



RELIABLE SOLAR THERMAL CATALOGUE

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CSP HOLDING GROUP LTD



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Solar Vacuum Tubes Workshop



Heat Pipe Workshop

Shandong Zentek Energy and Technology Co., Ltd. is a sub-company of CSP Holding Group. We are a professional manufacturer of solar water heating products and related spare parts. Our products include solar vacuum tubes, heat pipes, solar collectors and so on.

Our solar vacuum tube production line could manufacture 10,000,000 tubes per year. The fully automatic production line for large diameter tubes is the first one in the world. We could manufacture a wide range of large diameter tubes with diameter ranging from 125 to 150mm and lengths ranging from 600 to 2200mm. For heat pipes, we could manufacture 10,000 sets per month. With more than 20 years' experience, our products have been exported to Europe, Middle East, South America and South Asia etc.. We are and we will be devoting ourselves to the renewable products always.



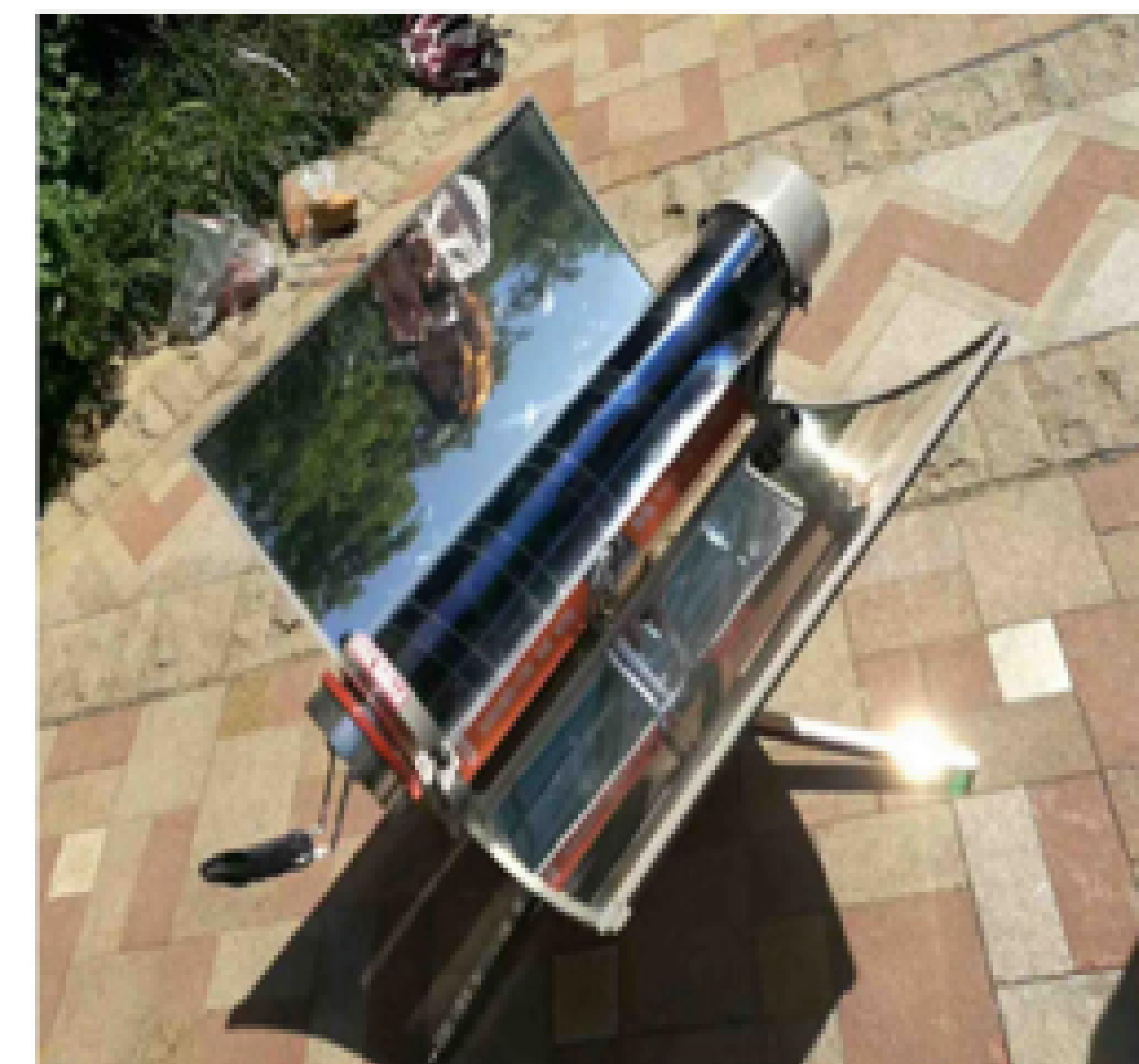
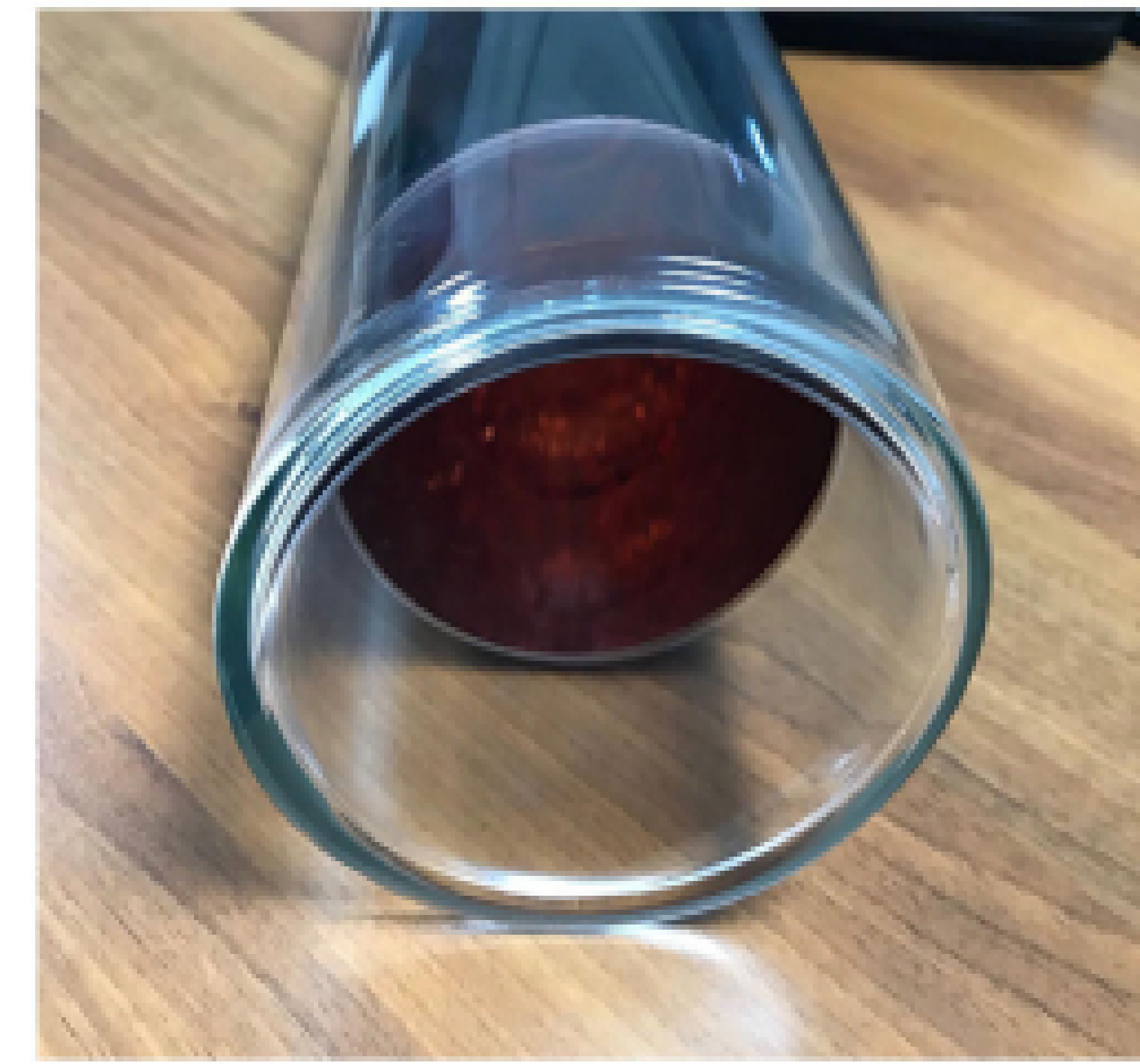
Solar Vacuum Tube

Advantage:



Technical Datasheet:

Tubes Size	58*1800/58*2100mm
Tubes Thickness	1.6+-0.1mm
Absorptive Coating	SS-AL/Cu
Absorption of Selective Coating	$\geq 92\%$ (AM1.5)
Emission of Selective Coating	$\leq 0.06(80^{\circ}\text{C} \pm 5^{\circ}\text{C})$
Average Heat Loss coefficient(ULT)	$\leq 0.7\text{W}/(\text{m}^2 \text{ } ^{\circ}\text{C})$



Large Diameter Solar Vacuum Tube

Technical Datasheet:

Technical Data	Big Size Tubes
Outer Diameter	125/137/145/150mm
Inner Diameter	111/121/125/130/mm
Tube Thickness	3mm
Length	600-2100mm
Type	Non-pressure
Tube Life	At Least 15 Years
Warranty	1 Years
Application	Solar Water Heater/Solar Projects
Package	5 layers corrugated paper

Technical Data	Big Size Solar Vacuum Tubes
Material	Borosilicate Glass 3.3
Absorption of SELECTIVE COATING	≥ 0.90 (AM1.5)
Emission of SELECTIVE COATING	$\leq 0.08(80^{\circ}\text{C} \pm 5^{\circ}\text{C})$
Vacuum	$\leq 3 \times 10^{-3}$ Pa
Stagnation Temperature	$> 390^{\circ}\text{C}$
Solar radiance exposure	$\leq 3.6\text{MJ}/\text{m}^2$
Coefficient of Average Heat Loss	$< 0.80\text{W}/(\text{m}^2 \text{ } ^{\circ}\text{C})$
Selective absorber coating	AL-SS-CU
Maximum Strength	0.6Mpa



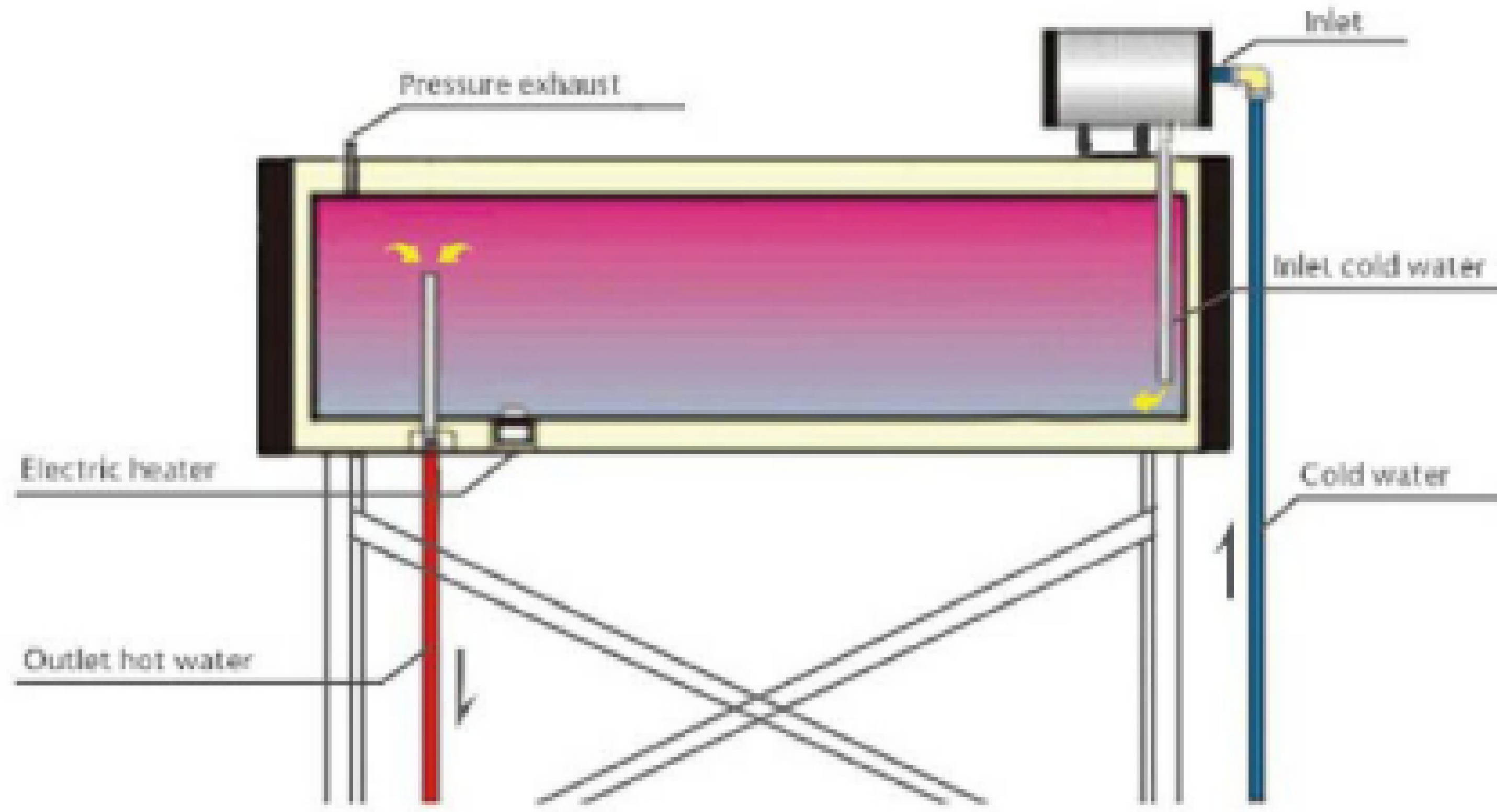
Heat Pipe Solar Vacuum Tubes

Advantage:

- 1) High efficiency solar vacuum tube
- 2)High efficiency heat pipe: Condenser 14mm.copper pipe 8mm
- 3)high purity Cu, more than 99.999999%
- 4)10 years quality guarantee, 15 years lifespan.
- 5)ISO 9000,Solar keymark certification
- 6)Fast delivery:10 thousand sets per month

Datasheet:

Evacuated Tube	
Series	58/1800mm
Structure of Selective Coating	SS-AL-N/CU (three layers)
Heat Pipe	
Length	1800 mm
Diameter of Heat pipe	Φ8
Diameter of Condenser	Φ14 mm
Length of Condenser	65 mm
Heat Transfer Media	Inorganic Superconductive Working Media
Material	TP2 Copper
Aluminum Fin	
Length	1620mm
Material	3003 Aluminum Alloy



Compact Non-pressurized Solar Water Heater

Water Tank:

Inner Tank: Food grade SUS304-2B stainless steel 0.5mm
Outer Tank: Painted steel 0.4mm
Tank Diameter: 360mm/470mm

Insulation: Polyurethane foam 50-55mm

Solar VacuumTube: One layer coating AL-N/AL

Frame: Galvanized steel or aluminum alloy 1.2-2.0mm, installation angle 30 or 45 degree.

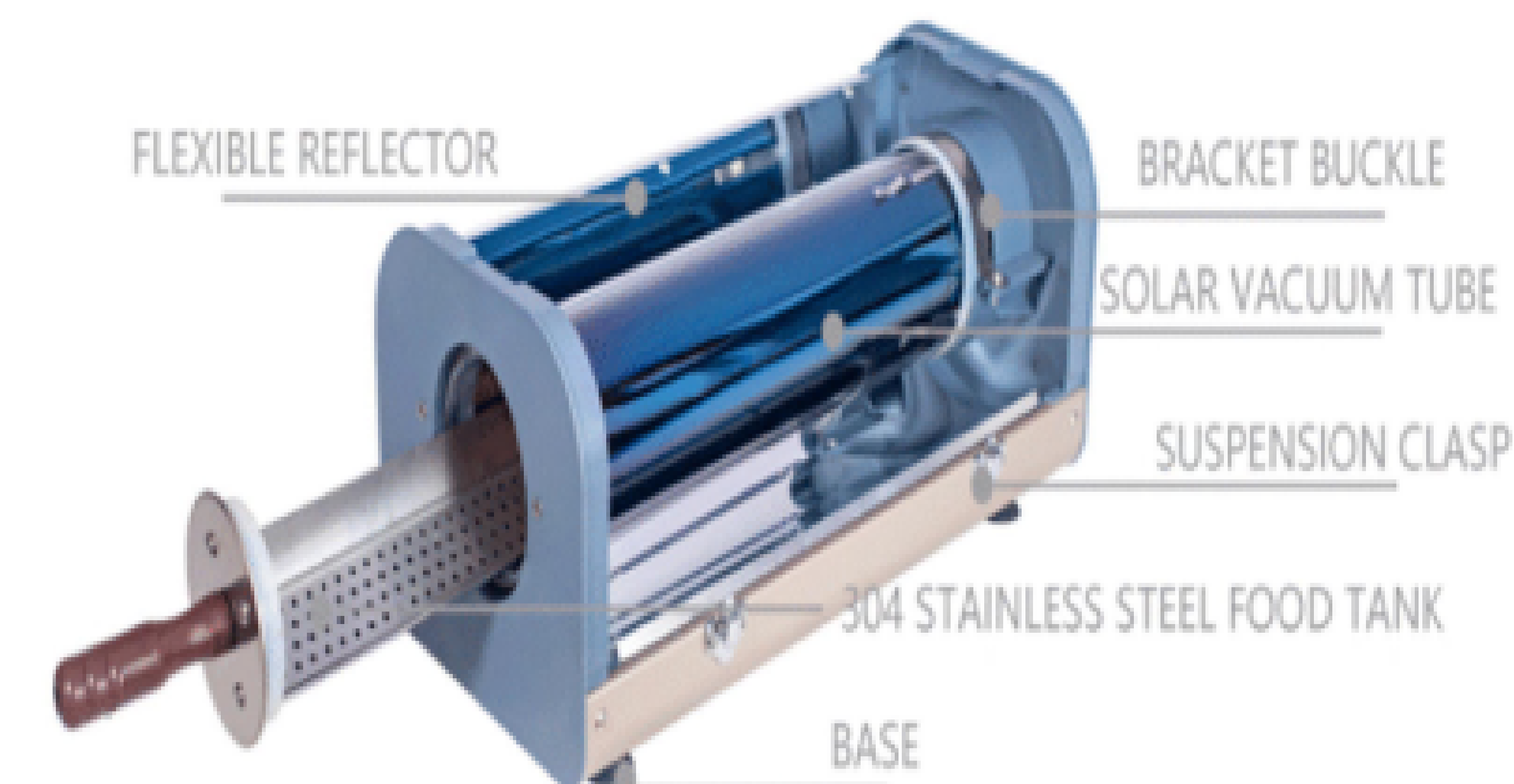
Optional Accessories:

Electric heater/assistant tank(5L/8L/20L)/solar controller / magnesium rod

Datasheet:

Model	Vacuum tube			Capacity(L)	20GP/40HQ Loading Qty(Unit)
	Φ (mm)	Length(mm)	Qty(pcs)		
Zentek58/1800-10	58	1800	10	100	80/170
Zentek58/1800-15	58	1800	15	150	48/115
Zentek58/1800-20	58	1800	20	200	38/89
Zentek58/1800-30	58	1800	30	300	26/63

Loading quantity for reference only



ZENTEK Portable Solar Cooker

Technical Datasheet:

Sunmax Solar Cooker Datasheet			
Solar Vacuum Tube	Tubes Size(MM)	125*566	137*600
	Absorption Ratio(%)	≥ 90	
	Emission Ratio(%)	≤ 8	
	Capacity(L)	4.82	5.25
	Stagnation Temperature($^{\circ}\text{C}$)	≥ 250	
Outer Body	Material	Aluminum	
	Thickness(MM)	2.0	
	Material of Both Side	Nylon Glass Fiber	
Reflector	Material	Aluminum	
	Thickness(MM)	0.5	
Size	Cooker Size(MM)	610*290*250	660*290*250
	Package Size(MM)	663*337*317	710*337*317
Loading Quantity	20GP(Unit)	420	400
	40HQ(Unit)	977	950
Weight	Cooker Weight(KG)	8.3	9.5
	Package Weight(KG)	9.8	11

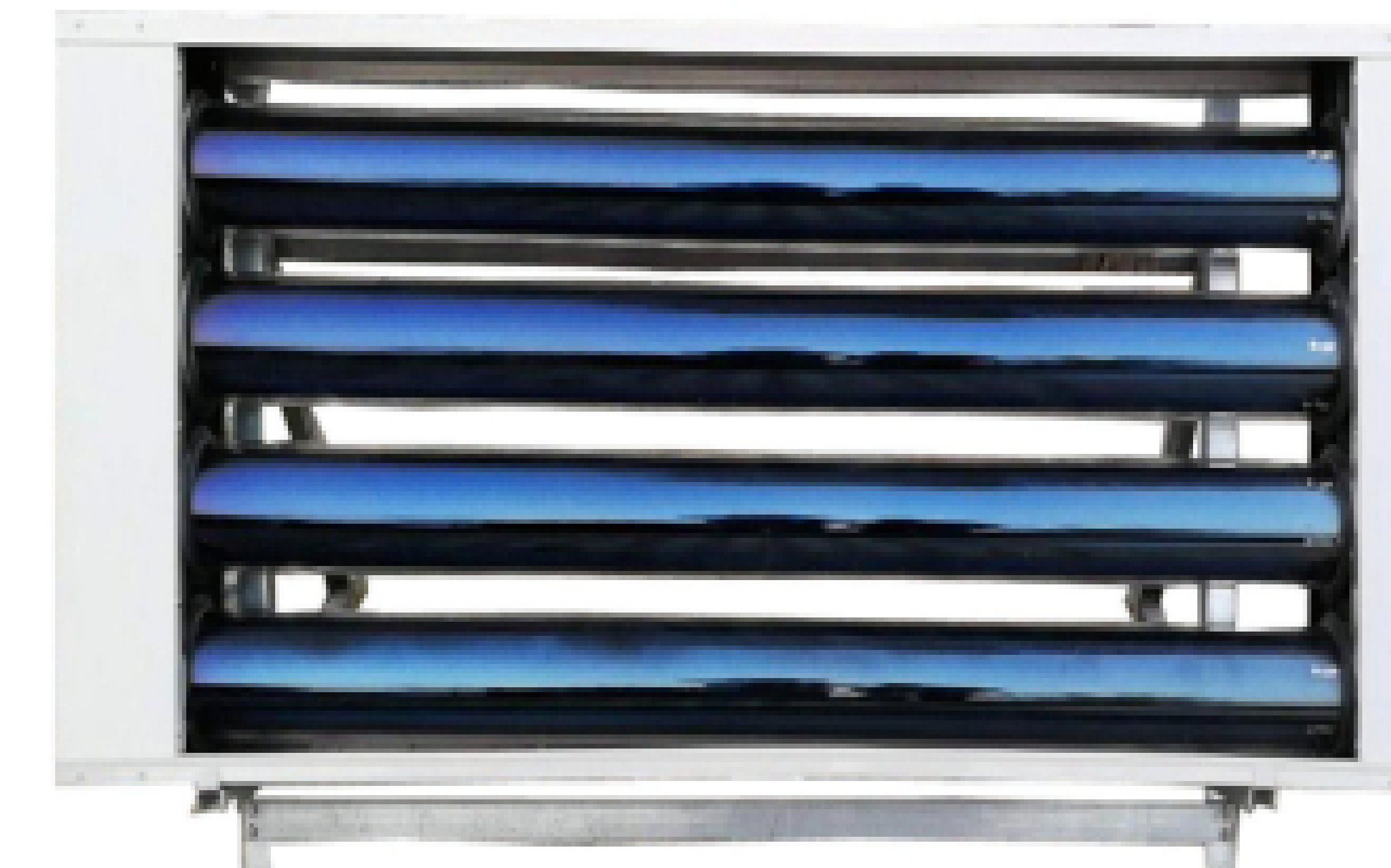
Recipe:

	Cooking Time	30 minutes
	Cooking Method	Step1: Marinate chicken legs for 1 hour Step 2: Put the chicken legs in the cooker and bake for 30 minutes.

	Cooking Time	60 minutes
	Cooking Method	Step1: Wash the sweet potatoes and cut them into small pieces. Step2: Put the sweet potatoes in cooker

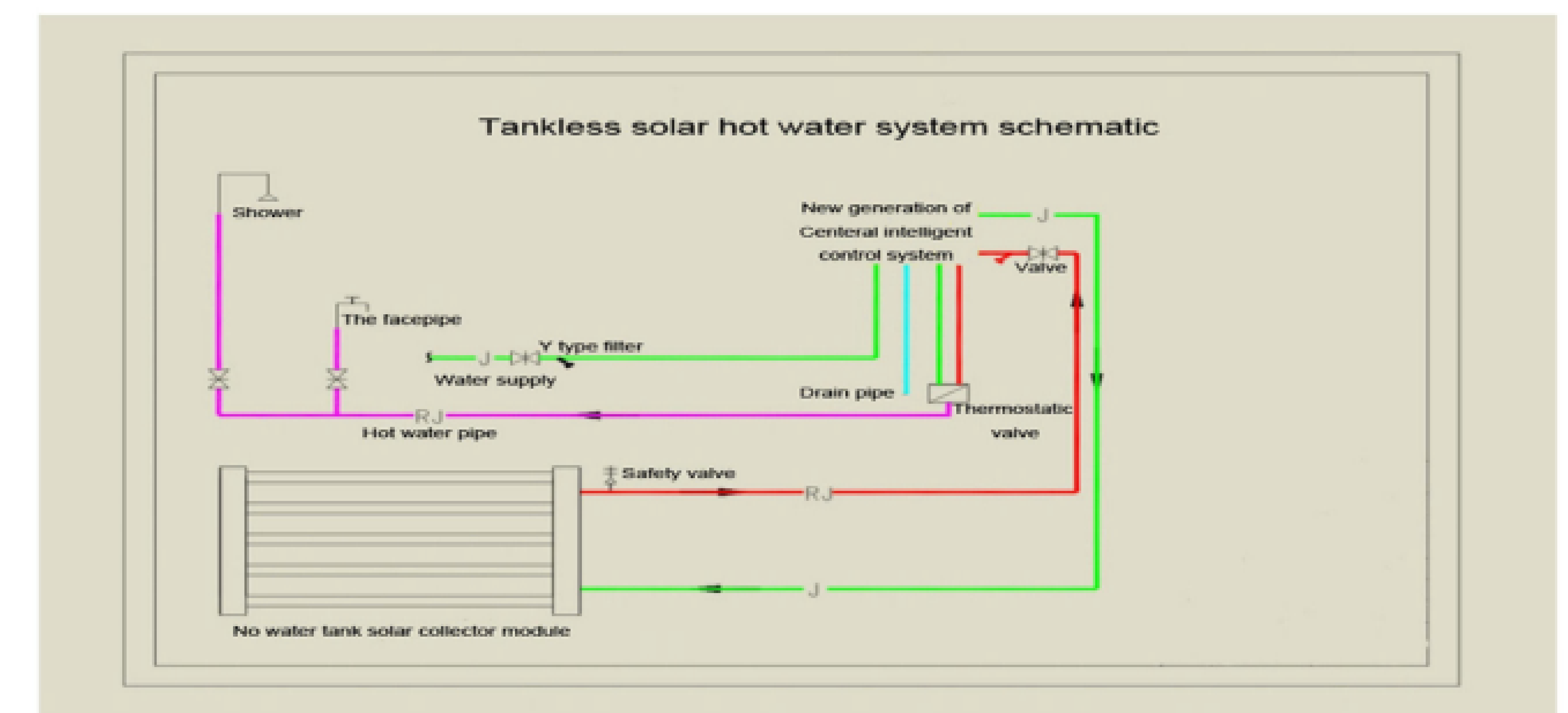
	Cooking Time	60 minutes
	Cooking Method	Step1: Wash the sweet potatoes and cut them into small pieces. Step2: Put the sweet potatoes in cooker

	Cooking Time	40 minutes
	Cooking Method	Step1: Wash the rice clean Step2: Put the rice in the bowl and add the right amount of water. Step3: Put the bowl in the cooker



Tankless Solar Collector

Working Principle:

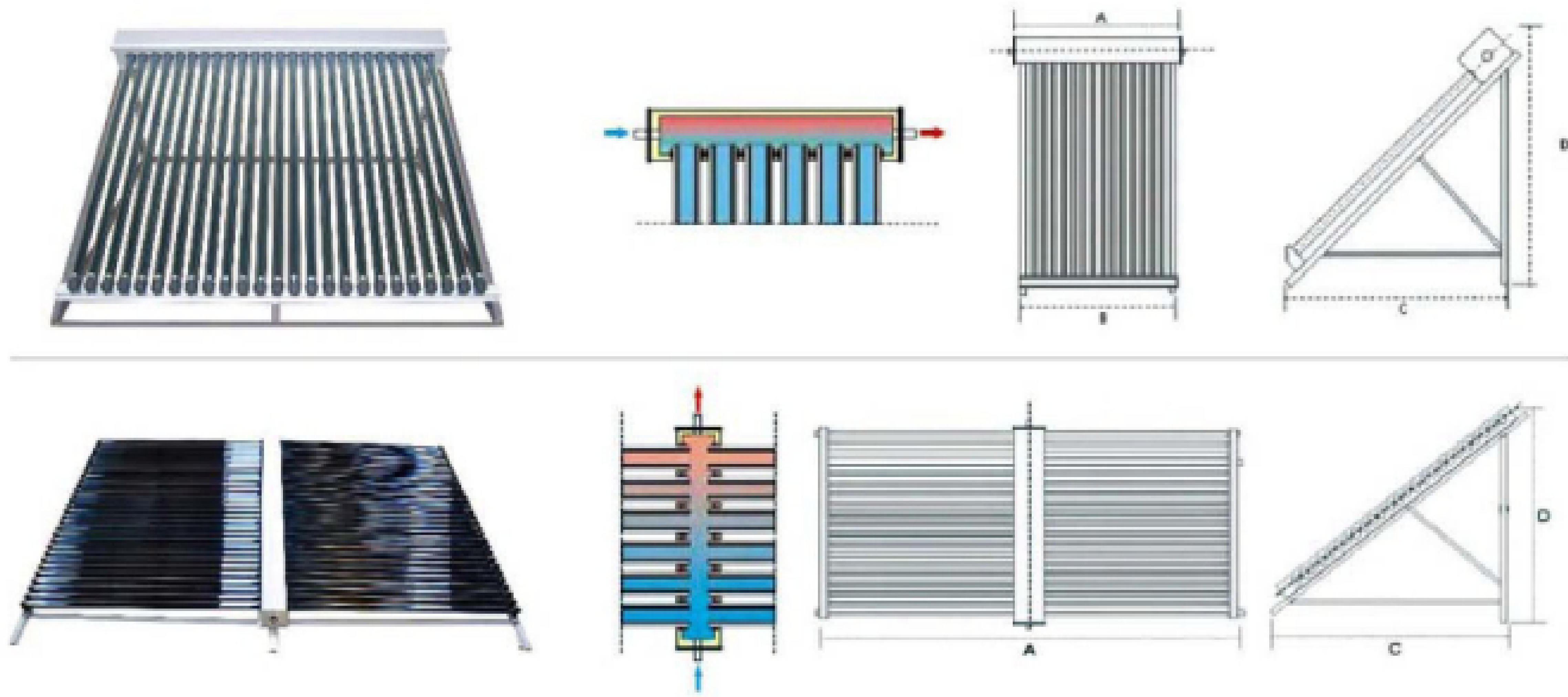


Technical Datasheet:

Specification	Collector Area	Capacity	Collector Weight	Working Weight
(mm)	(m^2)	(L)	(Kg)	(Kg)
$\Phi 137*2160*3-0.2/60$	1.4	62	65	125
$\Phi 137*2160*4-0.2/80$	1.8	80	84	164
$\Phi 137*2160*5-0.2/100$	2.3	100	103	203
$\Phi 137*1860*3-0.2/52$	1.2	52	61	110
$\Phi 137*1860*4-0.2/70$	1.5	70	80	150
$\Phi 137*1860*5-0.2/88$	1.9	88	99	189

Advantage:

1. High pressure system, Stainless steel inner tank can bear high pressure, safe and reliable.
2. 24 hours hot water supplying.
3. Trial and building, villas and flat roof construction.
4. Easy to install, low maintenance costs.
5. Small footprint, beautiful appearance.



Non-pressurized Solar Collector

Collector Manifold: Aluminum alloy
Inner Tank: Food grade SUS304-2B stainless steel
Outer Tank: Color steel plate
Insulation: Polyurethane foam 50-55mm
Solar Vacuum Tube: Three layer coating SS-ALN (L)/ALN
Frame: Galvanized steel 1.2mm/1.5mm or aluminum alloy 2.0mm, installation angle 30 or 45 degree.

Datasheet:

Model	Vacuum tube			Tube orientation	Aperture area(m²)
	φ(mm)	Length(mm)	Qty(pcs)		
ZT58/1800-10	58	1800	10	Vertical	1
ZT58/1800-15	58	1800	15	Vertical	1.5
ZT58/1800-20	58	1800	20	Vertical or Horizontal	2
ZT58/1800-30	58	1800	30	Vertical or Horizontal	2
ZT58/1800-50	58	1800	50	Horizontal	5



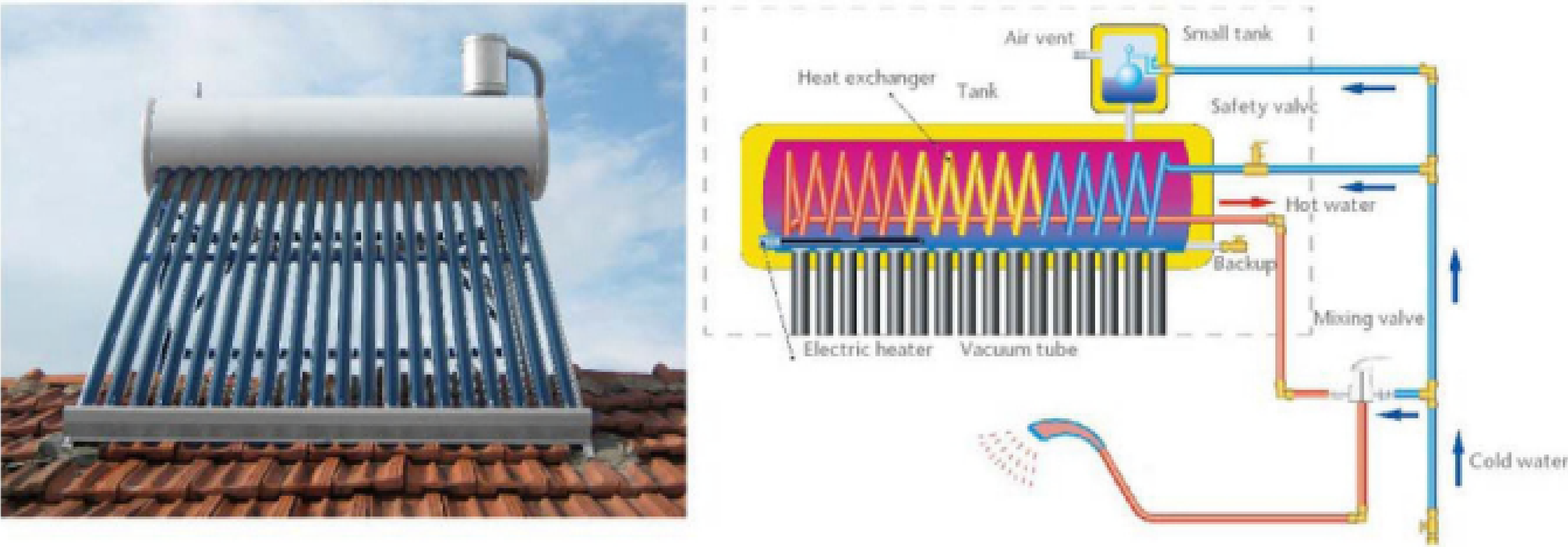
Pressurized Heat Pipe or U-Pipe Solar Collector

Manifold casing: Aluminum alloy 1.5mm
Manifold header: Copper
Heat Pipe: Condenser φ 14mm, copper pipe φ 8mm
U-Pipe: Copper pipe φ 8mm
Max. operating pressure: 0.7Mpa
Insulation: Polyurethane foam 50-55mm
Solar vacuum tube: Three layer coating SS-ALN (L)/ALN
Frame: aluminum alloy, installation angle 30 or 45 degree

Datasheet:

Model	Vacuum tube			Pipe type	Aperture area(m²)	20GP/40HQ Loading Qty(Unit)
	φ(mm)	Length(mm)	Qty(pcs)			
ZT58/1800-10	58	1800	10	Heat Pipe or U-Pipe	1	145/345
ZT58/1800-15	58	1800	15	Heat Pipe or U-Pipe	1.5	92/227
ZT58/1800-20	58	1800	20	Heat Pipe	2	75/175
ZT58/1800-25	58	1800	25	Heat Pipe	2.5	60/140
ZT58/1800-30	58	1800	30	Heat Pipe	2	56/115

Loading quantity for reference only



Compact Pre-heated Pressurized Solar Water Heater

Water Tank:

Inner Tank: Food grade SUS304-2B stainless steel 0.5mm
Outer Tank: Painted steel 0.4mm
Tank Diameter: 360mm/470mm

Insulation: Polyurethane foam 50-55mm

Copper Coil: Heat-exchange copper coil ϕ 12mm, thickness 0.8mm, length 22m

Solar Vacuum Tube: One layer coating AL-N/AL

Frame: Galvanized steel or aluminum alloy 1.2-2.0mm, installation angle 30 or 45 degree.

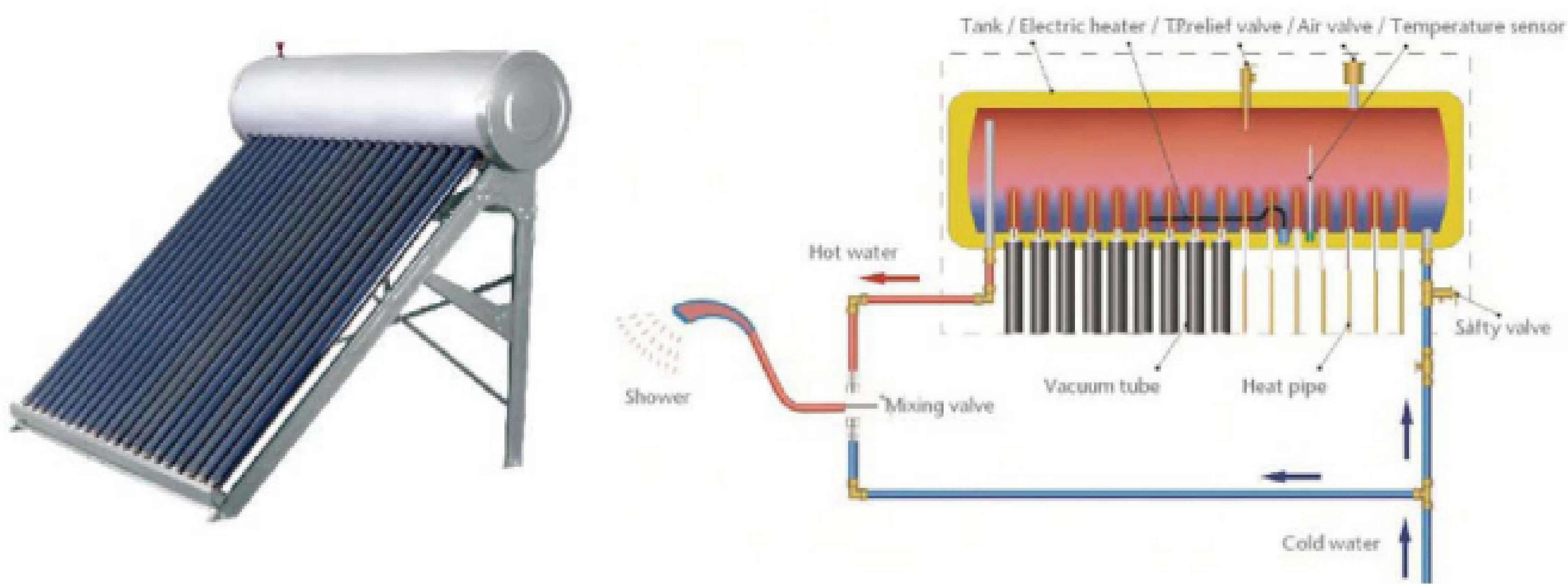
Optional Accessories:

Electric heater/assistant tank (5L)/solar controller/magnesium rod

Datasheet:

Model	Vacuum tube			Capacity (liters)	20GP/40HQ Loading Qty(Unit)
	ϕ (mm)	Length(mm)	Qty(pcs)		
Zentek58/1800-10	58	1800	10	100	80/170
Zentek58/1800-15	58	1800	15	150	48/115
Zentek58/1800-20	58	1800	20	200	38/89
Zentek58/1800-30	58	1800	30	300	26/63

Loading quantity for reference only



Compact Pressurized Solar Water Heater with Heat Pipe

Water Tank:

Inner Tank: Food grade SUS304-2B stainless steel 0.5mm
Outer Tank: Painted steel 0.4mm
Tank Diameter: 360mm/470mm

Insulation: Polyurethane foam 50-55mm

Solar Vacuum Tube: One layer coating AL-N/AL

Heat Pipe: heat pipe anti-freezing 0.6mm

Frame: Galvanized steel or aluminum alloy 1.2-2.0mm, installation angle 30 or 45 degree.

Optional Accessories:

Electric heater/solar controller/magnesium rod

Datasheet:

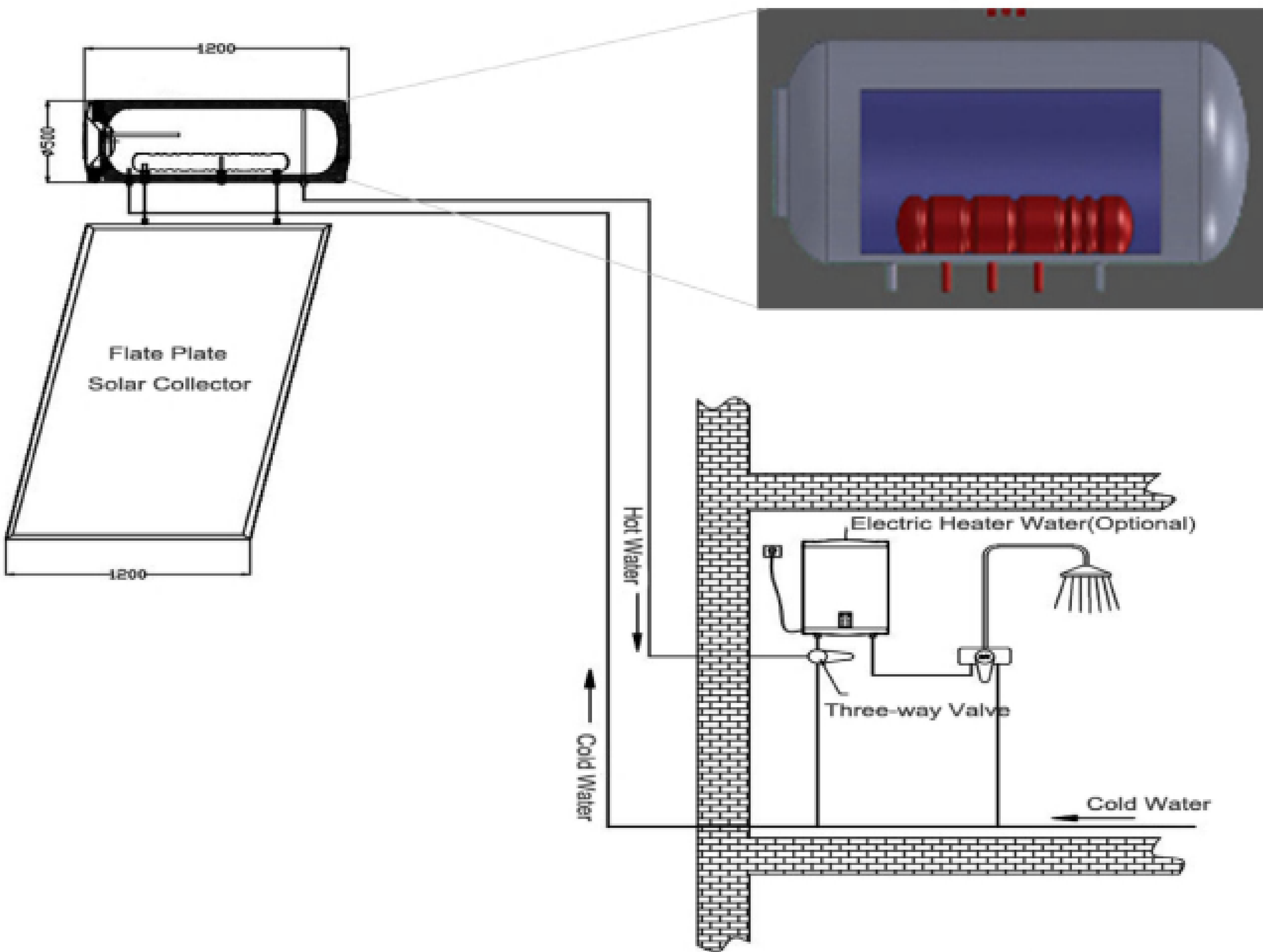
Model	Vacuum tube			Capacity(L)	20GP/40HQ Loading Qty(Unit)
	ϕ (mm)	Length(mm)	Qty(pcs)		
Zentek58/1800-10	58	1800	10	100	80/170
Zentek58/1800-15	58	1800	15	150	48/115
Zentek58/1800-20	58	1800	20	200	38/89
Zentek58/1800-30	58	1800	30	300	26/63

Loading quantity for reference only



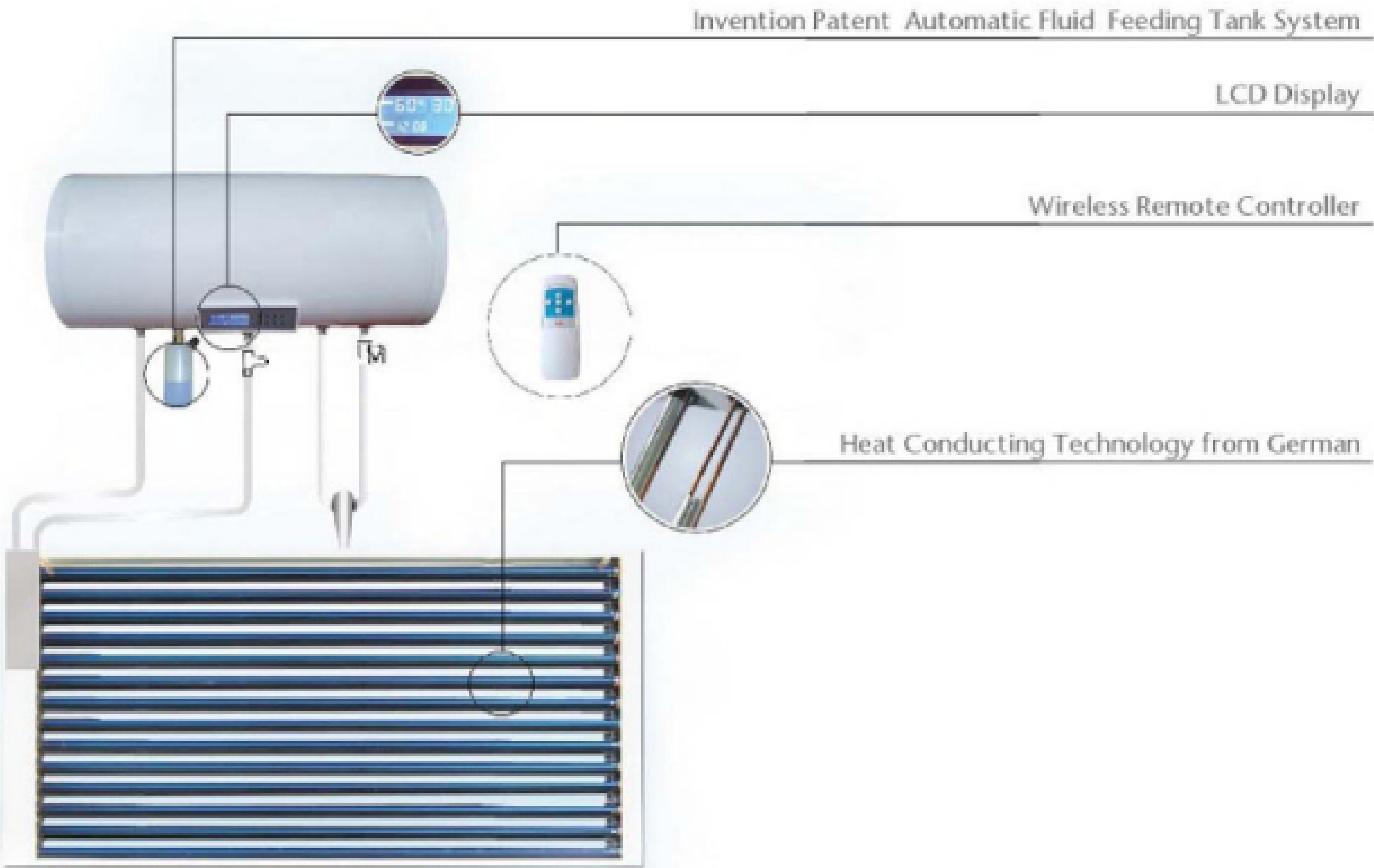
Flate Plate Solar Water Heater

Specification			
100L		150L	
Flat Plate Collector			
Gross Area	1.8M2	Gross Area	2.25M2
Absorber Area	1.68M2	Absorber Area	2.08M2
L*W*H	1000x1800x80MM	L*W*H	1250x1800x80MM
Diameter of the Inlet and Outer Tube	Φ22MM or by Order	Diameter of the Inlet and Outer Tube	Φ22MM or by Order
Net Weight	28KG	Net Weight	35KG
Thickness of Glass	3.2MM	Thickness of Glass	3.2MM
Max.Stagnation Temperature	200℃	Max.Stagnation Temperature	200℃
Insulation Thickness	40MM Mineral Wool	Insulation Thickness	40MM Mineral Wool
Max.Operating Pressure	10 Bar	Max.Operating Pressure	10 Bar



Specification			
100L		150L	
Water Heater Tank			
Heat Exchanger Type	Patent Small Enamel Tank	Heat Exchanger Type	Patent Small Enamel Tank
Heat Exchanger Thickness	1.5MM,Enamel	Heat Exchanger Thickness	1.5MM,Enamel
Max.Operating Pressure	10 Bar	Max.Operating Pressure	10 Bar
Thickness of Inner Tank and Outer Tank	Steel 2.0MM, PPGI 0.4MM	Thickness of Inner Tank and Outer Tank	Steel 2.0MM ,PPGI 0.4MM
Thickness of Foaming	50MM	Thickness of Foaming	50MM
Diameter of the Inlet and Outer Tube	φ22MM or by Order	Diameter of the Inlet and Outer Tube	φ22MM or by Order
Mg Rod	Yes	Mg Rod	Yes

Specification			
100L		150L	
Frame			
Material	Galvanized Steel or Stainless Steel	Material	Galvanized Steel or Stainless Steel
Thickness	1.2MM	Thickness	1.2MM
Angle of Installation	By Order	Angle of Installation	By Order
Loading Quantity			
100L		150L	
120UNITS/40HQ		90UNITS/40HQ	



Balcony Pressurized Solar Water Heater System

- Water Tank:
Inner/outer tank material/thickness: Enameled tank 2.0mm/painted steel 0.5mm
- Insulation: Polyurethane foam
- Solar Collector: U-type pressurized solar collector
- Others: Solar controller
- Installation Types: On-wall or on-balcony

Datasheet:

Model	Vacuum tube			Capacity(L)	20GP/40HQ Loading Qty(Unit)
	Φ(mm)	Length(mm)	Qty(pcs)		
Zentek58/1800-10	58	1800	10	80	80/170
Zentek58/1800-12	58	1800	12	100	48/115
Zentek58/1800-15	58	1800	15	120	32/62

Loading quantity for reference only



Split Pressurized Solar Water Heater System

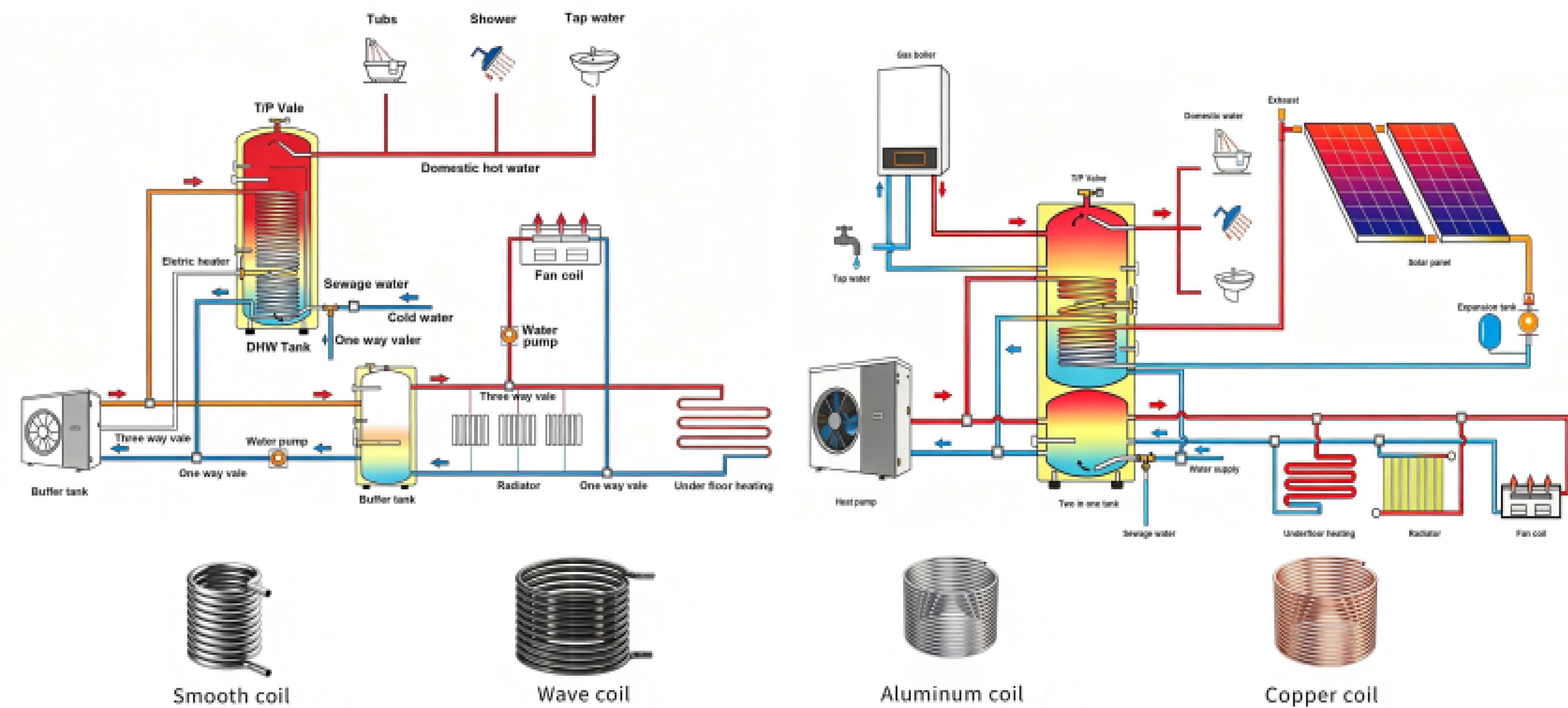
- Inner Tank: SUS304 2B 1.2/1.5/2.0mm
- Outer Tank: Color white steel 0.6mm
- Insulation: Polyurethane foam 45-60mm
- Copper Coil: One cooper coil ϕ 16mmx1.0mm
- Solar Collector: Heat pipe pressurized solar collector
- Other Accessories: Electric heater 1500-3000W/ Magnesium rod/Solar station (controller and pump)/ T/P valve/ Check Valve/ Safety valve/ Flow meter/ Expansion tank

Datasheet:

Model	Tank Capacity(L)	Collector Model	Collector Qty (unit)	Expansion Tank(L)	20GP/40HQ Loading Qty(Unit)
ZT-150	150	5818-18	1	12	38/88
ZT-200	200	5818-24	1	12	28/74
ZT-300	300	5818-18	2	12	21/50
ZT-400	400	5818-24	2	18	18/42
ZT-500	500	5818-30	2	18	15/33

Loading quantity for reference only

Buffer Tank---Stainless Steel



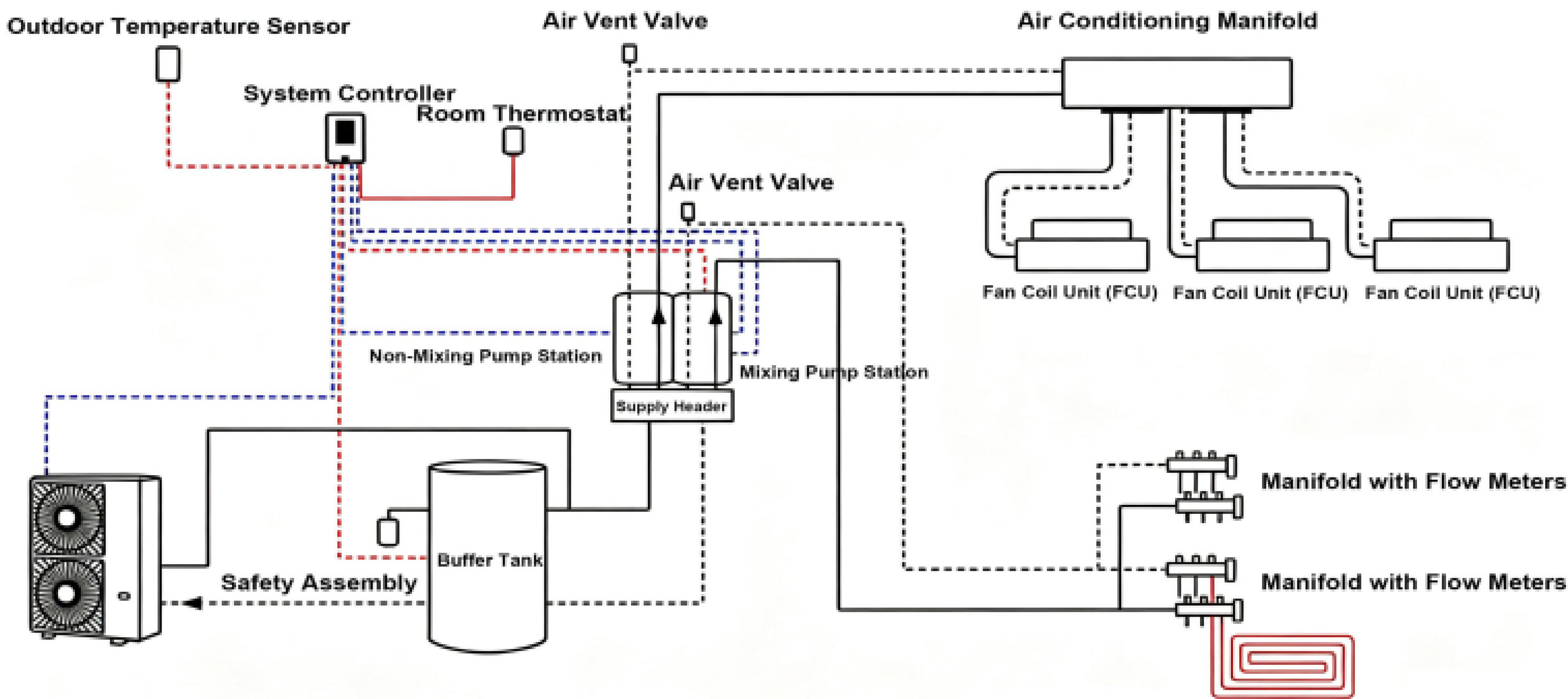
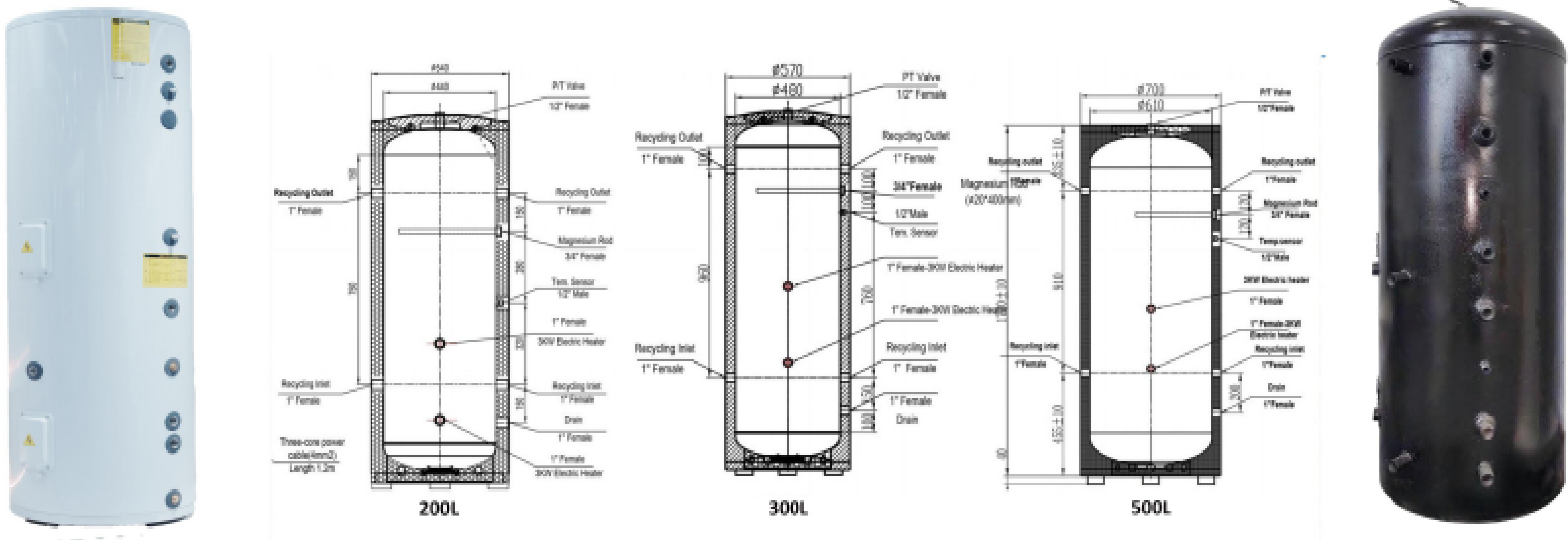
SPECIFICATION PARAMETERS

Copcity(L)	200L	250L	300L	400L
Inner Diameter(mm)	φ470	φ470	φ500	φ550
Outer Diameter(mm)	φ560	φ560	φ600	φ650
Insulation Thickness(mm)	645	645	650	650
Height(mm)	1312	1495	1572	1800
Inner Tank Material	Stainless steel 304, 316L, Duplex 2205			
Casing Material	Galvanized steel with pointing / SUS304 / PU soft jacket			
Electric Heater	1.5kW & 3kW 220~240V 50Hz 1Phase			
Exchange Coil Material	SUS316L			
Exchange Coil Diameter	22mm,28mm,32mm,35mm			
Connection Size(inch)	1/2", 3/4", 1", 5/4", 6/4", 2"			
Working Pressure	0.6 MPa			
Testing Pressure	1.0 MPa			

SPECIFICATION PARAMETERS

Capacity(L)	200L	250L	300L	400L	500L
Buffer Capacity	50L	50L	100L	100L	200L
DHW Capacity	150L	200L	200L	300L	300L
Inner Diameter(mm)	φ470	φ470	φ500	φ550	φ600
Outer Diameter(mm)	φ560	φ560	φ600	φ650	φ700
Insulation Thickness(mm)	645	645	650	650	650
Height(mm)	1500	1780	1850	1900	2000
Inner Tank Material	Stainless steel 304, 316L, Duplex 2205				
Casing Material	Galvanized steel with painting / SUS304 / PU soft jacket				
Exchange Coil Material	SUS316L				
Exchange Coil Diameter	22mm,28mm,32mm,35mm				
Electric Heater	1.5kW & 3kW 220~240V 50Hz 1Phase				
Connection Size(inch)	1/2", 3/4", 1", 5/4", 6/4", 2"				
Working Pressure	0.6 MPa				
Testing Pressure	1.0 MPa				

Buffer Tank---Enamel



SPECIFICATION PARAMETERS

Capacity	200L\300L\500L
Model	CSP-ZT1
Inner Tank	Enamel Steel,2.0-2.5mm
Outer Tank	PPGI 0.5mm
Height	1074mm/1374mm/1592mm/1456mm/1888mm
Diameter	Φ470mm/Φ520mm/640mm/Φ700mm
Polyurathane	50mm
Working Pressure	0.6 Mpa
Testing Pressure	1.0 Mpa
Voltage	2000W/3000W
Production Time	10-14 day
Mag Rod	Option
Drainage	Option



All In One Heat Pump/With Air Duct

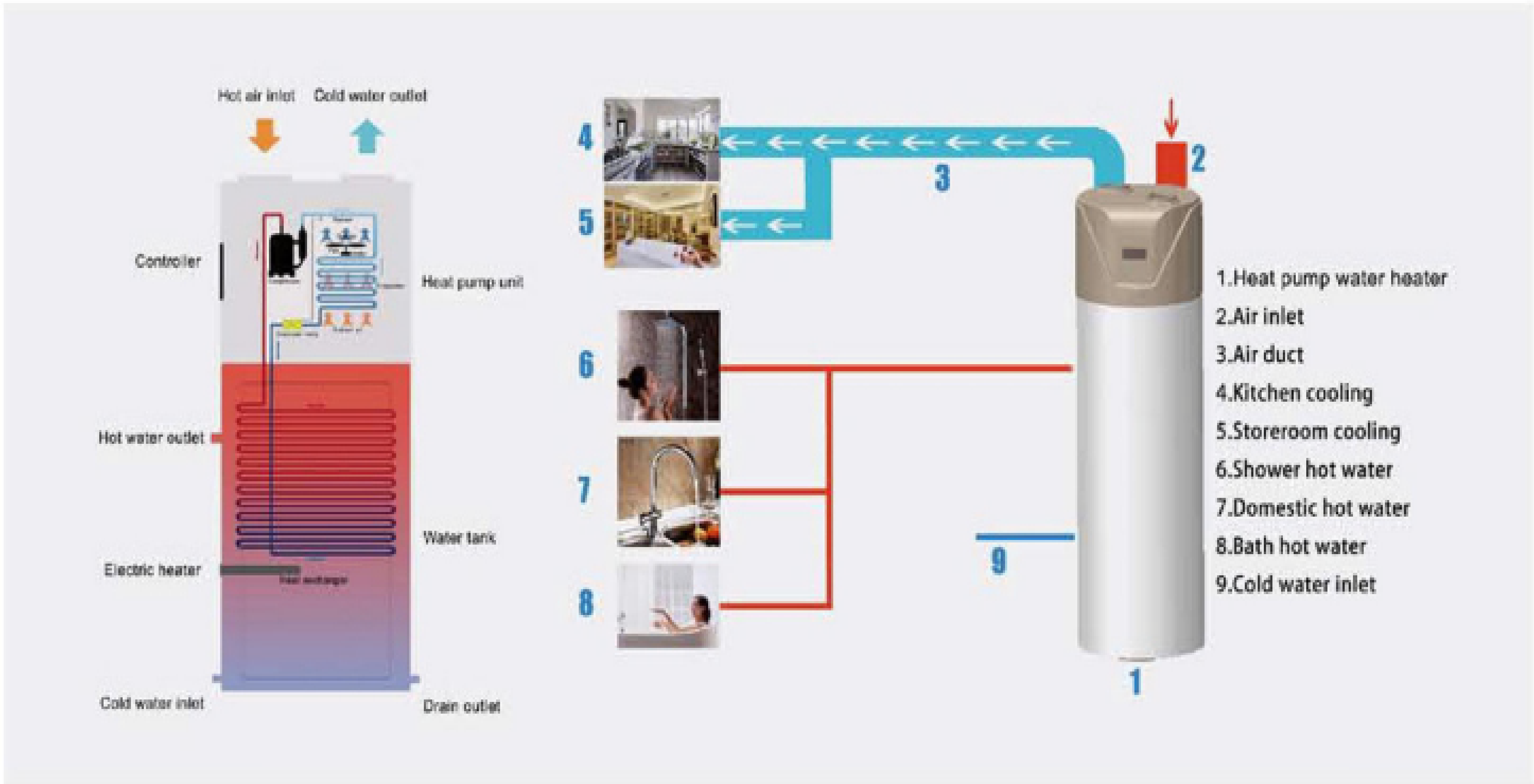


Features:

- R134A refrigerant, environmental friendly.
- Higher water temperature output up to 75°C.
- External condenser coil, more safe & reliable.
- Adopt enamel inner tank.
- High pressure protection.
- Defrost automatically.
- With sterilization function.
- MODBUS communication.
- Full automatically operation.
- With auxiliary electric heater.
- Top air in/out with duct, free of cool air.



Application



Technical Data

Photos					
Type	series A		series B		
Model No.	YT-120TA1	YT-180TA1	YT-200TB1	YT-250TB1	YT-300TB1
Testing condition: * Heating Capacity at Air temp. 20 °C / 15 °C, Water Temperature from 15 °C to 55 °C					
Heating Capacity (kW)	2.5	2.5	2.5	2.5	2.5
Power Input (kW)	0.6	0.6	0.6	0.6	0.6
COP	4.16	4.16	4.16	4.16	4.16
Max Power Input (kW)	2.4	2.4	3	3	3
Rated Current (A)	2.7	2.7	2.7	2.7	2.7
Max Current (A)	12.2	12.2	15	15	15
Power Supply	220V/1/50Hz	220V/1/50Hz	220V/1/50Hz	220V/1/50Hz	220V/1/50Hz
Backup Electric Heater (W)	1500	1500	2000	2000	2000
Refrigerant	R134a	R134a	R134a	R134a	R134a
Net Dimension(mm)	500x500x1628	500x500x1848	Φ620×1638	Φ620×1868	Φ620×2038
Package Dimension(mm)	680x680x1805	680x680x2025	700×700×1830	700×700×2060	700×700×2230
Net Weight(Kg)	80	93	88	95	102
Gross Weight(Kg)	98	111	106	113	120
Noise (dB)	48	48	48	48	48
Water tank volume(L)	120	180	200	250	300
Working temperature range (°C)	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43
Loading quantity(20ft container)	24	24	24	24	24
Loading quantity(40ft container)	51	51	51	51	51

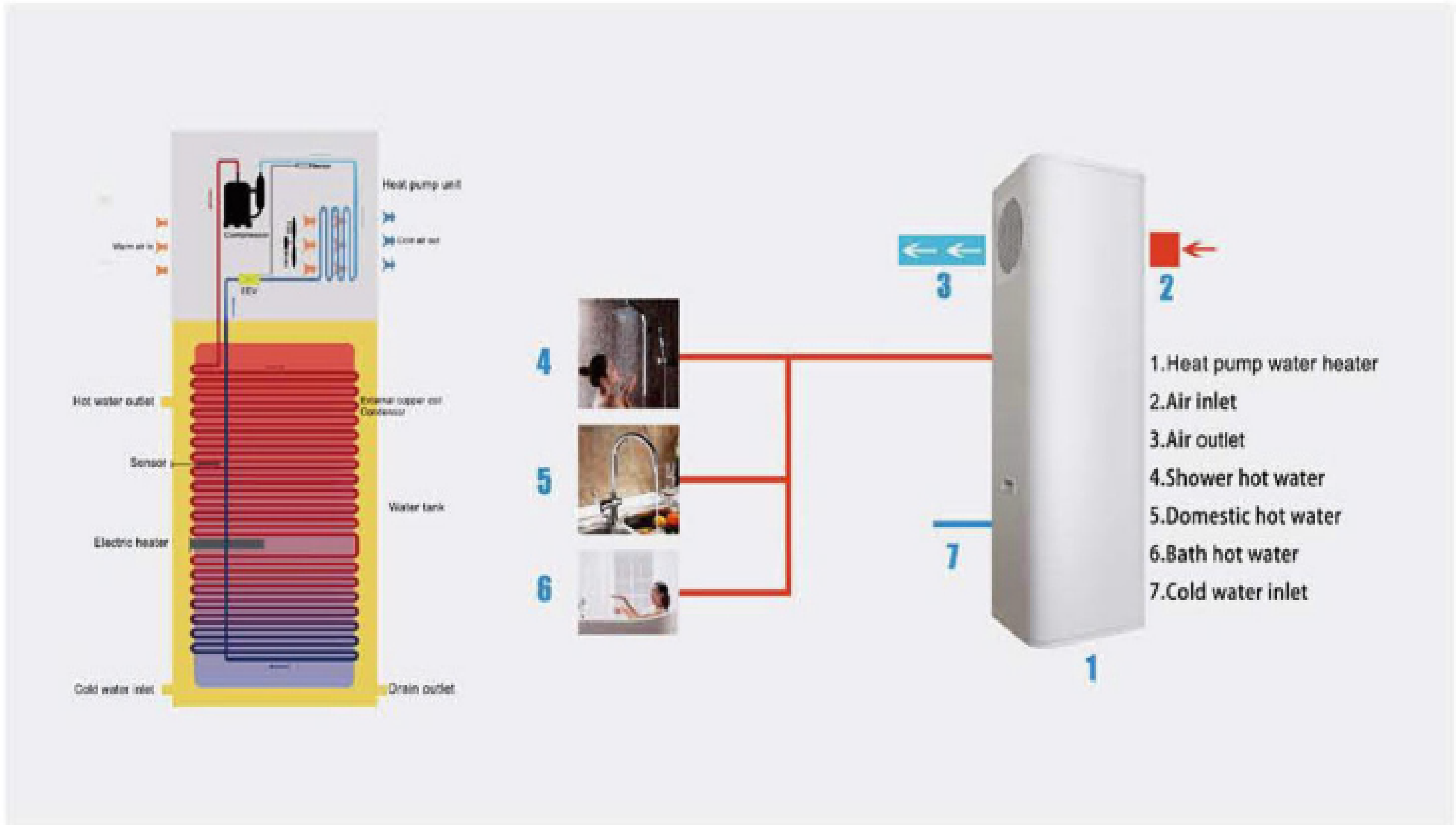


Features:

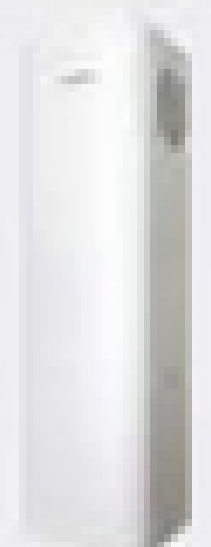
- R134A refrigerant, environmental friendly.
- Higher water temperature output up to 75°C.
- External condenser coil, more safe & reliable.
- Adopt enamel inner tank.
- High pressure protection.
- Defrost automatically.
- With sterilization function.
- MODBUS communication.
- Full automatically operation.
- With auxiliary electric heater.



Application



Technical Data

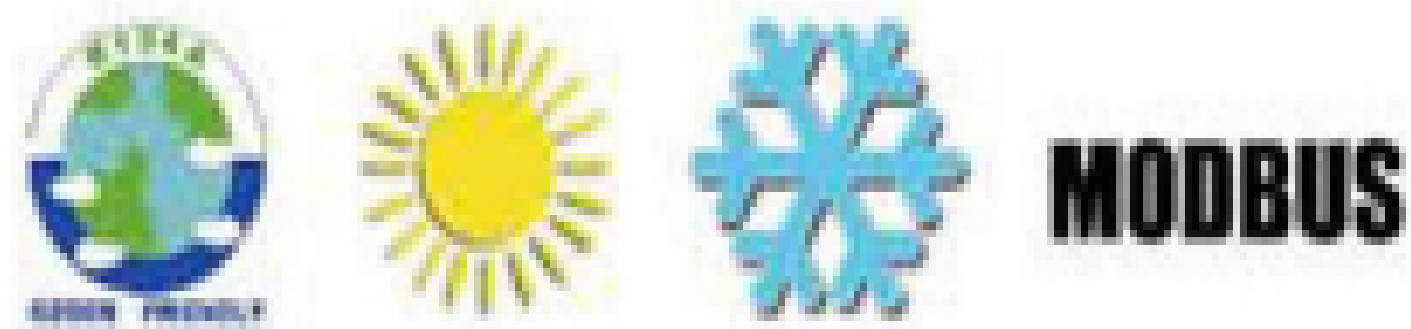
Photos		
Type	series C	
Model No.	YT-120TC1	YT-150TC1
Heating Capacity at Air 20°C/15°C, Water Temperature from 15°C to 55°C		
Heating Capacity (kW)	2.5	2.5
Power Input (kW)	0.6	0.6
COP	4.16	4.16
Max Power Input (kW)	3	3
Rated Current (A)	2.7	2.7
Max Current (A)	15	15
Power Supply	220V/1/50Hz	220V/1/50Hz
Backup Electric Heater (W)	2000	2000
Refrigerant	R134a	R134a
Net Dimension(mm)	500x500x1550	500x500x1670
Package Dimension(mm)	640x640x1720	640x640x1840
Net Weight(Kg)	89	92
Noise (dB)	48	48
Water tank volume(L)	120	150
Working temperature range (°C)	-7 ~ 43	-7 ~ 43

Heat Pump Water Heater
/ Commercial Type

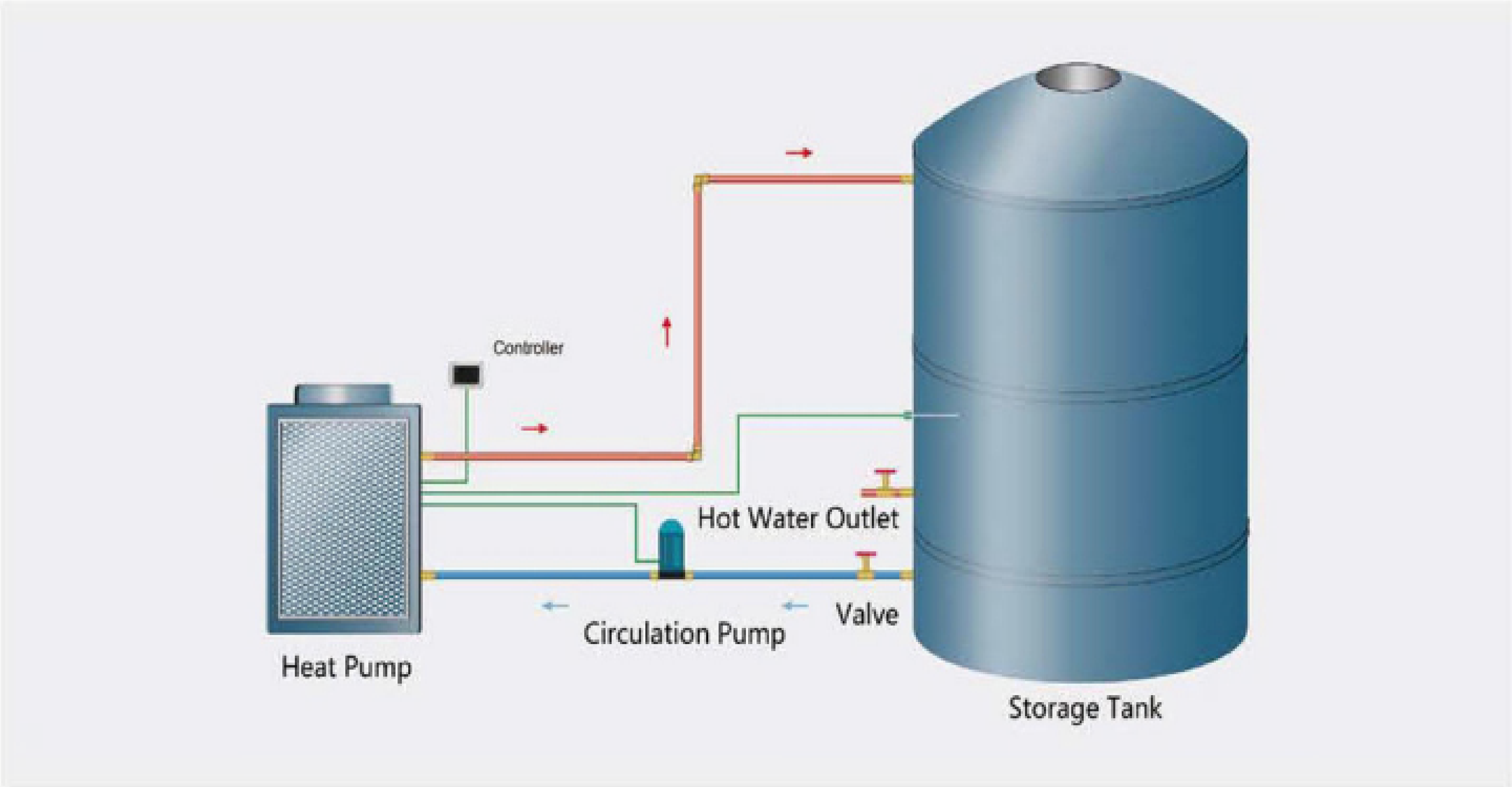


Features:

- Adopt R410A refrigerant, environmental friendly.
- Higher water temperature output up to 60°C.
- Adopt tube in tube heat ex-changer and circulating heating method, has higher COP.
- Defrost automatically, intelligent and fast.
- High pressure protection function.
- With MODBUS communication.
- Full automatically operation.
- Low operation ambient temperature -15°C/-25°C
- The system can be used for cooling, but it is not the main function.

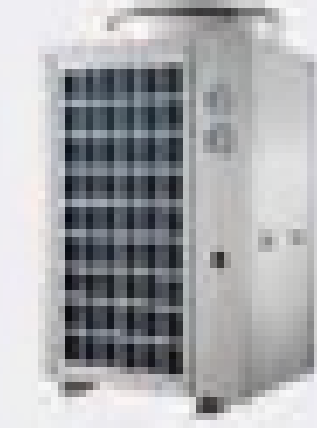
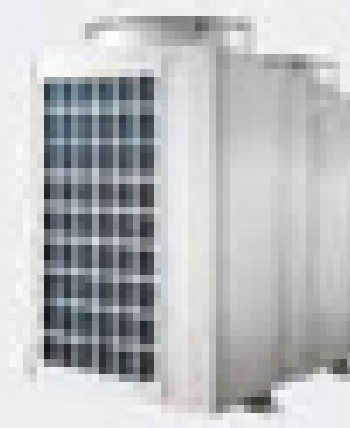


Application



We also provide hot water solutions or heating solution for hotels,schools,hospitals,restaurant !

Technical Data

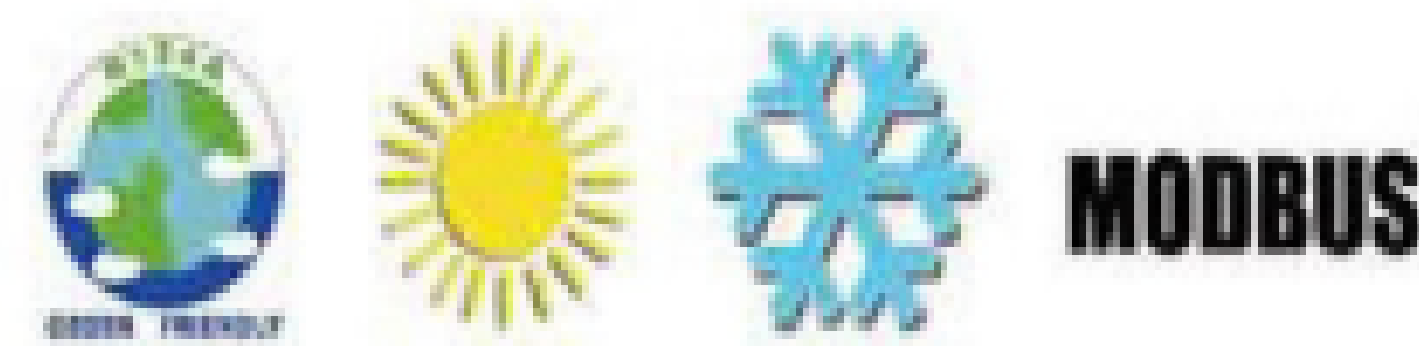
Photos					
Model No.	RS-019TA1	RS-038TA1	RS-050TA1	RS-100TA1	RS-190TA1
Power Supply	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz
Heating Capacity at Air 20°C/15°C, Water Temperature from 15°C to 55°C					
Heating Capacity (kW)	18	36	50	100	190
Power Input (kW)	4.2	8.3	11.5	22.6	44.4
COP	4.29	4.34	4.36	4.42	4.28
Max Power Input (kW)	6.9	13.2	16.8	36.5	66
Max Current(A)	12.3	23.5	31.5	68.1	110
Rated Hot Water(L/h)	380	770	1050	2100	4000
Refrigerant	R410a	R410a	R410a	R410a	R410a
Compressor	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Valve	Electronic	Electronic	Electronic	Electronic	Electronic
Air Flow Direction	Vertical	Vertical	Vertical	Vertical	Vertical
Water Flow Volume (m³/h)	4	8	10	18	33
Water Pressure Drop (kPa)	50	50	55	55	55
Dimensions(LxWxH) (mm)	765x691x1055	1416x752x1055	1252x1076x1865	2148x1076x2176	2248x2148x2176
Working temperature range (°C)	-15 ~ 43	-15 ~ 43	-25 ~ 43	-25 ~ 43	-25 ~ 43
Noise (dB)	≤60	≤65	≤65	≤70	≤76
Net Weight (kg)	160	259	450	800	1600
Water connection(mm)	25	32	40	50	80

Multi-function Heat Pump / Heating & Cooling / Commercial Type

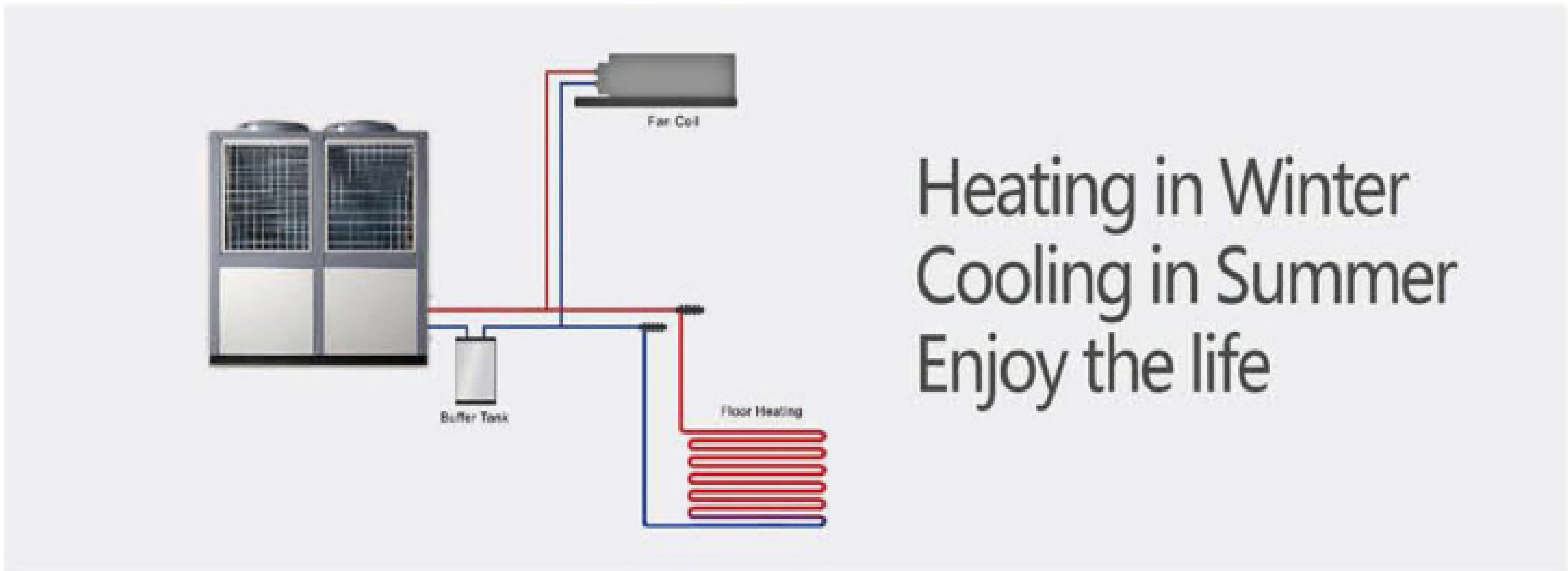


Features:

- R410A refrigerant, environmental friendly.
- Higher water temperature output up to 55 °C.
- Adopt EVI technology, the operation ambient temperature can reach at -25 °C.
- High pressure protection.
- Defrost automatically.
- With MODBUS communication.
- Adopt intelligent controller, full automatically operation.
- Through different installation, the system can be used for cooling or heating.



Application



Technical Data

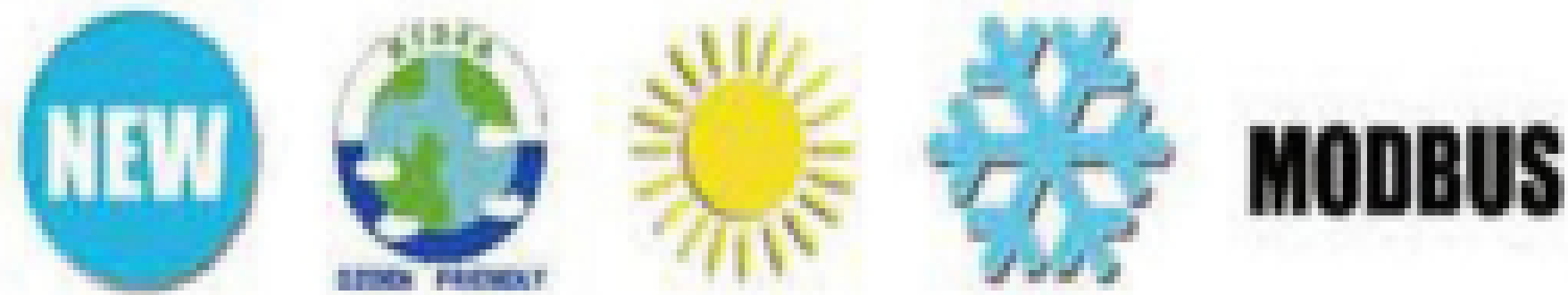
Photos			
Model No.	DLN-050TA1	DLN-100TA1	DLN-200TA1
Power Supply	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz
Heating Capacity at Air 7°C/6°C, Water 30°C in, 35°C out			
Heating Capacity (kW)	45	90	170
Power Input (kW)	10.3	20.8	39.7
COP	4.36	4.32	4.28
Heating Capacity at Air -12°C/-14°C, Water 30°C in, 35°C out			
Heating Capacity (kW)	30	60	110
Power Input (kW)	10.1	20.3	37.7
COP	2.98	2.95	2.92
Cooling Capacity at Air 35°C/24°C, Water 12°C in, 7°C out			
Cooling Capacity (kW)	32	64	125
Power Input (kW)	13.1	24.9	50.6
EER	2.45	2.57	2.47
Max Power Input (kW)	16.8	36.5	77.8
Max Current(A)	31.5	63.3	137.5
Refrigerant	R410a	R410a	R410a
Compressor	EVI Scroll	EVI Scroll	EVI Scroll
Expansion Valve	Electronic	Electronic	Electronic
Air Flow Direction	Vertical	Vertical	Vertical
Water Flow Volume (m3/h)	8	16	30
Water Pressure Drop (kPa)	55	55	55
Dimensions(L*W*H) (mm)	1252×1076×1865	2148×1076×2176	2248×2148×2176
Working temperature range (°C)	-25~43	-25~43	-25~43
Noise (dB)	≤65	≤70	≤76
Net Weight (kg)	450	800	1600
Water connection (mm)	40	50	80

Swimming Pool Heat Pump
/ Plastic Case / Residential type

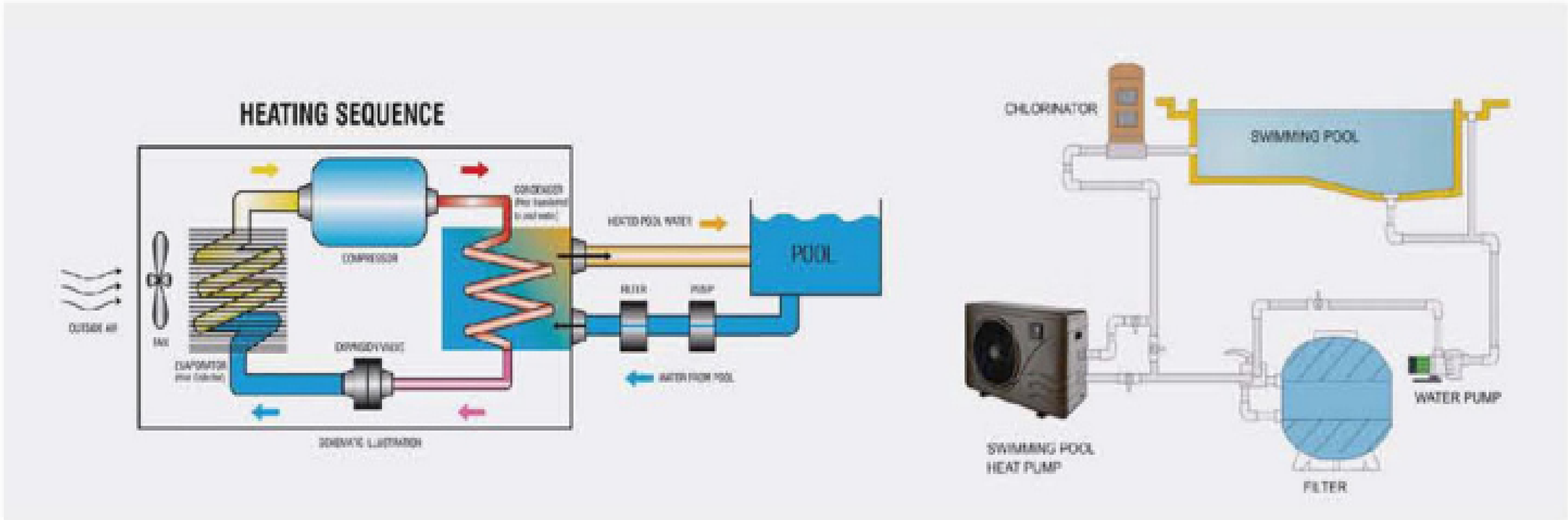


Features:

- R410A refrigerant, environmental friendly.
- Titanium heat exchanger, corrosion resistance.
- High pressure protection.
- Defrost automatically.
- With water flow switch.
- MODBUS communication.
- Full automatically operation.
- The heat pump can heat and cool the pool water.
- ABS plastic outer shell, corrosion resistance.



Application



Technical Data

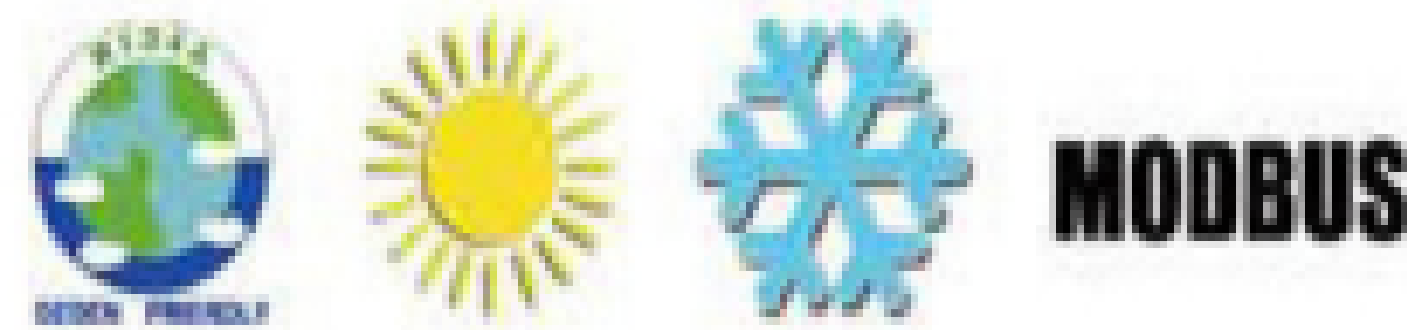
Photos					
Model No.	YC-007TB1	YC-010TB1	YC-012TB1	YC-015TB1	YC-019TB1
Heating Capacity at Air 27°C/24°C, Water 27°C in, 29°C out					
Heating Capacity (kW)	7.2	10.0	12.5	15.0	18.8
Power Input (kW)	1.19	1.63	2.05	2.45	3.13
COP	6.05	6.13	6.10	6.12	6.01
Heating Capacity at Air 15°C/12°C, Water 26°C in, 28°C out					
Heating Capacity (kW)	5.1	7.2	9.5	12.5	15.5
Power Input (kW)	1.00	1.40	1.86	2.44	3.06
COP	5.10	5.14	5.11	5.12	5.06
Cooling Capacity at Air 35°C/24°C, Water 29°C in, 27°C out					
Cooling Capacity (kW)	4.5	6.5	8.5	11.2	14.0
Power Input (kW)	1.30	1.80	2.39	3.22	4.11
EER	3.46	3.62	3.56	3.48	3.41
Power supply	230V / 1/ 50 Hz	230V / 1/ 50 Hz	230V / 1/ 50 Hz	230V / 1/ 50 Hz	230V / 1/ 50 Hz
Max Power Input (kW)	1.8	2.5	3	3.6	4.7
Max Current(A)	9.1	12.6	15.2	18.2	24.5
Refrigerant	R410a or R32	R410a or R32	R410a or R32	R410a or R32	R410a or R32
Heat Exchanger	Titanium	Titanium	Titanium	Titanium	Titanium
Air Flow Direction	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Water Flow Volume (m³/h)	3	4	5	6.5	8
Kind of defrost	by 4 way valve	by 4 way valve	by 4 way valve	by 4 way valve	by 4 way valve
Working temperature range (°C)	-15 ~ 43	-15 ~ 43	-15 ~ 43	-15 ~ 43	-15 ~ 43
Noise level (dBa)	≤ 48	≤ 48	≤ 49	≤ 51	≤ 51
Casing Material	ABS plastic	ABS plastic	ABS plastic	ABS plastic	ABS plastic
Net Dimensions (mm)(LxW xH)	972x430x653	972x430x653	972x430x653	1083x448x704	1083x448x704
Package Dimensions (mm)(LxWxH)	1022x460x788	1022x460x788	1022x460x788	1130x460x830	1130x460x830
Net Weight	46 kg	51 kg	58 kg	72 kg	85 kg
Gross Weight	59 kg	65 kg	73 kg	88 kg	102 kg

Swimming Pool Heat Pump / Commercial Type

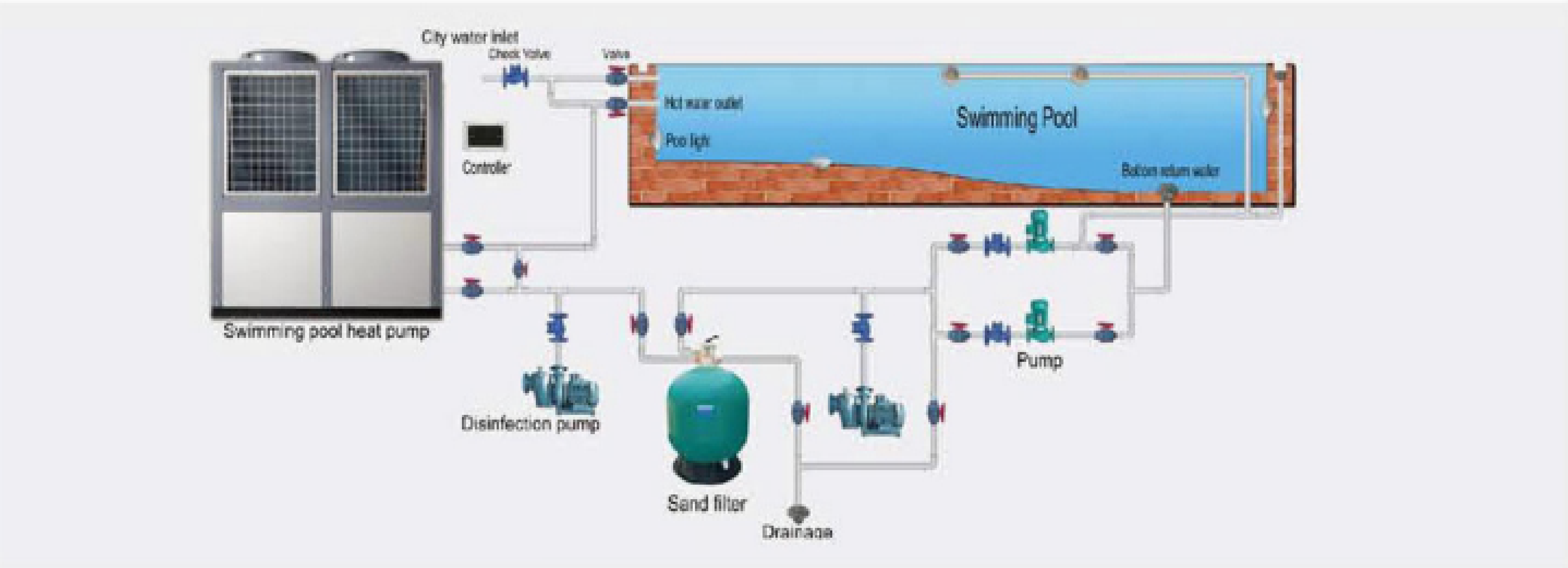


Features:

- R410A refrigerant, environmental friendly.
- Higher water temperature output up to 40°C.
- Titanium heat ex-changer, corrosion resistance.
- High pressure protection.
- Defrost automatically.
- With MODBUS communication.
- Full automatically operation.



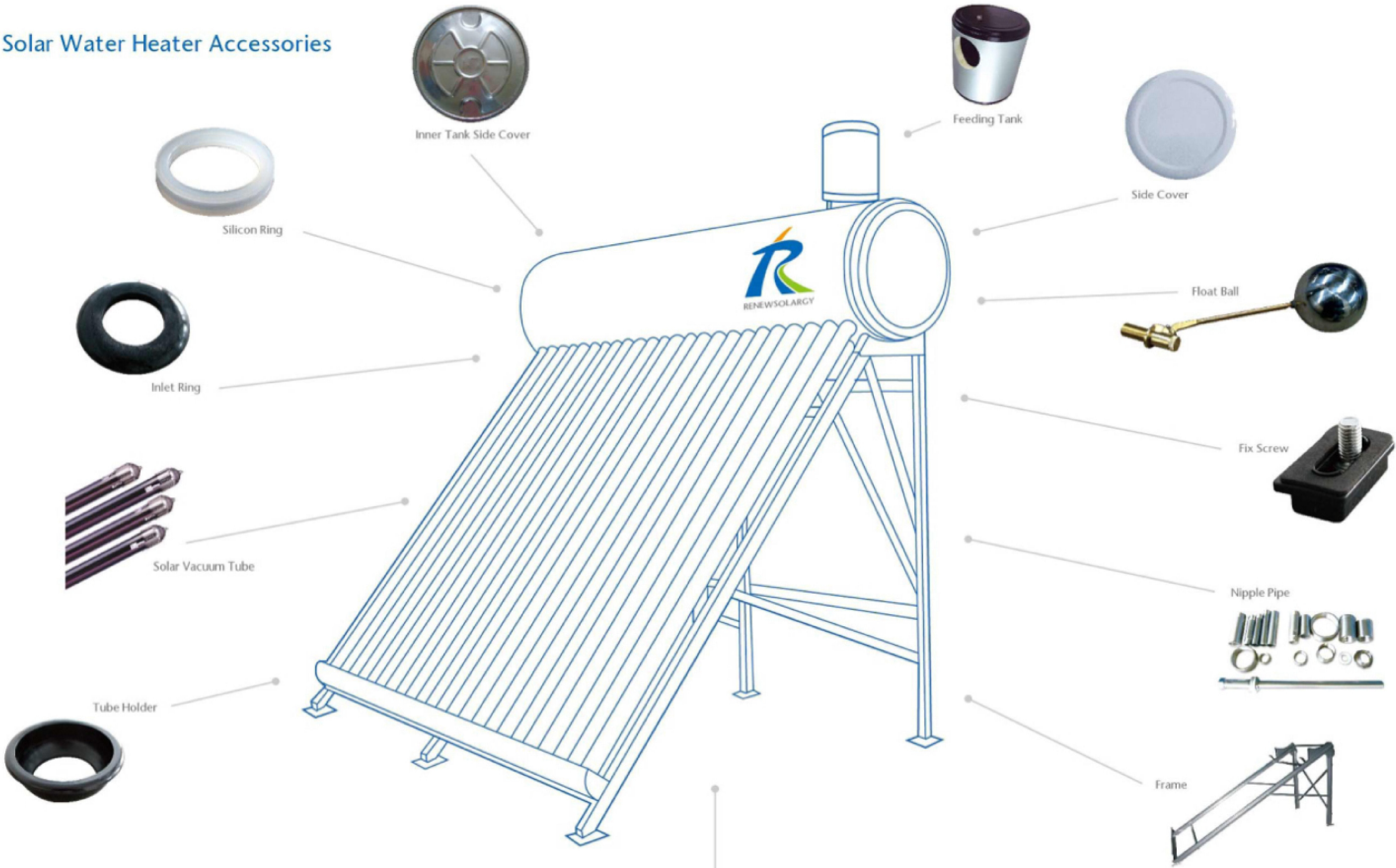
Application



Technical Data

Photos						
Model No.	YC-025TA1	YC-050TA1	YC-075TA1	YC-120TA1	YC-170TA1	YC-220TA1
Power Supply	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz	380V/3/50Hz
Heating Capacity at Air 27°C/24°C, Water 27°C in, 29°C out						
Heating Capacity (kW)	25	50	75	120	170	220
Power Input (kW)	4.2	8.4	12.8	20.1	28.6	37.6
COP	5.91	5.95	5.86	5.98	5.95	5.85
Heating Capacity at Air 15°C/12°C, Water 26°C in, 28°C out						
Heating Capacity (kW)	20	42	65	100	140	185
Power Input (kW)	4.1	8.6	13.5	20.4	28.9	38.6
COP	4.86	4.88	4.81	4.89	4.85	4.79
Cooling Capacity at Air 35°C/24°C, Water 29°C in, 27°C out						
Cooling Capacity (kW)	18	36	56	85	120	160
Power Input (kW)	5.3	10.5	16.6	24.6	35.2	47.6
EER	3.39	3.42	3.38	3.45	3.41	3.36
Max Power Input (kW)	6.9	13.2	20.1	29.1	48.5	67.2
Max Current(A)	12.3	23.5	35.9	52.2	87.0	121.1
Refrigerant	R410a	R410a	R410a	R410a	R410a	R410a
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Heat Exchanger	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium
Expansion Valve	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic
Air Flow Direction	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Water Flow Volume (m³/h)	10	20	30	50	70	85
Net Dimensions(LxWxH) (mm)	765x691x1055	1416x752x1055	1590x850x1500	2150x1078x2258	2150x1078x2258	2150x1078x2258
Working temperature range (°C)	-15 ~ 43	-15 ~ 43	-15 ~ 43	-15 ~ 43	-15 ~ 43	-15 ~ 43
Noise (dB)	≤60	≤65	≤68	≤70	≤70	≤75
Net Weight (kg)	120	250	460	760	900	1200
Water connection(mm)	50	63	63	75	90	110

Solar Water Heater Accessories



Solar Thermal Projects



Solar Thermal Projects

