

Technical list Air Source Heat Pump R32



SCHAFFHAUSEN PLATINUM

Schaffhausen Platinum
Multifunctional 3-in-1 Air Source Heat Pump
Full DC Stepless Inverter
heating & cooling & hot water supply



Stable running at -30°C

EVI (Enhanced Vapor Injection) direct current inverter compressor can run at optimal quality in ultra-low temperatures



1Hz stepless inverter

1Hz stepless frequency adjustment COP more than 2.75 at -12°C top-level energy efficiency means saving money even when it's cold outside



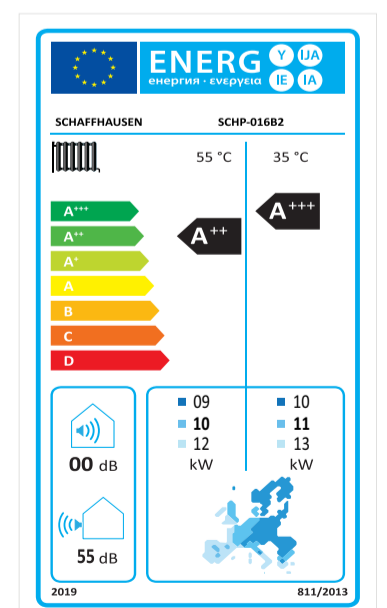
3 min speed defrosting

3 min intelligent defrosting technology with precise, speed and high energy efficiency



33dB ultra quiet

33dB low frequency silent cruise technology is at the sonic level of a quiet library



Warm in winter and cool in summer

Say goodbye to airborne disease

• SCHP-008B1 • SCHP-012B1 • SCHP-016B1 • SCHP-018B1 • SCHP-020B1

HEATING & COOLING & HOT WATER SUPPLY



1. Panasonic DC inverter compressor

The Panasonic 9RD series Rotary R32 compressor with variable speed uses EVI technology and automatically switches into heating or cooling working mode according to the ambient temperature. The DC inverter compressor runs stable at -30°C. Low noise and high efficiency.



2. Heat Exchanger

This patented "chocolate" diverges area technology with a high heat exchange.



3. DC inverter motor

With automatic variable-speed control. Little vibration, low noise, low energy use.



4. Full DC inverter driver module

Our customized embedded connection is secure, stable and accurately improves the active monitoring capability of the drive system.



5. Pressure sensor

Fast and precise 24-bit measurement delivers high precision sensing between the working temperature range from -60°C to 150°C.



6. High-end finned tube exchanger

Specific hydrophilic coating. Water and ash do not accumulate as easily. Rapid elimination of moisture and overall heating efficiency is greatly improved.



7. Ultra-silence fan blade

Adopt frameless horizontal axial-flow type design and materials with high thermal conductivity. Lower drag, vibration and noise.



8. Danfoss heat exchanger

Fluorine circulation in shell and water circulation in tube. More sufficient heat exchanging. Inner grooved copper tube and compact structure. Prevents lubricating oil deposits and has a highly efficient heat transfer.



9. High efficiency integrated water pump

Integrated high efficiency water pump to make sure a high efficiency during all the heat transferring processes.



ECO FRIENDLY R32



FULL DC INVERTER



HEATING



COOLING



HOT WATER

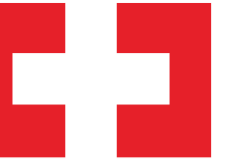


SCHAFFHAUSEN PLATINUM DC Inverter Multi Functional Air Source Heat Pump (R32) TECHNICAL LIST

SCHAFFHAUSEN PLATINUM	Unit	SCHP-008B1	SCHP-012B1	SCHP-012B2	SCHP-016B1	SCHP-016B2	SCHP-020B1	SCHP-020B2	SCHP-026B2	
Maximum Heating capacity	/	8.30kW	12.20kW	12.20kW	16.50kW	16.50kW	19.80kW	19.80kW	26kW	
Rated heating capacity at (A7/6°C,W30/35°C)	/	6KW	10KW	10KW	14KW	14KW	18KW	18KW	24KW	
Rated voltage /Frequency	V/Hz	230/50	230/50	400V/3N~50hz	230V/1N~50hz	400V/3N~50hz	230V/1N~50hz	400V/3N~50hz	400V/3N~50hz	
Heating Capacity Range	kW	(2.50-8.30)	(4.20-12.20)	(4.20-12.20)	(5.30-16.50)	(5.30-16.50)	(6.20-19.80)	(6.20-19.80)	(6-26)	
Heating (A7/6°C,W30/35°C)	Heating Capacity	kW	6,46	10,58	10,58	14,58	14,58	18,77	18,77	24,33
	Power Input	kW	1,31	2,29	2,29	3,17	3,17	4,16	4,16	5,10
	COP	W/W	4,93	4,62	4,62	4,60	4,60	4,51	4,51	4,77
Heating (A-12°C,W36/41°C)	Heating Capacity	kW	4,51	7,21	7,21	11,00	11,00	12,86	12,86	16,67
	Power Input	kW	1,67	2,79	2,79	4,26	4,26	5,14	5,14	6,30
	COP	W/W	2,71	2,58	2,58	2,58	2,58	2,50	2,50	2,65
Heating (A7/6°C,W40/45°C)	Heating Capacity	kW	6,49	10,37	10,37	14,71	14,71	18,50	18,50	23,98
	Power Input	kW	1,61	2,69	2,69	3,97	3,97	4,95	4,95	6,07
	COP	W/W	4,04	3,86	3,86	3,70	3,70	3,74	3,74	3,95
Heating (A7/6°C,W47/55°C)	Heating Capacity	kW	5,92	9,28	9,28	14,85	14,85	18,47	18,47	24,29
	Power Input	kW	1,87	2,97	2,97	4,91	4,91	5,98	5,98	7,93
	COP	W/W	3,17	3,12	3,12	3,03	3,03	3,09	3,09	3,06
Cooling (A35/24°C,W23/18°C)	Cooling Capacity	kW	6,55	10,27	10,27	13,77	13,77	16,58	16,58	21,81
	Power Input	kW	1,47	2,43	2,43	3,52	3,52	4,47	4,47	5,93
	EER	W/W	4,46	4,23	4,23	3,92	3,92	4,09	4,09	3,67
Cooling (A35/24°C,W12/7°C)	Cooling Capacity	kW	5,53	8,54	8,54	12,95	12,95	15,88	15,88	20,89
	Power Input	kW	1,82	2,84	2,98	4,51	4,51	5,36	5,36	7,15
	EER	W/W	3,04	3,00	3,00	2,87	2,87	2,96	2,96	2,92
ERP Level (35°C)	/	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	
ERP Level (55°C)	/	A++	A++	A++	A++	A++	A++	A++	A++	
SCOP (35°C) Based on TUV ERP Test report	/	4,92	4,55	4,55	4,58	4,62				
SCOP (55°C) Based on TUV ERP Test report	/	3,37	3,41	3,41	3,39	3,44				
Rated water flow	m3/h	1,10	1,75	1,75	2,50	2,50	3,20	3,20	4,20	
Rated voltage /Frequency	V/Hz	230/50	230/50	400V/3N~50hz	230/50	400V/3N~50hz	230V/1N~50hz	400V/3N~50hz	400V/3N~50hz	
Maximum input power	kW	2,71	3,83	3,83	6,20	6,20	7,50	7,50	10,00	
Maximum input current	A	12,00	17,00	6,50	27,50	10,50	35,00	13,00	17,00	
Fuse selection	Rated current	A	12	17	7	28	11	35	13	17
	Fusing current	A	16	23	9	37	14	47	18	23
Air switch	A	25	25	16	40	25	50	25	25	
Cross sectional area of wire	mm ²	4,00	4,00	2,50	6,00	4,00	6,00	4,00	4,00	
High pressure valve cut-off pressure	MPa	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	
Low pressure valve cut-off pressure	MPa	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	
Brand/Type of Compressor	/	Panasonic/Rotary								
Compressor Model	/	9RD138ZBA2J	9RD220ZDA2J	9RD220ZDA2J	9KD420ZAA2J	9KD420ZAA2J	9KD420ZAA2J	9KD420ZAA2J	9VD550ZCA2J	
Brand of EEV/EVI	/	DPF1.3C-05/DPF-1.0	DPF1.65C-05/DPF-1.0	DPF1.65C-05/DPF-1.0	DPF-2.0c/DPF-1.3c	DPF-2.0c/DPF-1.3c	DPF-2.0c/DPF-1.3c	DPF-2.0c/DPF-1.3c	DPF2.2c/1.3c	
4-way valve model	/	DSF-9	DSF-9	DSF-9	DSF-14	DSF-14	DSF-20	DSF-20	DSF-20	
Compressor oil type	/	FW50S	FW68S	FW68S	FW68S		FW50S		FW50S	
Compressor oil amount	cm ³	450	500	500	1000		1300			
Refrigerant	/	R32								
Refrigerant	Kg	1,2	1,8	1,8	2,5	2,5	3,2	3,2	4,0	
Fan	Air flow	m3/h	3500	4500	4500	7000	7000	8500	8500	11000
	Brand of Fan motor (DC fan)	/	LT RD85HA			RESIN WZDK170		LT RD85HA		Panasonic EHTS03AGW*2
	Fan output	/	85W			170W		85W*2		128W*2
	fan blade	W	560*139			590*150		560*139		520*173(590*150)
Water pump Model	/	UPM3K 25-75/APM25-9 Grundfos			UPML GEO 25-105 130/APM25-10				UPMXL 25-125 130 9H	
Defrost	/	Auto defrost with 4 way valve								
Waterproof grade	/	IPX4								
Noise pressure	dB(A)	50	52	52	55	55	56	56	58	
Max water outlet temperature	°C	60	60	60	60	60	60	60	60	
Diameter of water connection	/	DN 25 (1")	DN 25 (1")	DN 25 (1")	DN 32 (1-1/4")	DN 32 (1-1/4")	DN 40 (1.5")	DN 40 (1.5")	DN40 (1.5")	
Drainage valve	mm	15								
Internal pressure drop at rating water flow	kPa	25	27	27	30	30	32	32	35	
Min/Max heating water pressure (Safety valve 3Bar)	bar	1.0/3.0	1.0/3.0	1.0/3.0	1.0/3.0	1.0/3.0	1.0/3.0	1.0/3.0	0.5/3.0	
Fuse (PCB)	A	10	10	10	10	10	10	10	10	
Lowest Operational point, outdoor air/flow line (heating mode)	°C	-25								
Highest Operational point, outdoor air/flow line (heating mode)	°C	45								
Lowest Operational point, outdoor air/flow line (cooling mode)	°C	16								
Highest Operational point, outdoor air/flow line (cooling mode)	°C	45								
Net Dimensions (LxDxH)	mm	1100x495x850	1100x495x850	1100x495x850	1110x520x850	1110x520x850	1110x465x1450	1110x465x1450	1110x465x1450	
Package Dimensions (LxDxH)	mm	1140x530x1000	1140x530x1000	1140x530x1000	1140x565x1000	1140x565x1000	1140x500x1600	1140x500x1600	1140x500x1600	
Net Weight	kg	102	107	107	124	124	155	155	165	
Gross Weight	kg	114	119	119	136	136	175	175	185	
Condenser	Brand	/	Alfa Laval							
	Condenser Model	/	332*120-34	332*120-48	332*120-48	332*120-64	332*120-64	332*120-74	332*120-74	332*120-74
Economizer	Brand	/	Danfoss							
	Economizer Model	/	3-8P	3-8P	3-8P	3-8P	3-8P	3-8P	3-8P	3-8P

One Device Multiple Use

Get one air source heat pump and enjoy the functions of multiple devices



Would you like to experience the most comfortable heating and cooling solution? There is no need to buy expensive air conditioners and gas boilers. Schaffhausen Platinum heat pump can bring you a cheap and comfortable solution.



UP TO 85% IN ENERGY SAVING.

Full DC stepless inverter heat pump technology is more energy efficient. Schaffhausen Platinum 3-in-1 air source heat pump uses Panasonic DC inverter compressor. By absorbing energy from the environment, the heat pump can cover 1kW of electricity into more than 4kW of heat for your house.

Various Kinds of Heating Terminals

Suitable for all kinds of home decoration styles



DIFFERENT SORTS OF HEATING TERMINALS
Suitable for all kinds of home decoration styles

Fan coil



This is suitable for new buildings. The fan coil is hidden in the ceiling space-integrated with the home decoration. It is beautiful, elegant and can be used for heating or cooling.

Underfloor heating



This is suitable for new or existing buildings. Underfloor heating pipes are laid down underneath below the finish of the floor. Its main advantage is the evenly distributed heat covering the entire surface of the whole floor. Underfloor cooling is also an available option.

Hydronic radiator

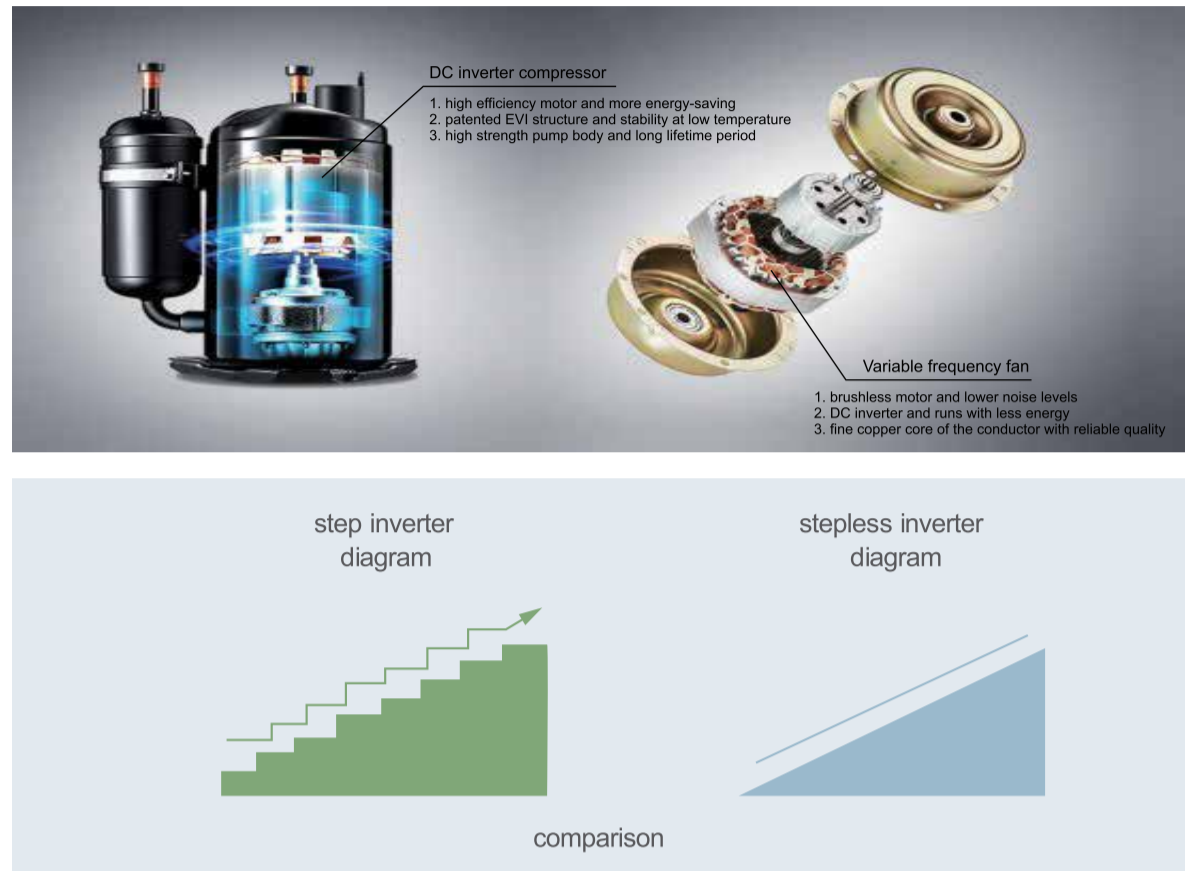


This is suitable for new or existing buildings. Hydronic radiators are available in many different models and sizes. This is the most appropriate solution for an existing building as it does not require a significant amount of changes to the building.



1. FULL DC stepless (1Hz) inverter technology: high efficiency and more energy-saving

Full DC stepless inverter refers to air source heat pumps (variable frequency compressor, variable frequency motor) that use DC inverter technology. Most products in the market use step frequency conversion or grid-style frequency conversion and thus cannot achieve real stepless frequency modulation. Stepless inverter means stepless frequency modulation, which achieves continuous speed regulation without any gear. According to the running conditions, Schaffhausen Platinum ultra-low temperature full DC inverter heating&cooling heat pumps can freely run with 1Hz stepless frequency modulation, and with a nominal heating COP at -12°C being more than 2.65, saves up to 59% more energy when compared to other variable frequency units.



2. 33dB low frequency silent cruise technology: ultra-silence

Schaffhausen Platinum ultra-low temperature full DC inverter heating&cooling heat pump uses the self-developed 1Hz DC stepless frequency modulation technology and holds real-time precision control over various running parameters. When reaching the set temperature, the units automatically switch into low frequency cruise mode. Just like the sound of opening a book in the library, the volume is only at 33Db, supplying you with the most comfortable and quiet environment



3. Intelligent 3 min defrosting technology: precision, speed and high efficiency

Schaffhausen Platinum ultra-low temperature full DC inverter heating&cooling heat pump uses self-developed patented intelligent defrosting technology. If the frost layer coverage is more than 85%, the heat pump will switch into defrosting mode, ensuring that the machine is frost-free.

4. EVI technology: stability at -30°C

In the Schaffhausen Platinum ultra-low temperature full DC inverter R32 heating&cooling heat pump, the compressor uses EVI technology. There is a 20% increase in the amount of refrigerant flow. On one hand, this makes the operating temperature range wider from -30°C to 50°C, and on the other, the two-stage compression function resolves the problem of poor heating at ultra-low temperatures such as at -30°C.





5. Intelligent even-temperature control technology: more comfort in even temperatures

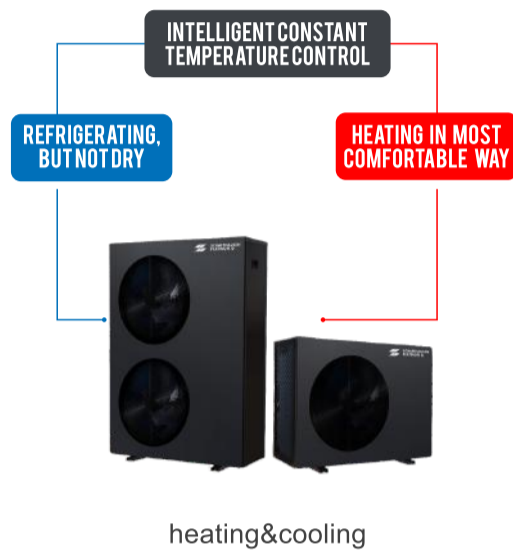
Schaffhausen Platinum ultra-low temperature full DC inverter heating&cooling heat pump integrates small-temperature difference refrigeration technology and low-temperature heating technology. When heating by radiant floor in winter, the heating floor uniformly radiates upwards, and the indoor temperature does not fluctuate. The user experience is obviously different from air conditioner. It is especially suitable for families with old people and children. In the hot summers, water-circulation refrigeration mode is active. Different to that of a traditional air conditioner, the Schaffhausen Platinum does not bring you a dry and freezing feeling.

Small temperature difference refrigeration technology

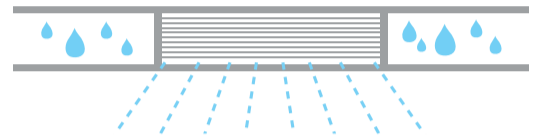
Uses water-circulation refrigeration mode. The temperature difference between the circulating water and indoor temperature is small. Since the moisture in the air is not easy to condense, the air is not dry. Concurrently, the outlet air temperature will not be too low too.

Heating at low temperature technology

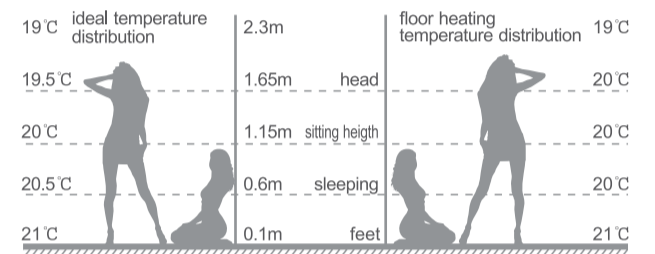
In low-temperature floor radiation heating, the floor temperature is only at about 25°C and the heat transfers slowly upwards. The feeling on the feet is both hot and cool on the head, aligning with the physiological habits of the human body.



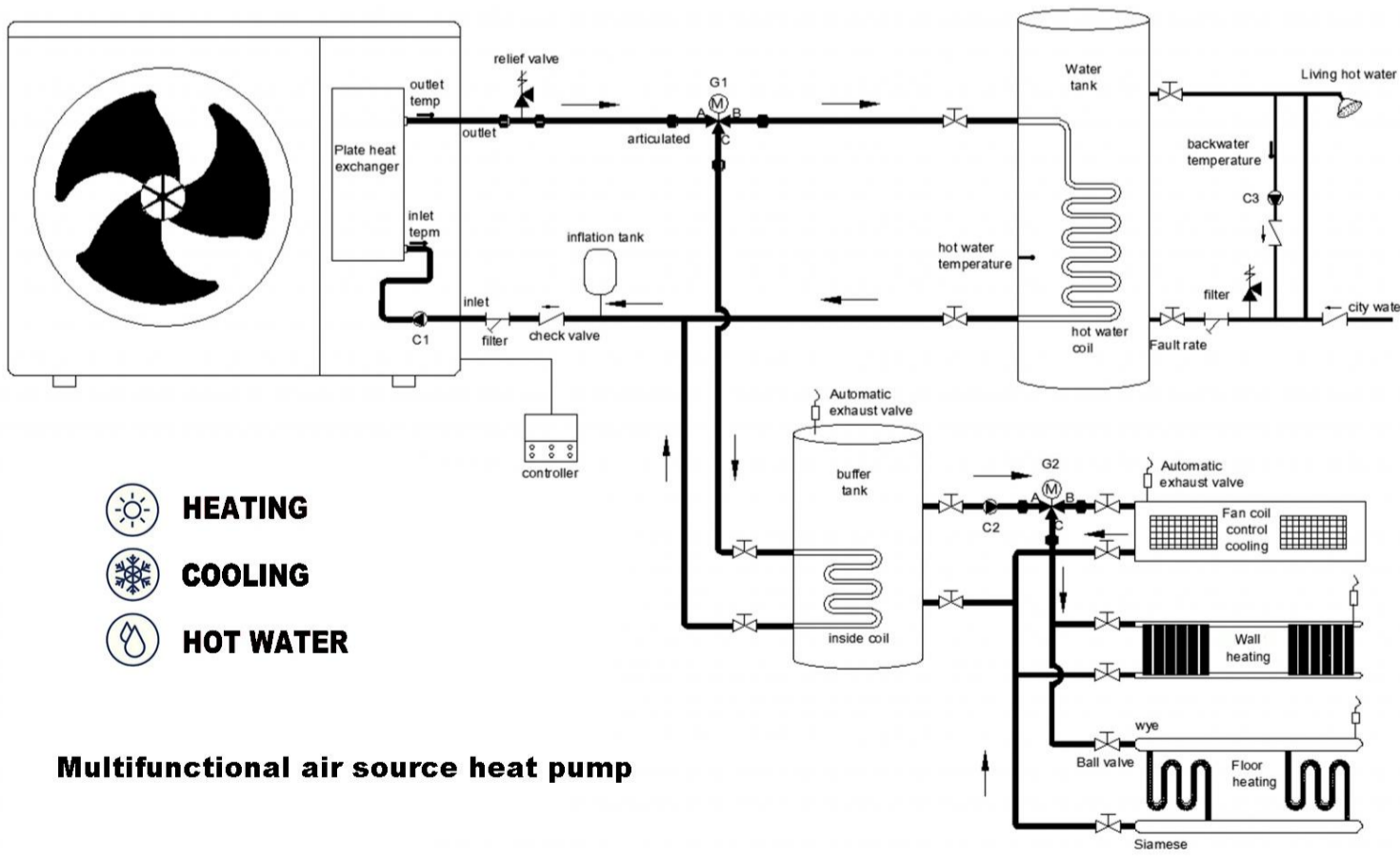
Small temperature difference water-circulation refrigeration effect



Temperature: 30% higher than traditional air conditioner
Temperature difference: 45% lower than traditional air conditioner



SYSTEM DIAGRAM



Fan coil



Underfloor heating



Hydronic radiator



