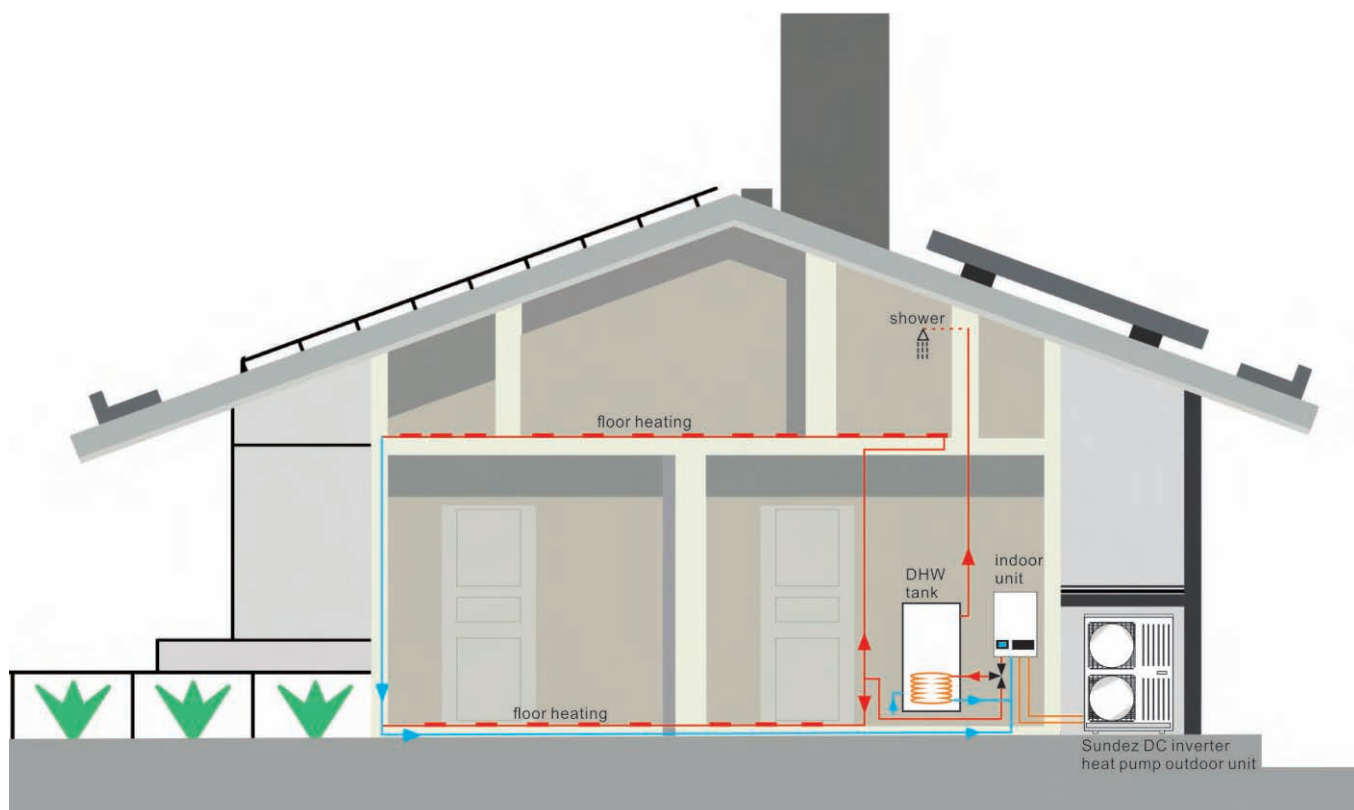




# DC INVERTER SPLIT HEAT PUMP

Sundez DC inverter heat pump is the ideal solution for house heating and hot water so far, with advanced DC inverter technology, saving 40% electricity than normal on/off heat pump in practical operation. The whole system is optimized with automatically variable fan speed. The built-in main functions offer trouble-free solution for heating, cooling and hot water. The heating curve contributes to a more comfortable indoor environment. It can work with solar, boiler or electric heater according to practical condition of the heating system.

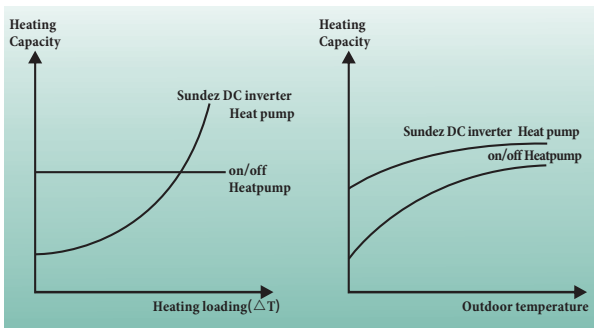




## Main Functions

### ▼ Automatically variable heating output

Sundez DC inverter heat pumps change the heating capacity output according to the heating loading. The heating capacity would be reduced onto a steady level in order to fit the heating load as the water temperature is reaching the set value, thus it reduces start/stop frequency largely. Besides, Sundez DC inverter heat pumps have less decline of heating capacity and COP than that of ON/OFF heat pumps at lower outdoor temperature.



### ▼ Heating, cooling and hot water

There are 3 modes: heating, cooling, and hot water. The combination of the modes extends the utilization of SUNDEZ DC inverter heat pumps to the whole year. Modes can be combined together and conform the following modes for users:

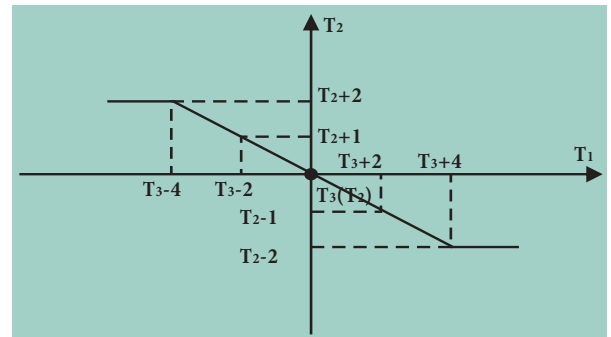
- Heating
- Hot water
- Heating + hot water
- Cooling
- Cooling + hot water

### ▼ Dual water temperature settings

Different indoor heating systems require different water temperatures, such as under floor heating and radiator heating. SUNDEZ DC inverter heat pump provides two separate water temperature setting programs, one is for floor heating, the other is for radiator. Users can simply select the indoor heating type with its default temperature set value, and would not bother with the temperature settings.

### ▼ Heating curve function

Heating curve is also called temperature compensation function. It can automatically adjust the heating water temperature set value as the outdoor temperature changes. Heat loss of the house would change as the outdoor temperature changes. By running the heating curve, SUNDEZ DC inverter heat pump adjusts the heating capacity output to optimize COP and make indoor temperature more stable and more comfortable.



T1 : ambient temperature  
T2 : water temperature set value  
T3 : ambient temperature break point  
(T2+2°C)Max ≤ Upper limit  
(T2-2°C)Min ≥ lower limit

### ▼ Optimized setting program for hot water

SUNDEZ DC inverter heat pump builds in optimized setting program for hot water. The auxiliary heater boosting temperature for hot water can be adjustable by users. The house needs more heat in colder days, and users can boost the hot water auxiliary heater at lower water temperature, so that the heat pump can switch to heating mode earlier offering more heating capacity for house.

### ▼ Receives remote signal to start/standby

One heating system would contain different heaters, and choose the suitable heater for energy saving according to practical conditions. The interlink function of SUNDEZ DC inverter heat pump receives a remote signal of 220V to start/standby. This function can be from solar controller, room thermostat, or the master controller of the house heating system.



### ▼Adjustable defrost function

The standard defrost program in SUNDEZ DC inverter heat pump offers high efficiency in normal days. The high humidity in some area or in some days in winter would make defrost of air source heat pumps more difficult. Besides the standard defrost program, SUNDEZ DC inverter heat pump has option of adjustable defrost parameters for high humidity, in order to balance the high humidity and the defrost efficiency.

### ▼Adjustable operation ambient temperature range

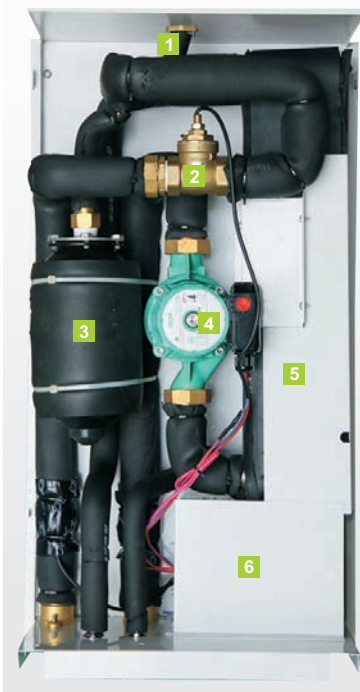
The operation ambient temperature range can be adjustable according to the practical combination of the whole heating system, in order to achieve the best heating output and efficiency of the whole heating system. All the protecting functions in the controller still operate to protect the heat pump system.

### ● Other functions/features

- Timer function.
- Automatically variable fan speed according to heating/cooling loading to optimize efficiency.
- Anti-freezing protection for water heat exchanger.
- Adjustable setting for auxiliary heater in heating mode.
- Crankcase heater for compressor.
- Heater for bottom plate to prevent condensing water from re-iced.
- Anti-mistake plug from outdoor unit to indoor unit for power and communication.ctions.

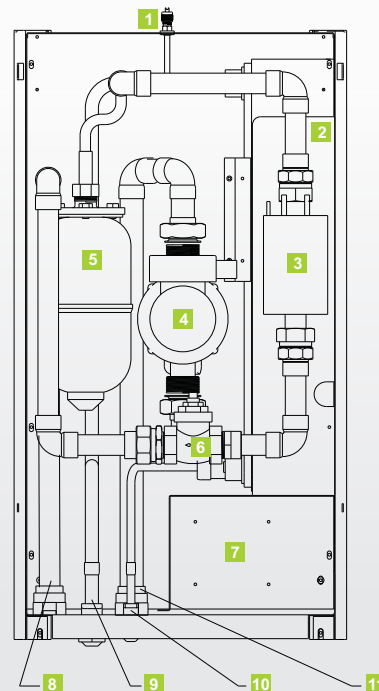
## ● Main Components - Indoor unit

### ▼Standard Version



- 1 Air vent
- 2 Water flow switch
- 3 Expansion vessel
- 4 Circulation pump
- 5 SUS316# plate heat exchanger
- 6 Indoor wiring box

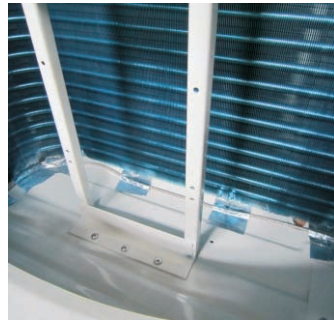
### ▼Version with electric heater



- 1 Air vent
- 2 SUS316# plate heat exchanger
- 3 2~3KW electric heater
- 4 Circulation pump
- 5 Expansion vessel
- 6 Water flow switch
- 7 Indoor wiring box
- 8 Water outlet
- 9 Refrigerant in
- 10 Refrigerant out
- 11 Water inlet



compressor heater



bottom plate heater



anti-mistake plug



bottom of indoor unit

Model		SDDC-050-B	SDDC-075-B	SDDC-125-B	SDDC-125-B-S	
Power Supply	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	380-400/3/50	
Rated Heating Capacity	KW	5.5	8.6	17.2	17.2	
Heating Capacity Range	KW	0.87~7.0	1.5~10.5	2.6~19.8	2.6~19.8	
Heating Input Power	W	300~1630	500~2450	1000~4400	1000~4400	
COP	W/W	2.9~4.5	2.9~4.5	2.9~4.5	2.9~4.5	
Rated Cooling Capacity	KW	5	7.5	14.5	14.5	
Cooling Capacity Range	KW	0.7~6.2	1.2~9.1	2.3~16.1	2.3~16.1	
Cooling Input Power	W	290~1590	490~2450	970~4300	970~4300	
EER	W/W	2.4~3.5	2.5~3.5	2.5~3.5	2.5~3.5	
Max. hot water temperature	°C	55	55	55	55	
Applicable ambient temp.	°C	-20~+43	-20~+43	-20~+43	-20~+43	
Compressor		Inverter rotary	Inverter rotary	Inverter rotary	Inverter rotary	
Refrigerant		R410A	R410A	R410A	R410A	
Water Connection	inch	DN20	DN25	DN25	DN25	
Water Flow Volume	m³/h	1	1.5	2.8	2.8	
Water Pressure Drop	kpa	12	12	20	20	
Water side heat exchanger		plate heat exchanger				
Circulation pump		Built-in	Built-in	Built-in	Built-in	
Fan Quantity		1	1	2	2	
Fan direction		Horizontal	Horizontal	Horizontal	Horizontal	
Fan rotate speed (auto-adjustable)	RPM	850/750/600	730/630/550	730/630/550	730/630/550	
Noise	Outdoor unit	dB(A)	48	49	53	53
	Indoor unit	dB(A)	30	30	30	30
Net weight	Outdoor unit	kg	50	60	121	128
	Indoor unit	kg	30	36	40	40
Net Dimension	Indoor unit	mm	HxWxD	732*410*319	732*410*319	732*410*319
	Outdoor unit	mm	LxWxH	830*310*710	880*360*800	930*390*1270

Test Condition:

Heating(A7/W35): ambient Temp. DB/WB 7/6 °C, water inlet /outlet Temp. 30/35 °C.

Cooling(A35/W7): ambient Temp. DB/WB 35/24 °C, water inlet/outlet Temp. 12/7 °C.