



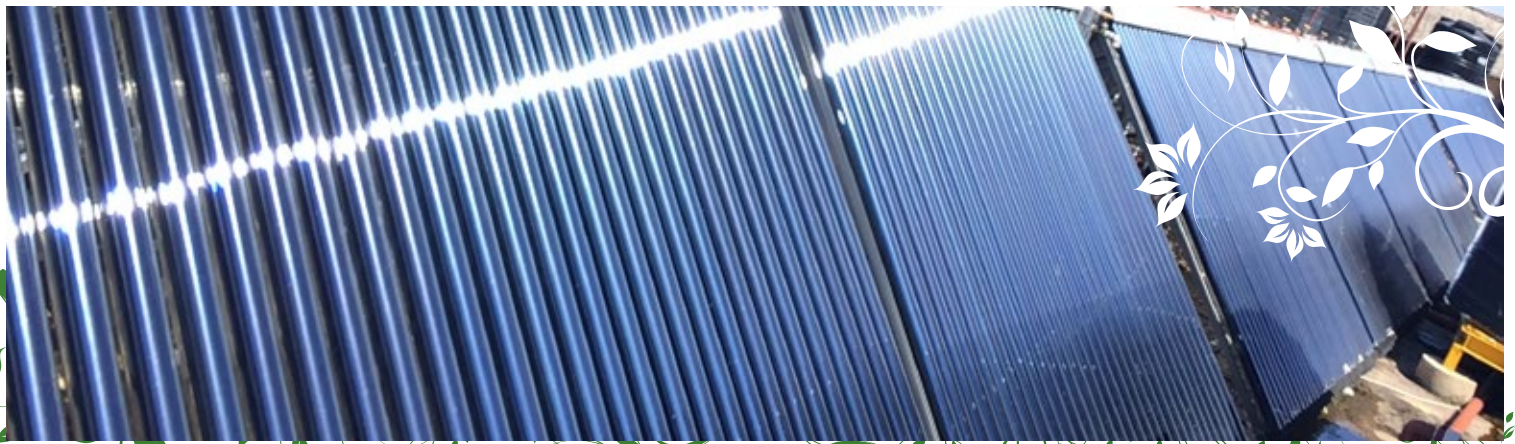
**YOGISUN**<sup>TM</sup>  
Go Solar. Go Green.

# Go Solar. Go Green.

With the improvement of peoples living standard, there is a large scale increase in the consumption of the world's conventional energy resources. Many types of energy crisis make people realize that conventional energy resources are limited and people have looked away to the development and utilization of new energy. Solar energy is the main resource of all energy sources on the earth. Every year the energy radiating the surface of the earth is equivalent to the calorific power that is given out by 130000 billion tons of standard coal.

Owning a YogiSun solar water heater is a practical way to help reduce greenhouse gas emissions in our atmosphere. Occasionally, the sun's radiation needs a helping hand to maintain your water temperature. This manually occurs during continual cloudy days. YogiSun provides an electric booster to ensure you will never be without steaming hot water.

No conventional hot water system pays for itself, like your new YogiSun solar does. With 50% to 90% of your hot water coming free from the sun, you'll be saving money before you know it. More than that, your savings with YogiSun continues year after year.



## About YogiSun

Water heating accounts for 30 per cent of the energy used in an average home and is responsible for 25 per cent of the total greenhouse gas emissions from home energy use. Reducing your hot water use and using renewable energy sources to heat water are great ways to reduce your environmental impact.

By installing YogiSun solar water heater for your household size and water use patterns one can save money and reduce greenhouse gas emissions without compromising your lifestyle.

Installing YogiSun solar water heater one can greatly reduce their energy bills as it will use energy from the sun to heat water at zero cost. Using solar energy to heat water produces no harmful greenhouse gas emissions. YogiSun solar water heaters can provide up to 90 per cent of your total hot water requirements, depending on the climate and the model of heater.

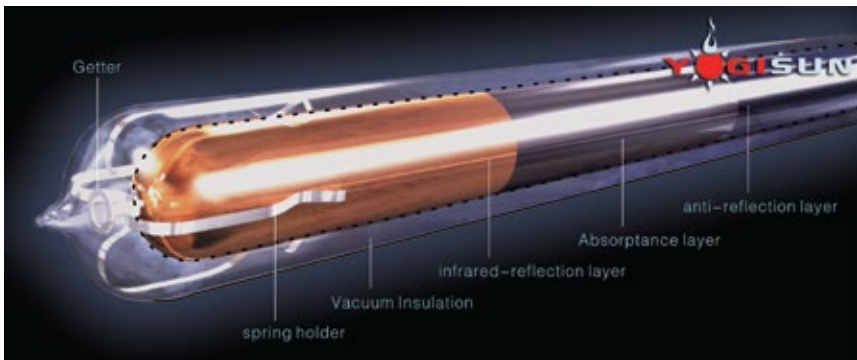




# The YogiSun Vacuum Tube



YogiSun vacuum tubes introduce the latest trivalent element technology which includes high borosilicate glass and ALN/AlN-SS/CU selective complex absorptive coating. This invention increases the performance, absorption and gives a low reflection ratio. Through the interlayer as shown in the diagram, the vacuum has a unique effect of thermo, withstanding temperatures up to 380°C, hence performing a strong heating ability with an absorption rate of 96%. This technology is into effect by various countries such as Germany, China, UK and USA over various solar projects.

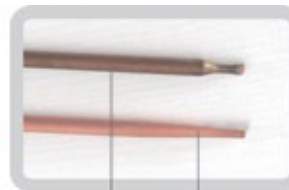


## Specification of all-glass Evacuated Solar Collector Tubes

- Structure: all glass concentric dual tube geometr
- Glass material: borosilicate glass
- Absorbance: > 0.92
- Emittance: < 0.08 (80°C)
- Vacuum: < 5\*10<sup>-3</sup> Pa
- Stagnation: >230m.°C/KW
- Average heat loss: < 0.8w/msq.°C
- Lifetime: > 15years



Updated technology of YogiSun heat pipes warrant the high performance



YogiSun special anti-freezing design makes the heat pipe suitable for cold areas and long lifetime service.  
A) YogiSun's  
B) Other products in the market.



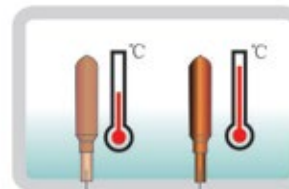
New tri-elements technology, especially for the long time high stagnation temperature.  
A) YogiSun vacuum tube.  
B) Other vacuum tubes on the market



Use TUI high-purity and anaerobic red copper to guarantee the life time of the heat pipe.



Strict testing methods ensure 100% qualification rate.



Faster start speed and high power is the best advantage of YogiSun's heat pipes. In the same condition of testing, YogiSun heat pipes are 30-50% quicker on starting speeds and produce 5-30% higher temperature.  
A) YogiSun's  
B) Other products in the market

# Heat pipe collector - SCM Series

## Technology Core



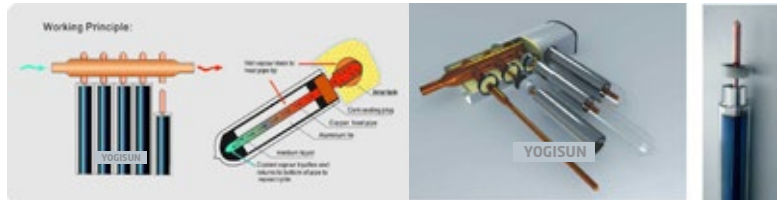
### Working Principle

The pipeline is made of red copper and conducted by heat transfer liquid. There is no water flow in the vacuum tubes. The manifold uses Aluminum alloy mould material of high strength with an air flow design.

Maximum Operating Pressure  
Tank: 10 bar

Maximum Test Pressure  
Tank: 13bar

Module design, arbitrary combination, which can meet the demand of large water consumption.

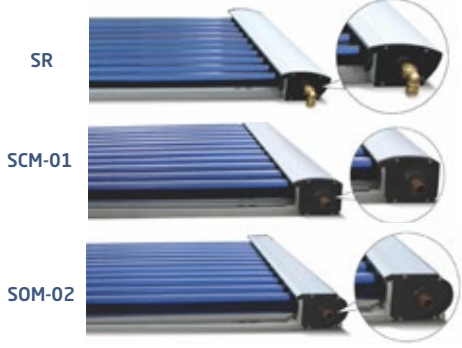


Yogisun special anti-freeze design makes the heat pipe suitable for cold areas and long lifetime service.

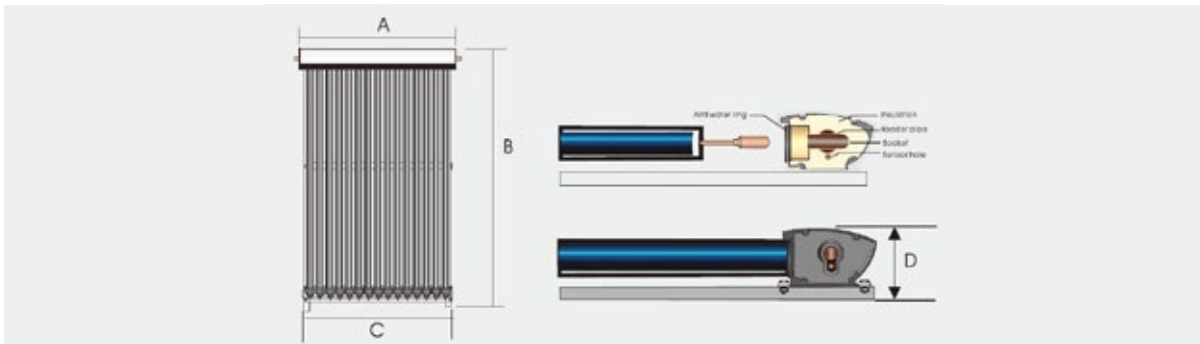
**A** Yogisun  
**B** Other manufacturers



Faster conduction speed is an advantage in Yogisun's heat pipes. In the same condition of testing, Yogisun heat pipes are quicker by 30-50% on start up and yield higher temperatures of up to 5-30%.  
**A** Yogisun  
**B** Other manufacturers



Jomo Kenyatta International Airport  
NAIROBI



Models	Vacuum Tube	Condenser (mm)	Capacity (L/Day/60C)	Effective Collector Area m2	Size (mm)			
					A	B	C	D
SCM 15	58x1800*15Pc	14	120-150	1.95	1295	2010	1230	125
SCM 20	58x1800*20Pc	14	170-200	2.6	1670	2010	1605	125
SCM 30	58x1800*30Pc	14	260-300	3.91	2420	2010	2355	125

## Flat plate collector - SP Series

### Technology Core

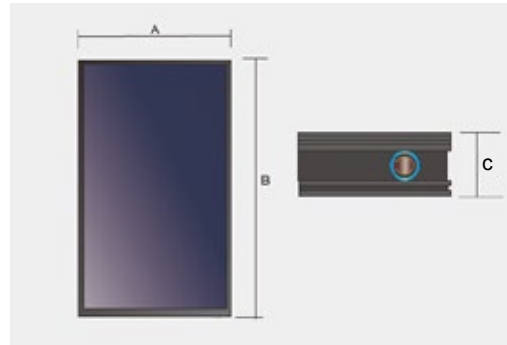


#### Collector

- Cover: Mistlite low iron extra clear tempered glass
- Thickness of cover: 3.2mm
- Diameter of pipe:
- Header pipe:  $\Phi 22\text{mm}$  (thickness: 0.8mm)
- Risers:  $\Phi 10\text{mm}$  (thickness: 0.7mm)
- No. of risers: 7
- Distance between pipes: 110mm
- Liquid heat transfer: Water or Anti-freeze fluid (Water-glycol)

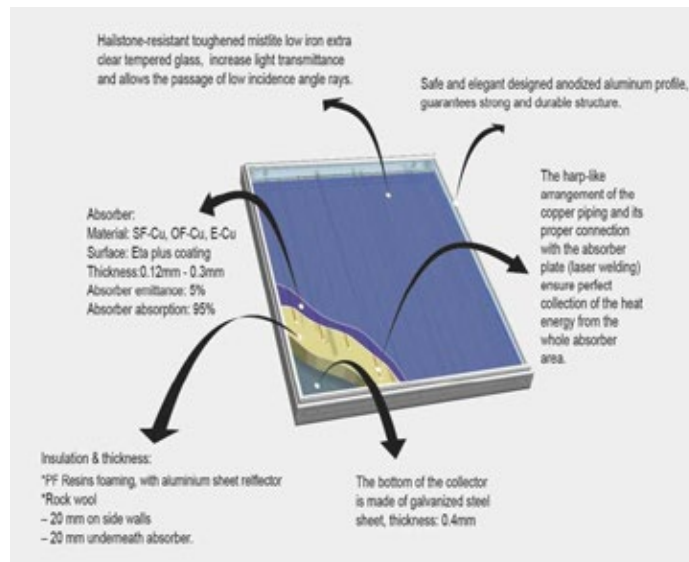
#### Frame

- Frame material: Anodized aluminum profile
- Insulation & thickness:
  - Rock wool, density: 50Kgs/M3
  - 20mm under the absorber & 20mm around walls
- Back plate material: Galvanized steel sheet, thickness: 0.4mm



#### Absorber (Blue tech)

- Surface: Eta plus coating
- Thickness: 0.12mm - 0.4mm
- Absorber emittance:  $5\% \pm 2\%$  (Eta Plus)
- Absorber absorption:  $95\% \pm 2\%$  (Eta Plus)
- Connection between pipes & absorber: Laser welding



Model	Welding	Risers (mm)	Glass Panel Thickness	Connector Size	Capacity (L/Day/60C)	Effective Collector Area m <sup>2</sup>	Size (mm)		
							A	B	C
SP 2.0	Laser	10	3.2mm	22mm	100-130	2	1000	2000	78
SP 1.9	Laser	10	3.2mm	22mm	100-120	1.92	2400	800	78



# STH High Pressure Integrated (indirect) Solar System

## Technology Core

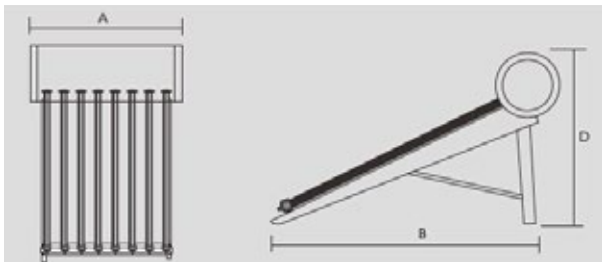


- Outer tank: colorful steel, 0.4mm thick
- Inner Tank: crystal liner 4mm, steel 1.2 mm thick
- Insulation: Polyurethane foam, 50 mm
- Working pressure: 6Bar
- Daily efficiency: ≥55% (≥42% in winter)
- Working temperature: 60°C ~ -35°C
- Vacuum tube specifications: 58mm\*1800mm
- Lifetime of vacuum tube: 15 years



Superior heat pipe - faster startup, works in high pressure, new structure with nylon tube caps make the installation more easy.

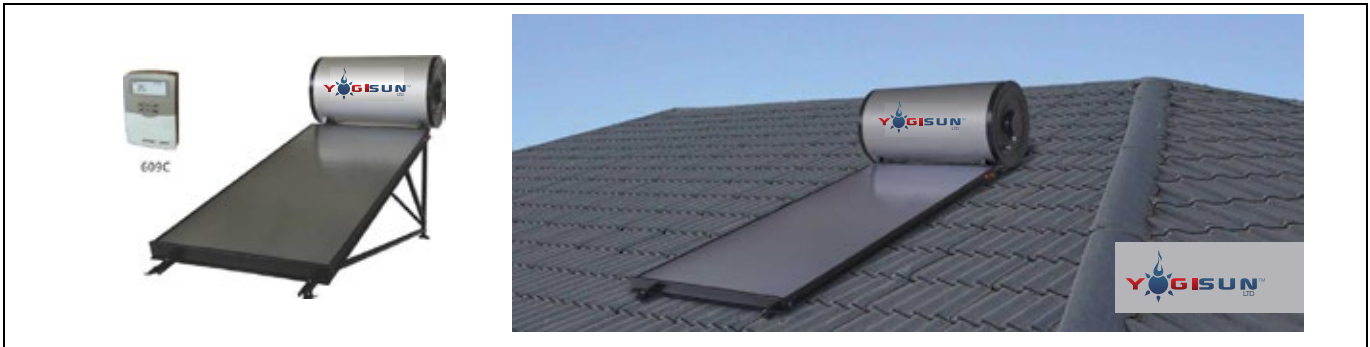
Socket-high erosion resistant 316L stainless special steel, formed by stamp molding.



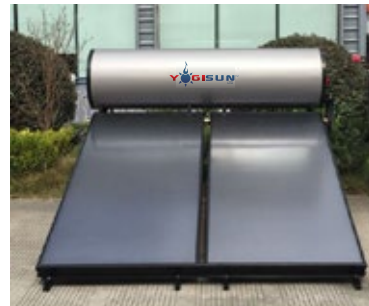
Models	Vacuum Tube	Frame Angle	L/Day/60C	Effective Collector Area m2	Dimensions			
					A	B	C	D
STH-150	58x1800*15pcs	25°	150	1.92	1400	1160	1500	1350
STH-200	58x1800*20pcs	25°	200	2.57	1775	1535	1500	1350
STH-300	58x1800*30pcs	25°	300	3.87	2525	2285	1500	1350

# Flat plate integrated (direct) pressurized solar system -SPH

## Technology Core



- The first of its kind heat Pipe - Flat Plate collector, anti-freeze, scale free and easy installation.
- New structure, no medium liquid needed, low maintenance.
- Overheating protection and longer service life with pressurized tank.
- Slope/flat roof adaptability, can be installed easily in sloped roofs.
- Design installation available for any residential development i.e. high rise apartments, maisonettes and houses.
- Pressurized tank and flat plate can be split within the roof void.



### Unique overheating protection

The new structure can prevent overheating in summer (overheating can damage the tank and shorten the lifetime), while the relative low temperature can ensure the high sunlight absorbing efficiency.



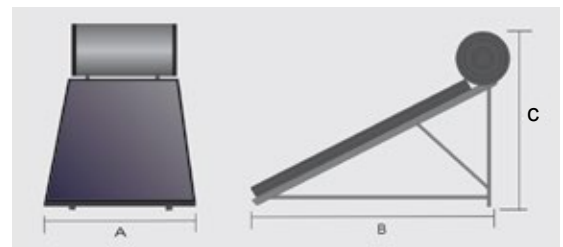
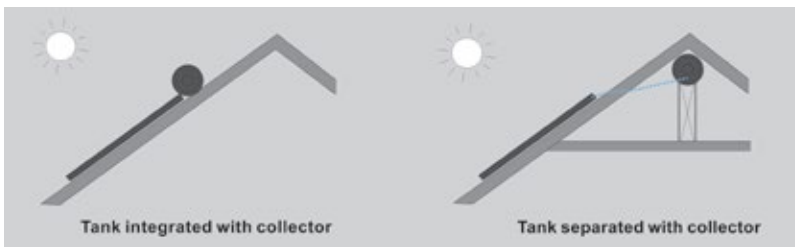
### Installation adopts to most building profiles

Mount easily on sloped roofs and in various locations. It can be installed in various angels and integrates easily with many construction profiles.



### Heat pipe structure - no liquid medium

The tank and collectors can be separated complying with the customer requirements. Circulation of heat can either be natural or forced and the tank can be hidden in building profiles.



Model	Working Principle	Risers (mm)	Frame Angel	Diameter Outer Tank (mm)	Capacity (L/Day/60C)	Size (mm)		
						A	B	C
SP 2.0	Laser	10	25°	550	150	1000	2300	1435
SP 4.0	Laser	10	25°	550	300	2110	2300	1435

# Split Pressurized (indirect) System - SFCY Series

## Technology Core



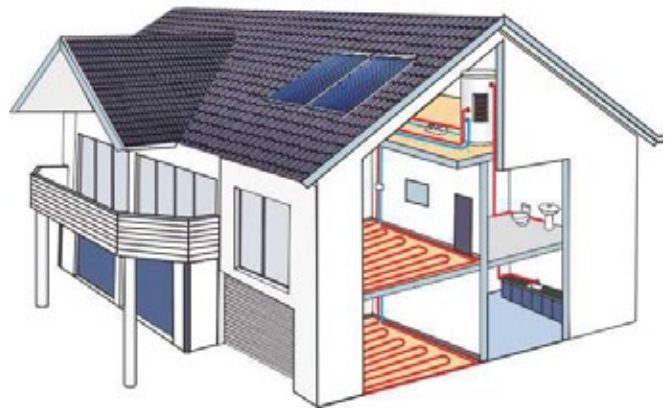
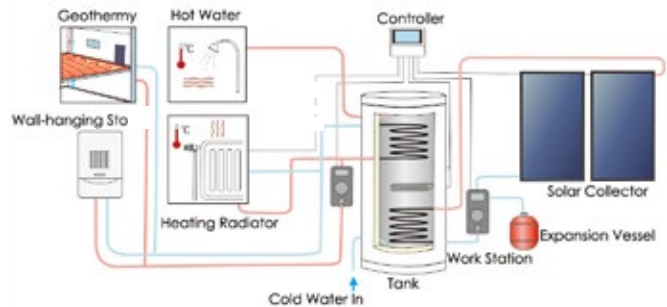
SFCY-01

SFCY-02



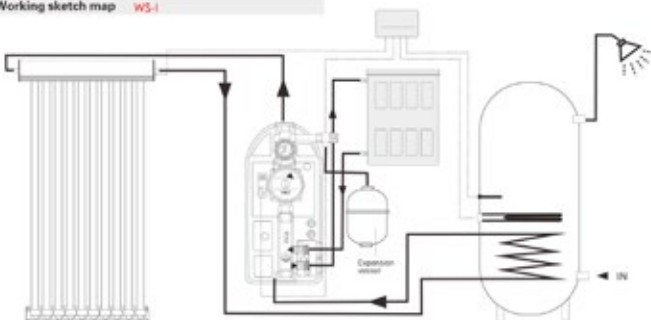
### Split pressurized system - SFCY-01/02

- When the temperature of the heat collector reaches the set value, the controller starts the circulation pump automatically.
- The circulation pump makes heat-conducting liquid circulate automatically.
- The heat-conducting liquid transfers heat to the water by the heat exchanger in the water tank.
- In case the temperature of the collector does not reach the set value, the circulation pump shall shut down automatically.
- In case the temperature of the water tank does not reach T-max, then the auxiliary heating device starts automatically.

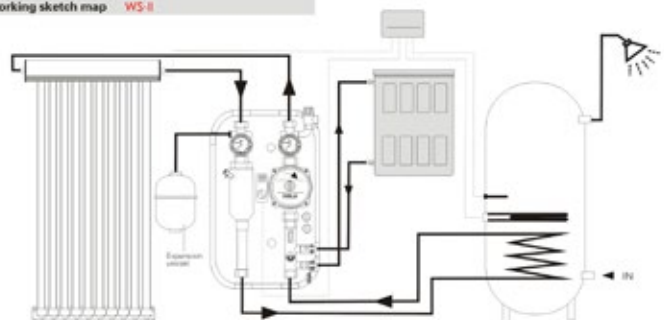


Solar split pressurized technology is an international upto-date application technology of the solar water heater at present. Installation of a split pressurized water heater has become one of the main trends in the European and American markets. Yogisun split solar system - is specially designed for high end finish of villas and homes.

Working sketch map WS-I



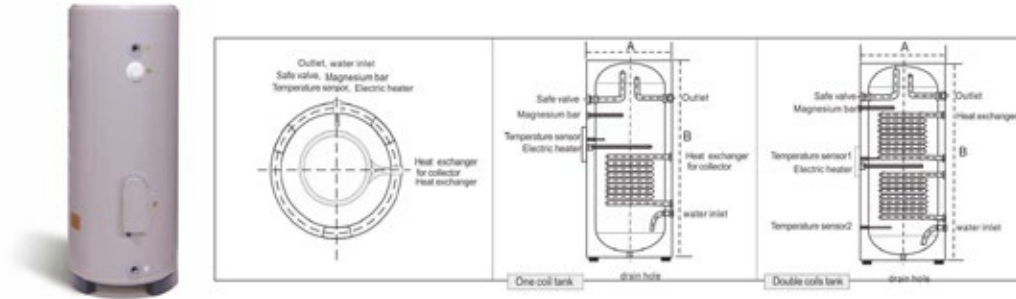
Working sketch map WS-II





### Pressurized tank for split SFCY model (TK-Series)

Pressurized tank is used for the connection of solar collectors. Our tank includes electric immersion heater for backup, magnesium stick, P/T valve, one-direction safety valve.



No.	Model	Inner tank	Inlet Outlet	Double coils	Back UP	Insulation (mm)	tank size (mm)
1	TK-100L	SUS304-2B*1.2mm	3/4"	○	1500W	50	470*1040
2	TK-150L	SUS304-2B*1.2mm	3/4"	○	1500W	50	470*1440
3	TK-200L	SUS304-2B*1.5mm	1"	○	1500W	50	560*1280
4	TK-300L	SUS304-2B*2.0mm	1"	●	1500W	50	560*1860
5	TK-500L	SUS304-2B*2.0mm	1"	●	1500W	50	700*1850
6	TK-700L	SUS304-2B*2.5mm	1"	●	3000W	50	760*2200
7	TK-1000L	SUS304-2B*3.0mm	1", 1.25"	●	3000W	50	1000*2000

\* ○ for one coil  
● for two coils

\*we manufacture custom made tanks according to specification

### Solar hot water working station (WS- II ,WS-I)

This is a combined circulation unit for solar applications. On the right hand side, the pump will supply from the storage tank to the solar collector, and the left hand pipe is the return from the collector to the tank coil.

- No filling pump needed, Using the working station with the container supplied could simplify the installation on filling medium liquid. The circulation pump will allow one man to fill the system.
- Multifunctional ball valve to simplify the system filling
- Install the collector and the cylinder separately
- Preset the flow rate
- Air stop device , manual integrated vent
- Can work conjunction with any controller
- Safety operation, excellent performance, Maintenance free



#### technical parameters

**application range:** Combined self-fill circulation unit for solar thermal applications  
**Max pressure:** 10 bar  
**Max working temperature:** 180°C  
**Max surrounding temperature:** 45°C  
**connection size:** G3/4" female

#### balance valve

**Flow rate control range:** 4 to 16 l/min  
**applicability:** Flow meter is control the flow rate from the rang 4-16 L/ min, the flow meter can display exactly flow rate, Anti-blast glass and brass cover Vertical installation is obligatory

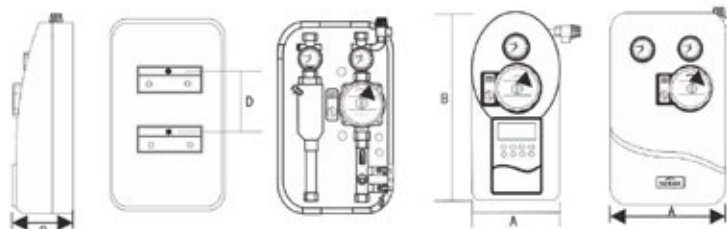
#### Safety Device

**Safety valve:** 6 Bar  
**Air stop device:** G 1/4"  
**Thermometer/pressure gauge:** 0-10Bar / 0-120°C

#### Circulation Pump

**Mode:** WOLU RS-156 RS-256  
**Maximal flow rate:** 2.5T/h  
**Max lift:** 6M  
**Max working pressure:** 10 Bar  
**Working temperature:** -25 °C + 110 °C  
**power supply:** 220V/60Hz or 110V 50Hz

#### Grundfos-UPS Series



No.	Model	Thermometer /pressure gauge	Max Pressure	Flow rate control	Self filling pump	Power supply	Double pipe	Air vent	A*B size (mm)
1	WS-I	1 Pcs	○	range 4 to 16 l/min	●	220V/60Hz	—	—	210*439
2	WS-II	2 Pcs	○		●	110V/50Hz	●	●	285*476

## Expansion tank

An expansion tank or expansion vessel is a small tank used in closed water heating systems and domestic hot water systems to absorb excess water pressure, which can be caused by thermal expansion.

Capacity : 5L,8L,12L,20L,24L

Connector: 1"

Maxpressure : 10 Bar



## Controller



### 868-C8

APPLICATIONS CAPACITY

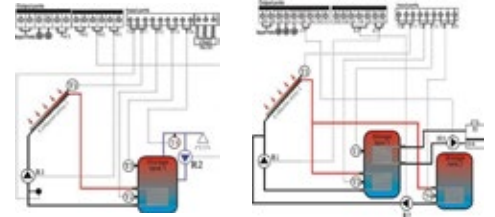
Max.number of collectors:1

Max.number of storage tanks:1

Max.number of relays:4

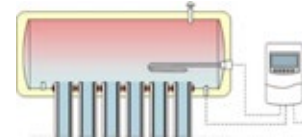
Max.number of sensors:4

Max.number of application system:1



### 609C

- Appearance of controller: see product itself (dimension: 179mm x120mm x43mm)
- Power supply : AC230V ± 10% ● Power consumption : < 3W
- Accuracy of temperature measuring : ± 2°C ● Range of tank temperature measuring : 0 – 100°C
- Suitable power of electrical heater, ≤ 2000W ● Inputs : 1 piece NTC10K, B3950 sensor (≤ 135°C) for tank, (PVC cable ≤ 105°C), ● Outputs : 1 relay, for electrical heating
- Ambient temperature : -10°C~ 50°C. ● Water proof grade : IP40.



## Accessories





# YogiSun Gallery



River View Apartments - Nairobi



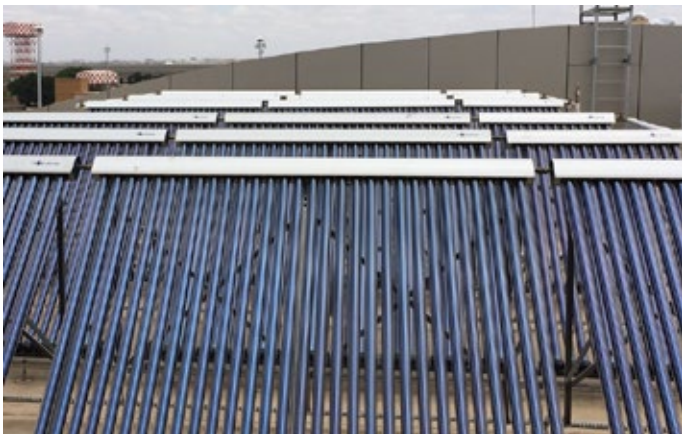
Sea Cliff Apartments - Dar es Salaam



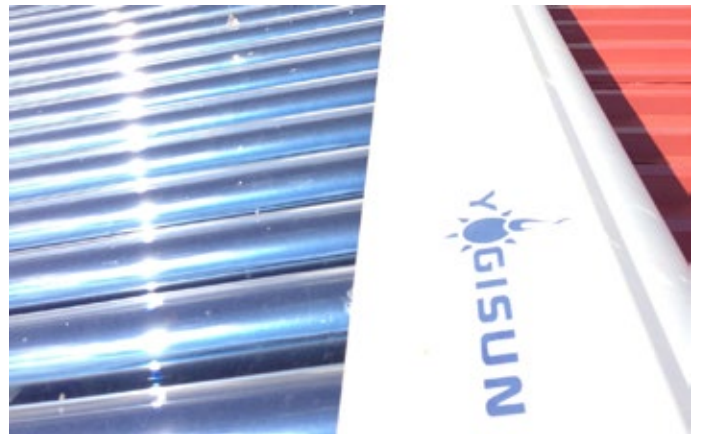
Parliament House - Nairobi



Sea Cliff Village - Dar es Salaam



Jomo Kenyatta International Airport - Nairobi



Parliament House - Nairobi



Chase Wood Park - Nairobi



White Sands - Dar es Salaam



P.O.Box 10992-00400, Nairobi, Kenya.

Email [info@yogisun.net](mailto:info@yogisun.net)

[www.yogisun.net](http://www.yogisun.net)

YogiSun systems adhere to energy production standards established by innovation and quality propelled countries such as Germany and USA. These standards have to be met to ensure that our product has undergone the necessary tests and are reliable. Below are the certifications that give our products the edge over the rest.



- **E and DIN** - Germany and USA certifications establishing standards for quality and reliability of energy systems production.
- **CE** - Certifies health and safety in Europe.
- **SGS** - World leading certification services demonstrating that products, processes, systems or services are compliant with national and international regulations and standards.
- **SP** - Certificate awarded by Swedish technical research institute.
- **SRCC** - Solar rating and Certification Corporation in the USA, rating standards for solar energy equipments nationally.
- **ISE** - Institute for solar energy systems based in Germany having activities based from research to certification of solar products
- **IQNET** - Global certification body for unique, specialist and industry specific assurance solutions.