



Enriching Lives

KIRLOSKAR SOLAR PUMPING SYSTEM

Kirloskar Brothers Limited, India's largest manufacturer and exporter of pumps introduces, for the first time in world, a solar electric technology, which harnesses solar energy through photovoltaic (PV) panels and directly conditions this to drive a three phase AC induction motor driven centrifugal pump, eliminating the batteries in between.

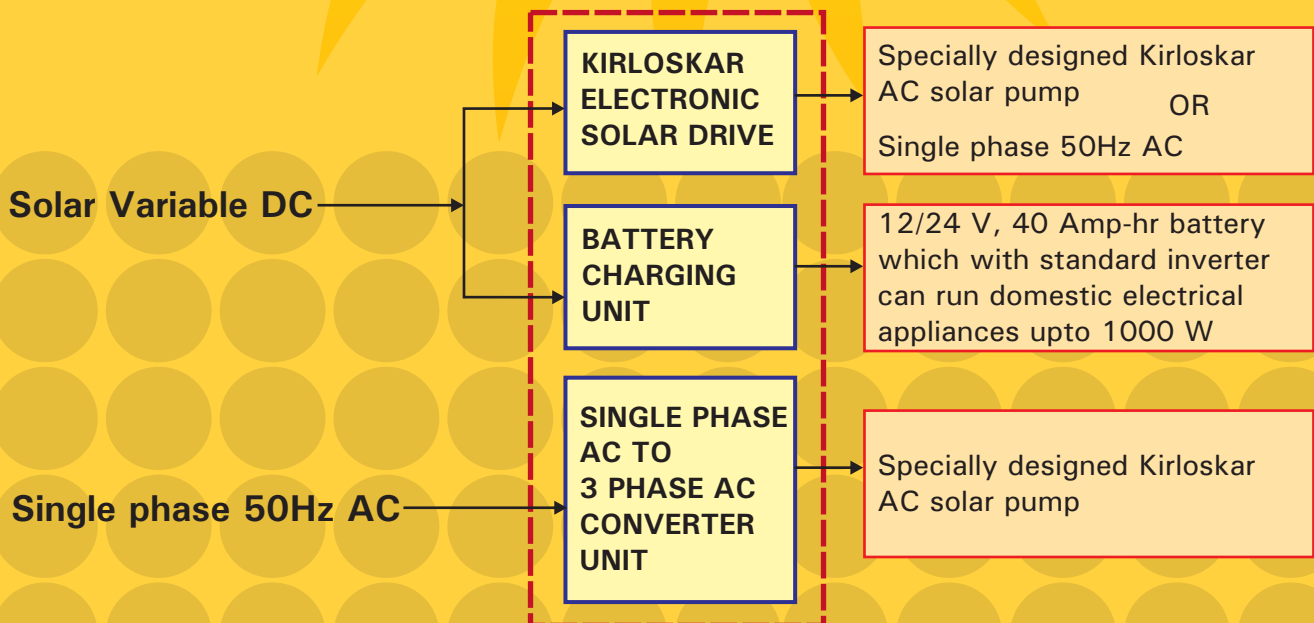
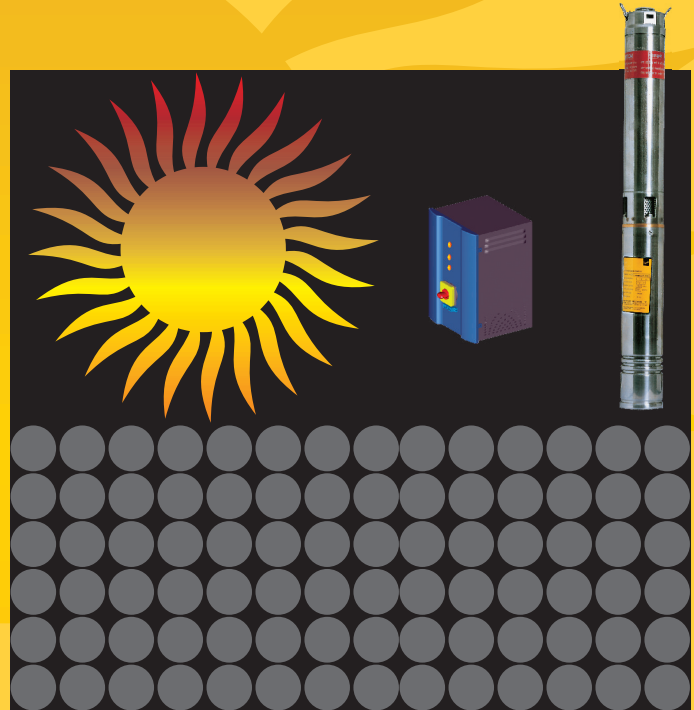
The motor input power is instantaneously adjusted electronically to match the maximum output power available from the solar PV panels. This "maximum power point tracking" feature ensures running of solar pump at maximum efficiency at all times.

Solar Pump System Components:

Pump: Standard 100 mm submersible pump type WINNER

Motor: Specially designed 120 V, 3 Phase AC induction motor

Electronic Solar Drive :
Multi-function electronic controller



Block diagram

Solar Photovoltaic Panels :

- Amorphous or Crystalline solar cells.
- Various module ratings such as 37, 50, 75, 100 Wp etc. can be configured
- Manufacturer's guarantee for 20 years

Configurations in which Kirloskar Solar Pumping System can be used

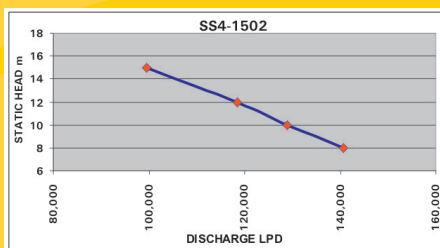
1. To drive specially designed Kirloskar solar AC pumps
2. To provide 1 phase 50 Hz AC output to run light domestic electrical loads such as fans, lamps, TV etc. upto 1000 watt
3. To convert 1 Phase 50 Hz AC to 3 Phase AC to run Kirloskar solar AC pump, when sunlight is not available, but 1 Phase supply is available. (optional)
4. Domestic Water purification unit based on ultra filtration technology can be run to get pure, safe drinking water. (optional)
5. 12/24 V, 40 Ahr lead acid battery charging unit (optional)

1800 Wp Solar Pumping System Performance :

The solar pump performance is computed at 100 mW/cm² sun intensity incident on panels for 7 hours a day

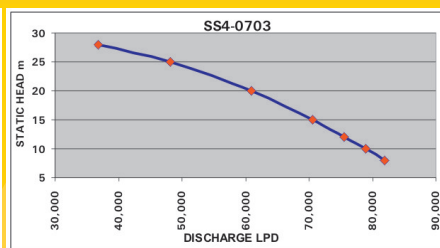
SS4-1502 :

(Low lift, High discharge model)



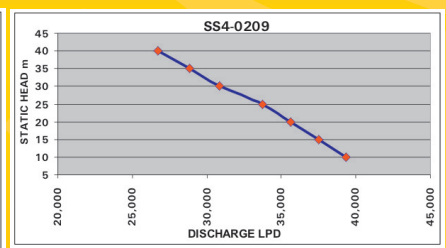
SS4-0703 :

(Medium lift, Medium discharge model)



SS4-0209 :

(High lift, Low discharge model)



Salient Features:

- Automatic start and shut off as per solar intensity
- Soft start controlling in rush current
- Dry run protection (automatic switch off)
- Phase imbalance protection
- Output short circuit protection
- Dust proof
- Works satisfactorily up to 55 °C ambient
- Single phase 50 Hz AC input operating voltage range of 100-270 Volts
- Visual indication of faults through flickering LED displays
- Will not restart automatically for faults like dry run, phase imbalance, output short circuit; unless attended

The above performance is indicative only and varies based on solar insolation and site conditions. As we are constantly endeavouring to improve the performance of our products/equipment, we reserve the right to make alterations from time to time and as such our products/equipment may differ from that detailed in this publication.



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