



# PHOTON ENERGY SYSTEMS LIMITED

An ISO 9001:2000 Company

## PHOTON PHOTONIZER

### Flat Plate Collector Solar Water Heating Systems



#### Flat Plate Collector

Water Heating System



#### MNRE CRISIL SOLAR GRADING SP 1B

- ◆ Solar Water Heating Systems
  - ETC & FPC System
- ◆ Solar Industrial Heating Systems
  - Effluent Evaporation
  - Solar desalination (with German Technology)
  - Boiler Feed Heating
  - Steam Generation
  - Power Generation
- ◆ All India Network
- ◆ Complete Turnkey Solution for all industrial purposes.

- Solar Industrial heating systems
- Complete solar solutions for all purposes
- All India service/Dealer Network

Tel: +91 40 23331337/1338/1339

Toll Free : 1800 4252 786 (SUN)

Web : [www.photonsolar.in](http://www.photonsolar.in)

#### Approvals



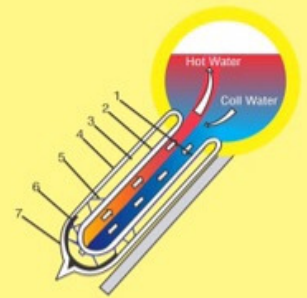
#### MNRE Chanel Partners



Unit 19, Mount View Enclave, Road No: 12,  
Banjara Hills, Hyderabad - 500 034, A.P., INDIA.  
Email : [swhs@photonsolar.in](mailto:swhs@photonsolar.in) | Fax: +91 40 23331340,

## Technical Specifications:

Available sizes	100 LPD	200 LPD	500 PD
Output Water Temperature	65 ± 5*c		
Number of tubes	10	20	50
Leangth of Tubes	1800mm		
Tube Material	Special Grade Borosilicate Glass		
Tube Outer Diameter	58mm		
Inner Tube Diameter	47 mm with selective absorption 3 layer coating		
System Capacity	100 Liters	200 Liters	500 Liters
Inner Tank Material	Ms with anti rust corrosion coating inside Ss 304 Grade for soft water Ss 316 Grade for Hard Water		
Tank Insulation	Hi - Density PUF – Poly Urethane Foam		
Tank Capacity	Stainless Steel / GI Powder Coated Ms / Ss Glossy outer cladding		



**Also  
Suitable for  
Hard Water**

1. Inner Glass Tube
2. Selective Absorbing Coating
3. Vacuum Gap
4. Cover Glass Tube
5. Supporting Component
6. Gas Absorbent
7. Absorbing Film

Due to continuous developments and product improvement the company reserves the right to change / after specifications.

## Crown vs CONVENTIONAL FLAT PLATE SOLAR HEATERS – COMPARISON OF BENEFITS

Features	Conventional Flat Plate Solar Heaters	Miracle Solar Geyser
Sun Tracking	No sun possible due to flat surface collector maximum heat absorption only at 12 Noon.	Circular glass tubes allows auto sun tracking and ensures maximum heat absorption (<93%) Throughout the day.
Effect of External weather and ambient temperature	Design dependent on ambient temperature results in low efficiency during cold weather	Design independent of ambient temperature ideal even during winters
Effect of hard water	System efficiency drops drastically as hard water causes scaling and chokes the narrow metallic absorber pipes (12mm). Leaks could also develop. Frequent expensive cleaning essential. Tank cleaning manually impossible due to completely sealed design.	Non metallic glass tubes of much large diameter(37mm)prevents choking and ensures maximum efficiency and life of the system without frequent cleaning and maintenance. Glass tubes and tanks can be cleaned manually.
Start up and heating time	Delayed heating process from cold to hot. Takes more than 5 hours	Low stare up time from cold to hot in just 2 to 3 hours.
Number of tubes for 100 LPD system	10 tubes	15 evaluates glass tubes
Installation space requirement (100LPD)	Base length of 10 feet can be mounted only on roof. Cannot be used multi storeyed apartments to heat loss in lengthy pipes from roof.	Balcony type cantilever mounting possible, ideal for multi storeyed apartments reducing hot water piping.
Relative position of cold water tank	Cold- water tank must be mounted at a height of about 7 to 8 feet from the base of the system.	Cold water tank could be mounted at a height of only 4 feet from the base of the system.

## PHOTON ENERGY SYSTEMS LIMITED

Regd. Office : Plot No. 775-K, Road No. 45, Jubilee Hills, Hyderabad - 33.  
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Tel : +91 40 23331337/1338/1339  
 Toll Free : 1800 4252 786 (SUN)  
 Web : www.photonsolar.in

Authorised Business Associates:

## Evacuated Tube Solar

Water Heating System



## Flat Plate Collector

Water Heating System



- ◆ Specially designed for the All condition.
- ◆ Highly Economical – Energy Saver.
- ◆ Good Thermal Efficient.
- ◆ Best Vacuum insulated Glass Tube.
- ◆ Special Grade Borosilicate Glass Tube.
- ◆ Specially Black Coated Three Layered glass Tube.
- ◆ MNRE Approved.
- ◆ Occupy less space compare to the Flat Plate System.
- ◆ Installation is possible in hard water area.
- ◆ Hi-Density Puff Insulated SS tank.
- ◆ Screw Less fitting SS Tank.
- ◆ Electrical backup provided for the non sunny Days.
- ◆ Nil Maintenance.
- ◆ Long life for 20 Years.
- ◆ Availability in Various capacities.
- ◆ Auto sun tracking due to the round surface.
- ◆ Start heating quickly.

- ◆ Sturdy and durable equipment.
- ◆ Long Lasting.
- ◆ Maximum Heat absorbing and Retention.
- ◆ Backup electric heater for non sunny days.
- ◆ Hi-Density Puff insulated SS tank for durable and efficiency.
- ◆ Pressurized, and Heat exchange system.
- ◆ BIS approved cu-Cu collector.
- ◆ Reliable Affordable Versatile.
- ◆ Sacrificial anode for tank protection.
- ◆ Variety of systems as per the need of the customer.
- ◆ MNRE Approved.
- ◆ Screw Less fitting SS Tank.
- ◆ Black Chrome Selective coated collector for more efficiency.
- ◆ Large number of installations.
- ◆ Effective Industrial application.
- ◆ Easy to install.
- ◆ Bigger System with force flow circulations possible.
- ◆ Collector are with better efficiency.

### **MNRE CRISIL SOLAR GRADING SP 1B**

**Usage Application:** Domestic, Hostels, Hospitals, Hotels, Restaurant, Canteens, Guest Houses, Boiler Feed Water Installations, Effluent Evaporation, process Industries and Resorts.

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