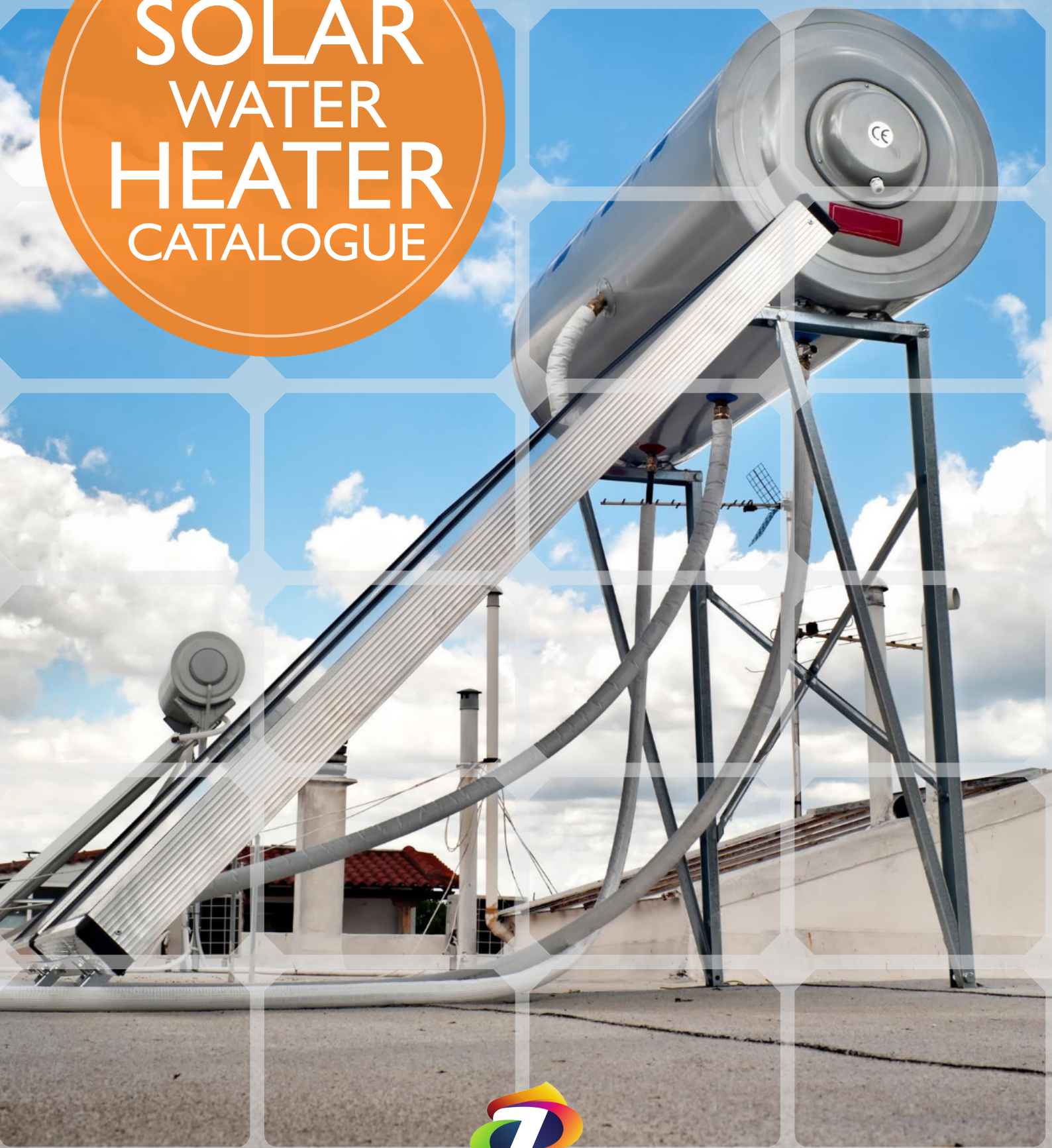


SOLAR WATER HEATER CATALOGUE



ZYTECH SOLAR

www.zytechsolar.in

SPAIN | INDIA | USA | SINGAPORE | TAIWAN | UAE



ZYTECH SOLAR

ABOUT US

Zytech Group Founded in 2005, ZYTECH India Founded in 2014 ISO Certified with its other certification IEC, MNRE, TUV, ISO, UL approved to create a sustainable world as a leading PV SOLAR Manufacturer.

ZYTECH has built a good reputation at home and abroad with top quality products, advanced Solar solution and cheerful after-sales service. ZYTECH devotes itself in researching, developing and manufacturing a full range of Solar products with most cost-effective solution, With clear marketing orientation, sustained technical innovation and internationally -updated management philosophy, We've committed to improving ourselves paying more attention to customer demand, focusing on making people's life more safe and comfortable, enabling them to enjoy new technology and efficient use of resources, you can count on us to provide all possible Solar service. ZYTECH must be a great choice as your reliable long-term partner. Zytech Group has its presence in Spain, France, Germany, Italy, India, Egypt, Hong Kong, Singapore, Taiwan, USA & Mexico.

MISSION AND PHILOSOPHY

We feel motivated by the Kyoto Protocol: we want to contribute to making photovoltaics and solar thermal energy sources of the future. In order to achieve this goal, we need to make these technologies even more cost efficient. By working to continually increase our company's productivity, investing in research at our Research Centre in Germany and in the output of our products, we are successfully on the way to achieving this goal. The Zytech group offers competitive photovoltaic and solar thermal solutions to solve the problems with our sources of energy through a decentralised environmentally friendly energy supply. Tomorrows's modern and fair minded world will no longer be imaginable without solar power technology. The coming generations will set their sights on special types of energy, they should be clean and safe. Our children will not be satisfied by use of energy from fossil fuels of energy. In the coming future, the use of solar energy will have become a normal occurrence. Photovoltaics is one of the energy sources of the future. In this expanding market, we want more than just to grow, we want to increase our market share further.



ZYTECH SOLAR

FPC (FLAT PLATE COLLECTOR)

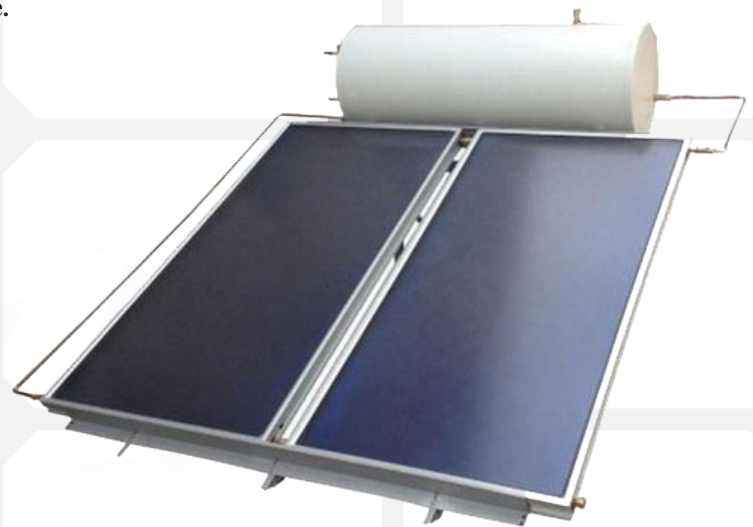
The common type of solar collector which have been in use since the 1950s. The main components of a flat plate panel are a dark coloured flat plate absorber with an insulated cover, a heat transferring liquid containing antifreeze to transfer heat from the absorber to the water tank, and an insulated backing. The flat plate feature of the solar panel increases the surface area for heat absorption. The heat transfer liquid is circulated through copper or silicon tubes contained within the flat surface plate.

Salient Features

- Both pressurised and non-pressurised systems available.
- Robust construction.
- PUF insulated hot water storage tanks.
- Direct and indirect heating available.
- More than 10000 LPD capacities.

Advantages

- Excellent performance in the cold climates.
- Minimum maintenance required
- Less payback period



ETC (EVACUATED TUBE COLLECTOR)

The evacuated tube solar thermal system is one of the most popular solar thermal systems in operation. An evacuated solar system is the most efficient and a common means of solar thermal energy generation with a rate of efficiency of 70 per cent. As an example, if the collector generates 3000 kilowatt hours of energy in a year then 2100 kilowatt hours would be utilized in the system for heating water. The rate of efficiency is achieved because of the way in which the evacuated tube systems are constructed, meaning they have excellent insulation and are virtually unaffected by air temperatures. The collector itself is made up of rows of insulated glass tubes that contain copper pipes at their core. Water is heated in the collector and is then sent through the pipes to the water tank

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ZYTECH SOLAR

SOLAR WATER HEATING INDUSTRIALS

FPC (Flat Plate Collector)

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ZYTECH SOLAR

SOLAR AIR HEATING SYSTEMS / DRYERS



ZYTECH SOLAR INDIA PVT LTD also the manufacturers, suppliers and exporters of Solar Air Heating systems, Solar Dryer or Solar Dehydration Systems in INDIA. Our organization also concerns with designing, manufacturing and supplying of Solar Dryers. Solar Dryer removes unnecessary moisture from the product with retention of original color and taste as well as keeps the product free from any environmental factor, dust, dirt, animal or bird droppings Solar Dryer Machine, Solar Drying Fruits, Agriculture, Crop Drying Machine, Solar Grain Dryer, Coconut Drying Machine, Solar Dryer System and Solar Dryer Technology, Solar Drying is Carried out mostly for Drying Purpose of Products hence Solar Drying Works as a best Moisture Confiscating Agent which Prevents the Products from getting De-composed.

- Technical Details
- Hygienic Drying
- No Color De-gradation due to UV rays.
- Low running Cost hence higher savings with solar dryer
- Optional Automatic Controls for dampers with humidity and temperature sensors with solar dryer.
- Low Cost
- Easy to Operate
- Long life Drying periods
- Limited Control of Air and Temperature with solar dryer
- Air Flow Provided by Solar fan with the help of solar dryer
- Most Widely used Solar Dryer
- More Efficient and fastest drying rates due to high air flow rate.
- Better temperature control with solar dryer
- Year long running due to electrical and diesel generator option.



SOLAR WATER HEATERS COLLECTORS

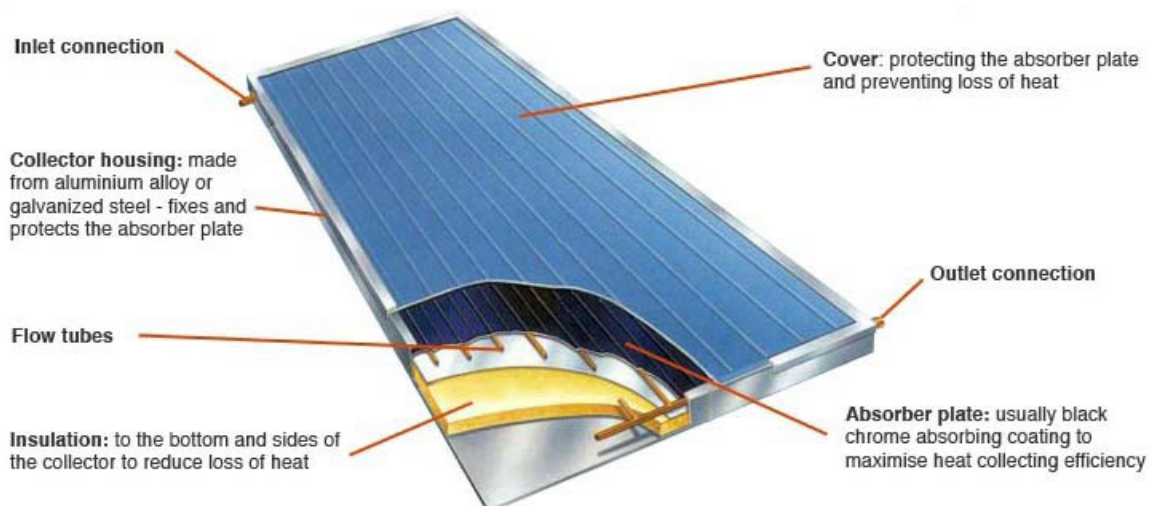
FPC (Flat Plate Collector)

A solar flat plate collector typically consists of a large heat absorbing plate, usually a large sheet of copper or aluminium as they are both good conductors of heat, which is painted or chemically etched black to absorb as much solar radiation as possible for maximum efficiency. This blackened heat absorbing surface has several parallel copper pipes or tubes called risers, running length ways across the plate which contain the heat transfer fluid, typically water.

These copper pipes are bonded, soldered or brazed directly to the absorber plate to ensure maximum surface contact and heat transfer. Sunlight heats the absorbing surface which increases in temperature. As the plate gets hotter this heat is conducted through the risers and absorbed by the fluid flowing inside the copper pipes which is then used by the household.

The pipes and absorber plate are enclosed in an insulated metal or wooden box with a sheet of glazing material, either glass or plastic on the front to protect the enclosed absorber plate and create an insulating air space. This glazing material does not absorb the sun's thermal energy to any significant extent and therefore most of the incoming radiation is received by the blackened absorber.

The air gap between the plate and glazing material traps this heat preventing it from escaping back into the atmosphere. As the absorber plate warms up, it transfers heat to the fluid within the collector but it also loses heat to its surroundings. To minimize this loss of heat, the bottom and sides of a flat plate collector are insulated with high temperature rigid foam or aluminium foil insulation as shown





ETC (EVACUATED TUBE COLLECTOR)

The Evacuated tube collector consists of a number of rows of parallel transparent glass tubes connected to a header pipe and which are used in place of the blackened heat absorbing plate we saw in the previous flat plate collector. These glass tubes are cylindrical in shape. Therefore, the angle of the sunlight is always perpendicular to the heat absorbing tubes which enables these collectors to perform well even when sunlight is low such as when it is early in the morning or late in the afternoon, or when shaded by clouds. Evacuated tube collectors are particularly useful in areas with cold, cloudy wintry weathers.

So how do solar evacuated tube collectors work?. Evacuated tube collectors are made up of a single or multiple rows of parallel, transparent glass tubes supported on a frame. Each individual tube varies in diameter from between 1" (25mm) to 3" (75mm) and between 5 (1500mm) to 8 (2400mm) in length depending upon the manufacturer. Each tube consists of a thick glass outer tube and a thinner glass inner tube, (called a "twin-glass tube") or a "thermos-flask tube" which is covered with a special coating that absorbs solar energy but inhibits heat loss. The tubes are made of borosilicate or soda lime glass, which is strong, resistant to high temperatures and has a high transmittance for solar irradiation.

Unlike flat panel collectors, evacuated tube collectors do not heat the water directly within the tubes. Instead, air is removed or evacuated from the space between the two tubes, forming a vacuum (hence the name evacuated tubes). This vacuum acts as an insulator reducing any heat loss significantly to the surrounding atmosphere either through convection or radiation making the collector much more efficient than the internal insulating that flat plate collectors have to offer. With the assistance of this vacuum, evacuated tube collectors generally produce higher fluid temperatures than they're flat plate counterparts so may become very hot in summer.





ZYTECH SOLAR

SWIMMING POOL HEATING SYSTEM

You can significantly reduce swimming pool heating costs by installing a solar pool heater. They're cost competitive with both gas and heat pump pool heaters, and they have very low annual operating costs. Actually, solar pool heating is the most cost-effective use of solar energy in many climates.

How they work

Most solar pool heating systems include the following:

- A solar collector -- the device through which pool water is circulated to be heated by the sun
- A filter -- removes debris before water is pumped through the collector
- A pump -- circulates water through the filter and collector and back to the pool
- A flow control valve -- automatic or manual device that diverts pool water through the solar collector.

Pool water is pumped through the filter and then through the solar collector(s), where it is heated before it is returned to the pool. In hot climates, the collector(s) can also be used to cool the pool during peak summer months by circulating the water through the collector(s) at night., Some systems include sensors and an automatic or manual valve to divert water through the collector(s) when the collector temperature is sufficiently greater than the pool temperature. When the collector temperature is similar to the pool temperature, filtered water simply bypasses the collector(s) and is returned to the pool.





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