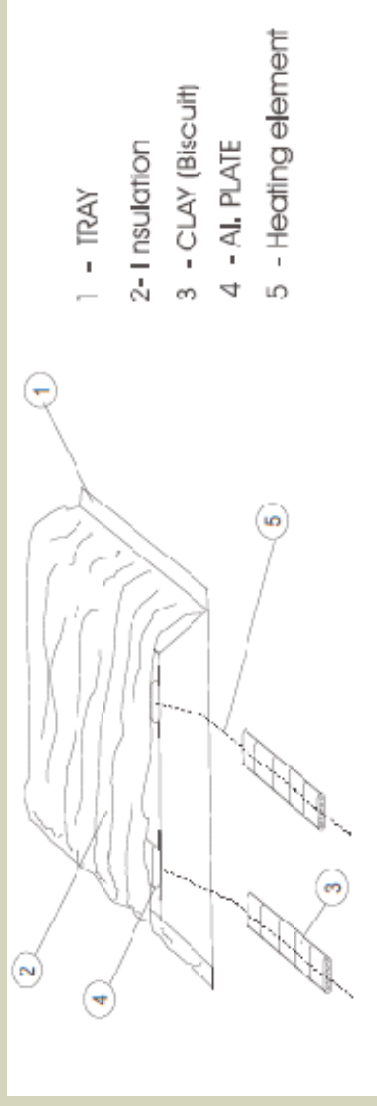


Part II

TULSI HYBRID SOLAR OVEN

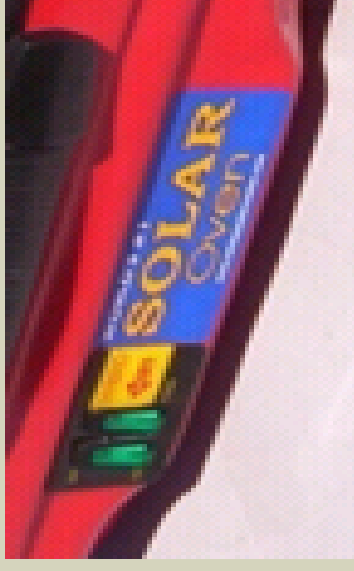
1. GENERAL

There is no difference in the construction, shape and outer look of Tulsi Solar Oven and Tulsi Hybrid Solar Oven except that an electrical system is provided in Tulsi Hybrid Solar Oven which enables cooking round the clock through-out the year. Heaters are provided at the bottom of the Tray connected to a Thermostat, which controls and maintains the required temperature within the specified range by cutting in or out the electric supply. Two illuminated Switches are provided on the front panel. When the cooking is set to 'low' one Switch illuminates and when it is set to 'high' both Switches illuminate. Most of the electrical items fitted in Tulsi Hybrid Solar Oven are UL / CE approved.



HEATING ELEMENT & INSULATION AT TRAY BOTTOM

TULSI HYBRID SOLAR OVEN



2. USE DURING BROAD DAY LIGHT

Follow instructions given in Part – I for TULSI SOLAR OVEN

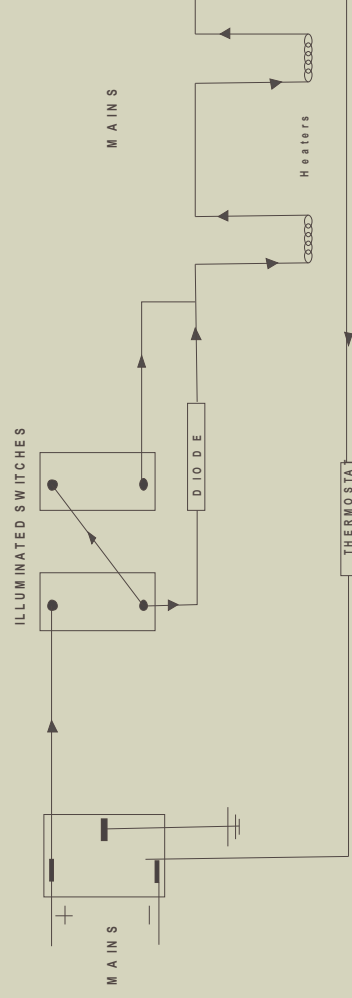
3. USE IN THE NIGHT OR DURING CLOUDY DAY

When electrical back-up is required for cooking, pre-heat for ten minutes and thereafter load the food stuff. Close the

Pots and place them in the Tray and tightly close the DGL. **Ensure that the Power Line Voltage and the Voltage of Tulsi Hybrid Solar Oven is same by referring to the Label affixed near the Socket.** Now plug in the Power Cord. Put the Oven Switch on 'Low' which will get illuminated indicating Low temperature mode; for 'high' setting simultaneously put 'On' the other Switch also and observe that both the Switches illuminate. The Thermostat will control the Oven temperature and will take care of cooking. Unlike in cooking heaters and other modern cooking appliances electric consumption in Tulsi Hybrid Solar Oven is low just because the heaters do not remain on during the entire cooking period and that the Heaters fitted are low wattage Heaters.

4. CIRCUIT DIAGRAM

Circuit diagram of Tulsi Solar Oven (Hybrid)



5. COOKING WITH PV (Photovoltaic) PANEL

One of the biggest problems faced by the Solar Oven users' is how to cook food in remote village or hilly terrain in the night or on cloudy days. There is no grid supply, as such; cooking is not possible on any Solar Cooker presently available in the market. The problem is genuine but the same is addressed by installing Photo-Voltaic Panel (PV Panel) and cooking on Tulsi Hybrid Solar Oven. This stand-alone -system is very convenient and makes cooking very easy and economical. After initial expenditure on purchase of the PV panel and associated items, there is no expenditure involved on cooking except periodic replacement of Battery. In case other household gadgets and house lighting etc. are also desired to be operated by means of PV Panel, the array of Panels, Inverter and Battery of higher capacity, as per the requirement, will have to be installed. For details please refer the diagram on next page.

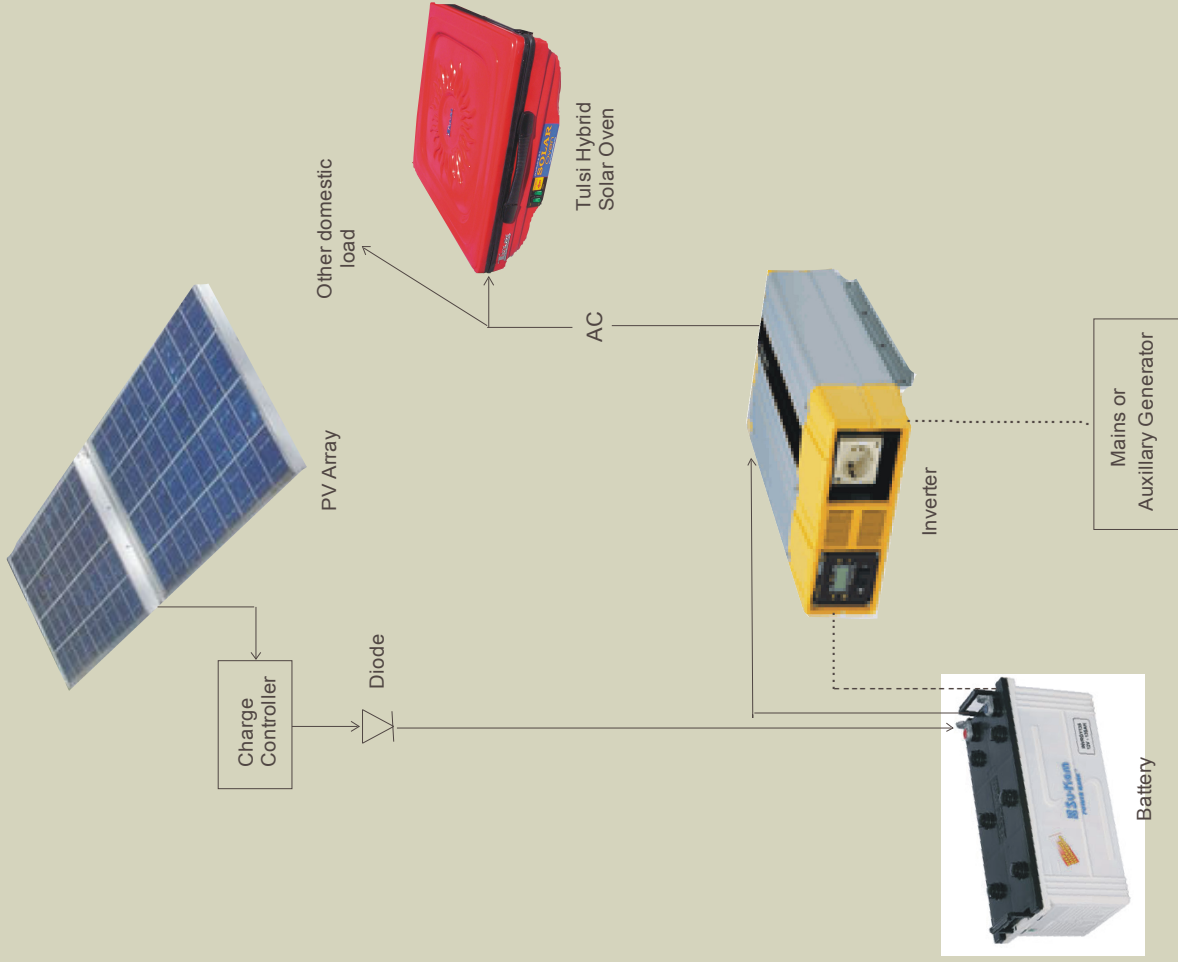
For those who want to enjoy trouble free long drive and outings, they may install PV Panel on roof of their SUV and cooking may simultaneously go on inside the vehicle while it is running on smooth road. Alternatively, on reaching the destination, simply take out the Oven, plug-in supply from Inverter already charged during driving. Enjoy outing with your family, while the Oven will simmer and prepare meal ready to be served as and when you desire.

The equipment required for cooking by means of PV Panel is Optional and the kit does not form part of the standard Oven. The items can be locally purchased and got installed by some technician of medium caliber. In case of any problem, Rohitas Electronics may be contacted for supply of necessary items.

Tulsi Hybrid Solar Oven is a real cooker or if you can call it a '**mobile kitchen**' will be more appropriate. If you lose all power, you can still cook just about anything, or you can dry your perishable foods before they go bad in an emergency situation. Also if you lose power, it would be difficult to run your home oven on battery or generator power whereas, Tulsi Hybrid Solar Oven is easy to run on a car battery, small generator or Inverter. Thus it enables cooking in any situation, even disabled can use it on their own.



COOKING IN TULSI HYBRID SOLAR OVEN WITH PV PANEL



6 SPECIFICATION

Basic Tulsi Solar Oven (without electrical backup) is same in performance as GRADE 'A' of Indian Standards Specification No. IS: 13429: 2000.

Tulsi Hybrid Solar Oven is a variant of the above with electrical heating system as an additional feature.

Technical Specification:

Aperture area	: 0.2372 m ²
Cooking Capacity	: Two Kgs. approx. at a time.
Cooker box material	: Fire retardant resin, UV stabilized Fiberglass body.
Pots	: Four stainless steel, solar black painted.
Cooking tray	: Al. 480 x 480 mm.
Cooker outer box	: 535 x 535 mm.
Heater power	: High – 500 watts ± 10 %, Low – 250 watts ± 10 %
Voltage	: Oven is supplied in 12, 24, 48, 110 or 220 Volts.
Power consumption	: 0.15 to 0.50 units for cooking one time meal depending upon ambient conditions, quantity and quality of food etc.
Switch Position	: Low - for gentle cooking. High- for faster cooking.