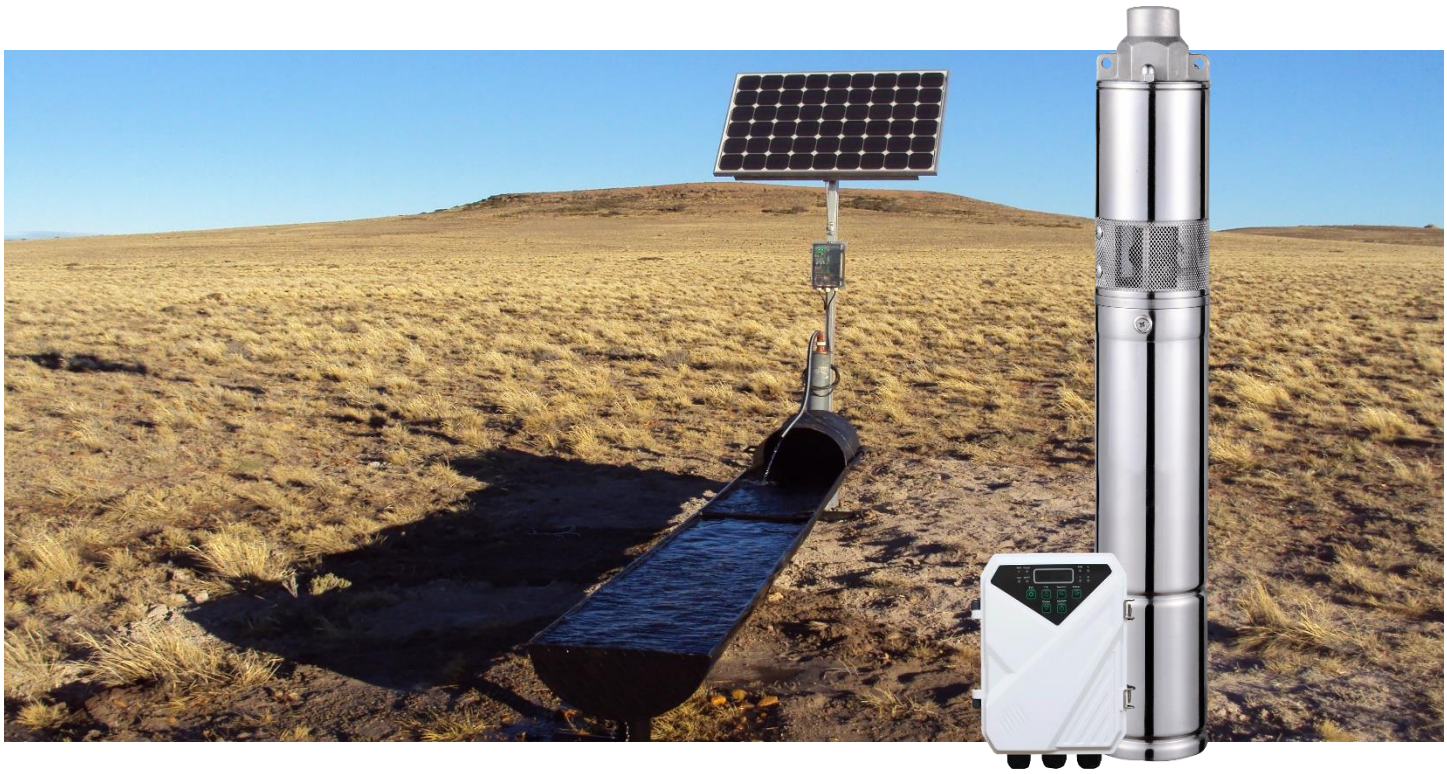
SUBMERSIBLE SOLAR PUMPS

DOMESTIC•INDUSTRIAL•AGRICULTURAL

STOCK WATER•IRRIGATION•WATER TRANSFER



SUBMERSIBLE SOLAR PUMPS

SUBMERSIBLE SOLAR PUMP RANGE

- 3DSS 24/120 24V, 120W
- 3DSS 36/210 36V, 210W
- 3DSS 48/500 48V, 500W
- 3DSS 48/75 48V, 750W
- 3DSS 72/75 72V, 750W
- 3DSS 72/1100 72V, 1100W

MATERIAL:

- Outlet: Stainless steel 304
- Pump Body: Stainless steel 304
- Motor Body: Stainless steel 304
- Bearing: NSK (made in Japan)
- Screw and Nut: Stainless steel 316
- 100% Copper winding
- Wear resistant rubber stator

PRODUCT FEATURE:

- Compact structure with high efficiency, low noise, and pollutant free.
- Speed controlled for accommodating low yield boreholes.
- Soft start electrical control panel provides protection against under-voltage, over-voltage, over-pumping, overloading and provides waterless automatic recovery
- Easy installation, maintenance-free, safe, and reliable
- DC brushless motor:
  Max water submersion depth: 45m
  Max flow: 2.6m³/h
  Max head: 120m
- Probe for monitoring water level in borehole.
- Probe for monitoring water level in tank
- Spare rotor & Stator set.

APPLICATION:

- Suitable for installation in boreholes, wells, rivers, dams, and tanks with minimum OD of 80mm

WORKING CONDITIONS:

- Non-corrosive water with a volume ratio of sand content not exceeding 1% and the particle size not exceeding 0.5mm
- Max pumped liquid temperature 40°C
- PH capability 6.5 – 8.5

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INFORMATION:

Model	Motor Voltage (V)	Power (Watt)	Open Circuit Voltage	Max Flow	Max Head (m)	Outlet (INCH)	Diameter (INCH)	Panels Watt
3DSS 24-120	24	120	<50	1.2	56	3/4"	3"	1 x 200W
3DSS 36-210	36	210	<50	1.2	77	3/4"	3"	1 X 330W
3DSS 48-500	48	500	<100	1.7	109	3/4"	3"	2 X 330W
3DSS 48-750	48	750	<100	2	150	3/4"	3"	4 X 330W
3DSS 72-750	72	750	<150	2	150	3/4"	3"	3 X 330W
3DSS 72-1100	72	1100	<200	2.2	180	3/4"	3"	8 x 200W

PERFORMANCE CHART:

Model	Power	l/min	0	3	7	10	13	17	20	23	27	30	33	37
	kW	m³/h	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2
3DSS 24-120	0.12	H(m)	56	43	36	33	24	18	8	2	-	-	-	
3DSS 36-210	0.21		77	60	50	40	30	18	10	2	-	-	-	
3DSS 48-500	0.50		109	103	97	85	78	74	62	35	2	-	-	
3DSS 48-750	0.75		150	144	137	120	100	90	60	45	30	16	2	
3DSS 72-750	0.75		150	144	137	120	100	90	60	45	30	16	2	
3DSS 72-1100	1.10		180	164	148	126	97	68	66	52	25	20	10	2

CABLE SIZE:

Model	Power	Cable Size	Head (m)														
	kW		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
3DSS 24-120	0.12	mm x 3core		4	4	4	6											
3DSS 36-210	0.21	mm x 3core		4	4	4	6	6	6	6								
3DSS 48-500	0.50	mm x 3core		4	4	4	6	6	10	10	10	10						
3DSS 48-750	0.75	mm x 3core		4	6	6	10	10	10	16	16	16	16	25	25	25	25	
3DSS 72-750	0.75	mm x 3core		4	4	4	4	4	6	6	6	10	10	10	10	10	10	
3DSS 72-1100	1.10	mm x 3core		4	4	4	6	6	10	10	10	10	10	16	16	16	16	16

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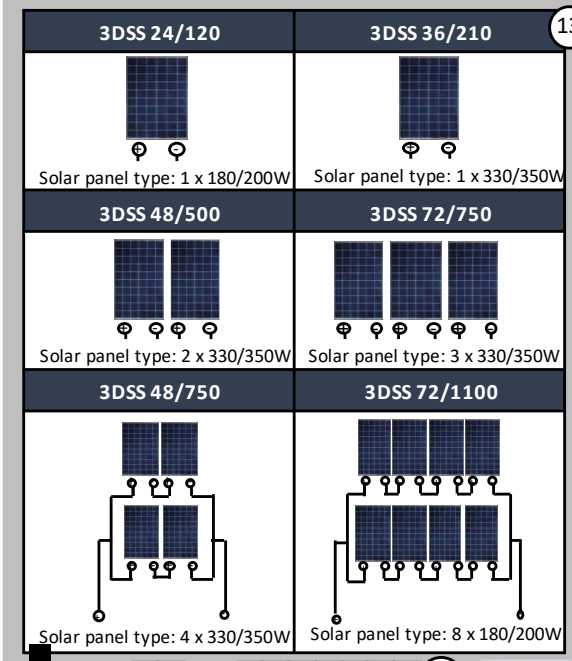
INFORMATION LEAFLET:

SOLAR 3” SCREW PUMPS

Performance Charts

Model	Power	l/min	0	3	7	10	13	17	20	23	27	30	33	37
	kW	m³/h	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2
3DSS 24-120	0.12	H(m)	56	43	36	33	24	18	8	2	-	-	-	
3DSS 36-210	0.21		77	60	50	40	30	18	10	2	-	-	-	
3DSS 48-500	0.50		109	103	97	85	78	74	62	35	2	-	-	
3DSS 48-750	0.75		150	144	137	120	100	90	60	45	30	16	2	
3DSS 72-750	0.75		150	144	137	120	100	90	60	45	30	16	2	
3DSS 72-1100	1.10		180	164	148	126	97	68	66	52	25	20	10	2



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ABC AQUA SOLAR MINI KIT:

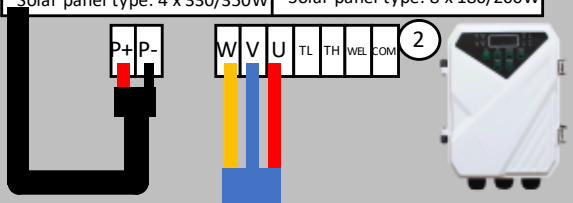
1. Pump and Motor Set
2. Control Box
3. Float Switch for tank

ABC AQUA SOLAR KIT:
Mini Kit +

4. Cable
5. Heat Shrink
6. Barrel Nipple
7. Nylon Reducing Bush
8. Non -Return Valve
9. Plasson Male Adaptor
10. Base Plate
11. Nylon Elbow

ABC AQUA COMPLETE KIT:
Solar Kit +

12. HDPE Pipe
13. Solar Panels
14. Solar Panel Frame



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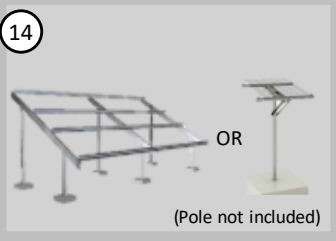

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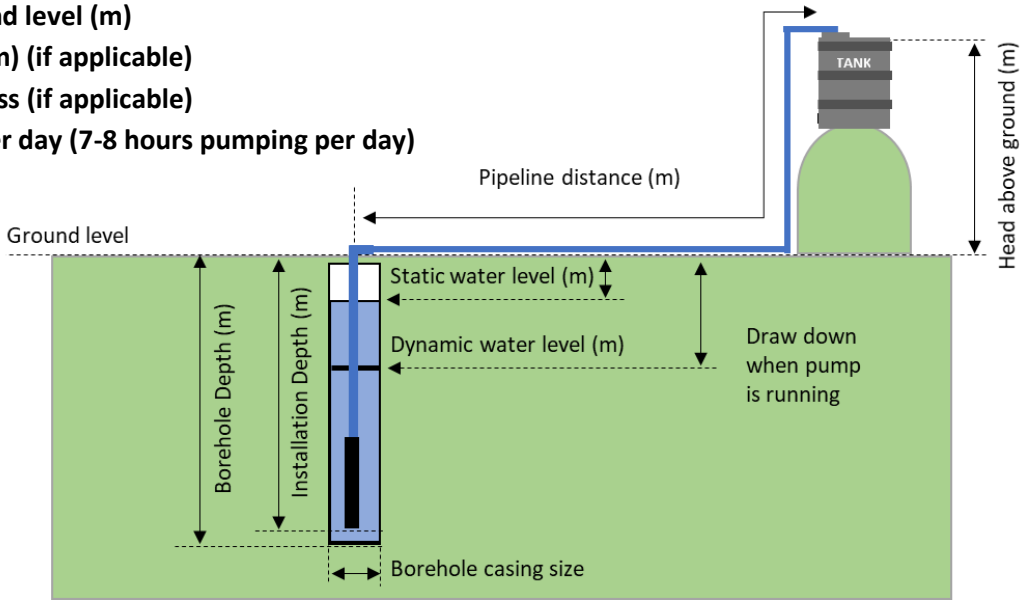
SELECTION CRITERIA:

1. Casing inner diameter
2. Borehole depth (m)
3. Installation depth (m)
4. Static Water Level (m)
5. Dynamic water level (m)
6. Static height above ground level (m)
7. Distance above ground (m) (if applicable)
8. Current pipe size, and class (if applicable)
9. Capacity / flow – liters per day (7-8 hours pumping per day)
10. Other pressure required



LIVESTOCK WATER REQUIREMENT:

COW	34-49 L/DAY (Average 40 L/DAY)
DAIRY COW	68-83 L/DAY (Average 80 L/DAY)
PIG	4.5-7.3 L/DAY (Average 5 L/DAY)
SHEEP	4-6.5 L/DAY (Average 5 L/DAY)
HORSE	26-45 L/DAY (Average 45 L/DAY)

ADDITIONAL INFORMATION:

14 PSI	=	1	Bar
1 Bar	=	10	Meters
1 m^3h	=	1 000	Litres
Conversion of Gallons to Litres	=	Gallons x 4.5	
1 Foot (measurement)	=	0.305 meters	

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TROUBLE SHOOTING:

Fault Code	Fault Description	Causes and Solutions of Fault	Recovery Procedure
P0	Hardware Overcurrent	- Motor model is mismatched, please choose matching pumps - UVW three-phase short-circuit connection, please rewire to ensure the normal installation of UVW	Automatically remove after 30s
P43	Phase-lack Protection	- UVW three-phase open circuit please rewire to ensure it reliable contact	Automatically remove after 30s
P46	Stall Protection	- Motor model is mismatched, please choose matching pumps - Pump extension cord is too long, please reduce the extension cord - Power too low, increase the power supply - Pump bearing is stuck, please clean pump bearing	Automatically remove after 30s
P49	Software Overcurrent	- Water pump bearing stuck, clean pump bearings - UVW three-phase short-circuit connection, please rewire to ensure the normal installation of UVW	Automatically remove after 30s
P50	Low Voltage protection	The input voltage is too low, please distributer power refers to the electrical characteristics	Voltage returns to normal, remove the fault immediately
P51	High Voltage Protection	The input voltage is too high, please distribute power refer to the electrical characteristics	
P48	Dry-Run Protection	- Not all of air in the pump is exhausted, vut off the power, re power and start the pump drainage after 30 seconds - There is no water in the water tank waiting for water to recover	Automatically clear after 30 minutes or re-power to clear
P60	High Temperature Protection	The temperature of controller MCU is more than 90°C	Automatically clear after 30 minutes or re-power to clear
E8	Current Sampling Failure	Cut off the power and restart after 30 seconds	Restart the power
PL	Power Shortage	- No sunlight, waiting for the sunlight to restart - Solar panel matching error, refer to the recommendation to match correctly	At the first 5 times, it will remove after 30 seconds, and then 30 minutes to remove
ALRM	Reverse Connection Protected	Exchange the positive and negative wire	Restart the power

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PROGRAMMING:

Turn on Dry run Protection (P0.1) to 1:

1. Press and hold **[Set]** for +/- 5 sec till (P0.0) appears on the screen
2. Press **[Enter]**
3. Set (P0.0) to 12 by Pressing the **[Up]** button
4. Once on (12) press **[Enter]**
5. Scroll to (P0.1) by pressing the **[Up]** button
6. Set (P0.1) to 1 by pressing the **[Up]** button
7. Once on (1) press **[Enter]**
8. Press and hold **[Set]** for +/- 5 sec till pump starts again.

Turn off Dry run Protection (P0.1) to 0:

1. Press and hold **[Set]** for +/- 5 sec till (P0.0) appears on the screen
2. Press **[Enter]**
3. Set (P0.0) to 12 by Pressing the **[Up]** button
4. Once on (12) press **[Enter]**
5. Scroll to (P0.1) by pressing the **[Up]** button
6. Set (P0.1) to 0 by pressing the **[Down]** button
7. Once on (0) press **[Enter]**
8. Press and hold **[Set]** for +/- 5 sec till pump starts again.

Speed control (P0.9):

1. Press and hold **[Set]** for +/- 5 sec till (P0.0) appears on the screen
2. Press **[Enter]**
3. Set (P0.0) to 12 by Pressing the **[Up]** button
4. Once on (12) press **[Enter]**
5. Scroll to (P0.9) by pressing the **[Up]** button
6. Set speed between max (4000) and min (0000) by pressing the **[Up]** and **[Down]** button
7. Once desired speed is obtained press **[Enter]**
8. Press and hold **[Set]** for +/- 5 sec till pump starts again.