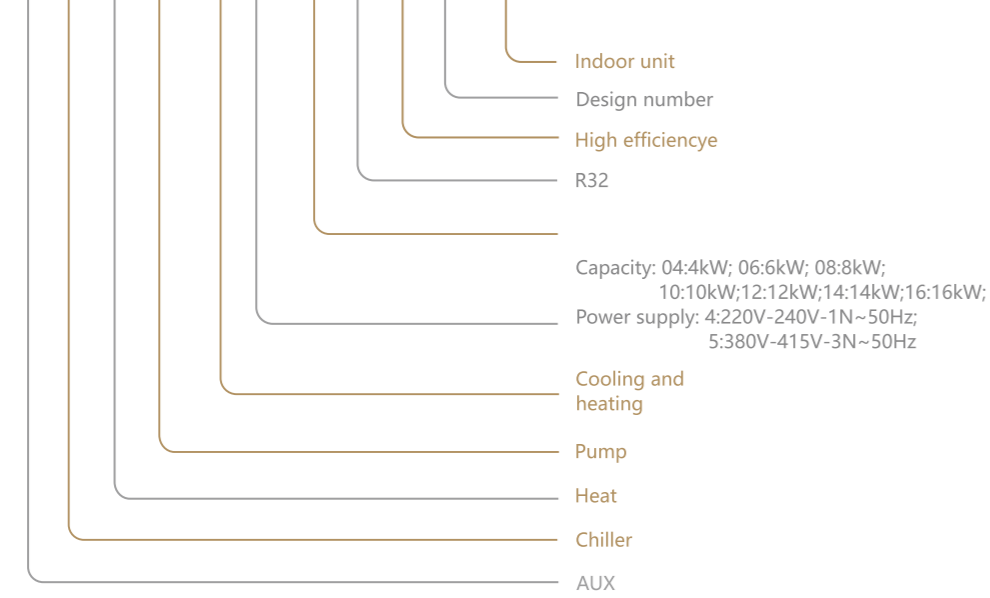
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Nomenclature- Heat Pump

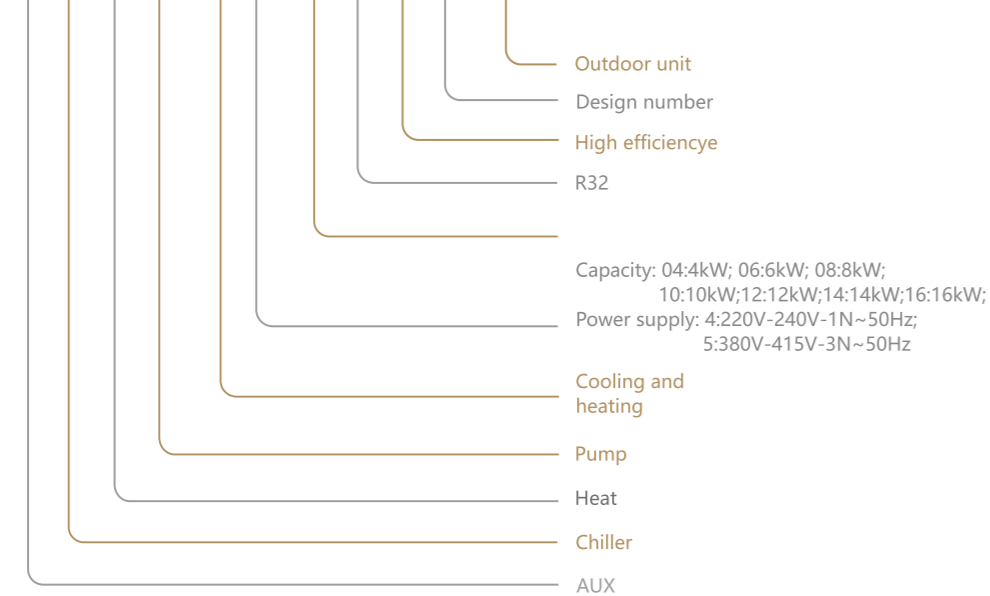
Indoor Unit

A C H P - H 04 / 4 R 3 H A - I





Outdoor Unit

A C H P - H 04 / 4 R 3 H A - O



HEAT PUMP MONOBLOCK

Series	4KW	6KW	8KW	10KW	12KW	14KW	16KW
Monoblock 	●	●	●	●	●	●	●
Split type 	●	●	●	●	●	●	●

► New integral outdoor unit

1. There is no need to install refrigerant pipeline; hot and cold water can be directly delivered to the room
2. The electric control box is placed on the top; after removing the top cover plate, the maintenance operation can be carried out, which is convenient
3. With built-in pressure relief valve, pressure will be relieved automatically when the water pressure is too high.

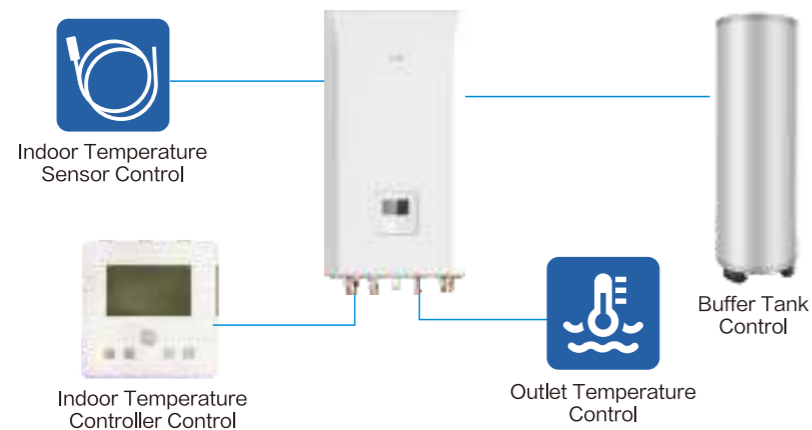


► Optional electric heating

With optional electric heating, users can flexibly choose electric heating as a supplement to the heating capacity of the heat pump according to the local climate and own habits.

► Four temperature control modes are available

Users can choose one of them (outlet water temperature control, indoor temperature sensor control, indoor temperature controller control, and buffer tank control) according to the actual installation and habits.



Specification

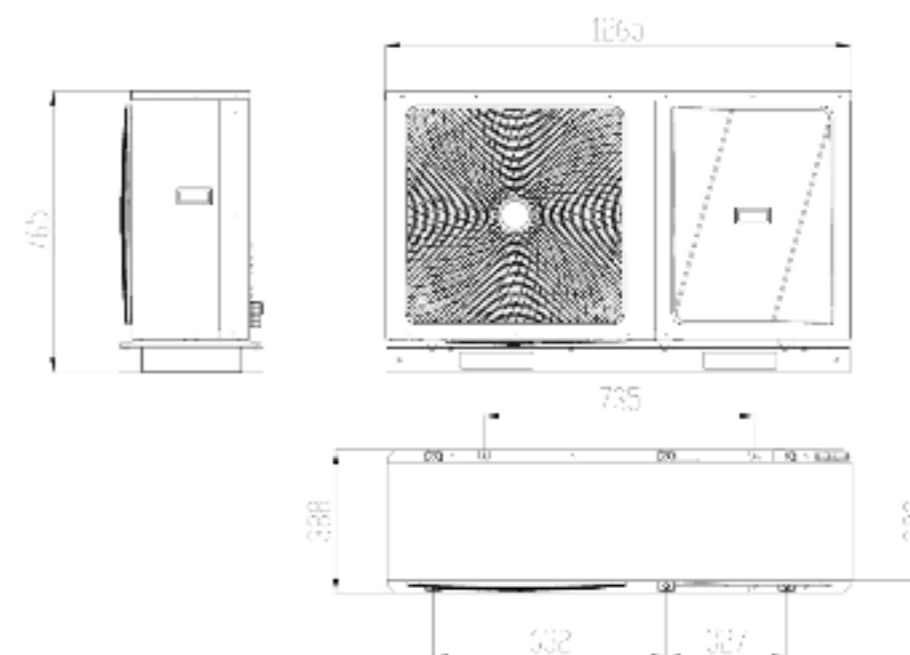
Model name		4kW	6kW	8kW	10kW	
Model		ACHP-H04/4R3HA-M	ACHP-H06/4R3HA-M	ACHP-H08/4R3HA-M	ACHP-H10/4R3HA-M	
Power supply		V/Ph/H 220-240/1/50				
Heating2	Capacity	KW	4.3	6.35	8.4	10
	Rated input	KW	0.83	1.28	1.62	2
	COP		5.2	4.95	5.2	5
Heating3	Capacity	KW	4.36	6.4	8.3	10
	Rated input	KW	1.47	2.13	2.60	3.23
	COP		2.96	3	3.19	3.1
Cooling4	Capacity	KW	4.5	6.6	8.45	10
	Rated input	KW	0.81	1.35	1.67	2.08
	EER		5.56	4.9	5.06	4.8
Cooling5	Capacity	KW	4.75	7.05	7.45	8.3
	Rated input	KW	1.40	2.35	2.20	2.52
	EER		3.4	3	3.39	3.3
Seasonal space heating energy efficiency class ⁷	LWT at 35 °C		A+++	A+++	A+++	A+++
	LWT at 55 °C		A++	A++	A++	A++
SCOP6	LWT at 35 °C		4.86	4.96	5.22	5.2
	LWT at 55 °C		3.32	3.53	3.37	3.5
plate heat exchanger	Dimension (W*H*D)	mm	331*117*70	331*117*70	331*117*87	331*117*87
	Heat exchange area	m ²	1.58	1.58	2.04	2.04
water pump	Pump head	m	9	9	9	9
	Max Flow	m ³ /h	4.5	4.5	4.5	4.5
	Adapter diameter		DN25	DN25	DN25	DN25
Sound pressure level		dB(A)	42	45	46	47
Sound power level		dB(A)	55	58	59	60
Packed dimensions (W×D×H)		mm	1330×428×930		1465×550×1095	
Body dimensions (W×D×H)		mm	1265×323×765		1385×520×933	
Net/Gross weight		kg	88/98		129/139	
Operating temperature range	Cooling	°C	-5 ~ 43			
	Heating	°C	-25 ~ 35			
	DHW	°C	-25 ~ 43			
Setting water temperature range	Cooling	°C	5 ~ 25			
	Heating	°C	12 ~ 65			
	DHW(tank)	°C	30 ~ 60			
Water circuit	Piping connections	inch	G1" BSP		G1" BSP	
	Safety valve set pressure	MPa	0.3			
	Flow switch	m ³ /h	0.36		0.6	
	Drainage pipe connection	mm	φ 25	φ 25	φ 25	φ 25
	Expansion tank Volume	L	8			
	Capacity of the back-up heater	kW	3			
Stuffing Quantity	40H/40/20	Unit	92/86/42	92/86/42	66/66/32	66/66/32

Note:
 1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811:2013; (EU) No 813:2013; OJ 2014/C 207/02:2014.
 2. Outdoor air temperature 7°C DB, 85% R.H.; EWT 30°C, LWT 35°C.
 3. Outdoor air temperature 7°C DB, 85% R.H.; EWT 47°C, LWT 55°C.
 4. Outdoor air temperature 35°C DB; EWT 23°C, LWT 18°C.
 5. Outdoor air temperature 35°C DB; EWT 12°C, LWT 7°C.
 6. Seasonal space heating energy efficiency class tested in average climate conditions.
 7. Test standard: EN12102-1
 8. Sound pressure level is the maximum value tested under the two conditions of Notes2 and Notes5.

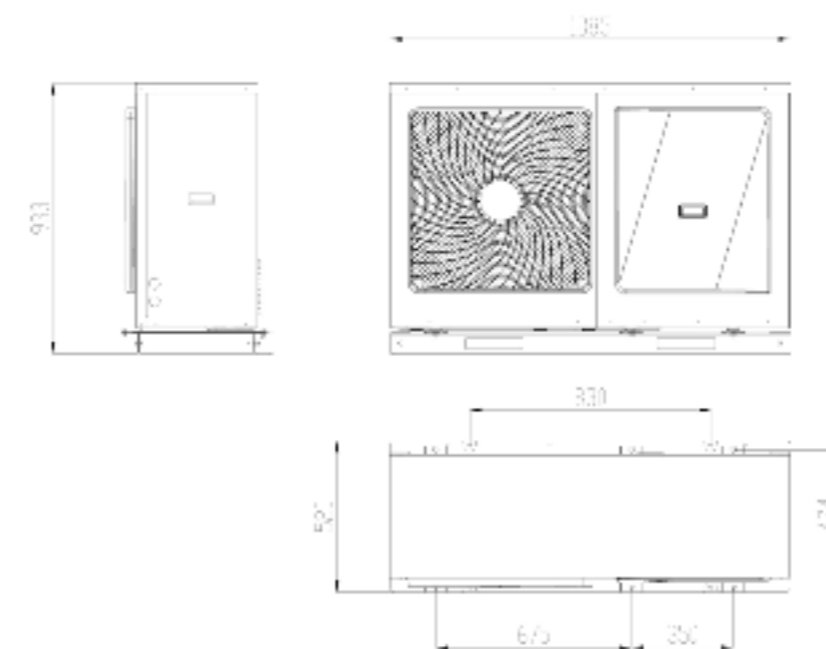
Model name		12kW	14kW	16kW	12kW	14kW	16W	
Model		ACHP-H12/4R3HA-M	ACHP-H14/4R3HA-M	ACHP-H16/4R3HA-M	ACHP-H12/5R3HA-M	ACHP-H14/5R3HA-M	ACHP-H16/5R3HA-M	
Power supply		V/Ph/H 220-240/1/50			380-415/3/50			
Heating2	Capacity	KW	12.2	14.5	16.1	12.2	14.5	16.1
	Rated input	KW	2.44	3.08	3.57	2.44	3.08	3.57
	COP		4.96	4.71	4.51	4.96	4.71	4.51
Heating3	Capacity	KW	12	14	16.1	12	14	16.1
	Rated input	KW	3.86	4.67	5.53	3.86	4.67	5.53
	COP		3.11	3	2.91	3.11	3	2.91
Cooling4	Capacity	KW	12	13.6	15	12	13.6	15
	Rated input	KW	3	3.78	4.41	3	3.78	4.41
	EER		4	3.6	3.4	4	3.6	3.4
Cooling5	Capacity	KW	11.7	12.8	14	11.7	12.8	14
	Rated input	KW	4.3	5.00	5.7	4.3	5.00	5.7
	EER		2.75	2.56	2.46	2.75	2.56	2.46
Seasonal space heating energy efficiency class ⁷	LWT at 35 °C		A+++	A+++	A+++	A+++	A+++	A+++
	LWT at 55 °C		A++	A++	A++	A++	A++	A++
SCOP6	LWT at 35 °C		4.82	4.71	4.63	4.82	4.71	4.63
	LWT at 55 °C		3.46	3.48	3.43	3.46	3.48	3.43
plate heat exchanger	Dimension (W*H*D)	mm	331*117*87	331*117*87	331*117*87	331*117*87	331*117*87	331*117*87
	Heat exchange area	m ²	2.04	2.04	2.04	2.04	2.04	2.04
water pump	Pump head	m	9	9	9	9	9	9
	Max Flow	m ³ /h	4.5	4.5	4.5	4.5	4.5	4.5
	Adapter diameter		DN25	DN25	DN25	DN25	DN25	DN25
Sound pressure level		dB(A)	52	52	55	52	52	55
Sound power level		dB(A)	65	65	68	65	65	68
Packed dimensions (WxDxH)		mm	1465x550x1095			1465x550x1095		
Body dimensions (WxDxH)		mm	1385x520x933			1385x520x933		
Net/Gross weight		kg	137/149			137/149		
Operating temperature range	Cooling	°C	-5 ~ 43			-5 ~ 43		
	Heating	°C	-25 ~ 35			-25 ~ 35		
	DHW	°C	-25 ~ 43			-25 ~ 43		
Setting water temperature range	Cooling	°C	5 ~ 25			5 ~ 25		
	Heating	°C	12 ~ 65			12 ~ 65		
	DHW(tank)	°C	30 ~ 60			30 ~ 60		
Water circuit	Piping connections	inch	G1" BSP			G1" BSP		
	Safety valve set pressure	MPa	0.3			0.3		
	Flow switch	m ³ /h	0.6			0.6		
	Drainage pipe connection	mm	φ 25			φ 25		
	Expansion tank Volume	L	8			8		
	Capacity of the back-up heater	kW	3			3		
Stuffing Quantity	40H/40/20	Unit	66/66/32			66/66/32		

Dimension

ACHP-HO4/4R3HA-M, ACHP-HO6/4R3HA-M



ACHP-H08/4R3HA-M, ACHP-H10/4R3HA-M, ACHP-H12/4R3HA-M
ACHP-H14/4R3HA-M, ACHP-H16/4R3HA-M



HEAT PUMP

SPLIT



► New integral outdoor unit

The dimension of the water module is 420×790×270

With hook design on the back, the water module can be directly hung on the wall

The electric control box can be rotated, and all parts can be accessed after the electric control box is opened

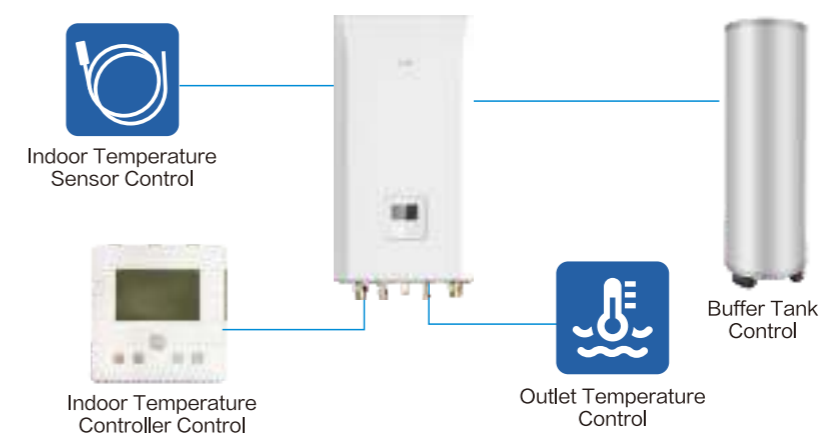
With built-in pressure relief valve, pressure will be relieved automatically when the water pressure is too high

► Built-in electric heating in hydrodynamic module

Built-in electric heating in the hydrodynamic module can be used as a supplement to the heating capacity of the heat pump.

► Four temperature control modes are available

Users can choose one of them (outlet water temperature control, indoor temperature sensor control, indoor temperature controller control, and buffer tank control) according to the actual installation and habits.



Specification-outdoor

Model name		4kW	6kW	8kW	10kW	12kW		
Model	outdoor	ACHP-H04/4R3HA-0	ACHP-H06/4R3HA-0	ACHP-H08/4R3HA-0	ACHP-H10/4R3HA-0	ACHP-H12/5R3HA-0		
ODU Power Supply	V~,Hz,Ph	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50		
ODU Max. Input Consumption	kW	4.14	4.14	4.47	4.47	9.2		
Heating2	Capacity	kW	4.3	6.25	8.4	10	12.2	
	Rated input	kW	0.83	1.25	1.62	2	2.44	
	COP		5.2	5	5.2	5	4.96	
Heating3	Capacity	kW	4.36	6.4	8.3	10	12	
	Rated input	kW	1.47	2.13	2.60	3.23	3.86	
	COP		2.96	3	3.19	3.1	3.11	
Cooling4	Capacity	kW	4.5	6.6	8.45	10	12	
	Rated input	kW	0.81	1.35	1.67	2.08	3	
	EER		5.56	4.9	5.06	4.8	4	
Cooling5	Capacity	kW	4.75	7.05	7.45	8.3	11.7	
	Rated input	kW	1.40	2.35	2.20	2.52	4.3	
	EER		3.4	3	3.39	3.3	2.75	
Seasonal space heating energy efficiency class7	LWT at 35 °C		A+++	A+++	A+++	A+++	A+++	
	LWT at 55 °C		A++	A++	A++	A++	A++	
SCOP6	LWT at 35 °C		4.86	4.96	5.22	5.2	4.82	
	LWT at 55 °C		3.32	3.53	3.37	3.5	3.46	
Air Flow Volume	m3/h	2800	2800	4000	4000	4650		
sound pressure level	H	dB(A)	38	38	45	48	49	
sound power level	H	dB(A)	56	58	58	61	64	
Dimension(WxDxH)	Net	mm	700x350x900	700x350x900	805x395x970	805x395x970	870x480x1060	
	Packing	mm	770x430x1020	770x430x1020	895x495x1105	895x495x1105	980x545x1100	
Weight	Net/Gross	kg	51/55	51/55	65/69	65/69	88/94	
	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52	
Refrigerant Piping	Gas Side	mm	15.88	15.88	15.88	15.88	15.88	
	MAX length	m	30	30	30	30	30	
	MIN length	m	2	2	2	2	2	
Installation height difference	ODU above	m	20	20	20	20	20	
	ODU below	m	20	20	20	20	20	
Operating temperature range	Cooling	°C	-5 ~ 52	-5 ~ 52	-5 ~ 52	-5 ~ 52	-5 ~ 52	
	Heating	°C	-25 ~ 35	-25 ~ 35	-25 ~ 35	-25 ~ 35	-25 ~ 35	
	DHW	°C	-25 ~ 43	-25 ~ 43	-25 ~ 43	-25 ~ 43	-25 ~ 43	
Stuffing Quantity	20/40/40H	Unit	87/183/183	87/183/183	44/96/144	44/96/144	40/84/84	
Energy efficiency label data	Colder	55 °C	kW	3	4	6	7	10
		35 °C	kW	5	6	7	8	11
	Average	55 °C	kW	6	6	7	8	12
		35 °C	kW	6	7	8	9	12
	Warmer	55 °C	kW	5	5	8	9	13
		35 °C	kW	6	6	8	9	11

- Note: 1. Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811:2013; (EU) No 813:2013; OJ 2014/C 207/02:2014.
 2. Outdoor air temperature 7°C DB, 85% R.H.; EWT 30°C, LWT 35°C.
 3. Outdoor air temperature 7°C DB, 85% R.H.; EWT 47°C, LWT 55°C.
 4. Outdoor air temperature 35°C DB; EWT 23°C, LWT 18°C.
 5. Outdoor air temperature 35°C DB; EWT 12°C, LWT 7°C.
 6. Seasonal space heating energy efficiency class tested in average climate conditions.
 7. Test standard: EN12102-1
 8. Sound pressure level is the maximum value tested under the two conditions of Notes2 and Notes5.

Model name		14kW	16kW	12kW	14kW	16kW		
Model	outdoor	ACHP-H14/5R3HA-0	ACHP-H16/5R3HA-0	ACHP-H12/5R3HA-0	ACHP-H14/5R3HA-0	ACHP-H16/5R3HA-0		
ODU Power Supply	V~,Hz,Ph	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50		
ODU Max. Input Consumption	kW	9.2	9.2	9.2	9.2	9.2		
Heating2	Capacity	kW	14.5	16.1	12.2	14.5	16.1	
	Rated input	kW	3.08	3.57	2.44	3.08	3.57	
	COP		4.71	4.51	4.96	4.71	4.51	
Heating3	Capacity	kW	14	16.1	12	14	16.1	
	Rated input	kW	4.67	5.53	3.86	4.67	5.53	
	COP		3	2.91	3.11	3	2.91	
Cooling4	Capacity	kW	13.6	15	12	13.6	15	
	Rated input	kW	3.78	4.41	3	3.78	4.41	
	EER		3.6	3.4	4	3.6	3.4	
Cooling5	Capacity	kW	12.8	14	11.7	12.8	14	
	Rated input	kW	5.00	5.7	4.3	5.00	5.7	
	EER		2.56	2.46	2.75	2.56	2.46	
Seasonal space heating energy efficiency class7	LWT at 35 °C		A+++	A+++	A+++	A+++	A+++	
	LWT at 55 °C		A++	A++	A++	A++	A++	
SCOP6	LWT at 35 °C		4.71	4.63	4.82	4.71	4.63	
	LWT at 55 °C		3.48	3.43	3.46	3.48	3.43	
Air Flow Volume	m3/h	4650	4650	4650	4650	4650		
sound pressure level	H	dB(A)	50	54	49	50	54	
sound power level	H	dB(A)	65	68	64	65	68	
Dimension(WxDxH)	Net	mm	870x480x1060	870x480x1060	870x480x1060	870x480x1060	870x480x1060	
	Packing	mm	980x545x1100	980x545x1100	980x545x1100	980x545x1100	980x545x1100	
Weight	Net/Gross	kg	88/94	88/94	88/94	88/94	88/94	
	Liquid Side	mm	9.52	9.52	9.52	9.52	9.52	
Refrigerant Piping	Gas Side	mm	15.88	15.88	15.88	15.88	15.88	
	MAX length	m	30	30	30	30	30	
	MIN length	m	2	2	2	2	2	
Installation height difference	ODU above	m	20	20	20	20	20	
	ODU below	m	20	20	20	20	20	
Operating temperature range	Cooling	°C	-5 ~ 52	-5 ~ 52	-5 ~ 52	-5 ~ 52	-5 ~ 52	
	Heating	°C	-25 ~ 35	-25 ~ 35	-25 ~ 35	-25 ~ 35	-25 ~ 35	
	DHW	°C	-25 ~ 43	-25 ~ 43	-25 ~ 43	-25 ~ 43	-25 ~ 43	
Stuffing Quantity	20/40/40H	Unit	40/84/84	40/84/84	40/84/84	40/84/84	40/84/84	
Energy efficiency label data	Colder	55 °C	kW	11	12	10	11	12
		35 °C	kW	13	14	11	13	14
	Average	55 °C	kW	14	14	12	14	14
		35 °C	kW	15	16	12	15	16
	Warmer	55 °C	kW	14	14	13	14	14
		35 °C	kW	12	13	11	12	13

Specification-indoor

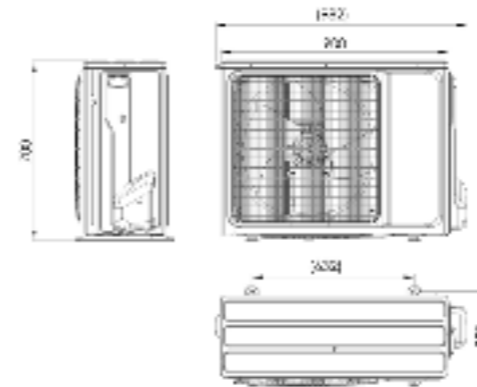
Model name		4kW	6kW	8kW	10kW
Model	Indoor	ACHP-H04/4R3HA-I	ACHP-H06/4R3HA-I	ACHP-H08/5R3HA-I	ACHP-H10/5R3HA-I
IDU Power Supply	V~,Hz,Ph	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50
IDU Max. Input Consumption	kW	3.09	3.09	9.09	9.09
plate heat exchanger	Dimension (W*H*D)	mm	331*117*70	331*117*70	331*117*87
	Heat exchange area	m ²	1.58	1.58	2.04
	Pump head	9m	9m	9m	9m
water pump	Max Flow	4.5m ³ /h	4.5m ³ /h	4.5m ³ /h	4.5m ³ /h
	Adapter diameter	DN25	DN25	DN25	DN25
	Sound Pressure Noise Level	dB(A)	30	30	31
Indoor Unit	Sound Power Noise Level	dB(A)	42	42	43
	Net Dimension (W*D*H)	mm	420×270×790	420×270×790	420×270×790
	Packing Dimension (W*D*H)	mm	515×1045×350	515×1045×350	515×1045×350
Setting water temperature range	Net/Gross Weight	Kg	38/44	38/44	39/45
	Cooling	°C	5 ~ 25	5 ~ 25	5 ~ 25
	Heating	°C	25 ~ 65	25 ~ 65	25 ~ 65
Water circuit	DHW(tank)	°C	25 ~ 60	25 ~ 60	25 ~ 60
	Piping connections	inch	R1"	R1"	R1"
	Safety valve set pressure	MPa	0.3	0.3	0.3
Refrigerant Pipe	Flow switch	m ³ /h	0.36	0.36	0.6
	Drainage pipe connection	mm	φ 25	φ 25	φ 25
	Expansion tank	L	8	8	8
Qty' per 20' & 40' & 40HQ	Capacity of the back-up heater	kW	3	3	9
	Liquid Side	mm	15.88	15.88	15.88
	Gas Side	mm	9.52	9.52	9.52
Drainage	mm	DN25	DN25	DN25	DN25

Model name		12kW	14kW	16kW
Model	Indoor	ACHP-H12/5R3HA-I	ACHP-H14/5R3HA-I	ACHP-H16/5R3HA-I
IDU Power Supply	V~,Hz,Ph	380-415/3/50	380-415/3/50	380-415/3/50
IDU Max. Input Consumption	kW	9.09	9.09	9.09
plate heat exchanger	Dimension (W*H*D)	mm	331*117*87	331*117*87
	Heat exchange area	m ²	2.04	2.04
	Pump head	9m	9m	9m
water pump	Max Flow	4.5m ³ /h	4.5m ³ /h	4.5m ³ /h
	Adapter diameter	DN25	DN25	DN25
	Sound Pressure Noise Level	dB(A)	31	31
Indoor Unit	Sound Power Noise Level	dB(A)	43	43
	Net Dimension (W*D*H)	mm	420×270×790	420×270×790
	Packing Dimension (W*D*H)	mm	515×1045×350	515×1045×350
Setting water temperature range	Net/Gross Weight	Kg	39/45	39/45
	Cooling	°C	5 ~ 25	5 ~ 25
	Heating	°C	25 ~ 65	25 ~ 65
Water circuit	DHW(tank)	°C	25 ~ 60	25 ~ 60
	Piping connections	inch	R1"	R1"
	Safety valve set pressure	MPa	0.3	0.3
Refrigerant Pipe	Flow switch	m ³ /h	0.6	0.6
	Drainage pipe connection	mm	φ 25	φ 25
	Expansion tank	L	8	8
Qty' per 20' & 40' & 40HQ	Capacity of the back-up heater	kW	9	9
	Liquid Side	mm	15.88	15.88
	Gas Side	mm	9.52	9.52
Drainage	mm	DN25	DN25	DN25

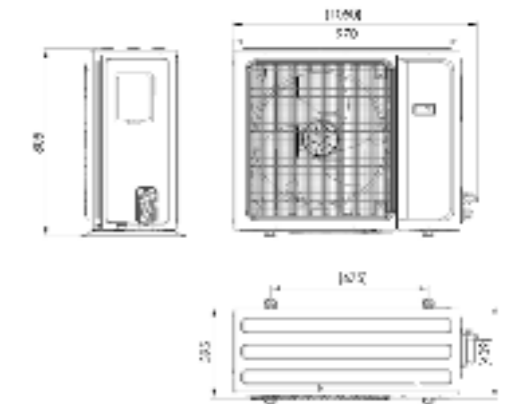
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 2. Outdoor air temperature 7°C DB, 85% R.H.; EWT 30°C, LWT 35°C.
 3. Outdoor air temperature 7°C DB, 85% R.H.; EWT 47°C, LWT 55°C.
 4. Outdoor air temperature 35°C DB; EWT 23°C, LWT 18°C.
 5. Outdoor air temperature 35°C DB; EWT 12°C, LWT 7°C.
 6. Seasonal space heating energy efficiency class tested in average climate conditions.
 7. Test standard: EN12102-1
 8. Sound pressure level is the maximum value tested under the two conditions of Notes2 and Notes5.

Dimension

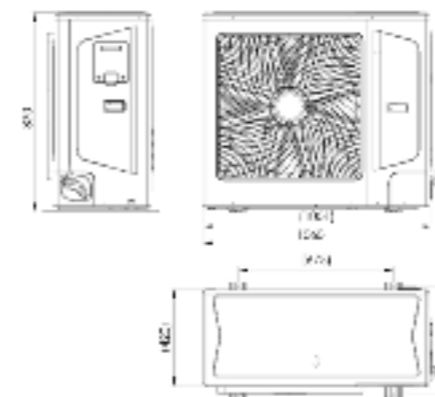
ACHP-H04/4R3HA-O, ACHP-H06/4R3HA-O



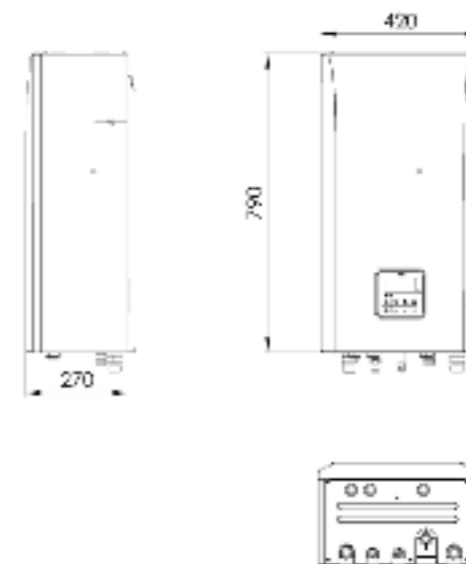
ACHP-H08/4R3HA-O, ACHP-H10/4R3HA-O



ACHP-H12/5R3HA-O, ACHP-H14/5R3HA-O, ACHP-H16/5R3HA-O



ACHP-H04/4R3HA-I, ACHP-H06/4R3HA-I, ACHP-H08/4R3HA-I, ACHP-H10/5R3HA-I, ACHP-H12/5R3HA-I, ACHP-H14/5R3HA-I, ACHP-H16/5R3HA-I



Overall Solution

Brand: AUX

Unit model: ACHP-H10/5R3HA-M

With heating function

Heating energy efficiency in seasons of mild and low temperatures: A+++

Nominal noise value of indoor unit: 42 dB

Nominal capacity value in tropical zone, temperate zone, and frigid zone: 7 kW

Nominal noise value of outdoor unit: 60 dB

Tropical zone, temperate zone, and frigid zone distribution map of Europe



Solar energy Gas boiler Floor heating Hot water Cooling

App Control High Efficiency Wide Operation Range 24h Timer Weekly Timer Holiday Mode Multi Language Fast DHW Multiple Anti-freeze Pre-heating Combination With Solar Combination With Gas Heater

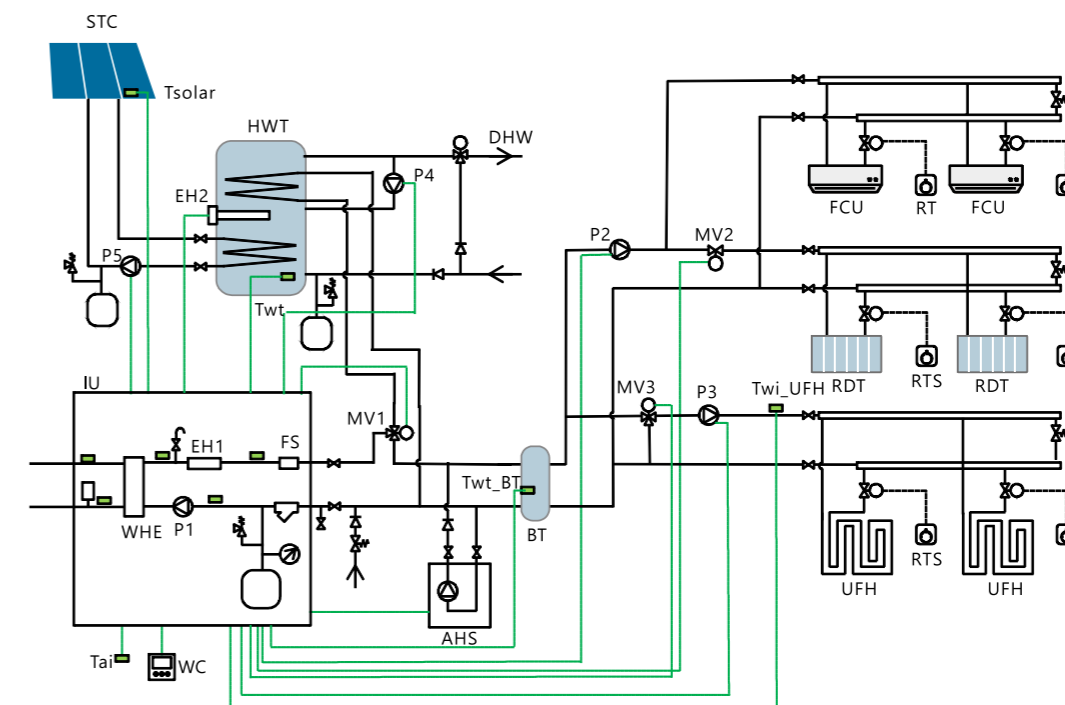
MONOBLOCK

Model	Energy efficiency at 35°C		Energy efficiency at 55°C	
	Energy efficiency value	A+++/A++	Energy efficiency value	A+++/A++
ACHP-H04/4R3HA-M	4.86	A+++	3.32	A++
ACHP-H06/4R3HA-M	4.96	A+++	3.53	A++
ACHP-H08/4R3HA-M	5.22	A+++	3.37	A++
ACHP-H10/5R3HA-M	5.2	A+++	3.5	A++
ACHP-H12/5R3HA-M	4.82	A+++	3.46	A++
ACHP-H14/5R3HA-M	4.71	A+++	3.48	A++
ACHP-H16/5R3HA-M	4.63	A+++	3.43	A++

SPLIT

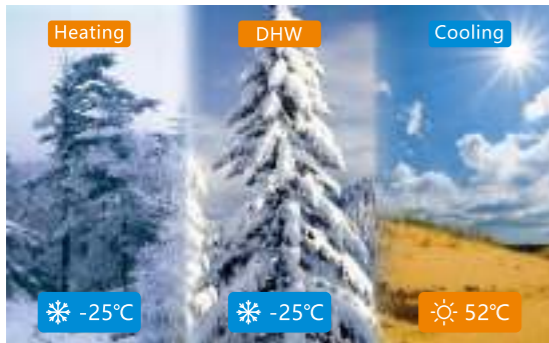
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ACHP-H10/5R3HA-O	5.2	A+++	3.5	A++
ACHP-H12/5R3HA-O	4.82	A+++	3.46	A++
ACHP-H14/5R3HA-O	4.71	A+++	3.48	A++
ACHP-H16/5R3HA-O	4.63	A+++	3.43	A++

AUX heat pump unit can be linked with water tank electric heating, solar energy, gas furnace, etc., to achieve the electric heating with water tank, water heating with solar energy, and heating with gas furnace.

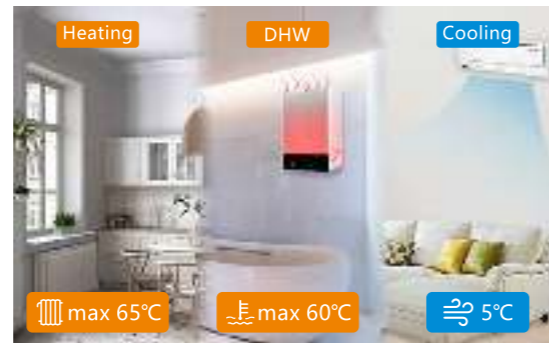


Wide operating range

- ▶ Inverter compressor, inverter fan, inverter water pump and other technology of full DC-inverter, equipped with electronic expansion valve for accurate adjustment, can ensure the stable operation of heating at -25°C external ambient temperature and refrigeration at 52°C external ambient temperature.

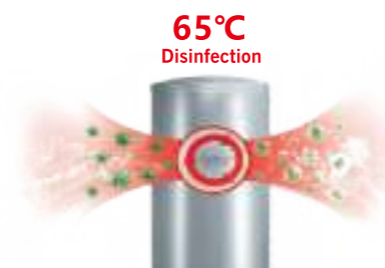
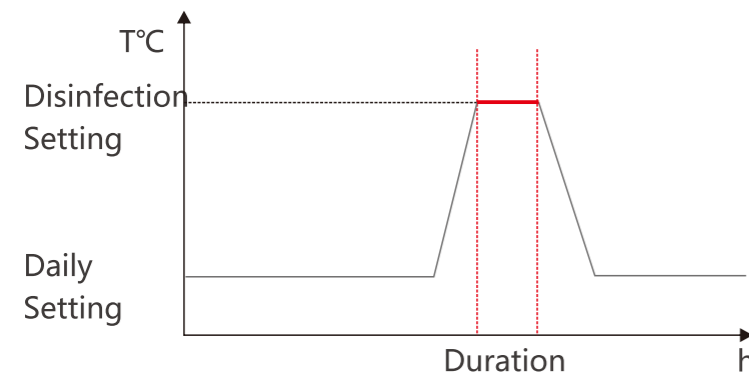


Wide operating ambient temperature range

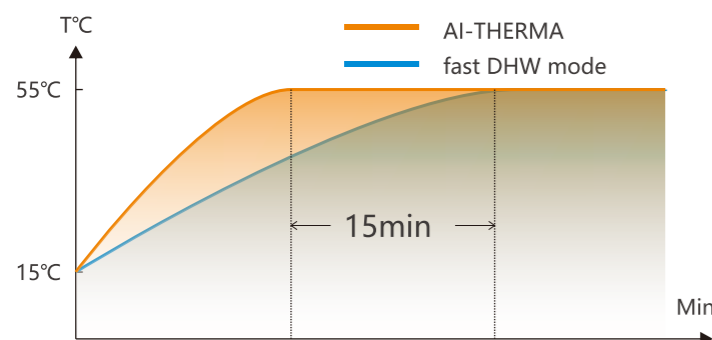


Wide operating water temperature range

- ▶ When the heat pump is set to heating mode, the maximum water outlet temperature can reach 65°C by running only the compressor.



- ▶ When the heat pump is set to the water heating mode, the maximum water tank temperature can reach 57°C by running only the compressor.



High energy efficiency

- ▶ For the design of condenser with high energy efficiency,

- (1) the advanced three-dimensional dynamic analysis and staggered duct design can reduce wind resistance, improve air volume, and improve heat transfer efficiency;
- (2) the heat exchange pipe of condenser is internal threaded pipe, which increases the heat exchange efficiency by 10%;
- (3) and the hydrophilic anti-corrosion fins further improve the efficiency of heat transfer.

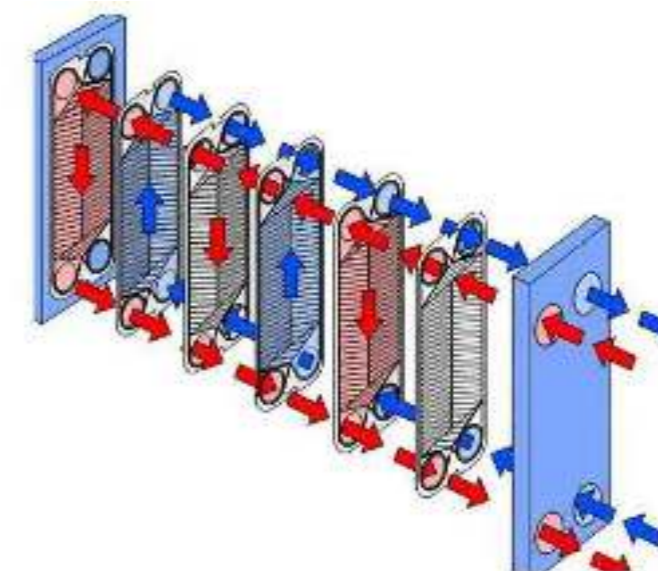


Seasonal efficiency up to A+++



- ▶ For the use of plate heat exchanger with high energy efficiency

- It has narrow duct, corrugated plates, and complex interface changes, and can achieve a high heat production efficiency;
- it has compact structure, small volume, and few consumables;
- it has high heat transfer coefficient with heat transfer efficiency up to 85%–90%;
- and it has large flow disturbance, good material for plates, small corrosion, and small fouling coefficient.



High reliability – full DC inverter

► Full DC inverter design

All the motors of the heat pump adopt full DC inverter technology, which can achieve the rapid start of the heat pump and avoid frequent start and stop, to ensure low noise and high energy efficiency of the heat pump. All the components are from well-known brands, so that the heat pump operation is more reliable.



► Inverter compressor

(1) electrical design with high current and high temperature resistance;
(2) oil return design in the program, which can effectively solve the oil return problem of the compressor;
(3) large pressure ratio design of the compressor, which can make the compressor run stably under the condition of high exhaust pressure and low suction pressure;
(4) E-class insulation of dual-rotor, which makes the compressor run with wider frequency and higher efficiency.



► Inverter fan

(1) DC inverter fan, which can accurately control the speed according to the system operation;
(2) original built-in drive, which is more efficient and reliable;
(3) E-class insulation, which makes the fan operation more reliable.



► Inverter water pump

(1) overall design of controller and motor with compact structure and small installation dimension;
(2) water pump built-in protection, which can automatically determine whether to shut down to protect the water pump according to the feedback water flow;
(3) automatic speed adjustment according to water temperature difference, which improves the heat transfer efficiency and the reliability of heat pump system.



High reliability – others

► Electronic expansion valve

The throttle component is electronic expansion valve with wide flow adjustment range, high adjustment precision and mature control procedures, which can make the heat pump run stably under harsh conditions.



► Standard chassis heating band

When the heat pump unit runs at low temperature, the standard chassis heating band can control the start and stop of the chassis heating band according to the running state to effectively protect the chassis from icing and realize energy saving.



► Built-in anti-freezing low-pressure switch in water module

The anti-freezing low-pressure switch is installed on the gas pipe of plate heat exchanger in the water module, which can protect the plate heat exchanger from freezing and cracking due to over-low pressure during refrigeration.

► Oil return design

The mature oil return program can effectively bring the oil discharged from the compressor back to the compressor, which can make the compressor get enough lubrication during operation, improve the reliability of the compressor operation, and improve the energy efficiency of the heat pump.

low-noise operation

► Noise reduction design of fan blade

- (1) unique air guide design to reduce fan noise;
- (2) airfoil blades to improve aerodynamic efficiency and reduce noise.

► Linkage between fan speed and compressor frequency

- (1) when the external load is large and the compressor frequency is high, the fan speed is high;
- (2) when the external load is small and the compressor runs at a low frequency, the fan runs at a low speed to effectively reduce the noise of the fan.

► Noise reduction design of pipeline

- (1) optimized pipeline structure, which can reduce the flow noise of refrigerant and avoid pipeline vibration noise;
- (2) exhaust pipe equipped with a silencer, which can reduce the flow noise of exhaust refrigerant.

► Two-level mute control

- level 1 mute: low limits on compressor frequency and fan speed, little influence, and low effect;
- level 2 mute: high limits on compressor frequency and fan speed, great influence, and great effect.
- Users can choose the level of mute according to actual needs.



function description—important parts

► Inverter control of water pump in water module

The water pump in the water module can automatically adjust the operating frequency according to the capacity of the heat pump, so that the temperature difference between the inlet and outlet of the water module is kept within a reasonable range. This ensures the highest heat transfer efficiency of the heat pump while giving customers the most comfortable experience.

► Separation control of electric heating

Electric heating is divided into 3 KW/9 KW control. According to the heat pump operating time, water temperature and other parameters, automatic control of the start, stop and gear of electric heating can not only avoid the water temperature failure to reach the set temperature for a long time and too high temperature, but also avoid the frequent start and stop of compressor, electric heating, etc.

► Electric heating of water tank controlled by water module

When water tank with electric heating is equipped, the water module can control the start and stop of the electric heating of the water tank as a supplement to the water heating capacity of the heat pump.



function introduction – health and comfort

► Fast water heating

When the user is in urgent need of hot water, the fast water heating can be started to run the heat pump, electric heating of the water tank and other parts in water heating mode in operation, accelerate the heating rate of domestic water, and meet the user's hot water demand.



► Water tank disinfection

The heat pump will enable the water tank disinfection at a fixed time every week. The water will be heated to 65°C and kept for 15 minutes, which can achieve 99.99% sterilization rate.



► Two-heater control

When the indoor terminal heat dissipation contains two or more types (example: floor heating + radiator), the radiator requires high water temperature, and the floor heating requires low water temperature. In order to meet the requirements of different terminals on water temperature, the two-heater control can be enabled to meet the requirements of different terminals on water temperature.



► Adaptive water temperature (ECO)

The heat pump automatically adjusts the outlet water temperature of the water module according to the external ambient temperature, avoiding energy waste caused by high water temperature and too high or too low indoor temperature caused by unreasonable water temperature settings. Energy saving can also be achieved through reasonable control of water temperature.



► Emergency function

If the outdoor unit fails, the water module can run separately to meet the user's demand for heating or domestic hot water.



► Timing function

With a maximum of 99 groups of timing, each group can be independently selected whether to enable the air conditioner and water heating:

(1) with the air conditioner, you can select the operation mode: cooling mode or heating mode, set the operation start time and end time, and set the temperature;

(2) with the water heating mode, you can set the operation start time and end time, set the water tank temperature, etc.

function introduction – intelligent operation

► Smart grid

DC variable frequency compressor adopts 180 Hz, significantly improves the energy efficiency



Type	Signal 1 (SG)	Signal 2 (EVU)	Running State
1	OFF	OFF	Restricted operation
2	ON	OFF	Normal operation
3	OFF	ON	Energy storage operation
4	ON	ON	Energy storage operation

► Function for vacation

DC variable frequency compressor adopts 180 Hz, significantly improves the energy efficiency



function introduction – intelligent operation

► WiFi

DC variable frequency compressor adopts 180 Hz, significantly improves the energy efficiency



- APP
- Smart grid
- Automatic water temperature
- Centralized control

► Centralized control

DC variable frequency compressor adopts 180 Hz, significantly improves the energy efficiency

