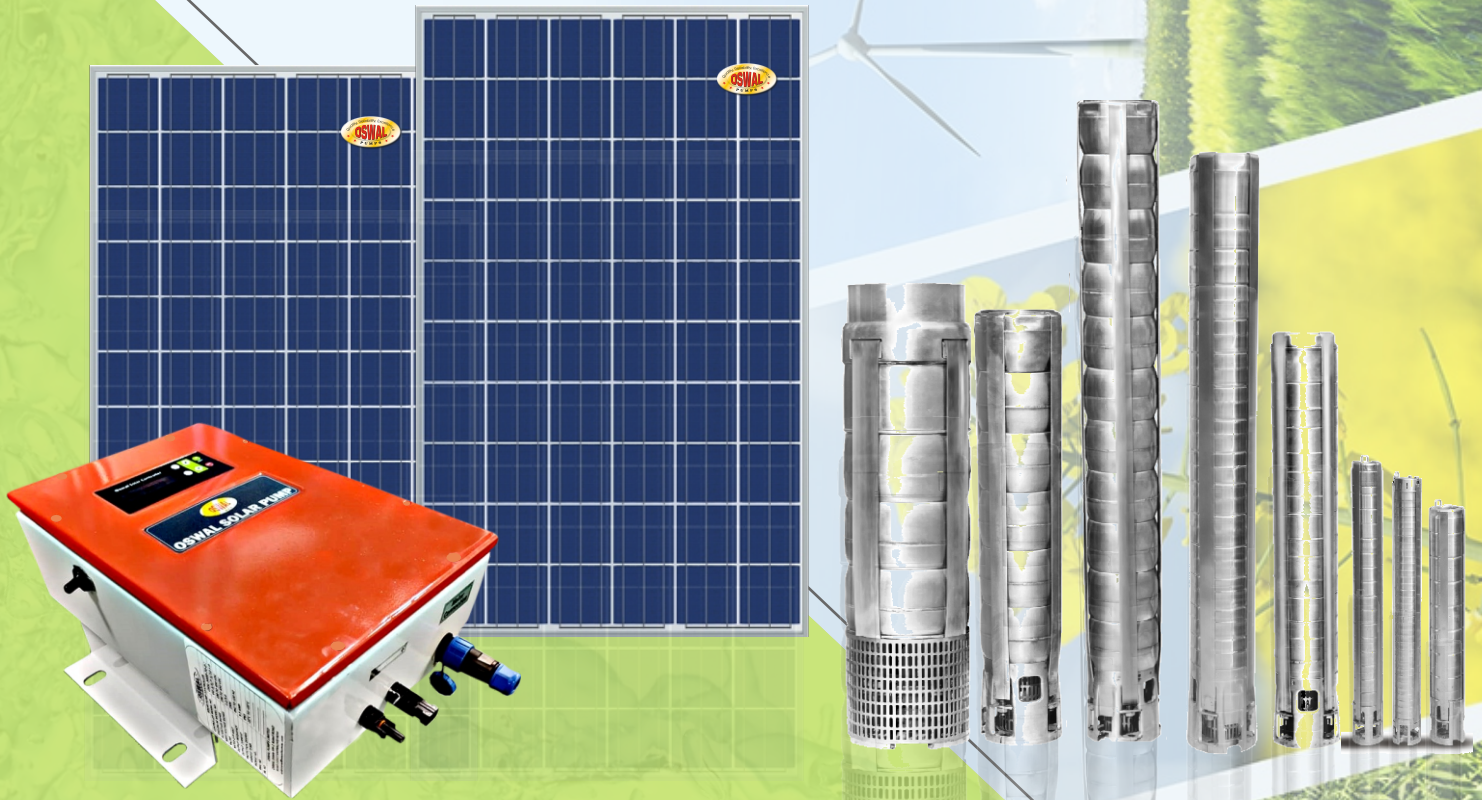


OSWAL SOLAR PUMP CATALOG



Solar | Domestic | Agriculture | Industrial

Infinite Solar Pumping Energy



OSWAL
— SOLAR PUMP —
True Partner



OSWAL SOLAR PUMP CONTROLLER

Oswal Solar Pump Controller (Solar Pump Inverter, IP65)

A transformer-less Inverter system, with 110/160/230/320/415Vac, 3-phase output voltage and V/F control to manage pump starting condition (soft start). The equipment is micro controller based and operated with software for digital control of inverter parameters, fault finding-diagnostics and digital I/O signaling.

Protection : Automatics shuts in case of

- Dry run
- High or low voltage surge
- Over heating
- Short or open circuit in motor
- Earth fault

MPPT Controller

With the Inbuilt MPPT (Maximum Power Point Tracking) function, it regulates the output frequency according to irradiation in real time to achieve the maximum power. Adopting the proposed dynamic VI maximum power point tracking (MPPT) control method, fast response and stable operation, better than the conventional methods, which may lead to the problems including poor tracking performance,

Salient features of Oswal Solar Pump Controller

- When solar power is not available controller can be automatically or manually switched to an alternating single phase or three phase input ac supply.
- High Resolution LCD display shows speed(%), input DC voltage, Output AC/PWM voltage and current system status.
- Uses MPPT technology to maximize water delivery at various solar energy level.
- MPPT maximize power points tracking for maximizing the efficiency of input power.
- GSM option also available to controls and monitor remote locations pumps.
- Remote telemetry capability through RS485 continuous data points(optional)
- High flow systems for faster tank fill and significant water outputs.
- Simple installation and easy maintenance.
- The control unit convert that(DC) power into alternating current for AC power ans supply is further given to the submersible pump through cable.
- Operate through Oswal mobile APP.

RATING	3 HP	5 HP	7.5 HP	10 HP
Pump Controller Rating	2.2 kW	3.7 kW	5.5 KW	7.5 kW
MPPT Range	250-450 VDC	350-790 VDC	350-790 VDC	350-790 VDC
Controller I/P Voc	310-450 VDC	540-790 VDC	540-790 VDC	540-790 VDC
Controller I/P Vmp	310-450 VDC	450-790 VDC	300-790 VDC	450-790 VDC
Controller I/P Current DC	10 Amp	10 Amp	18.5 Amp	18.5 Amp
Controller O/P Current	9 Amp	9 Amp	17 Amp	17 Amp
Controller I/P Power (kW)	2.2 kW	3.7 kW	5.5 KW	7.5 kW
Enclosure IP Protection	IP 65	IP 65	IP 65	IP 65
MPPT Tracking	yes	yes	yes	yes
Operating Temp	C(-10) to C(+55)	C(-10) to C(+55)	C(-10) to C(+55)	C(-10) to C (+55)
Inside the control box	up to 60	up to 60	up to 60	up to 60
Relative Humidity	Less than 95%,	Less than 95%,	Less than 95%,	Less than 95%,
Controller overload capacity	120% rated current for 60s	120% rated current for 60s	120% rated current for 60s	120% rated current for 60s

Special Features

Oswal Sheet Metal Stainless Steel Submersible pump are specially designed, with the use of latest manufacturing techniques. Years of experience, superior design and better manufacturing techniques have resulted into development of this range of pumps, which are efficient and reliable in operation. Strict quality assurance standards during the total process assure trouble free and reliability in operation requiring minimum maintenance. The pump range consist of many pump sizes is available with an optional

- ❑ 30% higher efficient.
- ❑ Suitable to 4", 6" & 8" Submersible Motor.
- ❑ All bearings are water- lubricated and have a square shape, enabling sand particles, if any, to leave the pump together with the pumped liquid.
- ❑ Bearing bush is made of anti friction rubber-NBR to withstand wear resistance.
- ❑ Non return Valve made in stainless steel (AISI 304 Grade). The valve casing is designed for optimum hydraulic properties to minimize the pressure loss across the valve and, thus, contributes to the high efficiency of the pump.
- ❑ Pump motor coupling is according to NEMA standard.
- ❑ Radial flow and mixed flow impellers & bowl made from stainless steel (AISI 304 Grade).
- ❑ Stop Ring which is designed as thrust bearings limits axial movements of pump shaft.
- ❑ Suction Case , stage casing and discharge chambers are made by stainless steel (AISI 304

Application in

- Water supply from bore well
- AC and solar energy compatible
- Municipal & irrigation purpose
- Water supply in commercial establishments
- Small farms, gardening & nurseries

Head Range :10 - 800 MTR.

Discharge Range :12 - 3600 LPM





DC MOTOR BENEFITS

- ☐ 30% higher efficient compare to AC submersible motor.
 - ☐ 30% higher discharge compare to AC submersible motor.
 - ☐ Require lower torque and low power to operate.
- Start Early in the morning.
- ☐ 100% stainless steel 304.

Features

- IP68 grade protection
- Stainless steel casing, shaft & other components
- Equipped with mechanical seal and sand guard for maximum sand protection

Comparison of Solar DC Motor Over Induction Motor

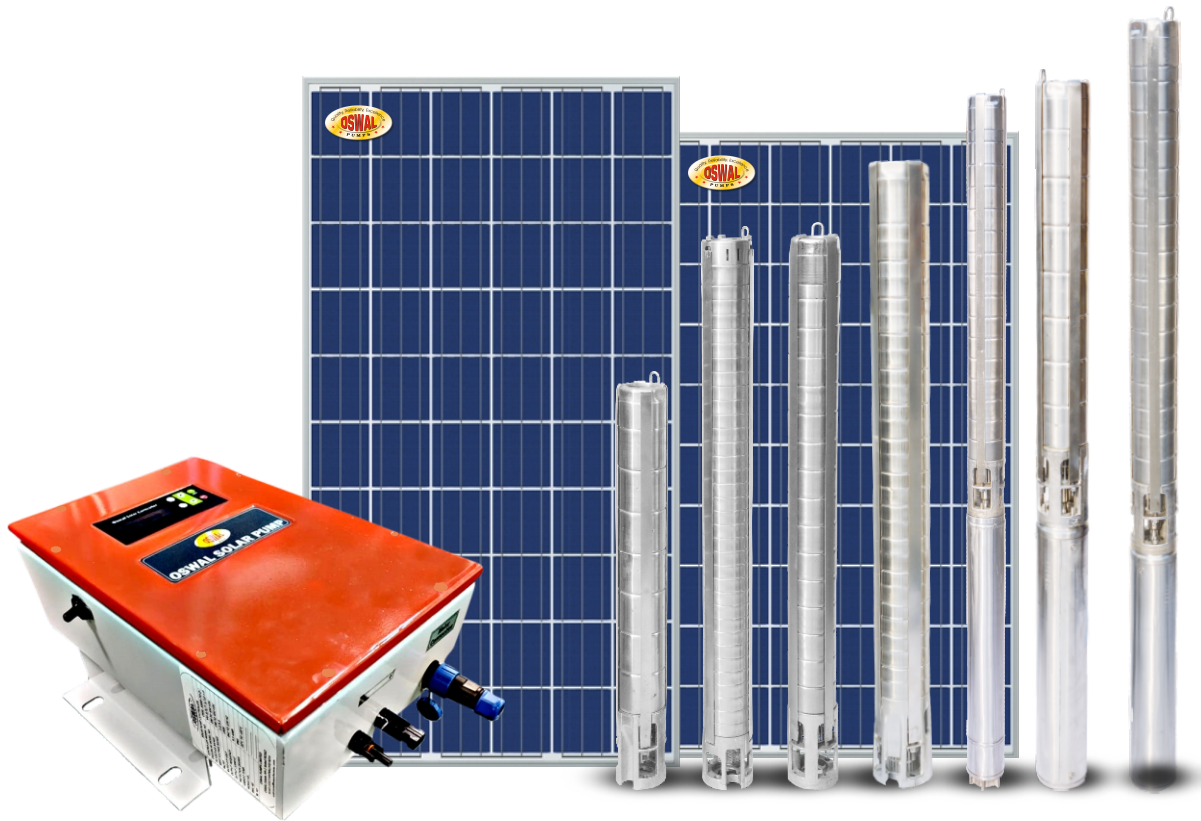
Sr. No.		PMSM DC MOTOR	INDUCTION MOTOR
1	Speed Range	0-3600 RPM	0-2900RPM
2	Solar Array	Less	More
3	Size For same power ration	Less	More
4	Power Desnity for same size	More	Less
5	Requiriment of Current for same load	Less	High
6	Efficiency	Higher (>85%)	Lower (<85%)
7	Drive (AC/DC-DC-AC)	Compulsory	Optional
8	Power Injduction	Higher	Limited by Speed
9	Frequency of motor	0-120Hz	0-50/60Hz
10	overloading	150%	120%
11	system Efficiency (Drive-Motor-Pump)	Higher	Lower



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