



Payback Period < 3 years



Cost Benefit Analysis of Solar Hot Water Systems Vs Other Hot Water Systems

Heating 100 ltr. of water with 25°C rise in Temp. using conventional energy

| | UoM | LPG | Electricity |
|--------------------|------|------|-------------|
| Required Heat* | Kcal | 3001 | 2626 |
| Required Fuel Qty. | kg | 0.3 | 3 units |
| Efficiency | % | 80 | 95 |
| Fuel Rate | INR | 55 | 8 |
| Cost per day * | INR | 17 | 24 |
| Monthly Cost | INR | 510 | 720 |
| Annual Cost * | INR | 5100 | 7200 |

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Reference Test Conditions:

- * Ambient temperature 20°C. 100 Lt/day capacity water heating with temperature rise of 25°C.
- * It is assumed that 3 units of electricity is saved per day and unit price is 8 Rs.
- * It is assumed that system is used for 300 days per year.

Products Range:

Technical Specifications

| Capacity (LPD) | 100 | 200 | 300 | 500 |
|---|--------------|-------------|-------------|-------------|
| Type | FPC | | | |
| Working | Thermosyphon | | | |
| Inner tank thickness (mm) | 2.5 | 2.5 | 2.5 | 2.5 |
| Inner Tank Material | GI | GI | GI | GI |
| Outer Tank Material | GI | GI | GI | GI |
| Insulating Material | PUF | PUF | PUF | PUF |
| Insulating Thickness (mm) | 50 | 50 | 50 | 50 |
| Insulating Density (kg/m ³) | 38 | 38 | 38 | 38 |
| Collector size (mm) | 1000 x 2000 | 1000 x 2000 | 1000 x 2000 | 1000 x 2000 |
| Collector material | Copper | Copper | Copper | Copper |
| Hot Water Temperature (°C) | 55 - 60 | 55 - 60 | 55 - 60 | 55 - 60 |
| Working Pressure (kg/cm ²) | 0.5 | 0.5 | 0.5 | 0.5 |
| Collector Qty. | 1 | 2 | 3 | 4 |
| Absorber Area (sqm.) | 2 | 4 | 6 | 8 |
| System Weight | 92 | 168 | 240 | 305 |
| Space Required (sqft.) | 4 x 8 | 9 x 8 | 14 x 8 | 18 x 10 |
| Warranty (years)* | 5 | 5 | 5 | 5 |

Technical Standards in Practice

- IS 12933 (Part 1):2003, Solar flat plate collector -Specification, Part 1- Requirements.
- IS 12933 (Part 2):2003, Solar flat plate collector -Specification, Part 2 - Components.
- IS 12933 (Part 3):2003, Solar flat plate collector -Specification, Part 3 - Measuring instruments.
- IS 12933 (Part 5):2003, Solar flat plate collector -Specification, Part 5 - Test methods.

Waasol Energies LLP is the largest vertically Integrated Company engaged in Solar Business in India with diversified business interest with in over 65+ nations across the globe. It is fact that 44 % energy is consumed in Thermal Applications Globally and if we replace 10 % of the thermal energy with Solar Thermal, there will be enormous savings in High Recurring Energy Bills & Consumption of Fossil Fuels while great savings on Carbon Foot Prints as well. We strongly believe that the Customized application development is essential for the promotion of Solar Thermal and hence we have always emphasized on development in house Research Team. Solar thermal has been key Business Vertical which helps to save recurring energy expense with attractive IRR. Waasol Energies LLP possess Passionate team of Techno commercial professions who provides Solutions for Hot Water, Process Heat and Its applications.

* Terms and Conditions as per warranty cards

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