

High Temperature Inverter Heat Pumps

A+++
ErP

70°C
Hot water

Low
Noise

Green
R290



This Series units use natural refrigerant R290 (GWP=3) that offers many advantages over refrigerants traditionally used in heat pumps. With improved efficiency, as well as higher flow temperatures (70 degrees), is perfect for new and existing heating systems (including hybrid).

Energy efficiency class of A+++ reduce the energy consumption of the outdoor unit. Using smart grids (SG ready), you can also take advantage of variable electricity prices and make additional savings.

Works all the way down to minus 25 degrees, so you are guaranteed good and stable heat, even on the coldest days of the year.

Frequency controlled: The heat pump can run with different services. When the desired temperature is achieved, running it with a lower one; frequency/performance to reduce energy consumption.

With DC Inverter brushless fan motor that can be controlled so that the sound from the device reaches a satisfactory low level.

Intelligent defrosting technology that minimizes energy consumption.



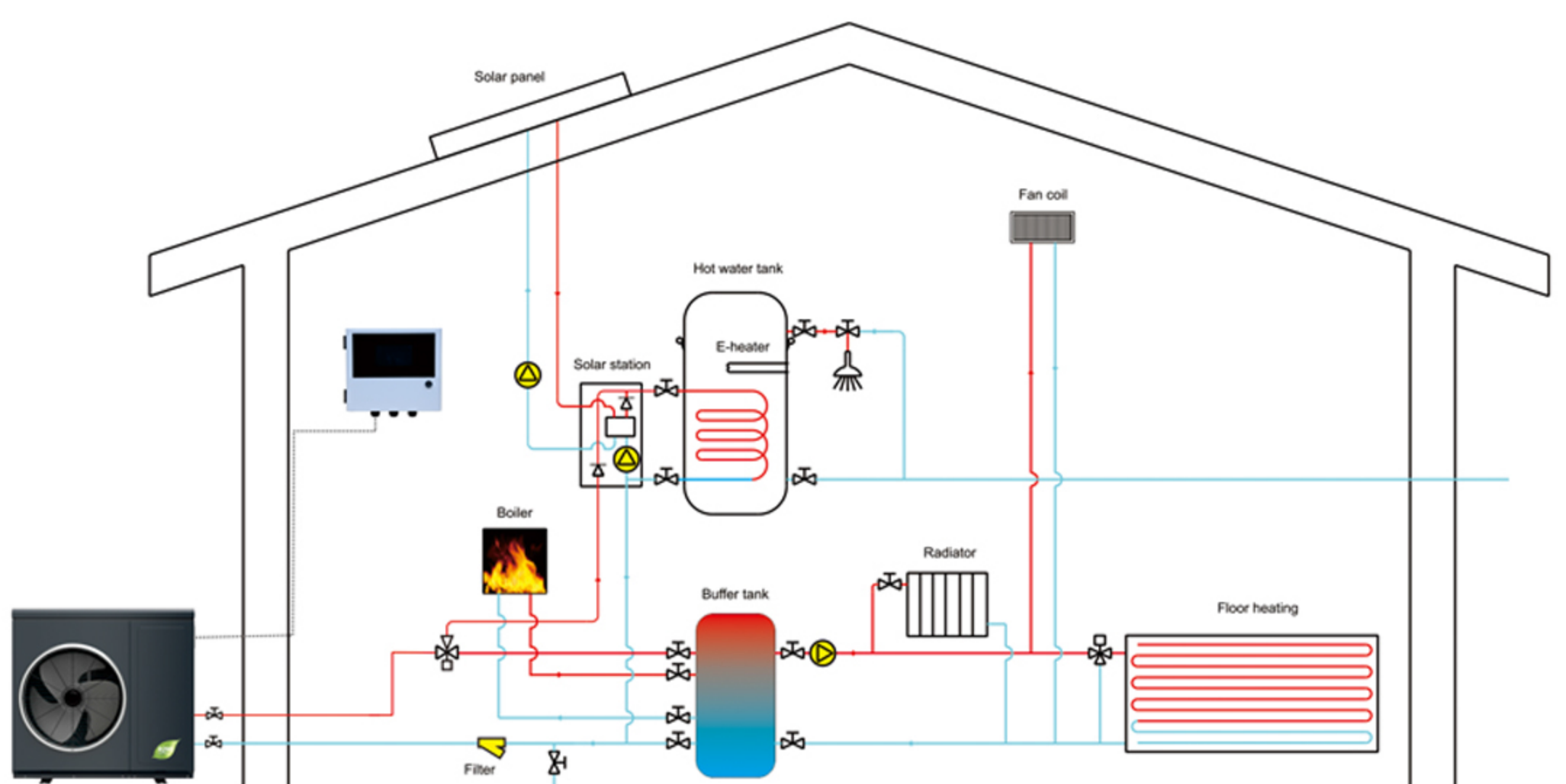
R290 Units Advantage

R290 is a natural refrigerant with a very low GWP. Its advantages comparing with R32 and R410A:

- Future-proof, as not affected by the F-Gas Regulation
- Higher flow temperature of up to 70 degree.
- Higher hot water comfort and protection against legionella without electric heater
- Wider performance envelope with operating temperature ranging between -25°C and $+46^{\circ}\text{C}$
- Reduced refrigerant charge compared to R410a and R32

Refrigerant	GWP
R290	3
R32	675
R410A	2088

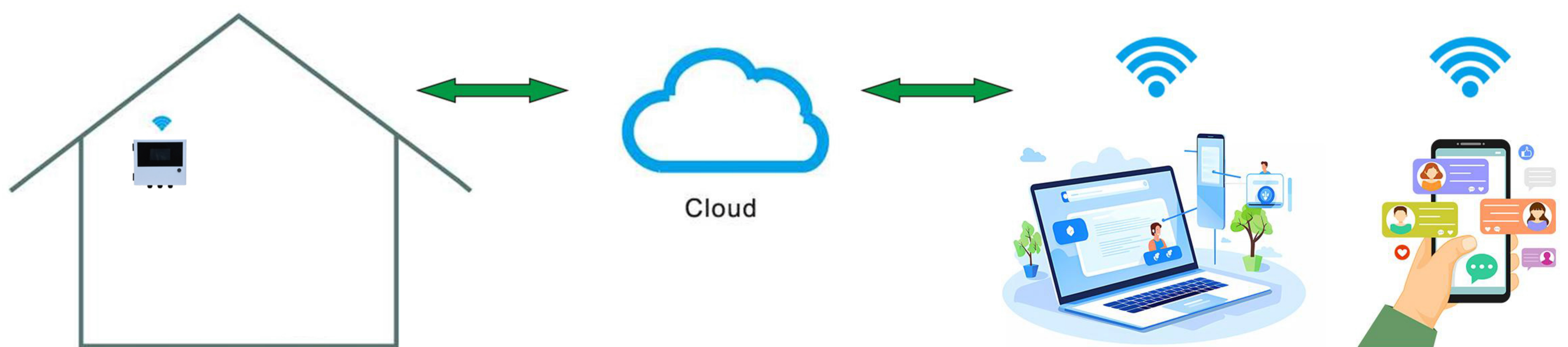
Typical application





Wifi App. and Web platform

Control your heat pump with your smart phone anywhere, anytime



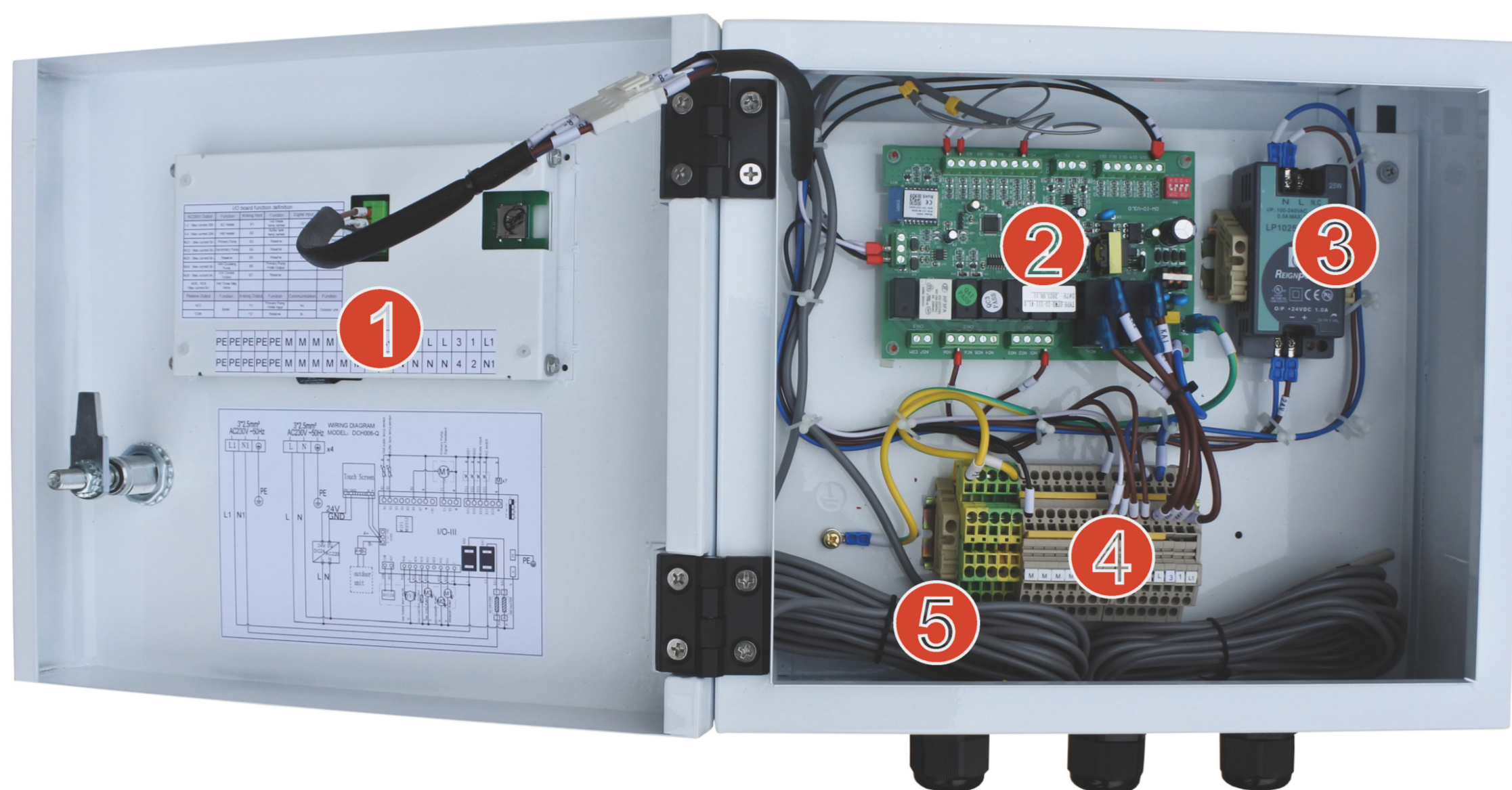
Unit App. control function:

- Unit on/off control
- Energy monitor
- Heating/cooling mode change
- Heating/cooling/domestic hot water temp, setup
- Weather compensation function enable/disable
- Back-up heater setup
- Heating/cooling schedule on/off
- Fault alert

Computer web monitoring system:

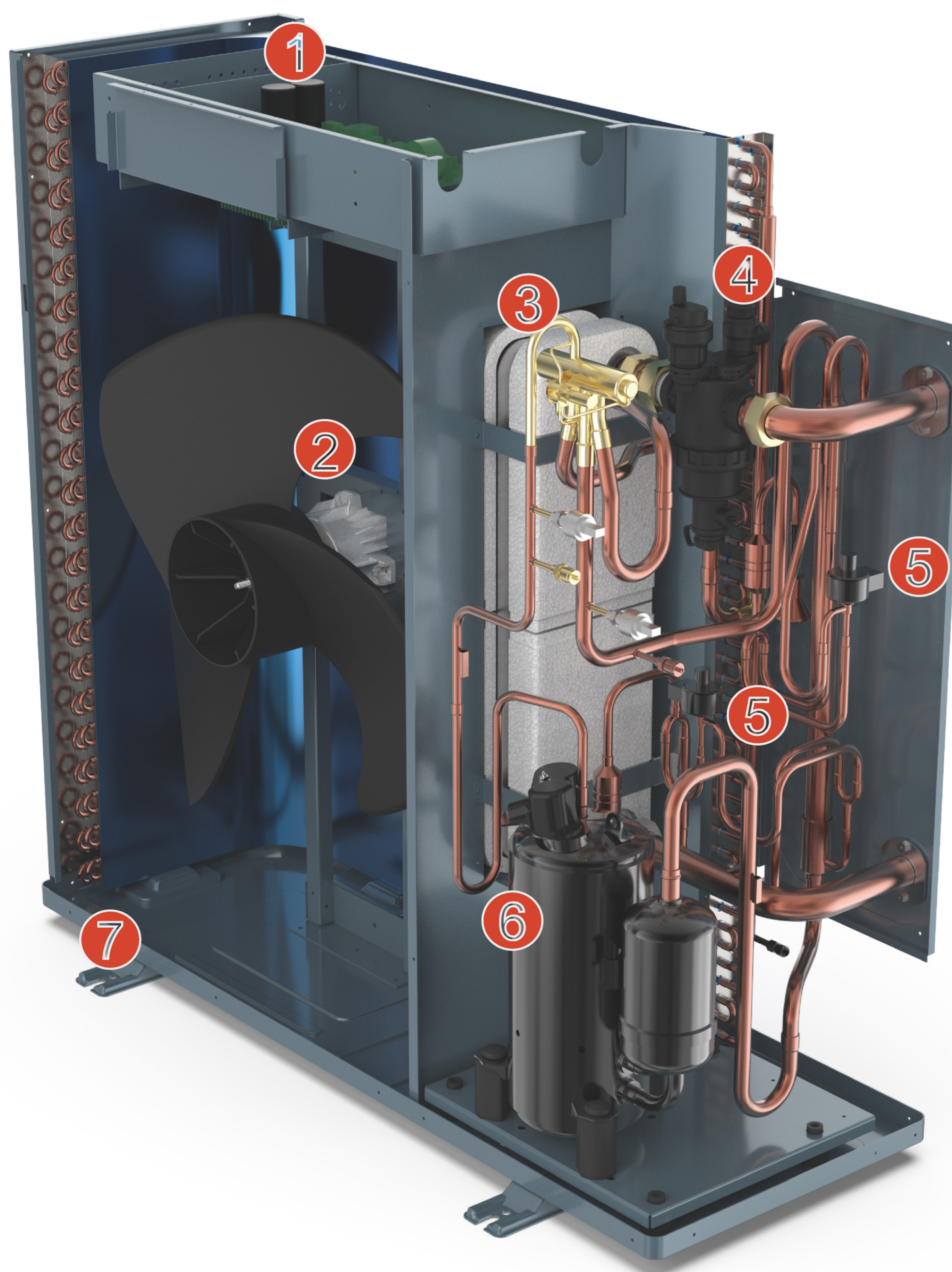
- Unit running monitoring
- Running data record and trend
- Alarm and fault alert
- Fault analysis

■ Main Components



Control Box

- 1 Touch screen 7"
- 2 I/O board
- 3 Power transformer
- 4 Terminal block
- 5 Temp. sensors



Outdoor unit

- 1 Inverter / control board
- 2 DC fan motor
- 3 Plate heat exchanger
- 4 Micro bubble separator
- 5 Heating/cooling separate EEV
- 6 Dual rotary compressor
- 7 Integration tray and tray heater

Circulation pump (not shown)

Heat pump outdoor unit

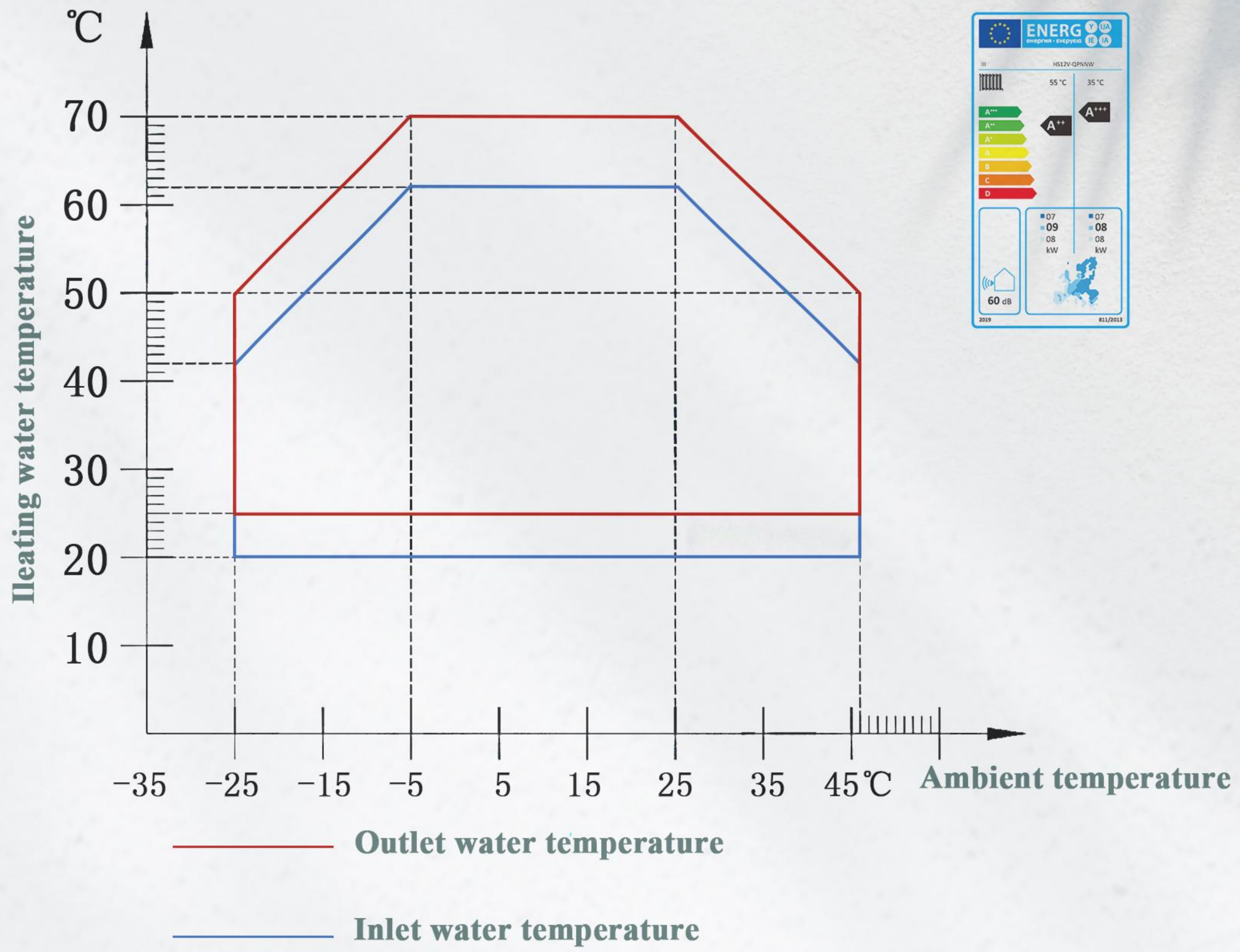
Model Number		HS06V-Q	HS08V-Q	HS10V-Q	HS12V-Q	HS12V-D	HS15V-Q	HS15V-D	HS22V-D
Heat output at A7/W35°C	kW	6.20	6.44	6.92	9.87	8.60	11.07	12.26	14.64
Power consumption A7/W35°C	kW	1.29	1.30	1.45	2.06	1.77	2.30	2.50	3.26
COP at A7/W35°C		4.80	4.95	4.77	4.79	4.86	4.81	4.90	4.49
Heat output range A7/35°C		2.30~6.46	2.90~8.20	2.90~9.50	3.80~12.20	3.80~12.20	4.95~15.20	4.95~15.20	6.85~22.10
Heat output at A2/W35°C	kW	5.10	6.60	7.00	8.40	8.40	12.30	12.30	19.86
Power consumption A2/W35°C	kW	1.20	1.60	1.70	2.10	2.10	3.10	3.10	4.94
COP at A2/W35°C		4.25	4.13	4.12	4.00	4.00	3.97	3.97	4.02
Heat output at A-7/W35°C	kW	4.90	6.30	6.70	8.20	8.20	11.60	11.60	16.88
Power consumption A-7/W35°C	kW	1.30	1.80	2.00	2.50	2.50	3.30	3.30	5.12
COP at A-7/W35°C		3.77	3.50	3.35	3.28	3.28	3.52	3.52	3.30
Heat output at A7/W55°C	kW	5.76	5.05	5.37	8.80	8.29	10.78	11.69	13.84
Power consumption at A7/W55°C	kW	1.74	1.74	2.00	2.58	2.59	3.47	3.39	4.45
COP at A7/W55°C		3.31	2.90	2.69	3.41	3.20	3.11	3.45	3.11
Heat output range A7/55°C		1.82~5.8	2.47~6.6	2.57~7.6	3.48~11.0	3.48~11.0	4.65~14.3	4.65~14.3	6.10~19.10
Heat output at A-7/W55°C	kW	4.30	5.90	6.20	7.80	7.80	10.80	10.80	14.85
Power consumption at A-7/W55°C	kW	1.60	2.10	2.60	3.10	3.10	4.30	4.30	6.37
COP at A-7/W55°C		2.69	2.81	2.38	2.52	2.52	2.51	2.51	2.33
Cool output at A35/W7°C	kW	4.30	5.20	5.9	7.80	7.80	12.20	12.20	16.3
Power consumption at A35/W7°C	kW	1.50	1.80	2.30	2.80	2.80	4.16	4.16	5.8
EER at A35/W7°C		2.87	2.89	2.61	2.79	2.79	2.93	2.93	2.81
Cool output range A35/W7°C	KW	1.50~4.32	1.90~5.35	1.9~5.9	2.7~7.8	2.7~7.8	3.65~12.20	3.65~12.20	5.75~16.30
Cool output at A35/W18°C	kW	5.20	6.20	7.10	10.60	10.60	14.70	14.70	19.33
Power consumption at A35/W18°C	kW	1.60	1.90	2.40	3.30	3.30	4.30	4.30	6.19
EER at A35/W18°C		3.25	3.26	2.96	3.21	3.21	3.42	3.42	3.12
Cool output range A35/18°C	KW	1.8~5.2	2.22~6.2	2.29~7.1	3.87~10.6	3.87~10.6	5.45~14.7	5.45~14.7	8.70~19.33
Power Supply		220-240V/50Hz				380-415V/3N~/50Hz	220-240V/50Hz	380-415V/3N~/50Hz	
Compressor		TWIN ROTARY							
Starting current	A	<15	<15	<15	<15	<15	<15	<15	<15
Rated operating current	A	9.40	12.50	14.00	18.00	10.50	32.00	11.50	16
Rated power consumption	KW	2.16	2.86	3.22	4.15	4.50	7.10	6.50	9
Condenser		Plate heat exchanger							
Heating medium flow range	m ³ /h	0.60~1.15	0.55~1.6	0.6~1.8	0.9~2.12	0.9~2.12	1.25~2.62	1.25~2.62	1.45~3.80
Internal pressure drop at nominal flow	kPa	16	21	23	25	25	25	25	35
Min. flow (defrosting)	m ³ /h	1.0	1.4	1.4	1.7	1.7	2.5	2.5	3.2
Nominal air flow	m ³ /h	2700	2900	3000	3350	3350	5500	5500	8000
Nominal fan output	W	70	70	75	80	80	150	150	220
Max outlet heating medium temperature	°C	70							
Refrigerant R290 filling weight	kg	0.55	0.72	0.72	0.80	0.80	1.10	1.10	1.38
GWP R290		3							
CO2 equivalent		0.0017	0.0022	0.0022	0.0024	0.0024	0.0033	0.0033	0.0041
Anti electric shock grade		I	I	I	I	I	I	I	I
Water proof grade		IP X4	IP X4	IP X4	IP X4	IP X4	IP X4	IP X4	IP X4
Max.Operation pressure of low side	Mpa	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Max.Operation pressure of high side	Mpa	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Max allowable pressure	Mpa	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Dimensions (WxDxH)	mm	1060×420×846	1060×420×1015			1060×420×1350		1060×420×1565	
Pipe connector		G1"							
Net Weight	kg	88	106	106	108	108	132	132	162
ErP Level (35°C)		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
ErP Level (55°C)		A++	A++	A++	A++	A++	A++	A++	A++
Energy efficiency ns (35°C)		181%	186%	186%	184%	185%	186%	186%	185%
Rated heat output Prated (35°C)		5	6	7	8	8	12	12	15
Energy efficiency ns (55°C)		137%	144%	138%	144%	145%	143%	144%	142%
Rated heat output Prated (55°C)		5	6	6	9	9	12	12	17
Operating ambient temp. range	°C	Heating: -25~46 DHW: -25~46 Cooling: 10~45							
Sound power level L _{WA} (ErP)	dB(A)	59	56	58	60	59	63	58	64
Sound power level L _{WA} (night mode)	dB(A)	53	54	55	59	59	57	57	62

The above data is tested by EN14511. A7/W35°C means air temp. 7°C, outlet water temp. 35°C

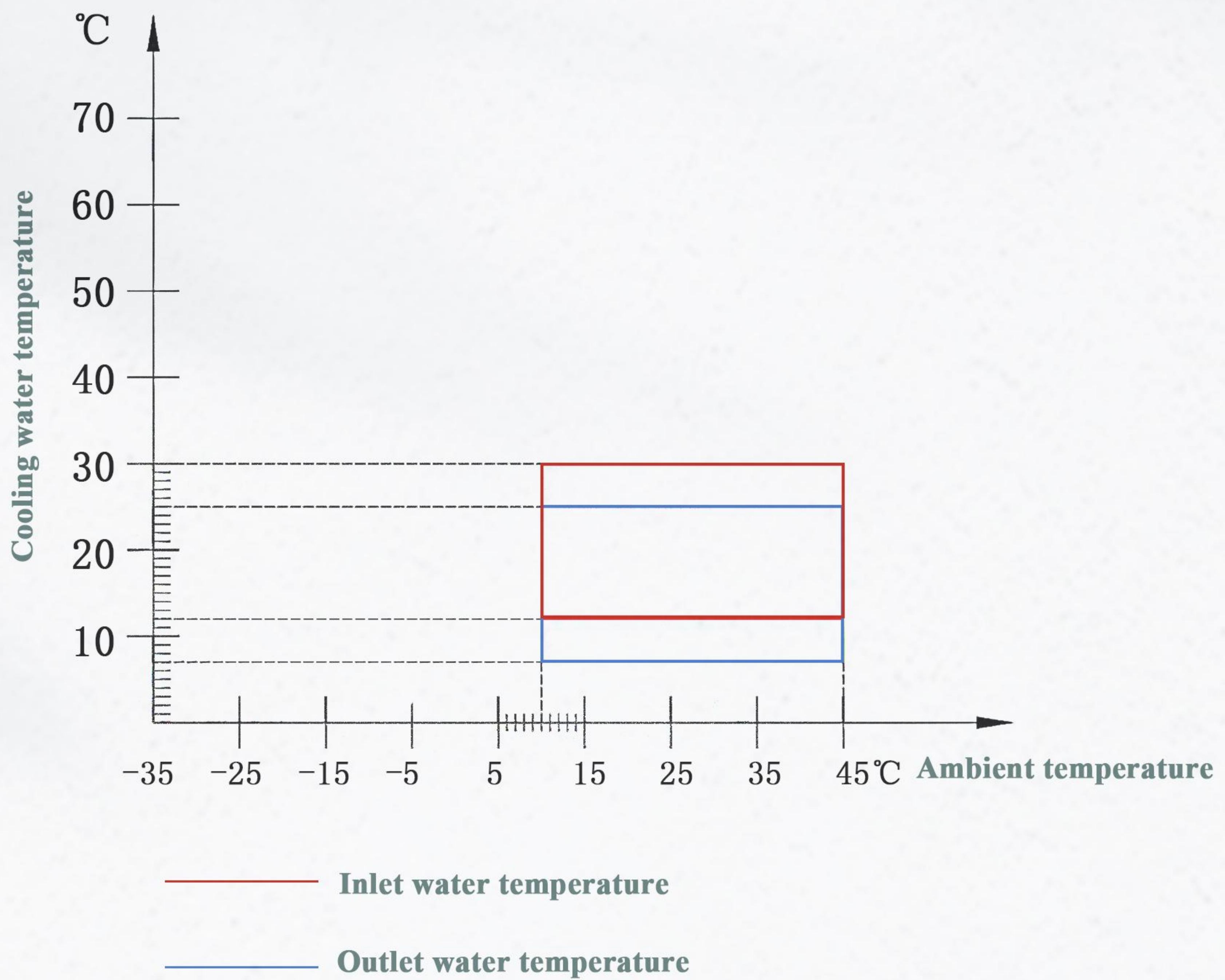
The Sound power level is tested by EN12102

🔥 Workable Range

Heating mode

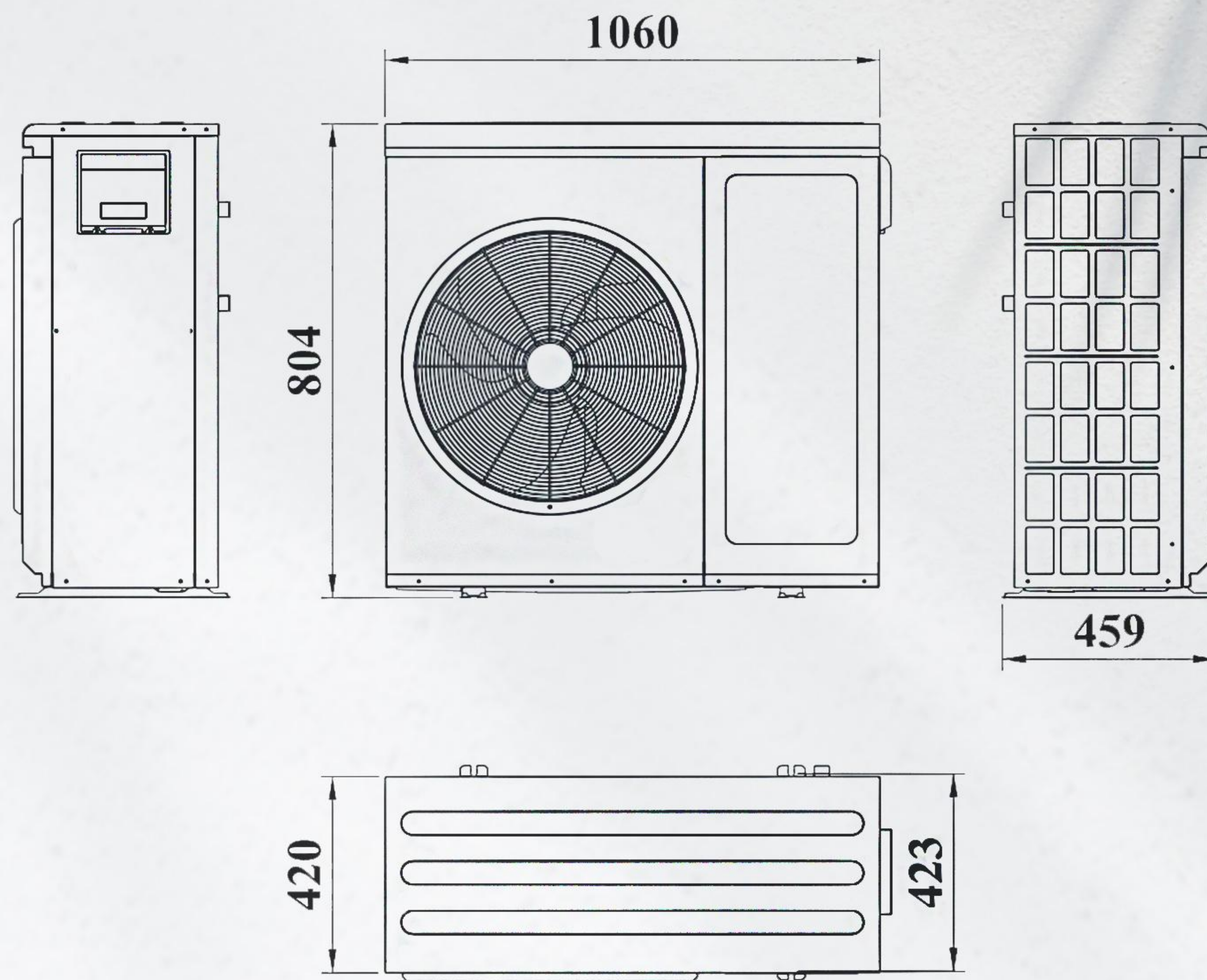


Cooling mode

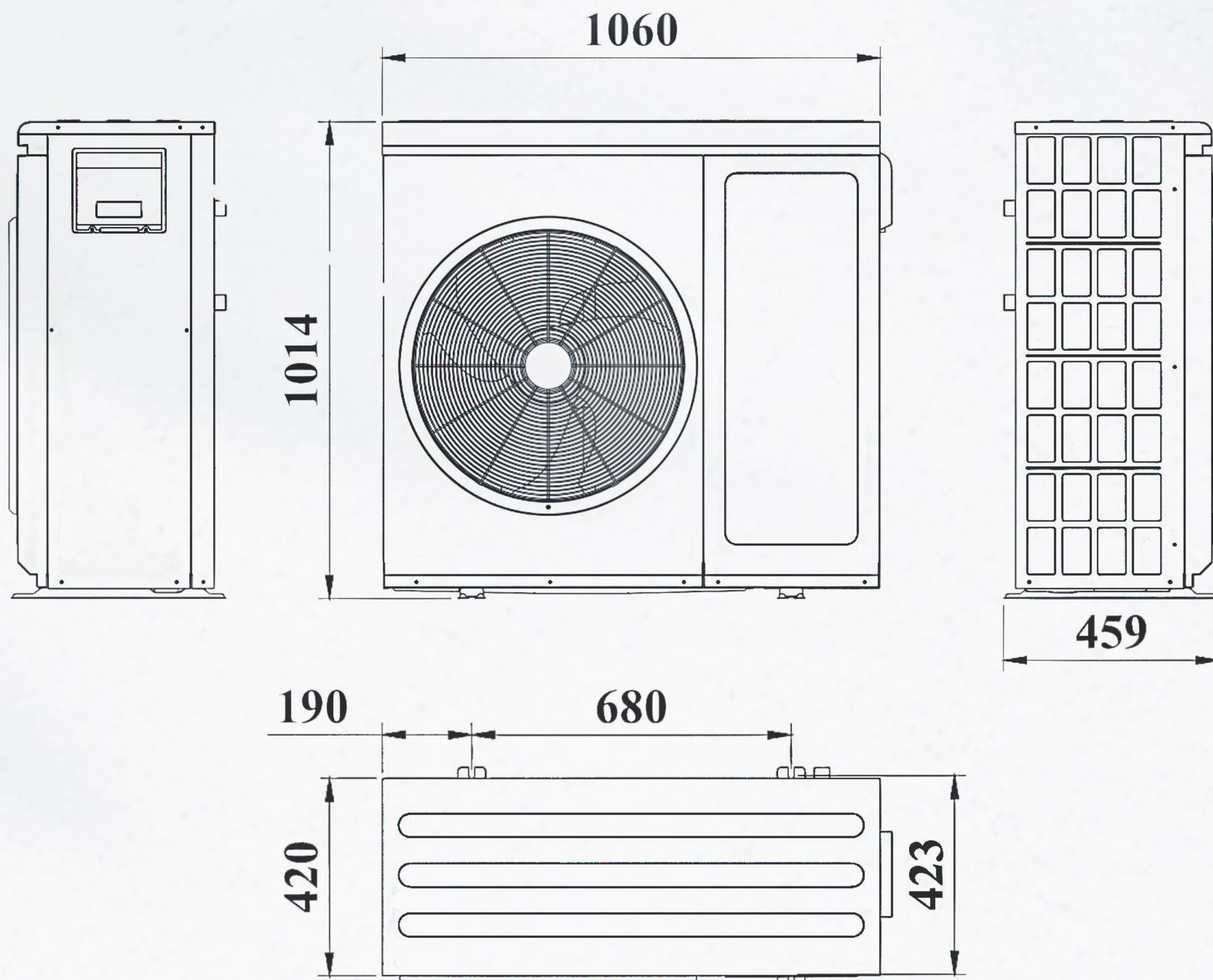


Dimension

HS06V

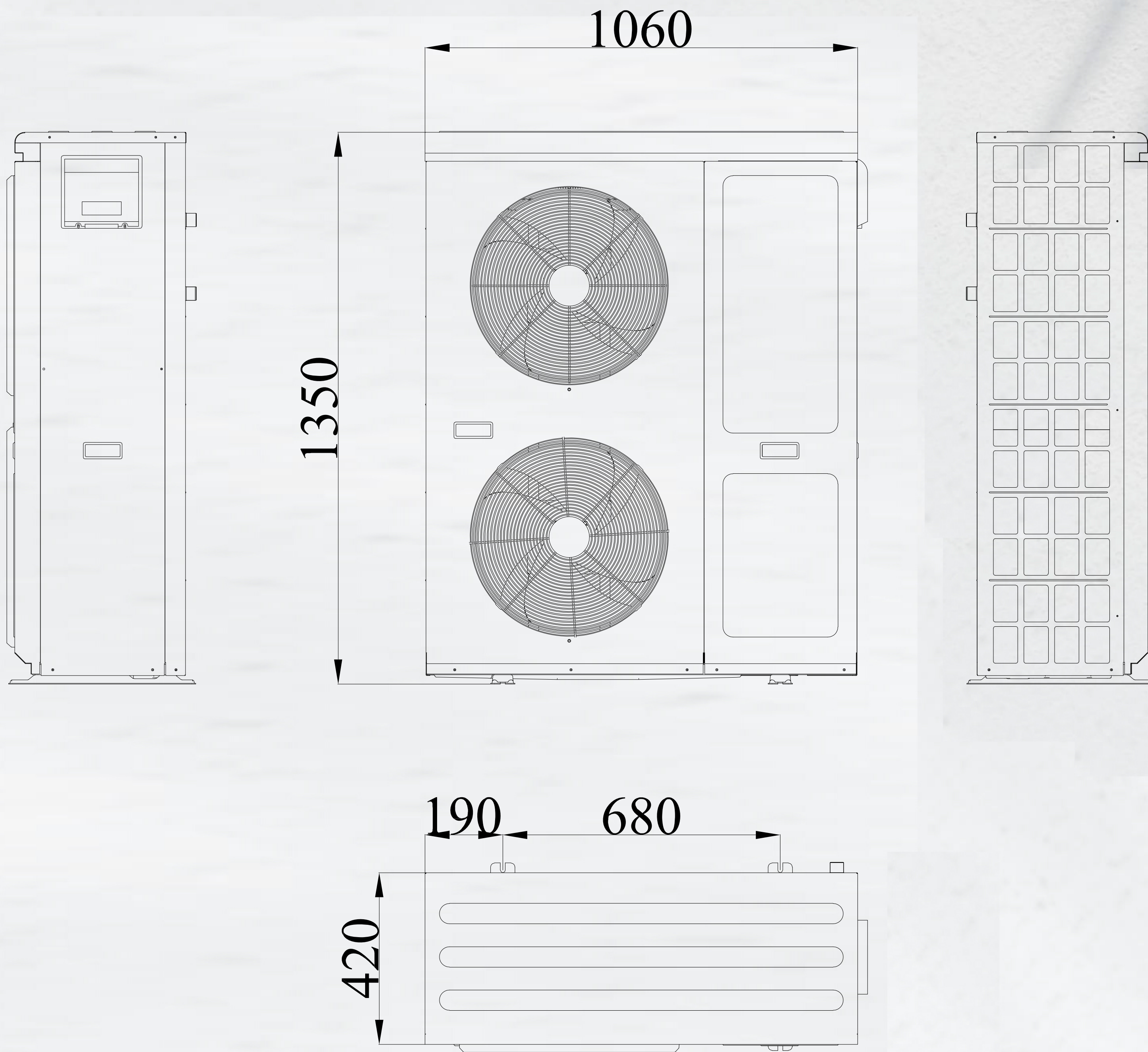


HS08V HS10V HS12V



Dimension

HS15V



HS22V

