

SOLAR COOKING SYSTEM



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INTRODUCTION



Solar concentrators are capable of delivering process temperatures in the range of 80°C to 300°C with reasonable efficiency and hence can be excellent alternatives to replace fossil fuels in industries for mid temperature applications. As this excellent design permits to take focus inside the kitchen, is extremely suitable for direct cooking in the comfort of kitchen. System needs a typical orientation of kitchen and focus is brought inside the kitchen through window in the wall.

PROPOSED SYSTEM

The Scheffler solar concentrator of 16 sqm are installed outside the kitchen and focus is brought inside the kitchen through an opening in the wall on secondary reflector which then reflects the radiation on to the cooking pot. Cooking can be done inside the kitchen. Bring Sun in kitchen technology. Schematic of the system is shown in figure below.



SYSTEM REQUIREMENTS & SPECIFICATIONS

SYSTEM REQUIREMENTS

South facing clear site. No tall buildings or trees on south side of installation site of reflectors. Area required is 7 m X 7 m clear area for one unit, east-west and north-south. Kitchen height should not be more than 14 feet from the ground.

SPECIFICATIONS

Scheffler Reflectors - 15 Nos.

- Shape: Elliptical shape with 16 sqm area.
- Reflectors: Glass mirrors, of 2 mm thick, Saint Gobein or equivalent. Reflectivity 80%.
- Mirror fixing: With positive locking in special aluminum section.
- Dish is strong enough to avoid any deformation during manhandling/tracking/under wind pressure of 60 km per hour.
- Stand will be designed to suit latitude at the location.
- Dish and stand will be in Mild Steel standard sections with three coats of epoxy painting.
- All exposed M.S. parts/components will have three coats of epoxy paint.
- The personnel of the buyer/user institution will be trained by us in the operation and maintenance of the system during installation and commissioning.

Steam system suitable for above - 1 System

Central Tracking System - 3 Nos.

- Specially designed patent pending system of timer based system with controller and DC motor for automatic, accurate day tracking. (Patented tracking mechanism).
- Photovoltaic panel and battery are provided for driving DC motor.
- Return from day tracking is manual in the evening or morning. Will need around 5 minutes.
- Seasonal Tracking: Manual, to be set once in 4-5 days. Time required is around 5 minutes.
- For up to 4 reflectors one central system is provided. All reflectors are interconnected by wire ropes or by aluminum sections.

FUEL SAVING POTENTIAL

- Scheffler solar concentrator of 16 sqm is capable of saving 6 kg of LPG per day. In most part of India the system can function for 260 days a year.
- At current rate of LPG @ Rs. 80 per kg. the annual saving potential works out to Rs. 130000/- per reflector per year. Total saving of Rs. 15 to 20 lakhs per year is possible.

WARRANTY

- The warranty is valid for 12 months from the date of despatch.
- Our warranty is applicable for our workmanship against manufacturing defects, is subject to equipment /material or part thereof not being subject to accident, alteration or improper use.
- The equipment /material and the whole system should be operated and maintained by trained personnel of the purchaser in accordance with our recommended operating instructions and maintenance methods. Any repairs / replacements are to be carried out by party authorised by us.

CONTACT US



HEAD OFFICE

M/s. Lesotek
A1/3, Green City, Opp. Videocon,
GIDC Sector 26,
Gandhinagar - 382028

Web Site : www.lesotek.com

Email : info@lesotek.com

Contact : +91-9924127479 / 9601769995 (Gandhinagar, Gujarat)
+91-9662525071 (Vadodara, Gujarat)
+91-9686932989 (Bangalore, Karnataka)

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Solar Cooking System
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