



TATA BP SOLAR INDIA LIMITED

PRODUCT SPECIFICATION

SUBMERSIBLE PUMPING SYSTEM – 1200 Wp

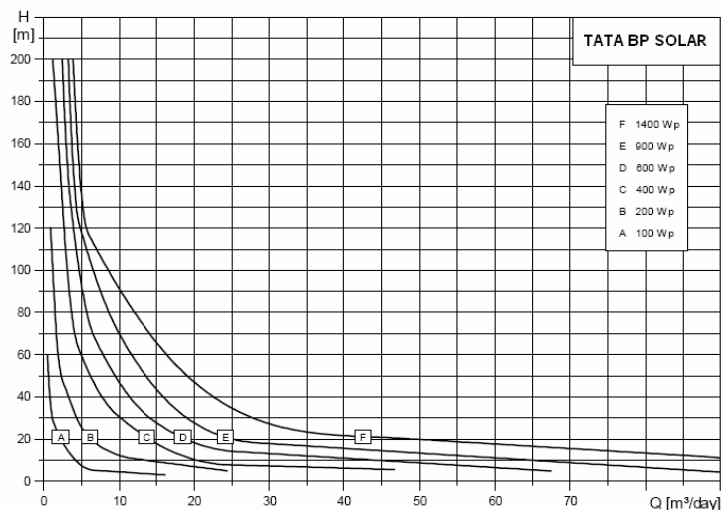
SYSTEM

1	PV Array rating (Wp) at STC	1200Watts
2	No. of Modules / System	16 Nos. of 75 W
3	PV arraymounting arrangement [Fixed / Tracking]	Tracking manual - 3 Positions [Morning / afternoon / Evening] Seasonal Tracking - 3 positions [Summer / winter / rainy]
4	Type of Pump and capacity	Submersible, 1400Watts

PUMP & MOTOR

- PUMP TYPE Multistage Centrifugal pump for low heads and large flows
- CASING & SHAFT Stainless Steel
- MOTOR Permanent-magnet principle with built-in electronic unit.

Performance range



Supply voltage of Pump-motor

Flexible as regards power supply and power range, the motor can be supplied with either DC or AC voltage: 30-300 VDC, PE – which is the intended use and also can operate from 1 x 90-240 V –10%/+6%, 50/60 Hz, PE.

Maximum Power Point Tracking (MPPT)

The built-in electronic unit gives the system with microprocessor based MPPT (MPPT = Maximum Power Point Tracking). The MPPT-function ensure the pump duty point is continuously optimised according to the input power available. MPPT is only available for pumps connected to DC supply at any input voltage with in specified range. System is operated with 8 Solar panels of 12V75Wp in series giving best res with 1200Wp of array.

High efficiency

The motor is a permanent-magnet motor (PM motor) featuring a higher efficiency within the power range compared to a conventional asynchronous motor. In addition to this, the segmented motor stator contributes considerat to the high efficiency. The motor is furthermore characterized by a high lock rotor torque even at low power supply.

Protections:

1. Dry-running protection
The pump is protected against dry running in order to prevent damage to the pump. The dry-running protection is activated by a water level electrode placed on the motor cable.
2. Overvoltage and undervoltage protection
The motor is protected against transients from the power supply according to IEC 60664-1 "overvoltage category III" (4 kV). In areas with high lightning intensity, external lightning protection is recommended.
3. Overload protection
4. Overtemperature protection: When the temperature rises above +85°C, the motor is automatically cut out. When the temperature has dropped to +75°C the motor is automatically cut in again.