



WI-FI

air source heat pump

-25°C full DC stepless inverter heating&cooling heat pump

SCOP

A+++

STEPLESS INVERTER

MORE ENERGY-EFFICIENT



Floor heating



Cooling



Hot Water



Floor heating & Hot Water



Cooling & Hot Water



Stable running at -25°C

Panasonic EVI direct current inverter compressor good running at ultra-low temperature environment



R32

A new generation non-toxic refrigerants with energy-saving, carbon reducing and environment-friendly. No harm to ozone layer, slow down global warming.



Convenient IOT

Free WI-FI, intelligent control any time, anywhere.



Quiet

Ultra low noise, enjoy the comfortable environment

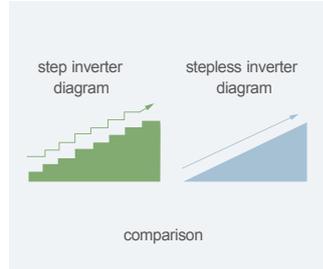
Multi mode operation

Multi energy coupling

CORE TECHNOLOGIES

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

Full DC stepless inverter refers to air source heat pump (variable frequency compressor, variable frequency motor) which use inverter technology. Most products in the market use step frequency conversion or grid-style frequency conversion, which cannot achieve real stepless frequency modulation; Stepless inverter means stepless frequency modulation, which can achieve continuous speed regulation without gear. According to the running condition, ultra-low temperature full DC inverter frequency modulation, which can save more heat&cooling heat pump can realize free running with 1Hz stepless energy up to 59% compared with other variable frequency units.



2. 38dB low frequency silent cruise technology: ultra-silence

Ultra-low temperature full DC stepless inverter heating&cooling heat pump uses the self-developed 1 Hz DC stepless frequency modulation technology, and realize real-time precision control of various running parameters. When reaching the set temperature, the units automatically switch into low frequency cruise mode, and the volume is only 38 dB, just as the sound of opening books in the library, which supplies you the most comfortable and quiet environment.



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

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

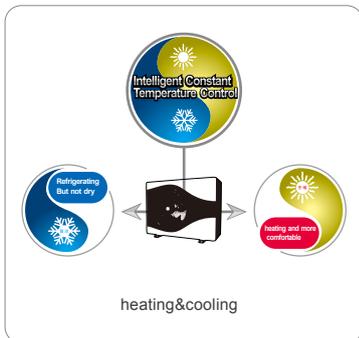
4. EVI technology: stable running at -25 °C

Ultra-low temperature full DC stepless inverter heating&cooling heat pump, the compressor of which uses EVI technology. 20% increase in amount of refrigerant flow, on the one hand, makes the operating temperature range more wider as from - 25 °C to 45 °C, and on the other hand, realizes two-stage compression function, which solving the problem of poor heating effect at ultra-low temperature, such as at -25 °C.



5. Intelligent even temperature control technology: even temperature is more comfortable

Ultra-low temperature full DC stepless inverter heating&cooling heat pump integrates small temperature difference refrigeration technology and low-temperature heating technology. When heating by radiant floor heating in winter, the heating floor uniformly radiates upward and the indoor temperature is unfluctuating. The user experience is obviously different from air conditioner. It is especially suitable for families with old people and children. In hot summer, water-circulation refrigeration mode is running. Different with traditional air conditioner, it will not bring you a dry and freezing feeling.

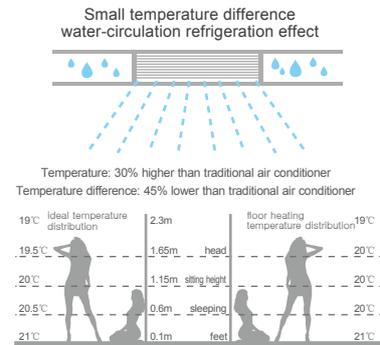


Small temperature difference refrigeration technology

Use water-circulation refrigeration mode. The temperature difference between circulating water and indoor temperature is small. The moisture in the air is not easy to condense, so the air is not dry. At the same time, the outlet air temperature will not be too low.

Heating at low temperature technology

Low-temperature floor radiation heating. The floor temperature is only about 25 °C, and the heat slowly transfers upward. The feeling on feet is hot and cool on the head, which conforms to the physiological habits of the human body.



One Device Dual Use Pay for one heat pump and enjoy the functions of two devices

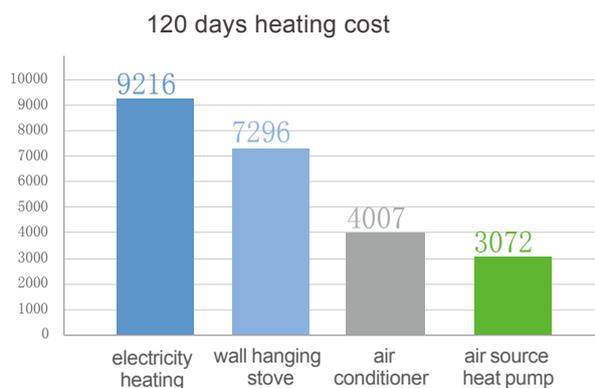
Want to experience the most comfortable heating and cooling solution? No need to buy expensive air conditioners and wall stoves. Sunrain ultra-low temperature full DC stepless frequency conversion Heating and cooling heat pump can bring you comfortable and preiswert heating&cooling solutions.



Energy Saving up to 75% Full dc stepless inverter heat pump technology is more energy-efficient.

Ultra-low temperature full DC stepless inverter heating&cooling heat pump uses Panasonic DC inverter compressor. By absorbing energy from the environment, each KWH of electricity input means four KWH of electricity use for heating, and the efficiency is up to 75%.

Take the three-room two-hall heating as an example, the area is 100 square meters, the heating load demand is 80W/m² and the heating days are 120 days. With floor heating continuous running 24 hours each day, air source heat pump, compared with wall hanging furnace heating can save 75% electricity a year.



Various Kinds of Heating Terminals Suitable for all kinds of home decoration styles

Fan Coil



It's suitable for the new decoration scheme. The fan coil is hidden in the ceiling space, which is integrated with the home decoration. It is beautiful and elegant, and can be cooled and heated at the same time.

Floor Heating Coil



It's suitable for the new decoration scheme. The floor heating pipe is laid below the ground, as occupying floor height is less than 3cm. It can be covered by ceramic tile, wood floor and other floor decoration materials, providing you with thermal comfort.

Heating Radiator



It is suitable for the heating renovation. According to different house types, different types of radiators can be selected. As no need to make too many changes in the interior decoration, It can provide you with a comfortable heating solution.

CORE COMPONENTS



1. Panasonic DC inverter compressor

use EVI technology and automatically switch into heating or cooling working mode according to the ambient temperature. Stable running at -30°C.



3. DC inverter motor

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



5. Pressure sensor

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



7. Ultra-silence fan blade

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



2. Danfoss Heat Exchanger

Patented "chocolate" diverges area technology. High heat exchange



4. Emerson full DC inverter driver module

Customized embedded connection. Secure and stable. Accurately improve the active monitoring capability of the drive system.



6. High-end finned tube exchanger

Specific hydrophilic coating. Not easy to accumulate water and ash. Rapid elimination of the moisture. Greatly improve the heating efficiency.



8. GRUNDFOS

Variable frequency water pump
Optimum adaptability
Low energy consumption

Full DC Inverter heating&cooling heat pump

Model		Diamond 8.3S	Diamond 12.2S	Diamond 16.5S	Diamond 16.6T	Diamond 19.8S	Diamond 19.8T	Diamond 26T	
Power Supply	/	220-240V~/50 (60) Hz			380-415V/3N~/50 (60) Hz	220-240V~/50 (60) Hz	380-415V/3N~/50 (60) Hz	380-415V/3N~/50 (60) Hz	
Heating ¹	Capacity	KW	2.50-8.30	4.20-12.20	5.30-16.50	5.30-16.60	6.20-19.80	6.20-19.80	6.80-25.90
	Input Power	KW	0.57-1.92	0.86-2.88	1.15-4.15	1.15-4.15	1.36-5.28	1.36-5.28	1.78-4.15
	Input Current	A	2.53-8.52	3.82-12.77	5.10-18.41	1.86-6.70	6.10-23.67	2.31-8.96	2.87-6.70
Heating ²	Capacity	KW	2.30-7.62	3.85-11.20	4.90-15.10	4.90-15.10	6.30-19.90	6.30-19.90	6.90-26.10
	Input Power	KW	0.75-2.61	1.13-3.75	1.65-5.25	1.65-5.25	1.65-6.82	1.65-6.82	1.95-8.55
	Input Current	A	3.32-11.58	5.01-16.6	7.32-23.30	1.67-8.47	7.40-30.56	2.80-11.58	3.15-13.80
Cooling	Capacity	KW	1.80-7.10	2.60-10.30	4.50-13.50	4.50-13.50	5.50-17.50	5.50-17.50	5.20-20.30
	Input Power	KW	0.61-2.43	0.91-3.65	1.45-4.85	1.45-4.85	1.65-6.25	1.65-6.25	1.95-8.20
	Input Current	A	2.71-10.78	4.03-16.19	6.43-21.52	2.34-7.82	7.40-28.02	2.80-10.61	3.15-13.23
SCOP (Water Temp. At 35°C)		5.14	4.55	4.58	4.62	4.61	4.64	4.58	
SCOP (Water Temp. At 55°C)		3.37	3.41	3.39	3.44	3.41	3.42	3.42	
Rated Input Power	KW	2.71	3.83	6.2	6.2	7.5	7.5	10	
Rated Input Current	A	12	17	27.5	10.5	35	13	17	
CO ₂ Equivalent	/	0.84t	1.21t	1.89t	1.89t	2.36t	2.36t	2.36t	
Maximum Allowable Pressure	MPa	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
IP Class	/	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4	
Max. Outlet Water Temp.	°C	60	60	60	60	60	60	60	
Operating Ambient Temperature	°C	-25~45	-25~45	-25~45	-25~45	-25~45	-25~45	-25~45	
Water Piping Connections	mm	G1	G1	G1-1/4	G1-1/4	G1-1/2	G1-1/2	G1-1/2	
Rated Water Flow	m ³ /h	1.1	1.75	2.52	2.52	3.2	3.2	4.12	
Water Pressure Drop	kPa	25	27	30	30	32	32	35	
Noise Level	dB(A)	50	51	55	55	56	56	58	
Net Dimensions (L×W×H)	mm	1100×445×850			1110×480×850		1110×445×1450		
Net Weight	kg	102	107	124	124	151	151	160	

Rated Test Conditions:

Heating¹: Ambient Temp 7°C/6°C (DB/WB), Water-In/Out Temp 30°C/35°C

Heating²: Ambient Temp 7°C/6°C (DB/WB), Water-In/Out Temp 47°C/55°C

Cooling: Ambient Temp 35°C/24°C (DB/WB), Water-In/Out Temp 12°C/7°C