



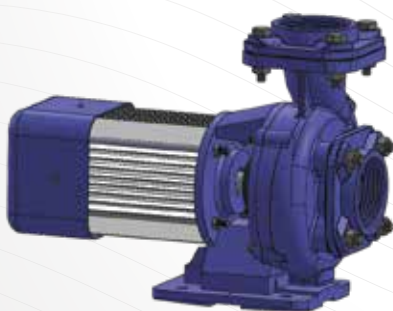
ROYAL INDIA

BE RESPONSIBLE
GO SOLAR

SOLAR WATER PUMPING SOLUTION



**ROYAL INSTRUMENT
INDIA PVT. LTD.**



High Performance

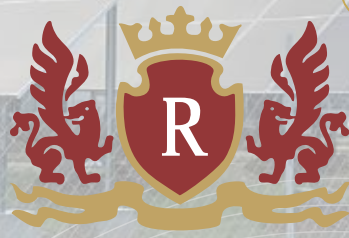
Updated Techonology

Our resing-packed motors were born from the bold idea of completely replacing the motor housings with resin. This, in combination with the reduced noise of the motors themselves, makes it possible to design very silent, energy - efficiency and quiet operation.



FACT

One advantage of resin-packed water - filled motors lies in their improved heat dissipation, as a result of the thermal conductivity of the resin being indeed higher than that of the surrounding air which allow for more compact designs.



ROYAL INDIA

A brand with big sustainable dreams.



Royal India is one of the leading and fastest-growing company in the country dealing with solar products and solutions. It has established in 2015 with the objective of providing best-in-class solar products and solution.

Within a short span of time. Royal India is now a renowned name in the solar industry and providing solutions for solar water pumps, Solar street lights, and other related products. Its state-of-the art technology and robust systems produce superior qualitya and long-lasting products and solutions.



Why us?

Royal India solar-powered water pumps are a low-cost solution enabling residents in these areas to spend more time increasing their income by growing crops etc. rather than ferrying water from far off distances.

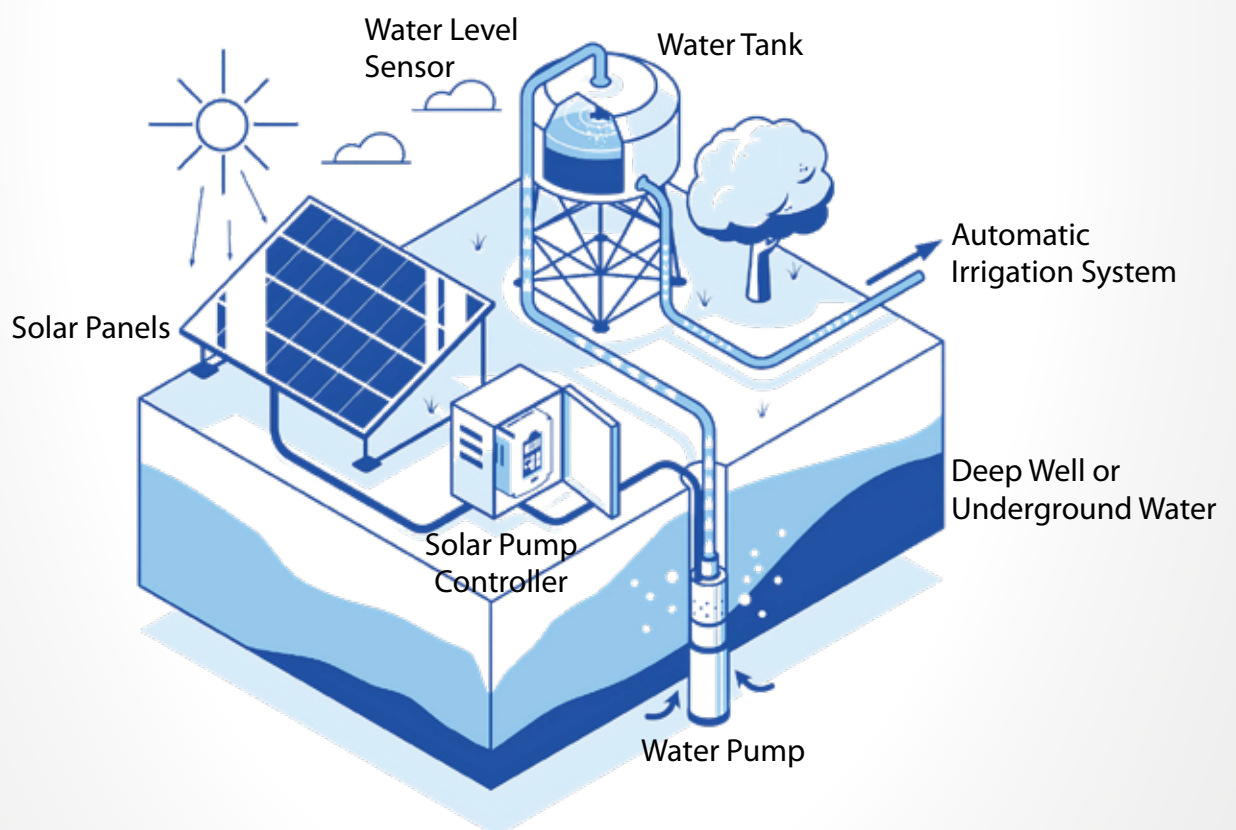


Introduction

SPC Water Pumping System

Diagram of SPC Water Pumping

SPC Water pumping system set uses the irradiance available through the spc array. The SPC array produces SDC power, which can be utilized to drive a DC or an AC pump set using a pump controller



SOLAR PUMP CONTROLLER

(Specification)

- Easy to connect and disconnect the motor by IP68 push-type connector.
- Seven segment ICD display to easy run parameter and type of fault.
- External keypad provided to change parameter and copy parameter.
- Having easy to power ON/OFF by DC switch
- Provided Protection as per MNRE.
- Solar pump controller must have IP65 protection and shall be housed in a cabinet.
- A maximum Powerpoint tracker (MPPT) shall be included to optimally used the power and maximize water discharge.
- Solar pump controller shall be integrated with inbuild GSN. GPRS gateway with GEO tagging.



Smart SPC Features



Dry Running

Open Circuit

Short Circuit

Reverse Polarity

Over Voltage / Under Voltage

SPD to Arrest High current surge



Suitable for AC/PMSM/BLCD Motor
Keypad to copy/paste parameter



Inbuilt RMS/GPRS with IoT system
Compaq in Design

Certified by Underwriter Laboratories | MNRE approved

SPC IP65 1HP to 10HP

Pump Controller converts the DC voltage of the SPC array into a suitable DC or AC, single or multi-phase power, and may also include equipment for MPPT, remote monitoring, and protection vices.

OUR PRODUCTS SIZE

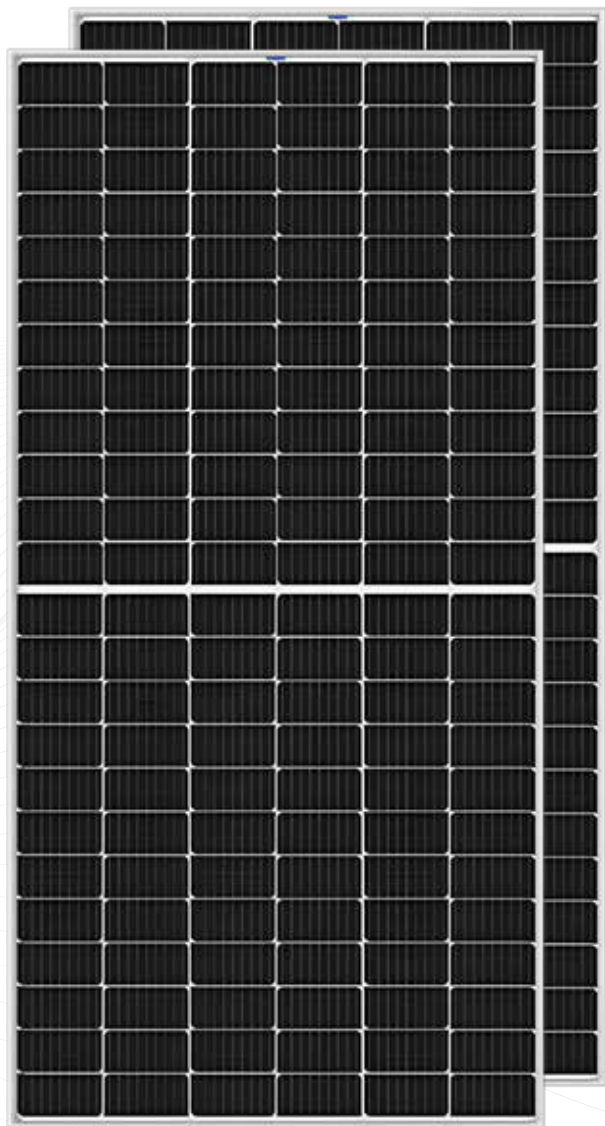
Model No.	Rating	L	B	H	Weight
RIIPL20201	2.2Kw, 3HP	400 mm	300mm	187 mm	4 KG
RIIPL00405	4Kw, 5HP	400 mm	300 mm	187 mm	6 KG
RIIPL70510	7.5Kw, 10HP	540 mm	540 mm	280 mm	6 KG

SPC FEATURES

[Remote Monitoring System Device)

- Control Motor : PMSM/BLDC Motor
- MPPT
- Keypad : Parameter copy and paste
- RMS and IoT System
- IoT Online Software is update
- All kind of protection function





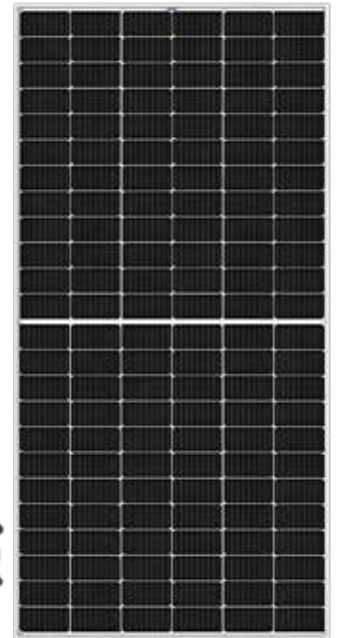
RESIN-PACKED WATER FILLED MOTOR PUMP SET - 1 HP

SPECIFICATION	1 HP BLDC MOTOR PUMP SET			Motor: High-Temperature Magnet Brushless DC Motor
Model No. as per MNRE	Model-1			Pump Material: SS-304
HP	1 HP			
PV array (Wp)	900			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)
Rated head (mtr.)	30	60	90	
Optimum Head Range (mtr.)	10-20	20-40	40-60	
Discharge (LPD)	60000#	42000#	25200#	
Shut Off head (mtr.)	25	45	70	
Shut off Dynamic Head (meters)	45			
Water output (LPD) from a total head of 30 meters.	45600			
PV Array Rating in Watts Peak	900 Wp			
Input Voltage (Vmp)	55-75 Vac			
Input Max. Current	13 A			
Ambient Temperature Range	Up to 50° C			

1 HP DC SOLAR | Monoblock Pump Set

Monoblock Pump 2800 RPM Motor with High Discharge

Specification	1 HP Surface Pump
HP	1
Model No. as per MNRE	Model-1
KW	0.75
Rated head (mtr.)	10
Water Discharge (LPD)	99,000 [#]
Shut Off Dynamic Head (meters)	12
PV Array (Wp)	900 Wp
Input Voltage (Vmp.)	200 V
Input Max. Current	13 A
Ambient Temperature Range	Up to 50° C



“SPC Series IP65 Category Solar Pump Controller with Compact Design and Low Weight, Product Life is Greater than IP54 Controller.”



1

Model No.
RIIPL20201



2

Voltage Range
100-440 VDC



3

Power Range
22 KW



4

Current Rating (A)
10.0 A





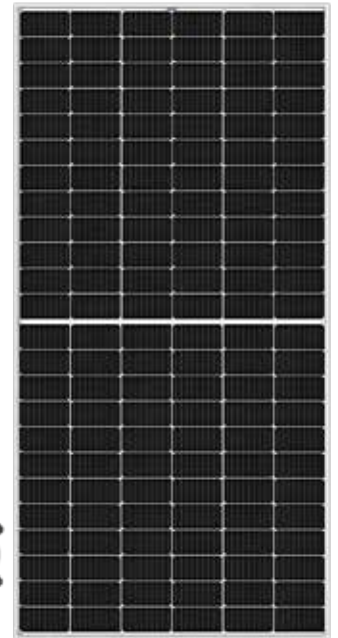
RESIN-PACKED WATER FILLED MOTOR PUMP SET - 2HP

SPECIFICATION	2 HP BLDC MOTOR PUMP SET				Motor: High-Temperature Magnet Brushless DC Motor
Model No. as per MNRE	Model-2				Pump Material: SS-304
HP	2 HP				
PV array (Wp)	1800				“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)”
Rated head (mtr.)	30	50	70	100	
Optimum Head Range (mtr.)	20-40	40-60	60-80	90-110	
Discharge (LPD)	63000#	37800#	25200#	17100#	
Shut Off head (mtr.)	45	70	150		
Shut off Dynamic Head (meters)	45				
Water output (LPD) from a total head of 30 meters.	68400				
PV Array Rating in Watts Peak	1800 Wp				
Input Voltage (Vmp)	200V				
Input Max. Current	13 A				
Ambient Temperature Range	Up to 50° C				

2 HP DC SOLAR | Monoblock Pump Set

Monoblock Pump 2800 RPM Motor with High Discharge

Specification	2 HP Surface Pump
HP	2
Model No. as per MNRE	Model-2
KW	1.5
Rated head (mtr.)	10
Water Discharge (LPD)	198,000 [#]
Shut Off Dynamic Head (meters)	12
PV Array (Wp)	1800 Wp
Input Voltage (Vmp.)	230 V
Input Max. Current	13 A
Ambient Temperature Range	Up to 50° C



“Royal India IP65 solar water pump controller has an efficiency of 97% (A certified by Underwriter Laboratories) which is much higher than VFD products at 85%.”



1

Model No.
RIIPL20201



2

Voltage Range
100-440 VDC



3

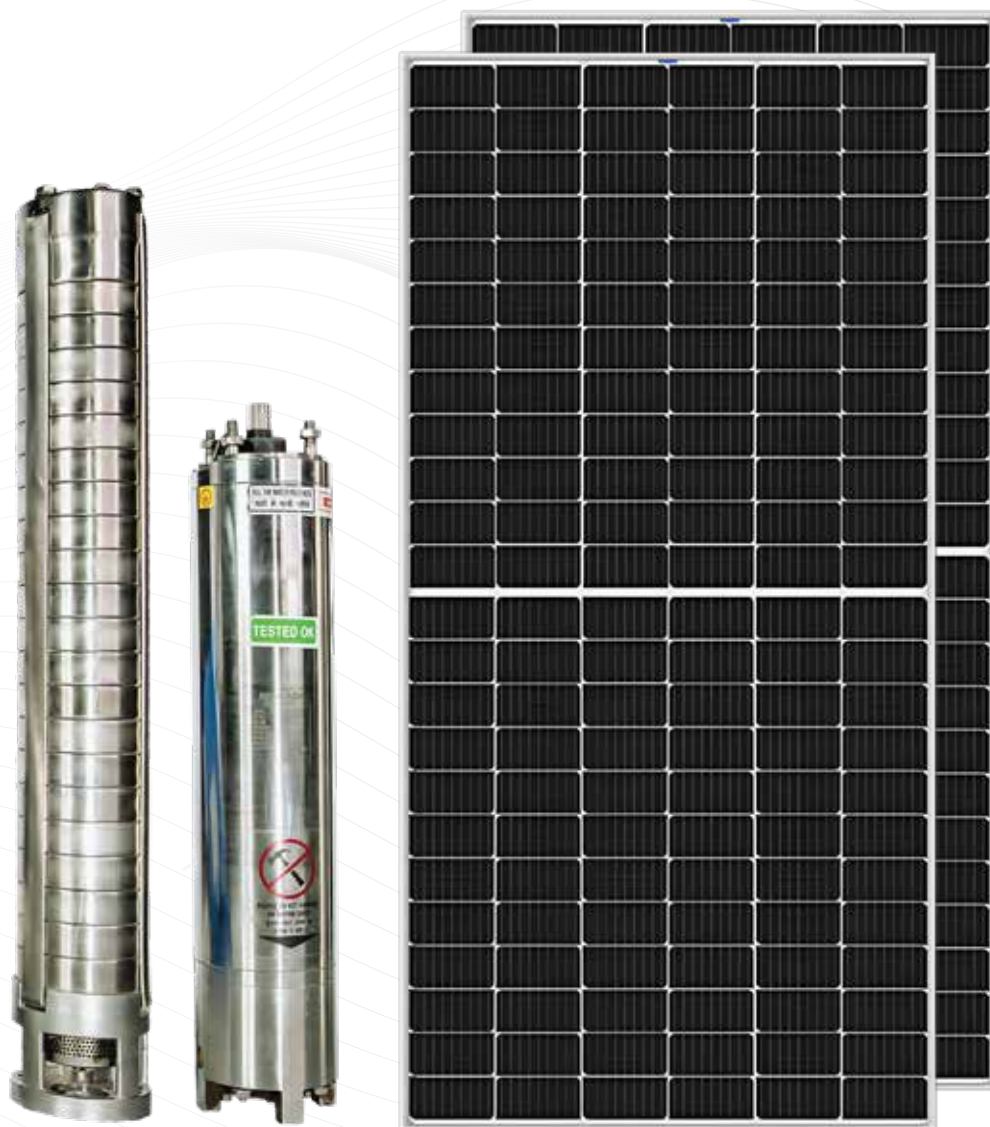
Power Range
22 KW



4

Current Rating (A)
10.0 A





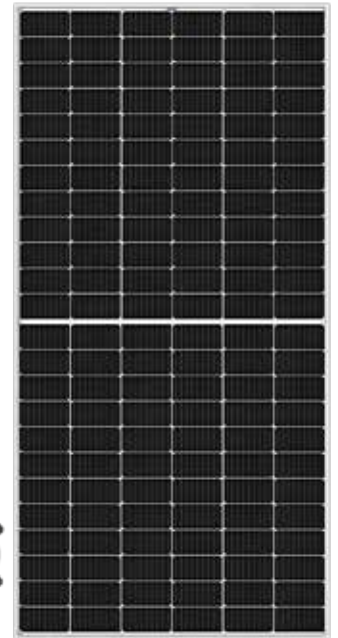
MOTOR PUMP SET - 3HP

SPECIFICATION	3 HP BLDC MOTOR PUMP SET				Motor: High-Temperature Magnet Brushless DC Motor
Model No. as per MNRE	Model-3,4,5				Pump Material: SS-304
HP	3 HP				“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)”
PV array (Wp)	3000				
Rated head (mtr.)	20	30	50	70	
Optimum Head Range (mtr.)	10-20	20-40	40-60	60-80	
Discharge (LPD)	165,000 [#]	114,000 [#]	69,000 [#]	45,000 [#]	
Shut Off head (mtr.)	25	45	70	100	
Shut off Dynamic Head (meters)	45	70	100		
Water output (LPD) from a total head of	(50 meters) 114000	(70 meters) 69000	(50 meters) 45000		
PV Array Rating in Watts Peak	3000 Wp				
Input Voltage (Vmp)	460 V				
Input Max. Current	13 A				
Ambient Temperature Range	Up to 50° C				

3 HP DC SOLAR | Monoblock Pump Set

Monoblock Pump 2800 RPM Motor with High Discharge

Specification	3 HP Surface Pump	
HP	3	
Model No. as per MNRE	Model-3,4	
KW	2.25	
Rated head (mtr.)	10	20
Water Discharge (LPD)	297,000 [#]	148,500 [#]
Shut Off Dynamic Head (meters)	12	25
PV Array (Wp)	2700 Wp	
Input Voltage (Vmp.)	460 V	
Input Max. Current	13 A	
Ambient Temperature Range	Up to 50° C	



“Built-in troubleshooting. identifying issues ahead of time. and accurate diagnosis IP65.”



1

Model No.
RIIPL20201



2

Voltage Range
100-440 VDC



3

Power Range
2.2 KW



4

Current Rating (A)
10.0 A





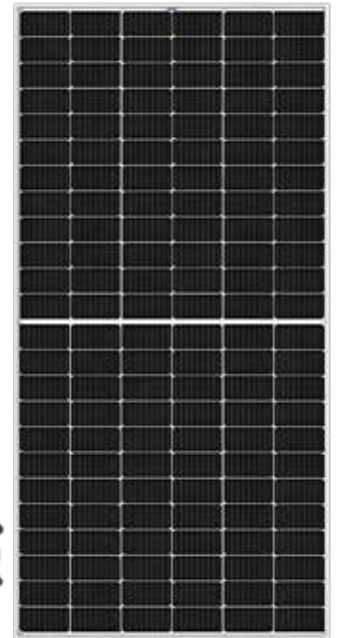
MOTOR PUMP SET - 5 HP

SPECIFICATION	5 HP BLDC MOTOR PUMP SET				Motor: High-Temperature Magnet Brushless DC Motor
Model No. as per MNRE	Model-6,7,8				Pump Material: SS-304
HP	5 HP				
PV array (Wp)	4800				“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)”
Rated head (mtr.)	20	30	50	70	
Optimum Head Range (mtr.)	10-20	20-40	40-60	60-80	
Discharge (LPD)	264,000 [#]	182,400 [#]	110,400 [#]	72,000 [#]	
Shut Off head (mtr.)	25	45	70	100	
Shut off Dynamic Head (meters)	70	100	150		
Water output (LPD) from a total head of	(50 meters) 110400	(70 meters) 72000	(100 meters) 50400		
PV Array Rating in Watts Peak	4800 Wp				
Input Voltage (Vmp)	460 V				
Input Max. Current	13 A				
Ambient Temperature Range	Up to 50° C				

5 HP DC SOLAR | Monoblock Pump Set

Monoblock Pump 2800 RPM Motor with High Discharge

Specification	5 HP Surface Pump		
HP	5		
Model No. as per MNRE	Model-5,6,7		
KW	3.75		
Rated head (mtr.)	10	20	30
Water Discharge (LPD)	528,000 [#]	264,000 [#]	182,400 [#]
Shut Off Dynamic Head (meters)	12	25	45
PV Array (Wp)	4800 Wp		
Input Voltage (Vmp.)	460V		
Input Max. Current	13 A		
Ambient Temperature Range	Up to 50° C		



“Royal India Solar Water Pump Controller with enable GPS and Remote Monitoring for Solar Irrigation System.”



1

Model No.
RIIPL00405



2

Voltage Range
100-440 VDC



3

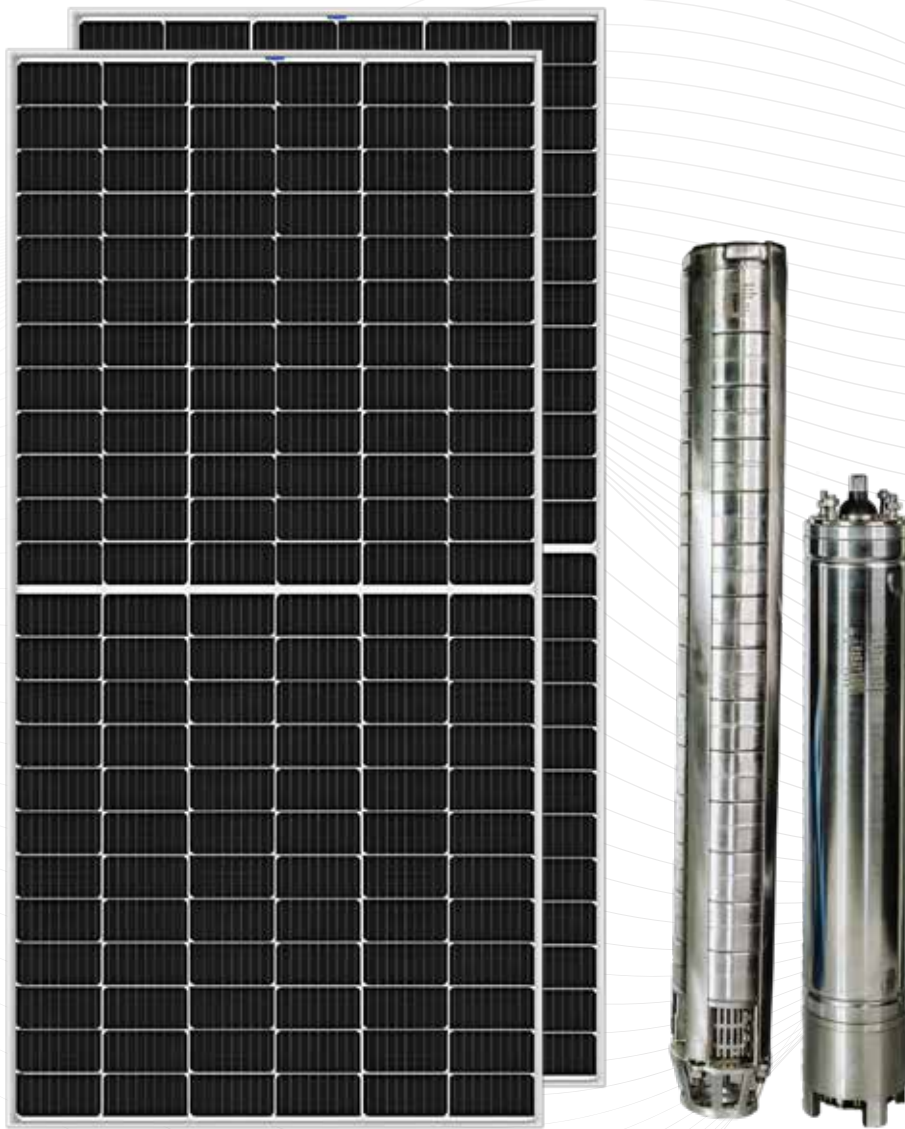
Power Range
4 KW



4

Current Rating (A)
16. A





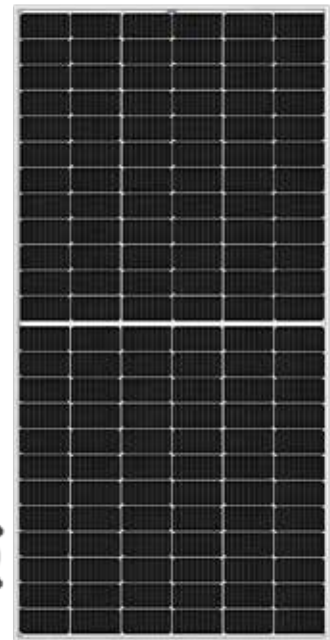
MOTOR PUMP SET - 7.5 HP

SPECIFICATION	7.5 HP BLDC MOTOR PUMP SET			Motor: High-Temperature Magnet Brushless DC Motor
Model No. as per MNRE	Model-9,10,11			
HP	7.5 HP			
PV array (Wp)	6750			“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)”
Rated head (mtr.)	50	70	100	
Optimum Head Range (mtr.)	40-60	60-80	90-110	
Discharge (LPD)	141,750 [#]	94,500 [#]	64,125 [#]	
Shut Off head (mtr.)	70	100	150	
Shut off Dynamic Head (meters)	70	100	150	
Water output (LPD) from a total head of	(50 meters) 155250	(70 meters) 101250	(100 meters) 70875	
PV Array Rating in Watts Peak	6750 Wp			
Input Voltage (Vmp)	900 V			
Input Max. Current	13 A			
Ambient Temperature Range	Up to 50° C			

7.5 HP DC SOLAR | Monoblock Pump Set

Monoblock Pump 2800 RPM Motor with High Discharge

Specification	7.5 HP Surface Pump		
HP	7.5		
Model No. as per MNRE	Model-8,9,10		
KW	5.625		
Rated head (mtr.)	10	20	30
Water Discharge (LPD)	742,500 [#]	371,250 [#]	256,500 [#]
Shut Off Dynamic Head (meters)	12	25	45
PV Array (Wp)	6750 Wp		
Input Voltage (Vmp.)	900 V		
Input Max. Current	13 A		
Ambient Temperature Range	Up to 50° C		



“PowerPoint tracking and maximize the use of solar energy. And will automatically regulate output frequency according to sun radiance intensity. maximum realize MPPT tracking function.”



1

Model No.
RIIPL70510



2

Voltage Range
250-800 VDC



3

Power Range
7.5 KW



4

Current Rating (A)
17. A





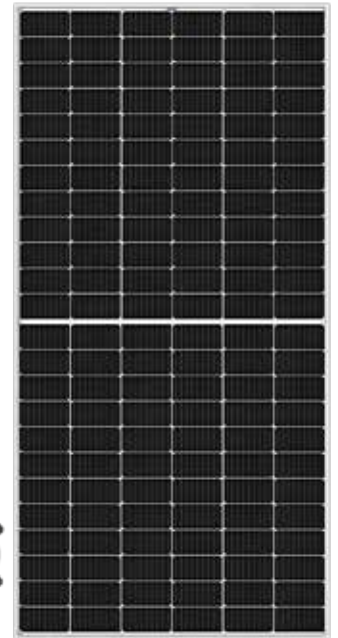
MOTOR PUMP SET - 10 HP

SPECIFICATION	10 HP BLDC MOTOR PUMP SET			Motor: High-Temperature Magnet Brushless DC Motor
Model No. as per MNRE	Model-12,13,14			
HP	10 HP			
PV array (Wp)	9000			“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)”
Rated head (mtr.)	20	30	50	
Optimum Head Range (mtr.)	10-20	20-40	40-60	
Discharge (LPD)	60000#	42000#	25200#	
Shut Off head (mtr.)	25	45	70	
Shut off Dynamic Head (meters)	70	100	150	
Water output (LPD) from a total head of	(50 meters) 207000	(70 meters) 135000	(100 meters) 94500	
PV Array Rating in Watts Peak	9000 Wp			
Input Voltage (Vmp)	900 V			
Input Max. Current	13 A			
Ambient Temperature Range	Up to 50° C			

10 HP DC SOLAR | Monoblock Pump Set

Monoblock Pump 2800 RPM Motor with High Discharge

Specification	10 HP Surface Pump		
HP	10		
Model No. as per MNRE	Model-11,12,13		
KW	7.5		
Rated head (mtr.)	10	20	30
Water Discharge (LPD)	990,000 [#]	495,000 [#]	342,000 [#]
Shut Off Dynamic Head (meters)	12	25	45
PV Array (Wp)	9000 Wp		
Input Voltage (Vmp.)	900 V		
Input Max. Current	13 A		
Ambient Temperature Range	Up to 50° C		



“IP65 Solar Pump controller is an important part of the PV pump system, which converts the input DC from PV array into AC for driving Pump”



1

Model No.
RIIPL70510



2

Voltage Range
350-800 VDC



3

Power Range
7.5 KW



4

Current Rating (A)
17. A



Notification Body



ISO 9001:2015 Certificate No : 1019QU08
ISO 14001: 2015 Certificate No : 1019EP03

Certificate of compliance quality veritas certification
Limited [certificate No. : 4261]

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And Never Compromise On the Quality of Our
Products and Services.**



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