



SOLAR HITECH

SOLAR WATER HEATER

*Delivering High Quality
Renewable Energy Solutions
since 1999.*





ABOUT US

Since 1999, Solar Hitech Solutions has established a legacy of being pioneers in manufacturing and selling reliable and efficient solar water heating solutions. The humble beginnings of our firm go back to 1999 when the founder and MD, Mr. R. S. Sethuraman got permission to manufacture solar water heaters in India.

In April 2000, the first solar water heater was manufactured by us and since then, we have been designing, manufacturing and testing high quality solar heating solutions from our 12500 sq. ft. state of the art manufacturing facility in Bangalore.

The first company to introduce **Evacuated Tube Collector (ETC) technology** in India, Solar Hitech was also the first firm to demonstrate the efficiency of the technology and convince the Ministry of Renewable Energy (MNRE) to promote this form of solar heating. Today, we continue to innovate and offer a wide range of solutions catering to residential, commercial and industrial clients.

WHY CHOOSE US

ISO 9001:2015 certified



Over 22+ Years of pioneering energy & Engineering solutions.



Engineering, Design & Service support Team



Extensive network of partners across India



12500 sq. feet manufacturing facility

WHY INVEST IN SOLAR WATER HEATERS?

There are several short-term and long-term benefits to using solar heating systems:



COST EFFECTIVE

Solar heating can save you upto 80% annually on electricity bills for water heating. In the face of rising electricity costs, solar water heating systems are the future.



RELIABLE & INDEPENDENT

With a solar water heating system, you'll have hot water even during electricity power cuts or load shedding.



ENVIRONMENT FRIENDLY

Solar water heating is clean energy which reduces your carbon footprint



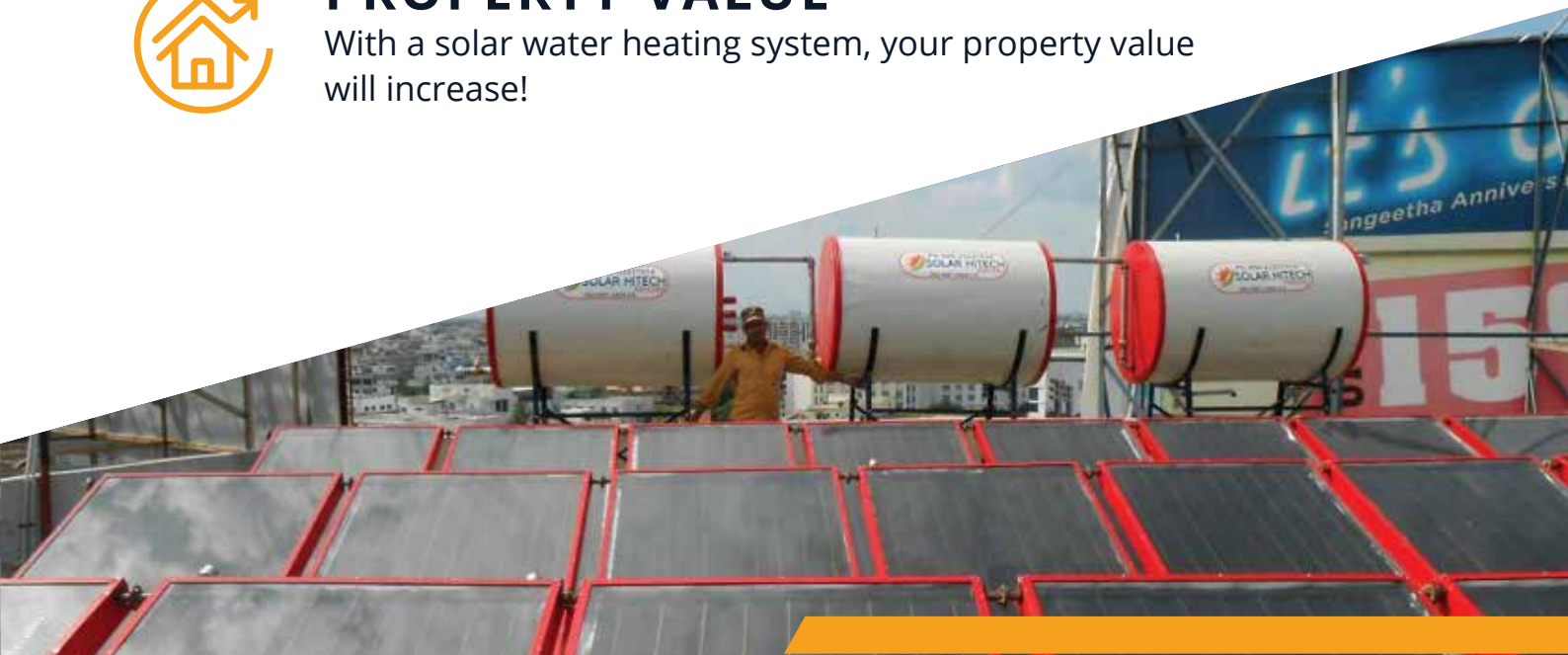
LONG LIFE

In areas with moderate to good quality water, solar water heaters can last upto 15 years.



PROPERTY VALUE

With a solar water heating system, your property value will increase!





PRODUCT RANGE BY TECHNOLOGY

Solar Hitech offers a wide product range, catering to multiple customer segments, but built on two primary technologies:

1. **Evacuated Tube Collector (ETC) Technology**
2. **Flat Plate Collector (FPC) Technology**

EVACUATED TUBE COLLECTOR (ETC) TECHNOLOGY

Solar Hitech Solutions has been a leader in solutions based on Evacuated Tube Collector (ETC) technology. Some of the benefits of ETC technology include:

- **Efficient:** 94% sun tracking from sunrise to sunset and no heat loss in cold weather with vacuum insulation
- **Reliable:** No scaling or corrosion due to borosilicate glass
- **Easy Maintenance:** Easy on-site cleaning of glass and tank system
- **Cheap:** Technology of the future and 30% cheaper than other technologies

OUR ETC PRODUCTS

Our ETC systems consist of tubes with borosilicate glass conforming to the **ISO 3585** specification. The tube and system specifications are as follows:

- Outer Tube Diameter : 58 mm +/- 0.7 mm
- Inner Tube Diameter : 47 mm +/- 0.7 mm
- Tube length : 1800 mm and 2100mm
- Absorber coating : Outer side of inner tube coated with three target Cu/SS/AlN selective coating by magnetron sputtering vacuum slashing process
- Absorptance > 93%, Emittance < 6 % (@ 85° C)
- Thickness can be customized to customer requirements
- TIG welded/Seam welded/CO2 welded
- Special grade directly molded **PUF 50mm** insulation and **MS powder coated support structures**
- Optional 2kW/3kW/5kW backup heater if needed

NON-PRESSURIZED ETC SYSTEMS

Our line of non-pressurized systems is ideal for residential accommodations such as individual houses and multi storied flats and commercial holdings without pressurized water needs and requiring temperatures upto 60 degrees and small/medium sized industries requiring high temperature water upto 80-90 degrees.

Our non-pressurized line is available in two varieties:

- **Radian** : Outer tank cladding PPGL colour coated with 58x1800mm Tubes
- **Radian+** : Outer tank SS201 stainless steel with 58x1800mm Tubes
- **Arc** : Outer tank cladding PPGL colour coated with 58x2100mm Tubes
- **Arc+** : Outer tank SS201 stainless steel with 58x2100mm Tubes

PRESSURIZED ETC SYSTEMS

Our line of pressurized systems are ideal for individual villas, bungalows and multi storied flats, hotels, hospitals and commercial establishments as well as small/medium sized industries with pressurized heating needs.

Unique in the industry, Solar Hitech Solutions ETC Pressurized systems come with a manifold in tank system that is 30% cheaper than conventional pressurized systems and can withstand pressures of upto 8 bar, the highest in the industry at these price points.

Our pressurized line is available in two varieties:

- **Splash Radian**: Outer tank cladding PPGL colour coated with 58x1800mm tubes
- **Splash Radian+** : Outer tank SS201 with 58x1800mm Tubes
- **Splash Arc**: Outer tank cladding PPGL colour coated with 58x2100mm tubes
- **Splash Arc+** : Outer tank SS201 with 58x2100mm Tubes

All ETC systems are available in four inner tank variants –SS304, MS, Galvanized Iron and Glass Lined.

FLAT PLATE COLLECTOR (FPC) TECHNOLOGY

Over the years, Solar Hitech has also established a strong presence as a manufacturer of Flat Plate Collector (FPC) systems. Our BIS Approved FPC systems are used across the country for residential, commercial and industrial applications.

- **Noon-time tracking:** Peak sun tracking at noon-time
- **Strong:** Toughened to withstand high thermal stress and low level impacts
- **Long Lasting:** Lasts longer
- **BIS Approved:** Our Flat Plate collectors are BIS approved

OUR FPC PRODUCTS

Our FPC systems consist of collectors with efficient absorbers that ensure maximum heat transfer. The tank and collector specifications are as follows:

- Absorber made of electro grade copper or aluminium with selective black chrome coating
- Raiser: Copper tube Diameter: 12.5 mm +/- 0.5 mm, 0.56 mm thick
- Header: Copper tube Diameter: 25 mm +/- 0.5 mm, 0.71 mm thick
- High quality brazing for raiser/header bonding & ultrasonic welding for fin / raiser tubes
- 4 mm thick toughened glass glazing
- Absorptance > 96%, Emittance < 2 %
- 63 mm diameter brass flanges for absorber connections
- Special grade directly molded **PUF 50mm insulation** and **MS powder coated support structures**
- EDSN Hose pipes, pressure hoses and fittings for collector to tank connections
- Optional backup heater if needed
- TIG welded/Seam welded/CO2 welded



NON-PRESSURIZED FPC SYSTEMS

Our line of non-pressurized FPC systems can be used in residential and commercial installations where heating requirements are not stringent, but rugged atmospheric conditions need long lasting systems. The systems work well to fulfill domestic water heating, hospitals, hotels and textile, chemical plants, brewing and dairy industry requirements.

Our non-pressurized FPC line is available in two varieties:

- **Verda** : Outer tank cladding PPGI colour coated
- **Verda+** : Outer tank SS201 stainless steel

PRESSURIZED FPC SYSTEMS

Our line of pressurized FPC systems can be used in pressurized water heating for Jacuzzi/showers, commercial and industrial establishments. All our pressurized systems are built with a unique technology which can withstand upto 5 Bar working pressures and can be customized upon request.

Our pressurized line is available in two varieties:

- **Turbo**: Outer tank cladding PPGI colour coated
- **Turbo+** : Outer tank SS201 stainless steel

All FPC systems are available in four inner tank variants –SS304, MS, Galvanized Iron and Glass Lined.



PRODUCT RANGE BY INNER TANK MATERIAL

Due to the wide disparity in water quality across the country, Solar Hitech Solutions has, over the years, built expertise in manufacturing tanks with different inner tank materials. The SHS product range comes in the following inner tank material variants:

- 1. Chrome Range :** Inner SS304 Tanks suitable for sites with soft water and low to moderate TDS levels
- 2. Albus Range :** Inner Galvanized Iron Tanks suitable for sites with bore water having moderate hardness and TDS levels
- 3. Minerva Range :** Inner Glass Lined Tanks suitable for sites with hard water and high TDS levels
- 4. Mild Steel Range :** Inner MS with Epoxy tanks suitable for sites with bore water having moderate hardness and TDS levels, primarily used for Pressurized systems



CHROME – INNER SS304 STAINLESS STEEL TANKS

Solar Hitech Solutions' Chrome Range of Inner SS304 tanks are suitable for houses, apartment complexes, hotels, hospitals and industries with soft water and low to moderate TDS levels. These tanks are well suited for sites which have softeners and water conditioners installed as the Inner SS304 material prevents the tank from corroding prematurely.

Key Features –

- **Soft Water Resistance** : Ideal for Soft Water Conditions
- **Low Carbon Steel** : Made with Low Carbon Steel which ensures long life
- **Leakage Resistant** : Fewer welded parts ensure strong leakage resistance
- **TDS PPM Range** : 0 to 200ppm
- **Warranty** : 5 Years for Non Pressurised Tanks and 2 Years for Pressurised Tanks



ALBUS – INNER GALVANIZED IRON (GI) TANKS

Solar Hitech Solutions' Albus Range of Inner GI tanks are suitable for houses, apartment complexes, hotels, hospitals and industries having moderate hardness and TDS levels. These tanks are well suited for sites which are supplied bore, river or municipal water as the Inner Galvanized Iron material prevents the tank from corroding prematurely.

Key Features –

- **Long Life :** Protective Zinc coating ensures a long life for the tank
- **Salt Water Protection Coating :** GI is coated with a highly resistant salt water protection coating
- **Cost Effective :** Low cost model for use in most sites with bore, river or municipal water
- **TDS PPM Range :** 150 to 400ppm
- **Warranty :** 5 Years for Non Pressurised Tanks and 2 Years for Pressurised Tanks



MINERVA – INNER ENAMEL GLASS LINED TANKS

Solar Hitech Solutions' Minerva Range of Inner Enamel Glass Lined tanks are suitable for houses, apartment complexes, hotels, hospitals and industries with hard water and high TDS levels. These tanks are well suited for sites with highly corrosive hard water as the Glass Lining prevents the tank from corroding prematurely.

Key Features –

- **Long Life** : Protective Enamel Glass Lined coating ensures a long life for the tank and no scaling
- **Chemical Resistant** : Highly resistant to HCL, H₂SO₄, solvents, sea water and other chemicals
- **Thermal Resistant** : High temperature and thermal shock resistant upto 150 degrees
- **Odor Free** : Odour free application
- **Glassy Surface Finish** • **Economical** • **Food grade**
- **TDS PPM Range** : Upto 1000ppm
- **Warranty** : 10 Years for Non Pressurised Tanks and 2 Years for Pressurised Tanks



MILD STEEL – INNER MILD STEEL(MS) WITH EPOXY TANKS

Solar Hitech Solutions' Mild Steel range of tanks are suitable for houses, apartment complexes, hotels, hospitals and industries having moderate hardness and TDS levels and are primarily used for Pressurized applications. These tanks are well suited for withstanding high pressures at moderate TDS levels for many years, on account of a combination of low carbon steel and salt water protective epoxy coating.

Solar Hitech Solutions used MS with Epoxy tanks in manufacturing its high end Splash and Turbo range of pressurized systems.

Key Features –

- **Long Life** : Protective Epoxy coating ensures a long life for the tank
- **Cost Effective** : Low cost model for use in most sites with bore, river or municipal water
- **TDS PPM Range** : 150 to 400ppm
- **Warranty** : 2 Years for Pressurised Tanks



PRODUCT RANGE BY CUSTOMER SEGMENT

Solar Hitech Solutions caters primarily to three customer segments:

- 1. Residential :** Hot water for domestic users living in villas, bungalows, row houses and apartments
- 2. Commercial :** Centralised hot water applications for Hotels, Hospitals, Builders, Educational Institutions and other Commercial establishments.
- 3. Industrial :** High Temperature process heating applications for automobile, pharmaceutical, textile, dairy, rice mill and leather industries.

RESIDENTIAL SEGMENT

Solar Hitech Solutions caters to the residential and domestic segment through its wide network of 200+ dealers and distributors spread across 10 states. With an installed LPD base of more 70 Lakh Litres spread across over 20,000+ customers across the country, Solar Hitech Solutions has established itself as the one of the leading solar water heater manufacturers in the country.

SHS also has a strong after sales service and warranty support with service typically offered within 12-24 hours of the request and replacement requests closed within 7 days, making it the company with one of the fastest response times in the industry.

We cater to the residential segment primarily through our line of Radian, Arc, Splash, Verda and Turbo lines of products.



ETC SYSTEMS - TECHNICAL SPECIFICATIONS & BUYING GUIDE

Radian Range – Radian, Radian+, Splash Radian, Splash Radian+ with Inner SS304, Galvanized Iron and Glass Lined Tank variants.

Capacity	Suitable for (No. of users)	Number of evacuated tubes	Size of tubes	Tank Insulation	Dimensions	Stands	Inner Tank Material available
100LPD	2 - 3	10	58 x 1800mm	PUF	2m x 1m	MS Powder Coated	SS304 / GI/ Glass Lined
150LPD	3 - 4	15	58 x 1800mm	PUF	2m x 1.4m	MS Powder Coated	SS304 / GI/ Glass Lined
200LPD	4 - 5	20	58 x 1800mm	PUF	2m x 1.8m	MS Powder Coated	SS304 / GI/ Glass Lined
250LPD	5 - 6	25	58 x 1800mm	PUF	2m x 2.5m	MS Powder Coated	SS304 / GI/ Glass Lined
300LPD	6 - 7	28	58 x 1800mm	PUF	2m x 3m	MS Powder Coated	SS304 / GI/ Glass Lined
500LPD	12 - 13	44	58 x 1800mm	PUF	2m x 4m	MS Powder Coated	SS304 / GI/ Glass Lined

Arc Range – Arc, Arc+, Splash Arc, Splash Arc+ with Inner SS304, Galvanized Iron and Glass Lined Tank variants

Capacity	Suitable for (No. of users)	Number of evacuated tubes	Size of tubes	Tank Insulation	Dimensions	Stands	Inner Tank Material available
100LPD	1 - 2	8	58 x 2100mm	PUF	2.2m x 1m	MS Powder Coated	SS304 / GI/ Glass Lined
150LPD	2 - 3	12	58 x 2100mm	PUF	2.2m x 1.2m	MS Powder Coated	SS304 / GI/ Glass Lined
200LPD	3 - 4	16	58 x 2100mm	PUF	2m x 1.6m	MS Powder Coated	SS304 / GI/ Glass Lined
250LPD	4 - 5	20	58 x 2100mm	PUF	2m x 2.4m	MS Powder Coated	SS304 / GI/ Glass Lined
300LPD	5 - 6	24	58 x 2100mm	PUF	2m x 2.8	MS Powder Coated	SS304 / GI/ Glass Lined
500LPD	10 - 12	32	58 x 2100mm	PUF	2m x 3.2m	MS Powder Coated	SS304 / GI/ Glass Lined



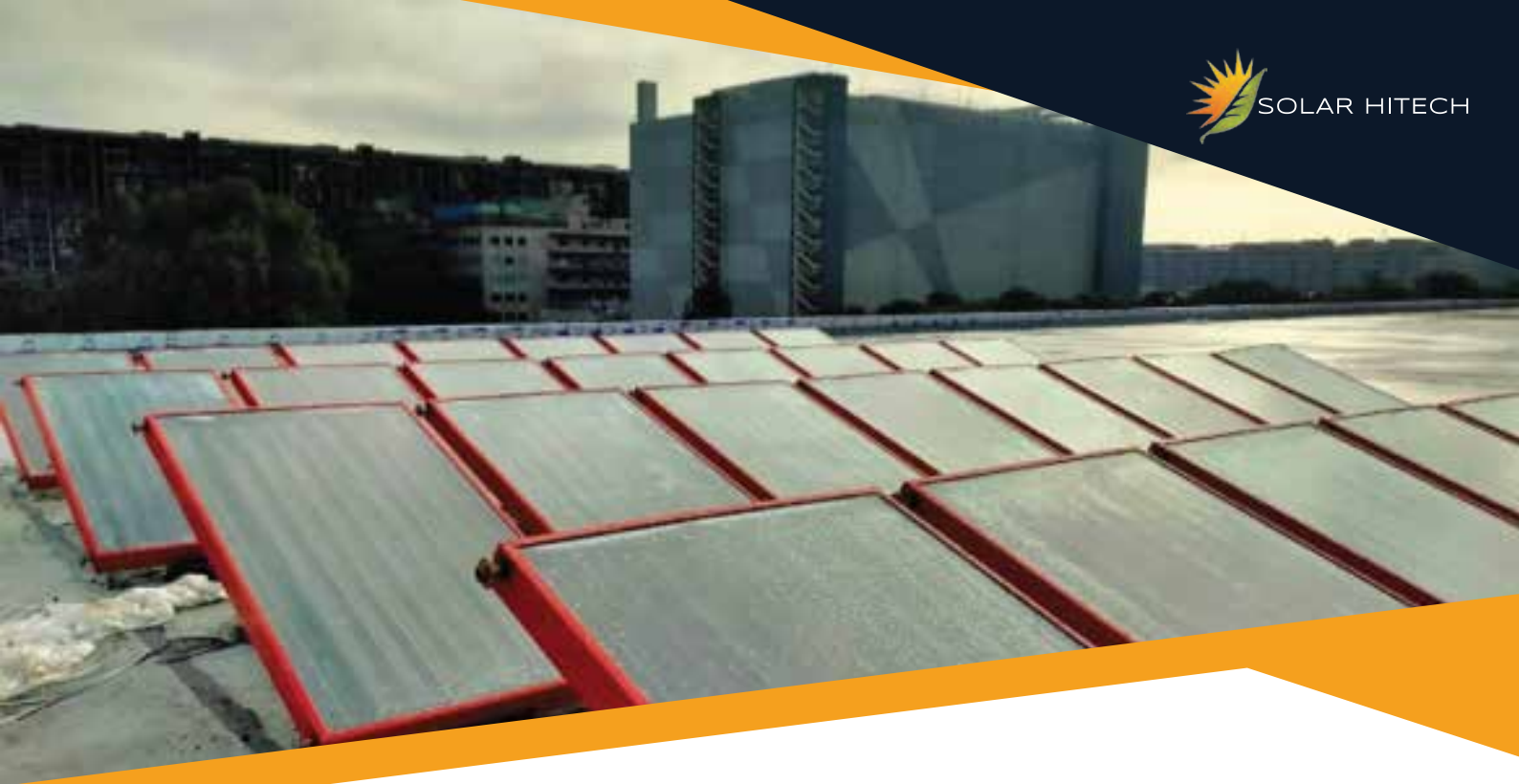
FPC SYSTEMS - TECHNICAL SPECIFICATIONS & BUYING GUIDE

Verda Non Pressurised Range – Verda, Verda + **with Inner SS304, MS with Epoxy and Glass Lined Tank variants**

Capacity	Suitable for (No. of users)	Number of collectors	Collector Absorber Materials	Tank Insulation	Dimensions	Stands	Inner Tank Material available
100LPD	2 - 3	1	Copper/Aluminium	PUF	2m x 1.2m	MS Powder Coated	SS304 / GI/ Glass Lined
200LPD	4 - 5	2	Copper/Aluminium	PUF	2m x 2.1m	MS Powder Coated	SS304 / GI/ Glass Lined
300LPD	6 - 7	3	Copper/Aluminium	PUF	2m x 3.2m	MS Powder Coated	SS304 / GI/ Glass Lined
500LPD	12 - 13	4	Copper/Aluminium	PUF	2m x 4.4m	MS Powder Coated	SS304 / GI/ Glass Lined

Turbo Pressurised Range – Turbo, Turbo + **with Inner SS304, MS with Epoxy and Glass Lined Tank variants**

Capacity	Suitable for (No. of users)	Number of collectors	Collector Absorber Materials	Operating Pressure	Tank Insulation	Dimensions	Stands	Inner Tank Material available
100LPD	2 - 3	1	Copper/Aluminium	5 bar	PUF	2m x 1.2m	MS Powder Coated	SS304 / GI/ Glass Lined
200LPD	4 - 5	2	Copper/Aluminium	5 bar	PUF	2m x 2.1m	MS Powder Coated	SS304 / GI/ Glass Lined
300LPD	6 - 7	3	Copper/Aluminium	5 bar	PUF	2m x 3.2m	MS Powder Coated	SS304 / GI/ Glass Lined
500LPD	12 - 13	4	Copper/Aluminium	5 bar	PUF	2m x 4.4m	MS Powder Coated	SS304 / GI/ Glass Lined



COMMERCIAL SEGMENT

Besides regular domestic Evacuated Tube Collector (ETC) and Flat Plate Collector (FPC) systems, Solar Hitech brings decades of experience in manufacturing customized, large, commercial solar water heater solutions for enterprises such as builders, hotels, hospitals, educational institutions and offices.

Large commercial solar water heater solutions are ideal for requirements, where a large number of users make use of a shared heating solution. In the case of shared domestic/commercial spaces, the design and installation of such solutions, often combined with Heat Pumps, goes a long way in delivering benefits of solar energy to communities.

ETC COMMERCIAL SOLAR THERMAL SOLUTIONS WITH MANIFOLDS

Our large commercial ETC systems come in capacity variants starting from 500 LPD to 5,000 LPD single tank models with larger tank capacities available as per customer requirements.

Each tank comes with ETC tube based manifolds that provide the heating required for large number of users. The tubes within the manifold can be arranged in various configurations, depending on the heating and temperature requirements.

Systems are available in the following capacities – 500 LPD, 1000 LPD, 1500 LPD, 2000 LPD, 2500 LPD, 3000 LPD, 4000 LPD, 5000 LPD and above.

Manifolds come in 500LPD and 1000LPD vertical and butterfly configurations in 58x1800mm and 58x2100 variants.



FPC COMMERCIAL SOLAR THERMAL SOLUTIONS WITH SOLAR COLLECTORS

Our large commercial FPC systems come in capacity variants starting from 500 LPD to 5,000 LPD single tank models with larger tank capacities available as per customer requirements.

Flat Plate Collectors will be available as per requirements to go with tank capacity and as per pressurized or non-pressurized requirements.

Systems are available in the following capacities – 500 LPD, 1000 LPD, 1500 LPD, 2000 LPD, 2500 LPD, 3000 LPD, 4000 LPD, 5000 LPD and above

The specifications of our collectors are as follows:

- Collectors can be sized appropriately as per the water heating capacity requirements.
- Typically, a collector of 2sq.m area is sufficient to heat 125LPD of water. Based on this thumb rule, collectors are sized and scaled as per the requirements of the project
- Collectors are available in one of two varieties: Copper & Aluminium
- Collectors have toughened glass covering them and their casings are powder coated.



LARGE SYSTEM TANK SPECIFICATIONS -

Description	Unit	500 LPD	1000 LPD	1500 LPD	2000 LPD	2500 LPD	3000 LPD	4000 LPD	5000 LPD
Volume	L	500	1000	1500	2000	2500	3000	4000	5000
Outer Tank Diameter	mm	800	1100	1400	1550	1550	1550	1550	1550
Total height	mm	1510	1700	1640	2080	1940	2260	3310	3560
Electric heater capacity	kW	2	2	2	3	4	5	5	5
Electric Heater	nos	1	3	3	3	3	3	4	6
Electrical heating	KW	2	6	6	9	12	15	20	30
Pipe connection sizes	inch	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Thermowell/ Sensor connections	inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
No of Collectors	nos	4	8	12	16	20	24	32	40
Collector Area	sqm	8.36	16.72	25.08	33.44	41.8	50.16	66.88	83.6
Collector weight	Kgs	120	240	360	480	600	720	960	1200
Insulation type/Thickness		PU/50	PU/75	PU/75	RW/75	RW/75	RW/75	RW/75	RW/75



INDUSTRIAL SEGMENT

For many years, industries across the world have depended on non-renewable sources to fulfill their heating needs. While this has worked when there was ample supply of oil and other non-renewable sources of energy, the rising cost and decreasing supply of these fuels has forced industries to look for alternate, non-limited sources of energy to fulfill these needs. This is where industrial solar water heater solutions come in.

Industrial Solar Water Heater solutions, especially those customized for each industry, can fulfill this need over extended periods of time. Being a limitless source of energy, solar can fulfill the heating needs for industrial sectors, while delivering significant savings on operational costs annually.

Solar Hitech has been a forerunner in the design, manufacture and integration of industrial solar water heater solutions. Our solutions can be customized for a wide variety of industrial sectors such as the automobile, dairy, paper, soap and detergents, textile, rubber/tire, distilleries/breweries, pharmaceutical and other industries.



BENEFITS OF INDUSTRIAL SOLAR THERMAL SOLUTIONS -



Turnkey solutions with customized solution design and engineering



Solutions for verticals such as Dairy, Automobile, Sugar, Paper, Textiles, Pharmaceutical, Brewing and more.



Address requirements of heating upto 90 degree Celsius



Asset Light Financing as per client needs:

- 3rd party Leasing/Financing
- Build Operate Transfer (BTO)
- Pay as you use
- Energy Services Company (ESCO) driven by accrued energy savings

SALES SUPPORT & WARRANTY

Solar Hitech Solutions has a presence in 10 states, covering over 200 districts across the country.

Our extensive dealer and service network ensures that our customers get quick turnarounds on their service requests, usually within 12-24 hours of placing their request.

For any solar water heater service or solar power products service, please visit our website and fill up the service request form or call us from 9AM to 6PM from Monday to Saturday, on our helpline numbers. We will respond to you within 6 to 8 working hours.



Solar Hitech offers Annual Maintenance Contracts (AMC) and Comprehensive Maintenance Contracts (CMC) for large solar power and solar water heater commercial and industrial installations. Place an enquiry on our website or call us for more details.

SYSTEM WARRANTY GUIDE*

Technology	Model**	Inner SS304 Tank Only	Inner GI/MS Tank Only	Inner Glass Lined Only	Frames	Collectors	Tubes, Rubber Parts, Accessories, etc.
ETC Domestic Models	Radian, Arc	5 Years	5 Years	10 Years	1 Year	1 Year	Not Applicable
	Splash	2 Years	2 Years	2 Years	1 Year	1 Year	Not Applicable
FPC Domestic Models	Verda	5 years	5 Years	10 Years	1 Year	1 Year	Not Applicable
	Turbo	2 Years	2 Years	2 Years	1 Year	1 Year	Not Applicable
Large Tanks	1000LPD – 5000LPD	2 Years	2 Years	2 Years	1 Year	1 Year	Not Applicable

* - Table indicates only warranty period for various solar water heater parts. Please refer to the warranty card for detailed warranty conditions and exclusions.

** - Only basic model names are indicated. The warranty coverage is the same for all variants. For eg: the warranty is the same for Radian and Radian+.



SOLAR HITECH

GET IN TOUCH

Solar Hitech Solutions



Sy No. 127/4, Machohalli Industrial Estate,
Magadi Road, Bangalore - 91, Karnataka.



corporate@solarhitechsolutions.in
varun@solarhitechsolutions.in



+91-9545712120
+91-9164870001



www.solarhitechsolutions.in