

Solar Thermal
Solar Panel Air Conditioner
Air Source Heat Pump



CATALOGUE

SOLAR THERMAL



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SOLAR PANEL AIR CONDITIONER



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Pressure Solar Water Heater



Integrative Pressurized Solar Water Heater IP01 Series



Item No.	Solar Vacuum Tube		Tube Coating	Absorber Area(m ²)	Tank Capacity	Loading Qty/sets 20GP/40GP/40HQ
	pcs	size/mm				
UNP-IP01-10	10	φ58 X 1800	Cu-S/S- AL/N Heat Pipe	1.36	100L	68/143/168
UNP-IP01-12	12	φ58 X 1800		1.84	120L	58/121/141
UNP-IP01-15	15	φ58 X 1800		2.044	150L	47/95/111
UNP-IP01-18	18	φ58 X 1800		2.26	180L	42/81/92
UNP-IP01-20	20	φ58 X 1800		2.72	200L	34/72/84
UNP-IP01-24	24	φ58 X 1800		3.27	240L	31/65/77
UNP-IP01-25	25	φ58 X 1800		3.41	250L	28/55/65
UNP-IP01-30	30	φ58 X 1800		3.91	300L	26/58/68

*All models are available in stainless steel



Remark:

1. Diameter of the tank: 360/460mm 380/470mm
2. Insulation thickness: 50mm
3. Vent connection: 1/2"
4. Electric heater connection: 1"
5. Water connection: 3/4"
6. Installation angel: 15°/20°/30°/45°
7. Test Pressure: 1Mpa

Model	UNP-K-IP01-153L	UNP-K-IP01-202L
Tank	Inner Diameter	360
	Outer Diameter	460
	Insulation/Thickness	50
	Inner Tank	Stainless steel 1.2mm
	Outer Tank	Galvanized steel 0.41mm
	Insulation/Density	36kgs/m ²
Frame	Hole to hole Distance	80
	Type	7*7
	Thickness	1.5mm thickness galvanized steel
Collector	No.s of Tube	18
	Thickness of Tubes	Inner tube 1.6mm, outer tube 2.2mm
	Absor area	2.52m ²
	Output	150W
	Tube	58/1800 Three Layers Coating
	Heat Pipe	T2 Copper 1700mm *0.7mm
Working Temperature	15℃-45℃	
Accessories	PT valve, Air Vent Valve, Check Valve, Vacuum Valve, Mag Bar Reserve electric heating and induction holes	

CHARACTERISTICS

1. Working with high pressure
2. Use heat pipe vacuum tube for deliver heat energy. Shorten the time for heating water
3. Hot water coming out with pressure
4. No limitation for the installation position
5. Each tube work alone so it can work even if one of the tube is broken

MATERIAL

1. Inner tank: Imported stainless steel (SUS304/2B) 1.2mm thickness
2. Outer tank: Galvanized steel alloy, 0.5mm thickness
3. Bracker: Galvanized steel alloy, 1.5mm thickness
4. Heat insulation layer: Imported polyurethane(Bayer, Germany), 50mm thickness
5. Heat Pipe: high quality straight red copper pipe
6. Working temperature: 99 celsius degree
7. Working pressure: 0.6Mpa (6 bars)
8. Color: As per customer's request

Low Pressure Solar Water Heater R01 Series



Item No.	Solar Vacuum Tube		Absorber Area(m2)	Tank Capacity	Loading Qty/sets 20GP/40GP/40HQ
	pcs	size/mm			
UNP-R01-8	8	φ58 X 1800	0.64	80L	106/212/252
UNP-R01-10	10	φ58 X 1800	0.8	100L	89/178/210
UNP-R01-12	12	φ58 X 1800	0.96	120L	76/152/180
UNP-R01-15	15	φ58 X 1800	1.97	150L	43/86/100
UNP-R01-18	18	φ58 X 1800	2.36	180L	39/82/96
UNP-R01-20	20	φ58 X 1800	2.62	200L	34/72/84
UNP-R01-24	24	φ58 X 1800	3.15	240L	31/65/77
UNP-R01-30	30	φ58 X 1800	3.95	250L	22/50/58



Remark:

1. Diameter of the tank: 360/460mm
2. Insulation thickness: 50mm
3. Vent connection: 1/2"
4. Electric heater connection: optional
5. Water connection: 3/4"
6. Installation angel: 15°/20°/30°/45°

CHARACTERISTICS

1. It takes advantage of the tap water's pressure. More pressure more comfortable.
2. The water is heated in short time and meeting your demand for hot water.
3. It can produce more hot water than the general types with continuous hot water coming.

MATERIAL

1. Inner tank: 304-2B stainless steel (food grade), argon arc welding, thickness 1.0mm. 360mm diameter
2. Outer tank: Stainless steel, Thickness: 0.31mm diameter 460mm
3. Bracket: Round-type of stainless steel, angle: 20/38/45 degrees. Thickness: 0.5mm
4. Heat insulation layer: Imported polyurethane(Bayer, Germany), 50mm thickness
5. Accessory: Magnesium bar, logo printing on tanks / box, controller, electrical heater, air vent base

Non-Pressurized Solar Water Heater S02 Series



Item No.	Solar Vacuum Tube		Absorber Area(m2)	Tank Capacity	Loading Qty/sets 20GP/40GP/40HQ
	pcs	size/mm			
UNP-S02-8	8	φ58 X 1800	0.64	80L	106/212/252
UNP-S02-10	10	φ58 X 1800	0.8	100L	89/178/210
UNP-S02-12	12	φ58 X 1800	0.96	120L	76/152/180
UNP-S02-15	15	φ58 X 1800	1.97	150L	43/86/100
UNP-S02-18	18	φ58 X 1800	2.36	180L	39/82/96
UNP-S02-20	20	φ58 X 1800	2.62	200L	34/72/84
UNP-S02-24	24	φ58 X 1800	3.15	240L	31/65/77
UNP-S02-30	30	φ58 X 1800	3.95	250L	22/50/58
UNP-S02-36	36	φ58 X 1800	4.75	300L	16/40/43



Remark:

1. Diameter of the tank: 360/460mm 380/470mm
2. Insulation thickness: 50mm
3. Vent connection: 3/4"
4. Electric heater connection: optional
5. Water connection: 3/4"
6. Installation angel: 15°/20°/30°/45°

CHARACTERISTICS

1. It takes advantage of the tap water's pressure. More pressure more comfortable.
2. The water is heated in short time and meeting your demand for hot water.
3. It can produce more hot water than the general types with continuous hot water coming.

MATERIAL

1. Inner tank: 304-2B stainless steel (food grade), argon arc welding, thickness 0.41mm. 360mm diameter
2. Outer tank: Stainless steel, Thickness: 0.31mm diameter 450/460mm
3. Bracket: U-type of stainless steel, angle: 20/38/45 degrees. 1.2mm
4. Heat insulation layer: Imported polyurethane(Bayer, Germany), 50mm thickness
5. Accessory: Magnesium bar, logo printing on tanks / box, feeding tank 5liter, controller, electrical heater, air vent base

Integrative Non-Pressurized Solar Water Heater G01/02 Series

Item No.	Solar Vacuum Tube		Absorber Area(m2)	Tank Capacity	Loading Qty/sets 20GP/40GP/40HQ
	pcs	size/mm			
UNP-G01/02-8-GI	8	φ58 X 1800	0.64	80L	106/212/252
UNP-G01/02-10-GI	10	φ58 X 1800	0.8	100L	89/178/210
UNP-G01/02-12-GI	12	φ58 X 1800	0.96	120L	76/152/180
UNP-G01/02-15-GI	15	φ58 X 1800	1.97	150L	43/86/100
UNP-G01/02-18-GI	18	φ58 X 1800	2.36	180L	39/82/96
UNP-G01/02-20-GI	20	φ58 X 1800	2.62	200L	34/72/84
UNP-G01/02-24-GI	24	φ58 X 1800	3.15	240L	31/65/77
UNP-G01/02-30-GI	30	φ58 X 1800	3.95	300L	22/50/58
UNP-G01/02-36-GI	36	φ58 X 1800	4.75	360L	16/40/43

*All models are available in stainless steel



G01



G02

Remark:

1. Diameter of the tank: 360/460mm
2. Insulation thickness: 50mm
3. Vent connection: 3/4"
4. Electric heater connection: optional
5. Cold water inlet: 3/4"
6. Hot water outlet: 3/4"
7. Installation angel: 15°/20°/30°/45°
8. **G01: Top side feeding tank**
G02: Side feeding tank

CHARACTERISTICS

1. It takes advantage of the tap water's pressure. More pressure more comfortable.
2. The water is heated in short time and meeting your demand for hot water.
3. It can produce more hot water than the general types with continuous hot water coming.

MATERIAL

1. Inner tank: 304-2B stainless steel (food grade), thickness 0.4mm
2. Outer tank: PVDF Coated Galvanized steel alloy, 0.5mm thickness
3. Bracket: Galvanized steel, 1.5mm thickness
4. Heat insulation layer: Imported polyurethane(Bayer, Germany), 50mm thickness
5. Working temperature: 99 celsius degree
6. Working pressure: 0.005Mpa(0.05 bars)
7. Accessory: Optional assistant tank and electrical heater

Pre-heated Solar Water Heater P02 Series

Item No.	Solar Vacuum Tube		Tube Coating	Absorber Area(m2)	Tank Capacity	Loading Qty/sets 20GP/40GP/40HQ
	pcs	size/mm				
UNP-P02-10	10	φ58 X 1800	Cu-Si-S-AL/N	1.36	100L	78/144/172
UNP-P02-12	12	φ58 X 1800		1.64	120L	65/124/143
UNP-P02-15	15	φ58 X 1800		2.044	150L	50/101/119
UNP-P02-18	18	φ58 X 1800		2.26	180L	41/94/104
UNP-P02-20	20	φ58 X 1800		2.72	200L	34/72/84
UNP-P02-24	24	φ58 X 1800		3.27	240L	31/65/77
UNP-P02-30	30	φ58 X 1800		3.41	300L	22/50/58
UNP-P02-36	36	φ58 X 1800		3.91	360L	16/40/43

*All models are available in stainless steel



Remark:

1. Diameter of the tank: 360/460mm
2. Insulation thickness: 50mm
3. Coil connection: 3/4"
4. Electric heater connection: 1"
5. Cold water inlet: 3/4"
6. Installation angel: 15°/20°/30°/45°

CHARACTERISTICS

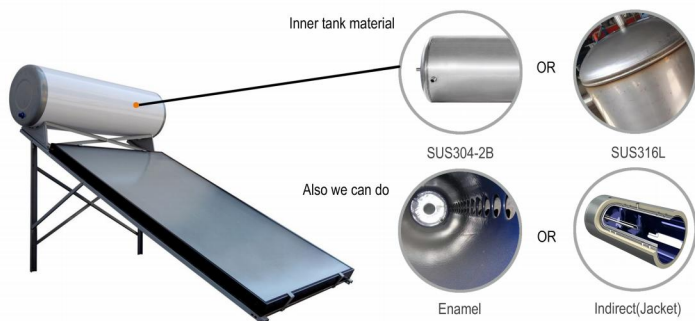
1. Instant heat exchange to provide plentiful warm water
2. Fresh and high water quality
3. Working with pressure
4. Output water temperature is stable, so it is very comfortable and safe to use
5. Hot&cold water flow is separated
6. Copper coil is tested and does not break
7. Works intelligently and easy and is very reliable
8. Perfect performance

MATERIAL

1. Inner tank: 304-2B stainless steel (food grade), thickness 0.4mm
2. Outer tank: Galvanized steel alloy, 0.4mm thickness
3. Bracket: Galvanized steel alloy, 1.5mm thickness
4. Heat insulation layer: Imported polyurethane(Bayer, Germany), 50mm thickness
5. Working temperature: 99 celsius degree
6. Working pressure: Copper coil: above 0.6Mpa(6 bars), tank: 0.005Mpa(0.05 bars)
7. Copper coil: 12mm, 0.8mm thickness

Flat Panel Solar Water Heater FPS01 Series

Item No.	Flat Panel Collector		Absorber Area(m ²)	Tank Capacity	Loading Qty/sets 20GP/40GP/40HQ
	pcs	m ²			
UNP-FPS01-100L	1	2	1.98	100L	52/62/102
UNP-FPS01-150L	1	2	1.98	150L	40/75/99
UNP-FPS01-200L	2	4	3.96	200L	38/70/91
UNP-FPS01-250L	2	4	3.96	250L	32/65/86
UNP-FPS01-300L	2	4	3.96	300L	27/56/66
UNP-FPS01-400L	3	6	5.94	400L	22/46/58



CHARACTERISTICS

1. Pressurized hot water flows out.
2. Easy installation on the flat roof and sloping roof.
3. Perfect design combined with building.
4. Thermosyphon System: circulation without the need for additional pumps.

MATERIAL

1. Inner tank: SUS304-2B stainless steel, thickness: 1.2mm
2. Outer tank: Galvanized steel, thickness 0.4mm
3. Insulation Layer: 50mm to 60mm
4. Bracket: Galvanized steel, thickness: 1.5mm
5. Working pressure: 0.5Mpa - 0.7Mpa
6. Absorber: Black coating or blue titanium. Standard 2000*1000*80mm

Split Pressurized Solar Water Heater S01 Series



Model No.	Solar Vacuum Tube		Aperture Area(m ²)	Tank Capacity	Loading Qty / sets 20GP/40GP/40HQ
	pcs	size/mm			
UNP-S01-15-1508	15	φ58 X 1800	1.44	150L	35/70/77
UNP-S01-20-1508	20	φ58 X 1800	1.92	150L	30/62/74
UNP-S01-25-2008	20	φ58 X 1800	1.92	200L	28/58/68
UNP-S01-25-2008	25	φ58 X 1800	2.40	200L	26/53/62
UNP-S01-25-2508	25	φ58 X 1800	2.40	250L	24/46/60
UNP-S01-30-2508	30	φ58 X 1800	2.88	250L	22/43/54
UNP-S01-35-3008	30	φ58 X 1800	2.88	300L	20/40/48
UNP-S01-40-3008	40	φ58 X 1800	3.84	300L	17/35/44
UNP-S01-60-4008	60	φ58 X 1800	5.76	400L	14/27/33
UNP-S01-60-5008	60	φ58 X 1800	5.76	500L	13/26/32
UNP-S01-20-200D	20	φ58 X 1800	1.92	200L	28/58/68
UNP-S01-25-200D	25	φ58 X 1800	2.40	200L	26/53/62
UNP-S01-25-250D	25	φ58 X 1800	2.40	250L	24/46/60
UNP-S01-30-250D	30	φ58 X 1800	2.88	250L	22/43/54
UNP-S01-30-300D	30	φ58 X 1800	2.88	300L	20/40/48
UNP-S01-40-300D	40	φ58 X 1800	3.84	300L	17/35/44
UNP-S01-40-400D	40	φ58 X 1800	3.84	400L	16/32/37
UNP-S01-50-400D	50	φ58 X 1800	4.80	400L	15/29/34
UNP-S01-60-400D	60	φ58 X 1800	5.76	400L	14/28/32
UNP-S01-60-500D	60	φ58 X 1800	5.76	500L	13/26/31
UNP-S01-75-700D	75	φ58 X 1800	7.20	700L	11/22/26

Remark:

1. S=Single coil tank system,D=Double coil tank
2. Manifold connection:22mm
3. Test Pressure(Pa):1Mpa
4. Max. service temperature(degree):95°

5. Max. stagnation Temperature(degree):200.3°
6. Flow range recommendation(50- 150L/m²h)
7. Min. collector angle(degree):15
8. Max. collector angle (degree):75°

CHARACTERISTICS

1. Module design, arbitrary combination, harmony with the building perfectly
2. Intelligent control and automatic operation
3. Anti-freeze: Using the anti-freezing liquid as the medium and the controller has the anti-freezing function
4. Work at anytime with excellent performance

MATERIAL

1. Inner Tank: SUS3042B,2.0mm -2.5mm thickness
2. Outer Tank: Galvanized steel alloy,0.5mm thickness
3. Tank Heat Insulation Layer: Rock Wool,50mm thickness
4. Bracket: Aluminum Alloy, 1.8mm thickness
5. Working station: Wilo circulation pump or Grundfos circulation pump, Flowing meter, Pressure gauge,Expansion vessel,controller
6. Working Temperature: 99 Celsius Degree
7. Working Pressure: 1.0Mpa (10 bars)

U pipe solar collector UC01 Series

Item No.	Solar Vacuum Tube			Aperture Area(m2)	Daily Output (50-90℃)	Loading Qty/ sets 20GP/40GP/40HQ
	pcs	size / mm	coating			
UNP-UC01-10	10	φ58 X1800	Cu-S/S— AL-N Heat Pipe	0.96	80-100L	130/286/303
UNP-UC01-15	15	φ58 X1800		1.44	120-150L	115/253/285
UNP-UC01-20	20	φ58 X1800		1.92	160-200L	87/193/217
UNP-UC01-25	25	φ58 X1800		2.40	200-250L	70/157/175
UNP-UC01-30	30	φ58 X1800		2.88	240-300L	57/126/141



Specifications:

1. U pipe vacuum tube solar collector
2. Vacuum tube material: Borosilicate glass 3.3
3. U pipe: Red copper
4. Manifold casing material: Aluminum alloy
5. Insulation layer: Rock wool
6. Frame material: Aluminium alloy
7. Heat transfer fin material: United aluminium sheet

CHARACTERISTICS

1. The evacuated tubes which are slid onto a U-shaped heat transfer unit absorb the sun energy and transform it into heat. As a result the liquid gets heated. When the required temperature is reached, the pump in the solar circuit is activated by the controller and transports the heat to the hot water storage tank or the heating system.
2. Suitable for mains pressure water.
3. Since there is no water in the tubes themselves, the tubes will not break in winter.
4. System is reliable and efficient.
5. The collector is mountable on sloped or flat roofs or on a facade. The installation is the most flexible since it can work well in any installation angle.
6. It can be combined with an existing pipeline.

Heat pipe solar collector HP01 Series

Item No.	Solar Vacuum Tube			Aperture Area(m2)	Daily Output (50-90℃)	Loading Qty/ sets 20GP/40GP/40HQ
	pcs	size / mm	coating			
UNP-HP01-12	12	φ58 X1800	Cu-S/S— AL-N Heat Pipe	0.96	100-120L	130/253/285
UNP-HP01-15	15	φ58 X1800		1.2	120-150L	115/210/240
UNP-HP01-18	18	φ58 X1800		1.44	150-175L	78/185/201
UNP-HP01-20	20	φ58 X1800		1.6	160-200L	75/170/189
UNP-HP01-24	24	φ58 X1800		1.92	200-250L	70/157/175
UNP-HP01-30	30	φ58 X1800		2.4	240-280L	57/127/141



Specifications:

1. Heat pipe vacuum tube solar collector
2. Vacuum tube material: Borosilicate glass 3.3
3. Manifold pipe material: Red copper
4. Manifold casing material: Aluminum alloy
5. Insulation: High-density rockwool
6. Frame material: Aluminium alloy
7. Heat transfer fin material: Aluminium sheet
8. Working pressure: 6 bars

ADVANTAGES:

1. High Efficiency: The vacuum minimizes heat loss, while the heat pipe efficiently transfers heat from the absorber to the heat transfer fluid.
2. Improved Performance in Cold Weather: Solar vacuum tubes with heat pipes can operate efficiently even in cold weather (-50°C) conditions.
3. Reliability: Heat pipes have no moving parts and are sealed, making them highly reliable with minimal maintenance requirements.
4. Quick Start-Up: Solar vacuum tubes with heat pipes can quickly start collecting solar energy as soon as sunlight is available.
5. No water inside vacuum tube, the whole collector can still work if a tube damaged.

Project Solar Collector E01, E02 Series

Item No.	Solar Vacuum Tube				Absorber Area (m ²)	Daily Output (50-90 °C)	Loading Qty/ sets
	pcs	orientation	size / mm	coating			
UNP-E01-20	20	vertical	φ58 X1800	Aluminium Nitride	1.87	150-200L	90/195/220
UNP-E01-25	25	vertical	φ58 X1800		2.35	200-250L	72/160/177
UNP-E01-30	30	vertical	φ58 X1800		2.35	250-300L	59/128/143
UNP-E02-40	40	horizontal	φ58 X1800		3.78	350-400L	82/170/200
UNP-E02-50	50	horizontal	φ58 X1800		4.73	450-500L	66/138/161



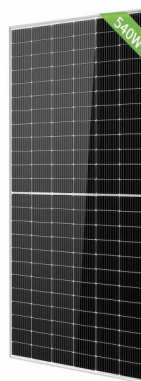
CHARACTERISTICS

1. Applicable to solar hot water supply/swimming pool heating/house heating
2. Operates automatically, telecommuting controlling
3. All-day/time-lapse mode
4. The design allows for versatile architectural integration
5. Any type of back up heating can be combined

MATERIAL

1. Outer Chest: Galvanized steel
2. Inner tank & Outer tank: 0.4mm thickness
3. Bracket: Galvanized steel, 1.5mm thickness
4. Heat insulation layer: Imported polyurethane (Bayer Germany), 40mm thickness
5. Working temperature: 99 celsius degree
6. Working pressure: 0.005Mpa (0.5 bars)
7. Color: Shinning White
8. Accessory: Plastic bottom support, silica gasket

PVT Integrated Electricity Hot Water Panel



Maximum Power Output: 540W

Maximum Module Efficiency: 20.4%

Power Output Guarantee: 0~+5W



Ideal choice for large scale ground installation



Selected encapsulating material and stringent production process control ensure the product is highly PID resistant and snail trails free



Special cutting and soldering technology leads to low hotspot risk



Sand blowing test, salt mist test and ammonia test passed to endure harsh environments

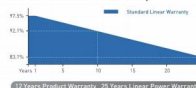


Optimized system performance due to module level current sorting

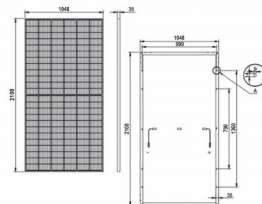


Highly transparent self-cleaning glass brings additional yield and easy maintenance

Linear Performance Warranty



Engineering drawings



Mechanical characteristics

No. of Cells	144 Cells (6x24)
Dimensions	2108x1048x35mm
Weight	28.8kg
Front Glass	High transparency solar glass 3.2mm (0.125 inch)
Frame	Silver, anodized aluminium alloy
Junction box	IP68 Rated
Output cables	4 (1x10/0.08 inch) Perforated 30330mm(11.81 inch)
Max/Wind Load/Snow Load	2400Pa/5400Pa
Connector	MC Compatible

Quantity for container load

40HQ container	600 pcs
Number of packages per pallet	30 pcs/pallet

Specifications

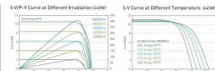
*STC: irradiance 1000 W/m ² , AM 1.5, Gnd cell temperature of 25°C	
Model Type	UNIEPU-PVT-540W
Peak Power(P _{max})	540.00
Rated voltage (V _{mp})	41.40
Rated current (I _{mp})	13.63
Open Circuit Voltage(V _{oc})	49.25
Short Circuit Current(I _{sc})	13.14
Cells Efficiency(%)	19.90
Module Efficiency(%)	20.4%
*NOCT: irradiance 800 W/m ² , AM 1.5G, ambient temperature 20°C, wind speed 1 m/s	
Peak Power(P _{max})	397.25
Rated voltage (V _{mp})	38.50
Rated current (I _{mp})	8.50
Open Circuit Voltage(V _{oc})	45.70
Short Circuit Current(I _{sc})	9.01
Inlet and Outlet	DN 15
Water pressure	0.8mpa
Water flow	0.4L/S

PVT certification



Temperature characteristics

NOCT Nominal Operating Cell Temperature(°C)	44±2
Voltage temperature coefficient (μVoc) / °C	-0.30% / °C
Current temperature coefficient (μIsc) / °C	+0.06% / °C
Power temperature coefficient (μPmp) / °C	-0.39% / °C



PVT operating conditions

Maximum System Voltage(V)	1500
Maximum Series Fuse Rating(A)	20
Power Tolerance	0~+3W
Operating and Storage Temperature(°C)	-40 ~ +85

Introduction of the Accessories

The accessories are very important in the whole solar water heater system. All of them are manufactured in our company or Purchased from one of the top three suppliers in China.



CIRCULATION PUMP



RELIEF VALVE



ELECTRIC HEATER



COMPUTERIZED
CONTROLLER



T/P RELIEF VALVE



STAINLESS STEEL
FLEXIBLE TUBE



MAGNESIUM ROD



EXPANSION VESSL



FILLING PUMP



MIXER VALVE



MIXER VALVE



PPR PIPE

SOLAR WORKING STATION



Main Function:
Making timing process easy and reliable, more convenient, safer and more utility.

Technical Parameters
1. Full Power of recycle pump: AC 110V/220V, 93W
2. Temperature and pressure gauge: 1.0Mpa, 120°C
3. Pressure relief valve: 0.8Mpa
4. Flowmeter: 2-8L/min
5. Connector: 1/2 inch

Components:
Temperature and pressure gauge
flowmeter
WILO/Grundfos pump
Safety valve
Controller



FLAT PLATE HEAT EXCHAGER

This is an extremely popular unit for wood burning furnaces, radiant floor systems, refrigerant systems straight vegetable oil conversions, beer chilling, air conditioning system and solar water heating systems. It will work for any application in which the desired result is for two fluids (liquid or gas) to exchange heat.

SOLAR PANEL AIR CONDITIONER





ACDC Hybrid Solar Air Conditioner

CE CB

R32

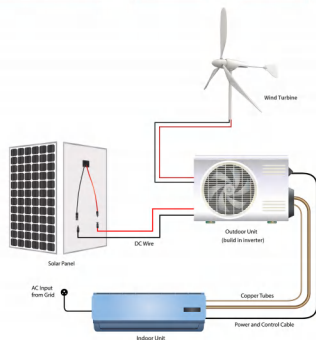
INVERTER

A+++

WIFI

Features:

- AC and DC dual power supply.
- Full DC control scheme, with the highest energy efficiency reaching SEER36 (about SEER17 for traditional inverter air conditioners).
- With MPPT and solar power supply control system, the energy efficiency is up to 95%.
- Hybrid Power with the priority of Solar energy. mains power as supplement, to achieve uninterrupted power supply.
- Wide voltage range design, free combination of solar panels without site limitation.
- Adapt to various climatic conditions.



Parameters

Model	Unit	UNP-26GW/ACDCB1	UNP-35GW/ACDCB1	UNP-50GW/ACDCB1	UNP-70GW/ACDCB1	UNP-100GW/ACDCB1
Cooling	Power Supply	V PH-V-HZ 1Ph, 220~, 50/60Hz	DC50-380V 1Ph, 220~, 50/60Hz	DC50-380V 1Ph, 220~, 50/60Hz	DC50-380V 1Ph, 220~, 50/60Hz	DC50-380V 1Ph, 220~, 50/60Hz
	Capacity	Btu/h 9000 (500-11000)	12000 (7000-14000)	18000 (6200-19500)	24000 (5100-26900)	36000 (6500-37500)
	Power Input	W 590(100-1200)	865(110-1500)	1320(140-1800)	1980(240-3030)	2850(320-3510)
	Current	A 2.68(0.45-5.45)	3.93(0.5-6.82)	6.0(0.6-18)	9.1(0.6-13.2)	12.95(1.45-15.95)
Heating	Capacity	Btu/h 9500(3800-11500)	13000(4000-15000)	19000(4700-20000)	25000(5500-30000)	37500(7000-39000)
	Power Input	W 625(120-1200)	880(130-1510)	1465(200-3140)	2050(260-3140)	3000(350-3650)
	Current	A 2.84(0.5-5.45)	4.0(0.9-6.86)	6.66(0.9-8.63)	9.32(1.1-13.7)	13.63(1.59-16.59)
	Moisture Removal	L/h 1.0	1.3	1.7	2.5	3.6
Indoor unit	Max input	W 1320	1500	2300	3200	3800
	Max current	A 6	7.50	10.45	14.54	14.54
	Indoor air flow(H/M/L)	m3/h 570/470/370	570/470/370	721/566/458	970/780/590	1150/900/700
	Indoor noise(H/M/L)	dB(A) 41/36/28	41/36/28	43/37/32	45/39/34	46/40/35
Outdoor unit	Net Size(W*D*H)	mm 734*194*285	775*194*285	921*213*302	1026*220*327	1080*220*327
	Pack Size(W*D*H)	mm 780*270*360	830*270*360	995*305*380	1105*310*405	1155*310*405
	Net/Gross	kg 8.1/9.9	8.1/9.9	9.5/12.5	11.9/15.2	13.7/17.2
	Outdoor air flow	m3/h 2100	2100	2100	2900	3800
Outdoor unit	Outdoor noise	dB(A) <50	<50	<52	<56	<56
	Net Size(W*D*H)	mm 835*320*540	835*320*540	835*320*540	910*340*700	946*410*810
	Pack Size(W*D*H)	mm 900*400*600	900*400*600	900*400*600	1063*457*780	1090*500*860
	Net/Gross	kg 28.9/33.4	29/33.5	31/36	49.5/56	65/73
Ambient temp.(cooling/heating)	Operation temp.	°C 16-30	16-30	16-30	16-30	16-30
	Ambient temp.(cooling/heating)	°C 18-52/15-34	18-52/15-34	18-52/15-34	18-52/15-34	18-52/15-34
	Application area	m2 12-18	16-23	24-35	32-47	47-63
	Solar panels recommendation	W 700-1290	1030-1900	1580-2900	2370-4350	3400-6270



Pure Solar Drive Solar Air Conditioner

R32

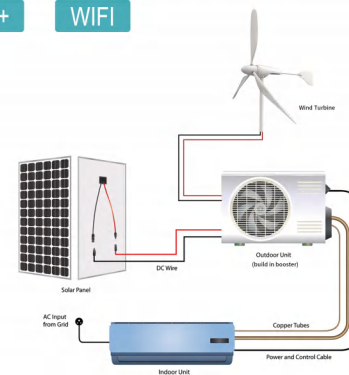
INVERTER

A+++

WIFI

Features:

- 100% solar energy driven, Air conditioning without AC power of mains.
- When Solar power generation is not sufficient for full frequency operation of the air conditioner, the compressor frequency will be automatically adjusted to keep working.
- Free electric charge (off-grid).
- Built-in MPPT to track the maximum photovoltaic power.



Parameters

Model	Unit	UNP-26GW/BPS	UNP-35GW/BPS	UNP-50GW/BPS	UNP-70GW/BPS
Cooling	Power Supply	V DC120-380V	DC120-380V	DC120-380V	DC120-380V
	Capacity	Btu/h 9000 (500-11000)	12000 (7000-14000)	18000 (6200-19500)	24000 (5100-26900)
	Power Input	W 590(100-1200)	865(110-1500)	1320(140-1800)	1980(240-3030)
	Current	A 2.68(0.45-5.45)	3.93(0.5-6.82)	6.0(0.6-18)	9.1(0.6-13.2)
Heating	Capacity	Btu/h 9500(3800-11500)	13000(4000-15000)	19000(4700-20000)	25000(5500-30000)
	Power Input	W 625(120-1200)	880(130-1510)	1465(200-1900)	2050(260-3140)
	Current	A 2.84(0.5-5.45)	4.0(0.9-6.86)	6.66(0.9-8.63)	9.32(1.1-13.7)
	Moisture Removal	L/h 1.0	1.3	1.7	2.5
Indoor unit	Max input	W 1320	1500	2300	3200
	Max current	A 6	7.50	10.45	14.54
	Indoor air flow(H/M/L)	m3/h 570/470/370	570/470/370	721/566/458	970/780/590
	Indoor noise(H/M/L)	dB(A) 41/36/28	41/36/28	43/37/32	45/39/34
Outdoor unit	Net Size(W*D*H)	mm 734*194*285	775*194*285	921*213*302	1026*220*327
	Pack Size(W*D*H)	mm 780*270*360	830*270*360	995*305*380	1105*310*405
	Net/Gross	kg 8.1/9.9	8.1/9.9	9.5/12.5	11.9/15.2
	Outdoor air flow	m3/h 2100	2100	2100	2900
Outdoor unit	Outdoor noise	dB(A) <50	<50	<52	<56
	Net Size(W*D*H)	mm 835*320*540	835*320*540	835*320*540	910*340*700
	Pack Size(W*D*H)	mm 900*400*600	900*400*600	900*400*600	1063*457*780
	Net/Gross	kg 28.9/33.4	29/33.5	31/36	49.5/56
Ambient temp.(cooling/heating)	Operation temp.	°C 16-30	16-30	16-30	16-30
	Ambient temp.(cooling/heating)	°C 18-52/15-34	18-52/15-34	18-52/15-34	18-52/15-34
	Application area	m2 12-18	16-23	24-35	32-47
	Solar panels recommendation	W 700-1290	1030-1900	1580-2900	2370-4350



Off-Grid(DC24/48V) Solar Air Conditioner

R32

INVERTER

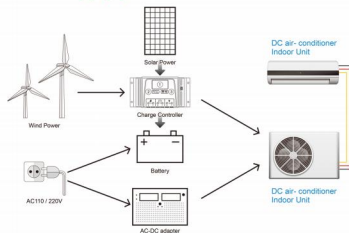
A+++

WIFI

Features:

- DC24V/48V compressor, Indoor motor, Outdoor motor are high efficiency full DC motors without conversion process.
- Easy installation as traditional air conditioners.
- Not affected by power supply and climate, and can be used in all climatic conditions.
- DC low-voltage safe operation, safe and reliable.

How to supply power for DC Air-Conditioner



Parameters

Model	Unit	UNP-26GW/DC24V	UNP-35GW/DC48V	UNP-50GW/DC48V	
Power Supply	V	DC21-29V	DC42-60V	DC42-60V	
Cooling	Capacity	Btu/h	9000	12000	18000
	Power Input	W	570	750	900
	Current	A	16	19	22
Compressor	/	DC24V	DC48V	DC48V	
EER	W/W	4.56	4.67	4.78	
	Btu/h/w	15.79	16.00	20.00	
SEER	Btu/h/w	23.6	24.3	25.2	
Indoor air flow(H/M/L)	m3/h	450	450	550	
Indoor noise(H/M/L)	dB(A)	≤40	≤42	≤43	
Indoor unit	Net Size(W*D*H)	mm	775*260*210	775*260*210	990*320*210
	Pack Size(W*D*H)	mm	840*325*265	840*325*265	1070*395*285
	Net/Gross	kg	7/9	8/10	13/15
Outdoor noise	dB(A)	≤50	≤52	≤54	
Outdoor unit	Net Size(W*D*H)	mm	790*260*540	790*260*540	850*290*580
	Pack Size(W*D*H)	mm	910*370*610	910*370*610	995*390*665
	Net/Gross	kg	25/28	28/31	35/38
Operation temp.	°C	16~30	16~30	16~30	
Ambient temp.(cooling/heating)	°C	-15~60	-15~60	-15~60	
Application area	m2	12-18	16-23	24-35	
Solar panels recommendation	W	680-1250	900-1650	1080-1980	

AIR SOURCE HEAT PUMP





Hybrid Heat Pump Water Heater



Circulation water pump built-in.



Wifi function for option (Control by Apps on mobile phone).



High efficiency shell & tube heat exchanger: Adopt high efficiency internal thread copper coil, which heating area is 3.6 times than ordinary smooth coil, larger diameter water loop design to make water flow smoothly, energy efficiency is superior.



Stainless steel 304 material for side cover of finned tube heat exchanger, for all fastener and other important parts, not easy to rust and corrosion, more durable.

GMCC



High quality GMCC rotor compressor, widely used in the field of air conditioners and heat pump water heaters, high quality, long service life and convenient maintenance.



Controller: Adopt famous master chip, ensure stable running.

With lot of protection functions: High & low pressure protection, anti-freezing protection, high temperature protection, overload protection, lack phase and reverse phase protection, and so on.



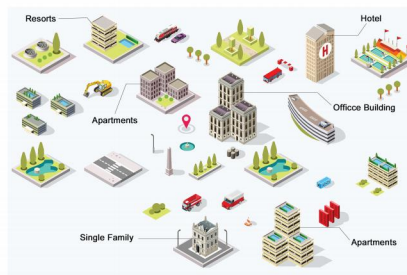
The blue hydrophilic aluminum foil fin heat exchanger adopts cross-type multi-flow path design to make the heat exchange more uniform; the internal thread copper tube design has higher heat transfer efficiency; at the same time, the hydrophilic fins are not easy to form water droplets, Spreading into a uniform water film completely on the surface of fins, eliminates the generation of water bridges, which greatly improves the heat exchange capacity and heat exchange efficiency between the aluminum foil and the flowing air.

R410A

Low ODP refrigerant: R410a.



Application



Technical Data

Photos	
Model No.	UNP-004TA1
Power Supply	220~240V/1/50Hz
Heating Capacity at Air 20°C/15°C, Water Temperature from 15°C to 55°C	
Heating Capacity (kW)	3.6
Power Input (kW)	0.86
COP	4.18
Max Power Input (kW)	1.45
Max Current(A)	6.5
Rated Hot Water(L/h)	80
Refrigerant	R410A
Expansion Valve	Electronic
Air Flow Direction	Horizontal
Water Pump inside	Yes
Water Pressure Drop (kPa)	35
Net Dimensions(L*W*H)(mm)	936*385*550
Package Dimensions(L*W*H)(mm)	1030*445*592
Working temperature range (°C)	-15 ~ 43
Noise (dB(A))	47
Net Weight (kg)	50
Water connection(mm)	20

2 in 1 System

hybrid heat pump water heater is an new generation of water heater. It moves heat from the air into the water tank , and gives you hot water in Winter , cool water in Summer.





Our air to water heat pump has been assessed by the manufacturer and deemed to meet EU safety, health and environmental protection requirements.



Less attenuation in low-temperature technology etc. Ensure the units operating well with a wide range between -25 ~ 43 degrees condition.



Low GWP (675) and zero ozone-depleting potential (ODP). Offers higher efficiency and longer pipe runs. Requires less refrigerant volume per kW.



Control your home heat pump anytime, anywhere. Turn it on in advance, then enjoy comfortable temperature and hot water as soon as you back home.

R32 Monoblock DC Inverter Heat Pump



DC Inverter Air to Water Heat Pump (Monoblock R32)					
Model	UNP-010DM1	UNP-010DM3	UNP-018DM1	UNP-018DM3	UNP-018DM3
Rated voltage/Frequency	V/Hz	230/50	400V/3N-50Hz	230/50	400V/3N-50Hz
Heating Capacity Range	kW	(4.20-12.20)	(4.20-12.20)	(6.20-18.80)	(6.20-18.80)
Heating(A3/6°C,W40/59°C)	Heating Capacity	kW	10.58	10.58	18.77
	Power Input	kW	2.28	2.29	4.35
	COP	W/W	4.62	4.62	4.31
	Heating Capacity	kW	7.21	7.21	12.86
Heating(A12~W36/41°C)	Power Input	kW	2.79	2.79	5.14
	COP	W/W	2.58	2.58	2.50
	Heating Capacity	kW	10.37	10.37	18.50
	Power Input	kW	2.69	2.69	4.95
Heating(A3/6°C,W40/48°C)	COP	W/W	3.86	3.86	3.74
	Heating Capacity	kW	9.28	9.28	16.47
	Power Input	kW	2.97	2.97	5.96
	COP	W/W	3.12	3.12	3.09
Cooling(A35/24°C,W23/18°C)	Cooling Capacity	kW	10.27	10.27	18.58
	Power Input	kW	2.43	2.43	4.47
	EER	W/W	4.23	4.23	4.09
	Power Input	kW	8.54	8.54	15.89
Cooling(A35/24°C,W12/7°C)	Cooling Capacity	kW	2.84	2.86	5.36
	EER	W/W	3.00	3.00	2.96
	Power Input	kW	2.84	2.86	5.36
	EER	W/W	3.00	3.00	2.96
Rated water flow	m³/h	1.75	1.75	3.20	3.20
Maximum input	kW	3.83	3.83	7.60	7.60
Maximum input	A	17.00	6.90	35.00	13.00
High pressure value cut-off pressure	MPa	4.4	4.4	4.4	4.4
Low pressure value cut-off pressure	MPa	1.5	1.5	1.5	1.5
Brand /Type of Compressor	/	Panasonic/Rotary			
Compressor Model	/	9R02202DA23	9R02202DA23	9R04302AA23	9R04302AA23
Brand of EVI/VRV	/	DPF1.6SC	DPF1.6SC	DPF1.6SC	DPF1.6SC
Brand of 4-way	/	05/DPF-1.6	05/DPF-1.6	05/DPF-1.6	05/DPF-1.6
Brand of Pressure	/	danfoss-DSP-30	danfoss-DSP-30	danfoss-DSP-30	danfoss-DSP-30
Brand of oil type	/	SAISHUA	SAISHUA	SAISHUA	SAISHUA
Compressor Oil	cm³	FW685	FW685	FW685	FW685
Refrigerant	kg	1.8	1.8	3.5	3.5
Refrigerant	m³/h	4500	4500	8500	8500
Fan	Brand of Fan motor (DC fan)	LT RDISHA	LT RDISHA	LT RDISHA	LT RDISHA
Defrost	/	Auto defrost with 4 way valve			
Waterproof grade	/	IPX4			
Noise pressure	dB(A)	52	52	56	56
Max water outlet temperature	°C	60	60	60	60
Diameter of water connection	mm	DN 25 (1")	DN 25 (1")	DN 40 (1.5")	DN 40 (1.5")
Drainage valve	mm	27	27	35	35
Internal pressure drop at rating water flow	bar	1.0/3.0	1.0/3.0	1.0/3.0	1.0/3.0
Min/Max heating water pressure (safety valve 3bar)	bar	1.0	1.0	1.0	1.0
Pressure (PSC)	bar	1.0	1.0	1.0	1.0
Lowest Operational point, outdoor air/flow line (heating mode)	°C	-25	-25	-25	-25
Highest Operational point, outdoor air/flow line (heating mode)	°C	45	45	45	45
Lowest Operational point, outdoor air/flow line (cooling mode)	°C	36	36	36	36
Highest Operational point, outdoor air/flow line (cooling mode)	°C	46	46	46	46
Cabinet Color	/	Light black	Light black	Light black	Light black
Net Dimensions (LxDxH)	mm	1100-480-850	1100-480-850	1210-480-1360	1100-480-1450
Package Dimensions (LxDxH)	mm	1150-500-1000	1150-500-1000	1150-500-1300	1150-500-1600
Net Weight	kg	107	107	155	155
Gross Weight	kg	118	118	175	175



R290 Monoblock DC Inverter Heat Pump

NEW-R290 DC Inverter Air to Water Heat Pump(MonoBlock)						
Model		UNP-006P(BA1)	UNP-012TR(P)BA1	UNP-012TR(P)BA1	UNP-018TR(P)BA1	UNP-018TR(P)BA1
Power Supply	V/Hz	220-240V/ 50Hz	220-240V/ 50Hz	380-415V/ 3N-50Hz	220-240V/ 50Hz	380-415V/ 3N-50Hz
Heating *	Capacity	kW	2.92-9.10	4.30-15.2	4.30-15.2	7.24-21.90
	Input Power	kW	0.61-2.11	0.87-3.73	0.87-3.73	1.50-5.88
	Input Current	A	2.80-9.25	4.02-16.38	4.02-16.38	6.86-20.25
Heating *	Capacity	kW	2.99-9.18	4.25-14.55	4.25-14.55	6.36-19.45
	Input Power	kW	1.03-2.92	1.45-4.28	1.45-4.28	2.15-6.85
	Input Current	A	4.57-12.79	6.71-18.80	6.71-18.80	9.84-30.12
Cooling	Capacity	kW	1.38-5.70	3.65-11.04	3.65-11.04	4.55-17.20
	Input Power	kW	0.67-2.44	1.12-3.97	1.12-3.97	1.85-7.31
	Input Current	A	3.06-10.27	5.18-17.44	5.18-17.44	8.47-32.1
ERP Level (35°C)	/	A+++	A+++	A+++	A+++	A+++
ERP Level (55°C)	/	A+++	A+++	A+++	A+++	A+++
SCOP (Water Temp. At 35°C)	kWh / kWh	4.87	4.85	4.9	4.83	4.84
SCOP (Water Temp. At 55°C)	kWh / kWh	3.85	3.84	3.84	3.84	3.85
Rated Input Power	kW	3.50	5.40	5.85	7.50	10.50
Rated Input Current	A	15.0	25.0	10.0	35.0	17.0
Refrigerant Type/Charge/GWP	/ kg	R290/0.553	R290/0.903	R290/0.903	R290/1.43	R290/1.43
CO ₂ Equivalent	/	0.00171	0.00271	0.00271	0.00421	0.00421
Operation Pressure(Low Side)	MPa	0.8	0.8	0.8	0.8	0.8
Operation Pressure(High Side)	MPa	3.0	3.0	3.0	3.0	3.0
Maximum Allowable Pressure	MPa	3.0	3.0	3.0	3.0	3.0
Electrical Shockproof	/	I	I	I	I	I
IP Class	/	IPX4	IPX4	IPX4	IPX4	IPX4
Max. Outlet Water Temp.	℃	75	75	75	75	75
Operating Ambient Temperature	℃	-25-45	-25-45	-25-45	-25-45	-25-45
Water Piping Connections	inch	G1	G1	G1	G1-1/4	G1-1/4
Rated Water Flow	m ³ / h	1.0	2.06	2.06	3.1	2.06
Water Pressure Drop	mPa	20	20	20	55	55
Min/Max water pressure	MPa	0.10/3.0	0.10/3.0	0.10/3.0	0.10/3.0	0.10/3.0
Noise Level	dB(A)	48.00	50	50	55	55
Net Dimensions (L×W×H)	mm	1187x418x605	1287x448x604	1287x448x604	1187x458x1456	1187x458x1456
Net Weight	kg	110	123	123	184	184
Heating * Ambient Temp 7℃/6℃ (DB/WB) -Water-in/out Temp 30℃/35℃						
Heating * Ambient Temp 7℃/6℃ (DB/WB) -Water-in/out Temp 47℃/55℃						
Cooling - Ambient Temp 35℃/24℃ (DB/WB) -Water-in/out Temp 12℃/7℃						



All In One Heat Pump

R134a Features:

- R134a refrigerant, environmental friendly.
- CMEV: Central mechanical extract ventilation.
- WIFI smart control.
- Microchannel heat exchanger.
- Higher water temperature output up to 75°C.



R290 Features:

- R290 low GWP(GWP=3).
- CMEV: Central mechanical extract ventilation.
- WIFI smart control.
- Energy efficient class: A++.
- Microchannel heat exchanger.



Stable silent operation



Technical Data R134a R290

Photos	UNP-200T81	UNP-300T81	UNP-200T82	UNP-300T82
Model	UNP-200T81	UNP-300T81	UNP-200T82	UNP-300T82
Power Supply	220-240V/50Hz			
Rated Heating Capacity (kW)	2.4	2.4	2.4	2.4
Refrigerant	R134a			
Typing Cycle	L	XL	L	XL
Energy Efficient Class	A+	A+	A++	A++
Energy Efficient: nph (%)	148.9	142.0	154.5	168.7
**COP (EN16147)	3.48	3.52	3.75	3.81
Tank Capacity (L)	200	300	200	300
Air Flow (m³/h)	450			
Air Discharge	Vertical			
Air Duct Diameter (mm)	ø150			
Auxiliary electric heater (kW)	2			
Default Water Temperature (°C)	55			
Working Temperature Range (°C)	7°C-43			
Unpacked Dimension (mm)	650*1672	650*1937	650*1672	650*1937
Packed Dimension (L*W*H)(mm)	700*700*1790	700*700*2050	700*700*1790	700*700*2050
Net Weight (kg)	110	130	110	130
Gross Weight (kg)	125	145	125	145
Noise (dB(A))	46			



** Above results are tested at ambient temperature 32°C/80°F, water temperature in 10°C/out 55°C according to EN16147/2017

Household Swimming Pool Heat Pump



Centralized Control

Pool Heat Pump is designed with centralized control function that make temperature adjustment and failure review easier. By incorporating the master-slave control into the design, the whole units can work together with higher efficiency without interfered by any failure of the slave unit during operation.



High Efficiency

The swimming pool heat pump has high efficiency for either pool heating or cooling.



Dual Coil Titanium Heat Exchanger

Compared with normal single coil heat exchangers, use dual coil titanium heat exchanger enlarges the heat exchanging surface that increases efficiency by providing an sufficient action area.



Compressor

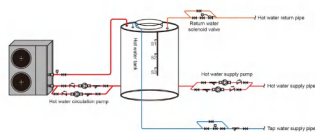
The compressor with precise energy stage setting ensures the excellent performance of energy savings

HOUSEHOLD INVERTER SWIMMING POOL MACHINE					
Model		UNP-SFE1-2	UNP-SFE1-1	UNP-SFE1-1	UNP-10FE1-1
Refrigerant		R32			
Power Supply		220-240V/50			
YL-H01-Heating A27W26℃	Heating capacity	KW	3.80	6.00	8.60
	BTU/h	KW	12.4-5	15.7	22.10.2
	Power input	KW	12966.00	20473.00	29344.00
	Current	A	0.69	0.95	1.15
	COP	WW	5.50	6.30	7.30
YL-H02-Heating A15W26℃	Heating capacity	KW	1.3-1	1.1-5.2	1.7-7.5
	BTU/h	KW	9213.00	15355.00	21838.00
	Power input	KW	0.68	0.98	1.25
	Current	A	3.10	4.50	5.70
	COP	WW	4.00	4.60	5.10
YL-C01-Cooling A35W30℃	Cooling capacity	KW	2.00	4.30	5.40
	BTU/h	KW	6824.00	14672.00	18426.00
	Power input	KW	0.70	1.30	1.70
	Current	A	3.20	5.90	7.70
	EER	WW	2.90	3.30	3.30
YL-C02-Cooling A43W30℃	Cooling capacity	KW	4095.00	12625.00	13990.00
	BTU/h	KW	0.60	1.40	1.57
	Power input	A	2.70	6.40	7.10
	Current	WW	2.00	2.60	2.80
	EER	WW	2.00	2.60	3.10
OPERATING	Water outlet temp range	℃	15-40	15-40	15-40
	Ambient temp range	℃	10-43	-10-43	-10-43
	Compressor brand	GMCC			
	Compressor type	Rotary*1	Rotary*1	Rotary*1	Rotary*1
	Controller	Micro processor based digital controller with LCD touch screen display			
MAX	Noise	dB(A)	48.00	47.00	50.00
	Power input	KW	0.95	1.50	2.20
	Current	A	4.30	6.80	10.00
	Type	Titanium/PVC	Titanium/PVC	Titanium/PVC	Titanium/PVC
	Standard water flow	m³/h	1.60	2.60	3.70
KEY	Suggested water flow	m³/h	1.2	2.3	3.5
	Water pressure (dis/ma)	KPa	5.00	4.00	6.00
	Water connection	mm	25.00	50.00	50.00
	Position	Side	Side	Side	Side
	Material	Plastic	Plastic	Plastic	Plastic
FAN	Air flow	m³/h	1000.00	1300.00	1800.00
	net	mm	430/325/430	995/396/570	995/396/570
DIMENSIONS (L x W x H)					
WEIGHT		kg	20/22	35/38	45/48



Commercial Air Source Heat Pump Water Heater

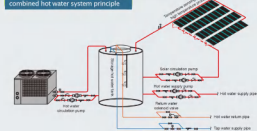
Circulating hot water system principle



More energy support

Heat Pump + Solar Energy = SAVE MONEY!

Circulating solar energy and heat pump combined hot water system principle



Professional compressor for heat pump water heater. Adopt Copeland or Panasonic top quality scroll compressor specially for heat pump water heater, with much wider operation range for different ambient temperature. Special design for high function & extend temperature, and system high condensing temperature & pressure. Higher efficiency, Lower noise, Higher reliability, Longer service life.

Large air volume, low noise fan motor: Use airfoil shape, large chord, space distortion alloy blade, efficient internal rotor motor. High efficiency and compact.

Will function for option (Control by Apps on mobile phone).

High efficiency shell & tube heat exchanger: Adopt high efficiency internal thread copper coil, which heating area is 3.6 times than ordinary smooth coil, larger diameter water loop design to make water flow smoothly, energy efficiency is superior.

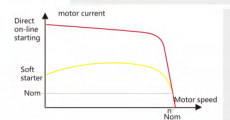
Stainless steel 304 material for side cover of finned tube heat exchanger, for all fastener and other important parts, not easy to rust and corrosion, more durable.

Low ODP refrigerant: R410a, other refrigerant for option.

High precision electronic expansion valve: Use electronic expansion valve for controlling, reach 500 steps adjustment, adjust super heat degrees accurately, achieve high efficiency operation system.

Controller: Adopt famous master chip, ensure stable running. With lot of protection functions: High & low pressure protection, anti-freezing protection, high temperature protection, overload protection, lack phase and reverse phase protection, and so on. Modular control for at most 16 heat pumps, can be combined freely according to the required capacity.

The blue hydrophilic aluminum foil fin heat exchanger adopts cross-type multi-flow path design to make the heat exchange more uniform; the internal thread copper tube design has higher heat transfer efficiency; at the same time, the hydrophilic fins are not easy to form water droplets. Spreading into a uniform water film completely on the surface of fins, eliminates the generation of water bridges, which greatly improves the heat exchange capacity and heat exchange efficiency between the aluminum foil and the flowing air.



Soft starter for option, reduce the starting current and starting stress, extend the service life of the motor and related equipment. Smooth start and soft stop avoid the surge problem and water hammer effect of traditional starting equipment.

Commercial Air-to-water Hot Water Heat Pump

	UNP03P-E3	UNP05P-E5	UNP07P-E5	UNP10P-E10	UNP14P-E10	UNP20P-E20	UNP24P-E20	UNP30P-E20
Rated heating capacity (kW)	11.9	18.8	24.5	34.7	49.6	73.8	84.5	103.8
Rated input power (kW)	2.85	4.45	5.86	8.16	11.95	17.66	20.02	24.95
Rated input current (A)	5.41	8.45	11.53	15.89	20.91	35.78	38.24	48.38
Maximum input power (kW)	3.82	7.31	9.68	11.47	17.38	27.20	31.28	39.11
Maximum input current (A)	6.41	12.15	18.42	22.36	29.53	51.23	59.15	73.96
Performance coefficient(COP)	4.17	4.22	4.18	4.25	4.15	4.18	4.22	4.16
Rated hot water output temp (°C)	55							
Max. hot water output temp (°C)	60							
Rated hot water produce capacity (L/H)	253	401	525	744	1063	1582	1812	2226
Power supply	3N 380V~420V/50Hz							
Compressor	Type	Hermetic scroll type						
	Start Mode	Directly start(Soft start for option)						
Water side heat exchanger	Quantity Set	1	1	1	2	2	4	4
	Type							
Water side heat exchanger	Water flow (m³/h)	2.1	3.3	4.1	6.0	8.6	12.9	18.1
	Water Pressure Drop (kPa)	≤50	≤55	≤55	≤60	≤70	≤70	≤72
	Pipe size (DN)	DN20	DN25	DN25	DN32	DN32	DN50	DN50
Protections	1. High pressure and low pressure protection,							
	2. Anti-freezing protection,							
	3. High temperature protection,							
	4. Too big of the water temperature difference for outlet and inlet protection,							
	5. Overload protection,							
	6. Lack phase protection,							
	7. Reverse phase							
Refrigerant	Throttle Type	Electronic expansion valve						
	Quantity (kg)	1.9	2.6	4	2.6×2	4.0×2	2.6×4	3.2×4
Noise DB(A)		≤55	≤63	≤68	≤68	≤68	≤69	≤70
length (mm)		700	820	820	1502	1502	1995	1995
width (mm)		680	695	695	750	750	1165	1165
height (mm)		875	1060	1060	1060	1060	1105	1105
Net Weight (kg)		110	160	190	255	400	600	855

Testing conditions:

- Application side initial water temperature: 15°C, end temperature 55°C, max. temperature 60°C.
- Ambient temperature dry bulb 20°C, wet bulb 15°C.

The above parameters are based on Refrigerant R410a, for parameters based on other refrigerant please contact us.

The above parameters may have some differences from the final product because of products updating, so above information is not the provision of any business contract. Please refer to final product label when buy, or refer to us for any information. Our company keeps the right to interpret.

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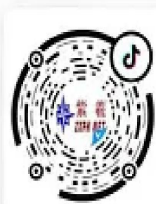
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