

AC Submersible Solar Pump

Model: RA3000

Type	Description
RA030H020	AC Submersible Solar pump type: RA030H020 Rated head: 20mtr., 3.0HP, Shut off head 25 mtr., With RA3000 controller
RA030H030	AC Submersible Solar pump type: RA030H030 Rated head: 30mtr., 3.0HP, Shut off head 45 mtr., With RA3000 controller
RA030H050	AC Submersible Solar pump type: RA030H050 Rated head: 50mtr., 3.0HP, Shut off head 70 mtr., With RA3000 controller
RA030H070	AC Submersible Solar pump type: RA030H070 Rated head: 70mtr., 3.0HP, Shut off head 100 mtr., With RA3000 controller
RA030H100	AC Submersible Solar pump type: RA030H100 Rated head: 100mtr., 3.0HP, Shut off head 150 mtr., With RA3000 controller

Type	RA030H020	RA030H030	RA030H050	RA030H070	RA030H100	<div>Motor : AC Induction Motor</div> <div>Pump : SS-304 material (In contact with water)</div> <div>Water output figures are on a clear sunny day with 3 times tracking of SPV panel, under “Average Daily Solar Radiation” condition of 7.15 KWh/sq.m on the surface of PV Array (i.e. coplanar with PV module)</div> <div>Standard Test Condition : AM=1.5, E=1000W/m² ,Cell Temperature : 25°C</div>
Rated head (mtr.)	20	30	50	70	100	
Optimum Head range (mtr.)	10-30	20-40	40-60	60-80	90-110	
Discharge (LPD)	1,35,000 [#]	96,000 [#]	57,000 [#]	39,000 [#]	25,500 [#]	
Shut Off head (mtr.)	25	45	70	100	150	
Array Rating	3000 Wp					
Input Voltage (Vmp.)	> 360 Vdc					
Input Max. Current	9 Adc					
Ambient Temperature Range	Up to 50° C					
MNRE test certificate reference (Report.no.)	-					

This water output is at STC conditions and testing as per MNRE's latest specifications for Solar water pumps.

Product Introduction

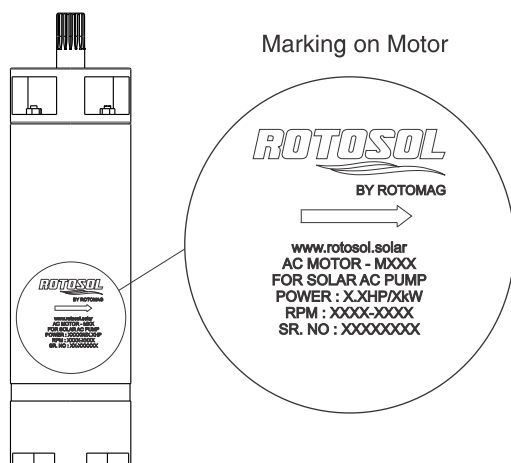
Rotosol solar submersible pump has a stainless steel SS-304 pump. This ensures long life and high reliability against dust, sand and abrasive elements. The pump elements are driven by a sealed "AC motor" filled with water. The motor is made from stainless steel 304 and sealed for life. High efficiency AC motors are used. The motor is driven by a controller which has inbuilt MPPT (Maximum power point tracker), dry running protection and overheating protection. A special thrust bearing supports the rotor of the motor to withstand the axial thrust of the water column when the pump is switched off. .



Application

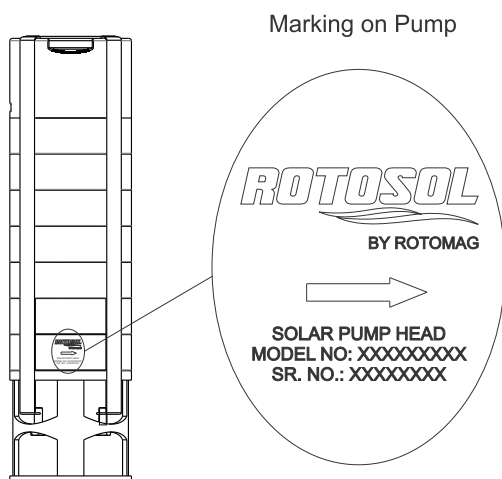
- Drinking water supply
- Livestock watering
- Pond management
- Irrigation
- Village water supply

Specifications of AC Submersible motor:



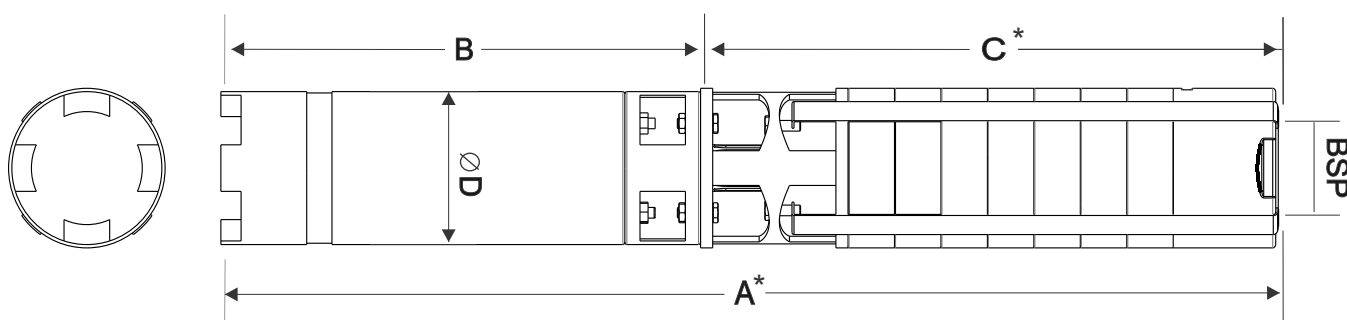
AC motor type	MA30
Power	3HP/2.25kW
RPM	1800-3300

Specifications of solar pump head:



Type	Rated head (mtr.)
RA030H020	20
RA030H030	30
RA030H050	50
RA030H070	70
RA030H100	100

Dimension of AC submersible solar pump head:



Model	Type	Dimensional Details					Module Details		Performance Curves No.	Approx. Nett Weight in Kg. (± 1.5 kgs.)
		A (mm)	B (mm)	C (mm)	D max (mm)	BSP	Module Size (Wp)	No. of Module		
RA3000	RA030H020	1140	690	450	145	2.5"	300	10	-	59
	RA030H030	1140	690	450	145	2.5"	300	10	-	59
	RA030H050	1260	690	570	145	2.5"	300	10	-	62
	RA030H070	1640	690	950	145	2"	300	10	-	65
	RA030H100	1800	690	1110	145	2"	300	10	-	69

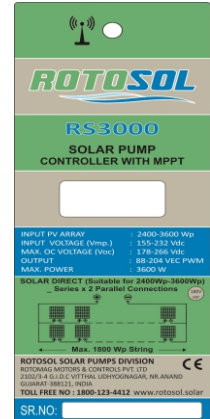
* The length is subject to change without notice as R&D is a continuous process and the modification may be required to suit the modification in I-V curves of the modules and the water output at varying heads.

Specifications of AC Submersible controller:

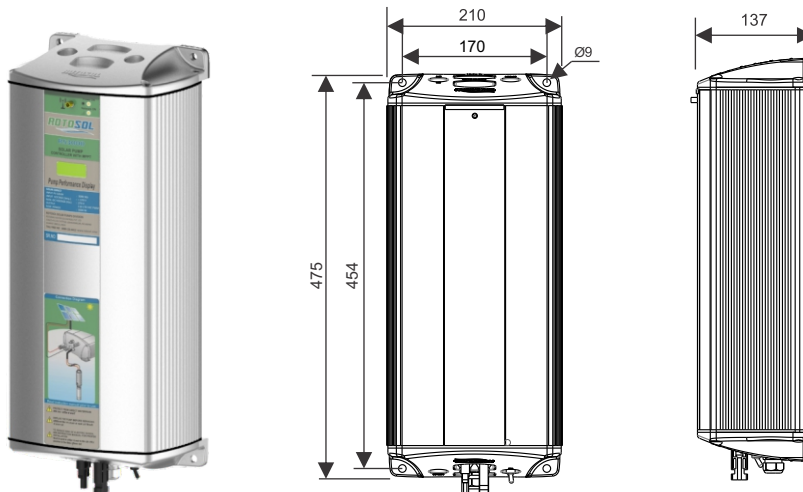
Model	Input PV array	Input voltage (Vmp.)	Max. Open circuit voltage (Voc.)
RA3000	3000W	> 360 Vdc	450 Vdc

Features of Controller:

- ▶ Fully enclosed with IP54 protection. as per IEC 60529:2013-08 Edition 2.2
- ▶ Multiple fault diagnosis indications.
- ▶ Integrated MPPT (Maximum Power Point Tracking).
- ▶ Tested as per IEC 60068-2-30, IEC 60068-2-14, IEC 60068-2-1, IEC 60068-2-2 for environment and IEC 61683 : 1999 for efficiency.*
- ▶ Option of "Tank Full" and "Source Empty" sensor for auto start and auto stop.



Mounting Dimensions:



IEC certificate nos. for controller:

- ▶ I.P. test certificate RP-1718-063907

Controller Nett weight

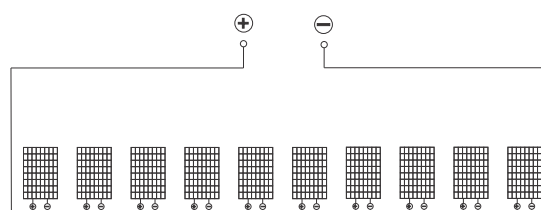
6 ± 1 kg.

Installation Requirements:

Preferred Solar PV Array

300 Wp, 72 Cell x 10 Panels: 3000W

Panel specifications	
Voltage at maximum power Vmax	38.88 V
Open circuit voltage Voc	44.56 V
Current at maximum power Imax	7.71 A
Short circuit current Isc	8.48 A



10 Series

Technical specifications/details mentioned in this datasheet are subject to change without prior notice. Please contact our sales/marketing team for any updated information or any change done.