

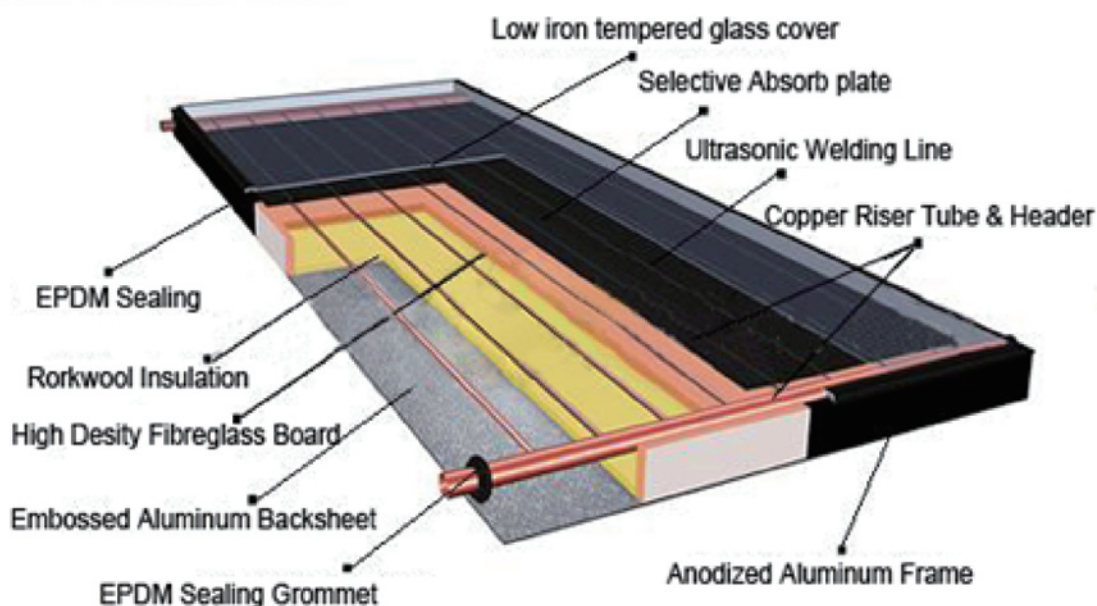


CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO.,LTD.





## Structure Declaration



## Specifications

**A**bsorber plate consists of copper fins ultrasonically welded to copper risers, to provide excellent heat transfer between the fins and the risers, ensuring high efficiency. The absorber core is made of high purity TU1 copper. Also, inexpensive durable aluminum absorber plate is available all allow excellent energy absorption even in cooler climates. Changzhou Sunnergy use high selective titanium coating film on absorber. High selective titanium coating film is a special developed  $TiNxOy$  film by spurting on the copper ribbon through physical vapor deposition (PVD) technology. The most difficult thing is how to store the solar energy in the  $TiNxOy$  film. Changzhou Sunnergy develop a patent way to spurt a reflection reducing coating and anti-corrosion ceramic membrane on the compound film, thus even after 25 years , the performance can still be above 95% as the initial time.

**T**he absorb ribbon is welded to the copper pipe by USW (ultrasonic welding) technology to minimum the destroy to the metal when welding. The absorber plate is encased in 25 mm rigid Polyurethane foam, with an option to additional layer of glass wool, retaining the collector's heat. The single-pane 3.2-mm solar glass is patterned to reduce reflection and tempered to maximize strength and durability. The 0.03% low iron oxide content enables a high solar transmittance of 91%.

**A**ll anodized aluminum extrusion casings are made of solid construction available in a natural or black color.

5/8" or 8 mm copper risers brazed to 11/8" or 7/8" copper manifolds with optional flow distribution.

The back plate is made of black polypropylene sheet.

**T**he aluminum foil acts as a barrier against out-gassing, integrated to the insulation



Material	Laser whole black chrome plate collectors	Laser Blue Titanium collector entire board	Laser whole black chrome plate collectors	Laser Blue Titanium collector entire board
ITEM NO.	SN80C-Bal-Cr-AL	SN80C-Bal-Ti-AL	SN250/80C-Bal-Cr-AL	SN250/80C-Bal-Ti-AL
SURFACE TREATMENT	Anodized aluminum black chrome entire board	Vacuum aluminum plating blue titanium entire board	Anodized aluminum black chrome entire board	Vacuum aluminum plating blue titanium entire board
Structure Type	Tube+plate Type	Tube+plate Type	Tube+plate Type	Tube+plate Type
Absorption Rate	0.93±0.02	0.93±0.02	0.93±0.02	0.93±0.02
Emissivity	0.09±0.05	0.05±0.02	0.09±0.05	0.05±0.02
FRAME SIZE (mm)	2000 x 1000 x 80	2000 x 1000 x 80	2500 x 800 x 80	2500 x 800 x 80
FRAME COLOR	Scrub oxide silver/golden/black color	Scrub oxide silver/golden/black color	Scrub oxide silver/golden/black color	Scrub oxide silver/golden/black color
GROSS AREA	2 m <sup>2</sup>	2 m <sup>2</sup>	2 m <sup>2</sup>	2 m <sup>2</sup>
LIGHTING AREA	1.85 m <sup>2</sup>	1.85 m <sup>2</sup>	1.85 m <sup>2</sup>	1.85 m <sup>2</sup>
ABSORBING AREA	1.85 m <sup>2</sup>	1.85 m <sup>2</sup>	1.85 m <sup>2</sup>	1.85 m <sup>2</sup>
SEALER	Anti aging tapes	Anti aging tapes	Anti aging tapes	Anti aging tapes
COVERS	1	1	1	1
COVER MATERIAL	Low-iron tempered glass Gyrosigma	Low-iron tempered glass Gyrosigma	Low-iron tempered glass Gyrosigma	Low-iron tempered glass Gyrosigma
COVER TRANSMITTANCE	ABOUT 89%	ABOUT 89%	ABOUT 89%	ABOUT 89%
BOTTOM BOARD	0.40mm GALVANIZED STEEL BOARD	0.40mm GALVANIZED STEEL BOARD	0.40mm GALVANIZED STEEL BOARD	0.40mm GALVANIZED STEEL BOARD
INSULATION MATERIAL	24K*30mm glass wool	24K*30mm glass wool	24K*30mm glass wool	24K*30mm glass wool
MAX WORKING PRESSURE	0.6MPa	0.6MPa	0.6MPa	0.6MPa
WEIGHT (KG)	36kg	36kg	36kg	36kg
WARRANTY	2YEARS	2YEARS	2YEARS	2YEARS





**SNB** series is a kind of solar collector, It used with heat preservation water tank, solar power work station and the pipe. The solar collector is consisted of super conducting vacuum heat collecting tube and header, so it's of great efficiency of heat collecting. The absorbing percentage of the glass vacuum collector is more than 94%. In the sunny days of spring or autumn, each collecting tube could make the water up to 90 degrees centigrade only in 2.5 hours.

## Technical Data of Heat pipe solar collector

Description	Solar collector
Numbers of tube(pcs)	10-30
Heat pipe material	0.6mm thickness TU1 copper
Heat pipe size	Top: Ø14* 1mm; Body: Ø8* 0.6mm
Tube diameter	φ58/1800mm
Solar vacuum glass tube	High boron-silicon
Coating of absorber on glass tube	Al-N-Al/ Stainless steel/ Copper
Manifold pipe material	TP2 copper (Ø35x0.8mm)
Manifold casing material	Aluminum alloy (2.0mm)
Insulation material in manifold casing	Rockwool
Density of insulation (kg/m3)	90
Frame material	Aluminum alloy frame
Sealing Materials	EPDM
Absorber area approx.(m2)	1.5-4.5
Maximum operation pressure(Bar)	6
Test pressure(Bar)	9
Heat transfer fluid	Anti-freeze Fluid (Water-Glycol)
Max.working temp.	300℃
hot water(L/Day)	100-300L
Collector efficiency	76.4%

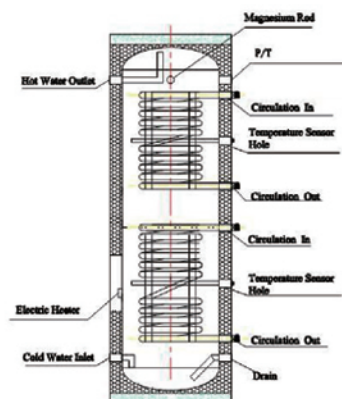






Model	Absorbing Area (m2)	Heat pipe vacuum tube			Supply hot water(L)	Qty.per 20'/40' Container
		Diameter (mm)	Length (mm)	Number		
SNB-H58/1800-10	1.49	58	1800	10	100	155/350
SNB-H58/1800-12	1.99	58	1800	12	120	132/300
SNB-H58/1800-15	2.23	58	1800	15	150	102/234
SNB-H58/1800-18	2.66	58	1800	18	180	85/195
SNB-H58/1800-20	2.98	58	1800	20	200	76/175
SNB-H58/1800-24	3.56	58	1800	24	240	65/150
SNB-H58/1800-25	3.71	58	1800	25	250	63/145
SNB-H58/1800-30	4.43	58	1800	30	300	55/125

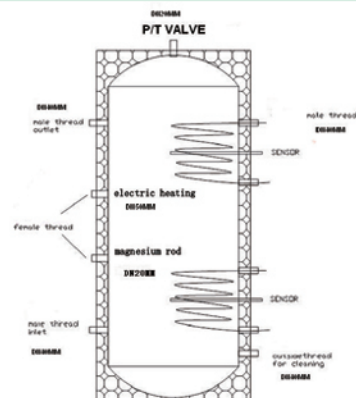




## Technical Data of Solar Hot Water Tank (home type)

Model	100L	200L	300L	400L	500L
Internal tank diameter(mm)	Ø 385	Ø 440	Ø 480	Ø 600	Ø 600
External tank diameter(mm)	Ø 480	Ø 540	Ø 570	Ø 700	Ø 700
Material and thickness of the internal tank(mm)	SUS304 1.2mm	SUS304 1.2mm	SUS304 1.5mm	SUS304 2.0mm	SUS304 2.0mm
Material and thickness of the shell (mm)	0.55mm galvanized sheet	0.55mm galvanized sheet	0.55mm galvanized sheet	0.55mm galvanized sheet	0.55mm galvanized sheet
Insulation PE foam thickness(mm)	50	50	45	50	50
surface area& OD of up heat exchanger (m2 & mm)	----	0.4/ Ø 16	0.4/ Ø 16	0.5/ Ø 16	0.5/ Ø 16
Length of up heat exchanger (m)	-----	8	8	10	10
Surface area& OD of down heat exchanger (m2 & mm)	0.6/ Ø 16	0.6/ Ø 16	0.8/ Ø 16	0.8/ Ø 16	0.8/ Ø 16
Length of down heat exchanger (m)	12	12	16	16	16
Installation size of water pipe	NPT3/4"	NPT3/4"	NPT3/4"	NPT3/4"	NPT3/4"
Rated heating power	1.5KW	1.5KW	2.0KW	2.5KW	2.5KW
Working pressure	6bar	6bar	6bar	6bar	6bar
Overall dimension(mm)	OD480*H1040	OD540*H1500	OD570*H1840	OD700*H1580	OD700*H1930
Packing case size(mm)	520*520*1100	580*580*1550	610*610*1900	740*740*1640	740*740*1990
Weight(references) (Kg)	46	68	95	112	122





## Technical Data of Solar Hot Water Tank (project type)

Model	1000L	2000L	3000L	4000L	5000L
Internal tank diameter(mm)	Ø 950	Ø 1220	Ø 1410	Ø 1620	Ø 1870
External tank diameter(mm)	Ø 1050	Ø 1320	Ø 1510	Ø 1720	Ø 1970
Material and thickness of the internal tank(mm)	SUS304 2.0mm	SUS304 2.5mm	SUS304 3.0mm	SUS304 3.0mm	SUS304 4.0mm
Material and thickness of the shell (mm)	SUS304 0.6mm	SUS304 0.7mm	SUS304 0.8mm	SUS304 0.8mm	SUS304 0.8mm
Insulation PE foam thickness(mm)	50	50	50	50	50
surface area& OD of up heat exchanger (m2 & mm)	1.26/ Ø 16	1.76/ Ø 16	2.00/ Ø 16	2.00/ Ø 16	3.00/ Ø 16
Length of up heat exchanger (m)	25	35	40	40	60
Surface area& OD of down heat exchanger (m2 & mm)	1.76/ Ø 16	2.52/ Ø 16	3.27/ Ø 16	3.27/ Ø 16	4.52/ Ø 16
Length of down heat exchanger (m)	35	50	65	65	90
Installation size of water pipe	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
Rated heating power	5KW	10KW	20KW	20KW	30KW
Working pressure	6bar	6bar	6bar	6bar	6bar
Overall dimension(mm)	OD1050XH1720	OD1320XH2270	OD1510XH2120	OD1720XH2270	OD1970XH2270
Packing case size(mm)	OD1080XH1750	OD1350XH2300	OD1540XH2150	OD1750XH2300	OD2000XH2300
Weight(references) (Kg)	200	350	430	600	850



CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO., LTD.  
 ADD: LUOXI TOWN, NEW DISTRICT, CHANGZHOU, JIANGSU, CHINA, 213000  
 TEL: +86-519-85606259 FAX: +86-519-85606275  
 E-mail: hellen@sunnergy.cn sunnergyhellen@gmail.com  
 www.sunnergy.cn

