

Moving Water is Solar Business

Solar Pump Controller

Solar Pumping Solution



COMPANY PROFILE

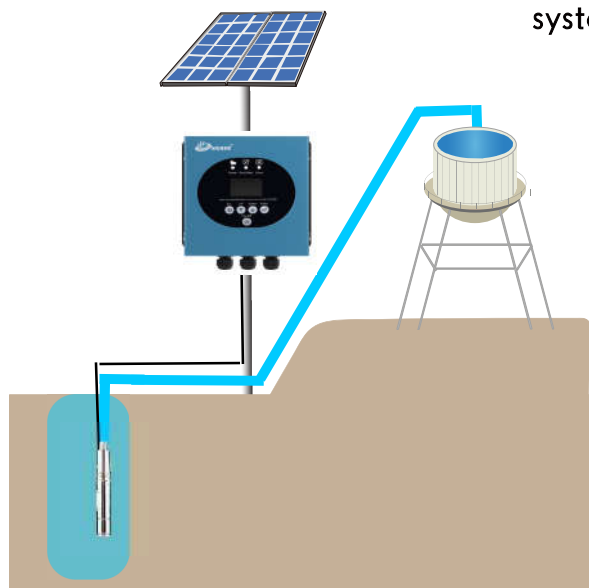


Hober Technology Co.,LTD is a professional large-scale manufacturer of solar pump, integrating development and production together. As a leader in china,we have patent by ourselves and CE,ISO90001 certification, and still focus on research, development and innovation. Our company was established in 2009, located near Hongkong which convenient sea, land and air transportation.

Solar DC Pump



DC solar pump system consists of solar panels, MPPT dc pump controller DC pump, and water storage device. The DC brushless motor is 30% higher efficiency than AC pump motors. Solar panels convert sunlight into electrical energy which is passed to the solar pump controller. The solar controller stabilizes the voltage and output power to drive the pump motor.



system chart

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Solar Pump Controller



1. Solar Or Battery Input . Compatible with Battery Mode 24/36/48/96/110v
2. Automatic MPPT Function to Identify the Voc and Vmp of Solar Panel
3. Support Sensorless DC Motor 24/36/48/72/96V/110v

4. Protection:

Solar DC Input Over-Voltage

Input Over Load Over Temperature

Well Water Empty(By Sensor)

Solar DC Input Anti-reverse

Output Over Current

Output Phase lost

Output Short Circuit

Water Over Flow of Tank(By Sensor)

Battery Low Voltage/Over Voltage Protection

5. IP65 waterproof and dustproof

6. LCD display

DC Motor(PMSM) Controller Specifications

Model No.		HBDC750			HBDC1500
Solar Panel DC Input	Max Voc Voltage	150V			240V
	Min Vmp Voltage	20V			70V
	Recommend Vmp Voltage	> Motor Voltage			> Motor Voltage
	Max MPPT Efficiency	98%			98%
	Max Input Current	18A			18A
	Number Of Strings Mc4	1 (+,-)			
	Note	Automatic MPPT Function to Identify the Voc and Vmp of Solar Panel,without programming			
Battery Input	Voltage	24 / 36 / 48 /96 /110 V Depend on the Pump Voltage			
	Max Input Current	25 A			18A
	Battery Protection Voltage MIN, RECOVERY,MAX	21.3V 23V 30V @ 24V	32.5V 35V 40V @ 36V	42.6V 46V 52V @ 48V	86.4V 92V 108.8V @96V
DC Output Parameters	Max Adapted DC Pump Horse Power	1 HP			2HP
	Max Adapted DC Pump Power	750W			1500W
	Drive Mode	3Phase Variable Speed Drive (Foc Drive)			
	Output Voltage	24 / 36 / 48 /72 V			96/110V
	Max Output Current	18A			18A
Water level Sensor(well / tank)		Yes			
Display		LCD display Settable working time, Remote Control via Wi-Fi/4G Module			
Waterproof		IP65			
Noise		< 50dB			
Cooling Method		Natural cooling			Natural Cooling
Protection		Solar DC input Over Voltage Solar DC Input Reverse Polarity Battery Protection DC Output Short-circuit DC Output Phase Lose(3Phase) Over Temperature Over Flow of Tank Water Empty of Well			
Operating Environment	Operating environment temperature	-10 to 60℃, Above 60℃ need to derate load			
	Max Humidity	95%RH			
	Using altitude	< 3000m, Above 3000m need to derate load			
	Others	Prohibiting the installation location: direct sunlight, thick dust, corrosive gas or oil mist, flammable gas, liquid.etc			
Package	Size	21*19*11CM			
	Weight	3.5KGS			4KGS

Solar Pump Controller



1. Automatic MPPT Function to Identify the Voc and Vmp of Solar Panel
2. Hybrid Ac input
3. Support Sensorless DC Motor 220V
4. Protection:
 - Solar DC Input Over-Voltage Solar DC Input Anti-reverse Over Load
 - DC Output Phase lost DC Output Short Circuit Over Temperature
 - Water Over Flow of Tank(By Sensor)
 - Borehole Water Empty(By Sensor or software)
5. Variable Speed Drive

💡 DC Motor(PMSM) Contoller Specifications

Model No.		HBDC2200LC
Solar Panel DC Input	Max Voc Voltage	450V
	Min Vmp Voltage	160V
	Recommend Vmp Voltage	>= 220V
	Hybrid Mode of Vmp Voltage	>= 320V
	Max MPPT Efficiency	98%
	Max Input Current	18 A
	Max Input Power	3300 (W)
	Number Of Strings Mc4	1 (+,-)
Note		Automatic MPPT Function to Identify the Voc and Vmp of Solar Panel,without programming
AC Input	Voltage	220V Single phase 50 or 60Hz
	Max Input Current	15 A
DC Output Parameters	Max Adapted DC Pump Horse Power	3 HP
	Max Adapted DC Pump Power	2200W
	Drive Mode	3Phase Variable Speed Drive
	Output Voltage	220V
	Max Output Current	16A
Water level Sensor(well / tank)		Yes
Display		Led display :Solar Voltage , Current & Power and Rpm of pump LED: Run/Stop Borehole Tank, Fault
Waterproof		IP65
Noise		< 50dB
Cooling Method		Force Fan cooling
Protection		Solar DC input Over Voltage Solar DC Input Reverse Polarity DC Output Short-circuit DC Output Phase Lose(3Phase) Over Temperature Over Flow of Tank Water Empty of Well
Operating Environment	Operating environment	-10 to 60℃, Above 60℃ need to derate load
	Max Humidity	95%RH
	Using altitude	< 3000m, Above 3000m need to derate load
	Others	Prohibiting the installation location: direct sunlight, thick dust, corrosive gas or oil mist, flammable gas, liquid.etc

Solar Deep well Pump

Advantage of solar pump

Maintenance-Free Brushless DC Motor
 Integrated DSP & MPPT(Maximum Power Point remote controlTracking)
 Suitable for Wide DC voltage Operation
 Control inputs for well probe,dry running protection
 Battery Operation,low voltage disconnect for battery etc.
 Overload and high Adjustable speed control of motor
 Temperature Protection and against reverse polarity



Material of Parts



01

Outlet

Stainless Stell
AISI 304 SS/316SS



02

Inlet

Stainless Stell
AISI 304 SS/316SS



03

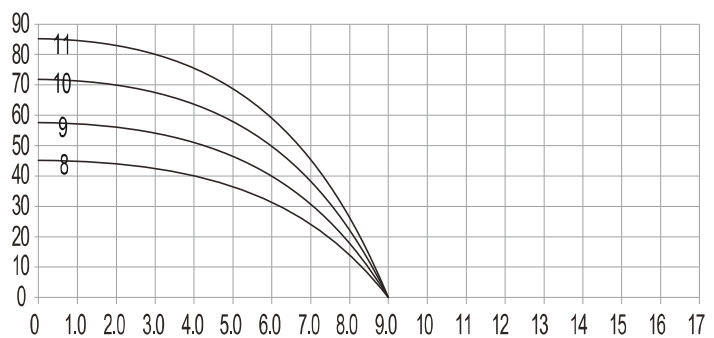
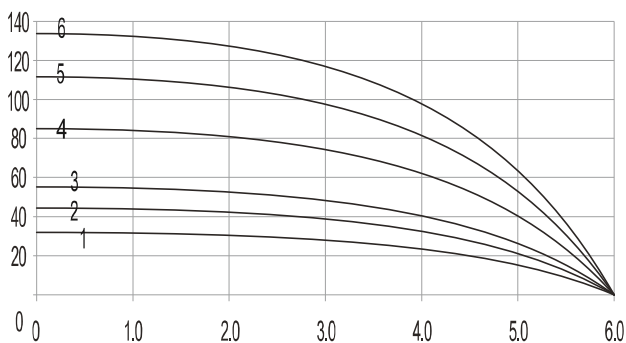
Bottom support

Stainless Stell
AISI 304 SS/316SS

Peformance Datasheet

Model No.	Solar Pump Model Name	Voltage	Controll er Power	Motor Power	Solar panels Reference	Max Flow & Lift		Well Diameter	Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)	(inch)
1	HBP4C-48-400-6-32	48	750	400	335w *2PCS	6m3/h	32m	G 5" 125mm	G 1 1/4" 32mm
2	HBP4C-72-600-6-42	72	750	600	450w * 2pcs	6m3/h	42m	G 5" 125mm	G 1 1/4" 32mm
3	HBP4C-72-750-6-56	72	750	750	540w *2PCS	6m3/h	56m	G 5" 125mm	G 1 1/4" 32mm
4	HBP4C-110-1100-6-84	110	1100	1100	540w *3PCS	6m3/h	84m	G 5" 125mm	G 1 1/4" 32mm
5	HBP4C-110-1300-6-112	110	1500	1300	335w*6PCS, 3pcs *2	6m3/h	112m	G 5" 125mm	G 1 1/4" 32mm
6	HBP4C-110-1500-6-135	110	1500	1500	335w*6PCS, 3pcs *2	6m3/h	135m	G 5" 125mm	G 1 1/4" 32mm
7	HBP4C-300-2200-6-175	300	2200	2200	335w*9PCS in series	6m3/h	175m	G 5" 125mm	G 1 1/4" 32mm
8	HBP4C-96-750-9-45	96	750	750	450w *3PCS	9m3/h	45m	G 5" 125mm	G2" 50mm
9	HBP4C-110-1100-9-58	110	1100	1100	540w *3PCS	9m3/h	58m	G 5" 125mm	G2" 50mm
10	HBP4C-110-1300-9-71	110	1500	1300	335w*6PCS, 3pcs *2	9m3/h	71m	G 5" 125mm	G2" 50mm
11	HBP4C-110-1500-9-85	110	1500	1500	335w*6PCS, 3pcs *2	9m3/h	85m	G 5" 125mm	G2" 50mm
12	HBP4C-300-2200-9-125	300	2200	2200	335w*9PCS in series	9m3/h	125m	G 5" 125mm	G2" 50mm

Curve



Solar Deep well Pump

Advantage of solar pump

Maintenance-Free Brushless DC Motor
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 Suitable for Wide DC voltage Operation
 Control inputs for well probe,dry running protection
 Battery Operation,low voltage disconnect for battery etc.
 Overload and high Adjustable speed control of motor
 Temperature Protection and against reverse polarity



Material of Parts



01

Outlet

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02

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03

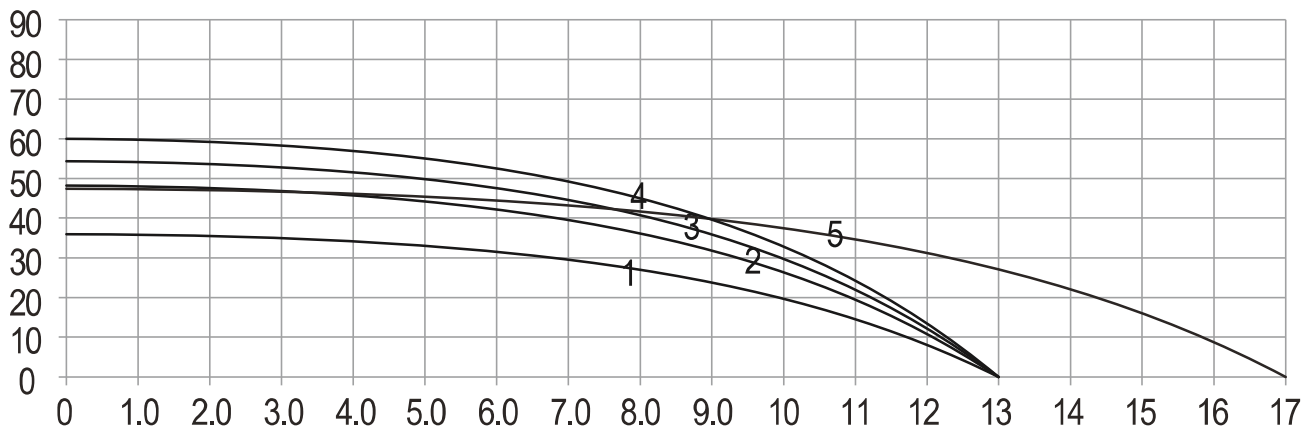
Bottom support

Stainless Stell
AISI 304 SS/316SS

Peformance Datasheet

Model No.	Solar Pump Model Name	Voltage	Controll er Power	Motor Power	Solar panels Reference	Max Flow & Lift		Well Diameter	Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)	(inch)
1	HBP4C-96-750-13-50	96	750	750	450w *3PCS	13m3/h	50m	G 5" 125mm	G2" 50mm
2	HBP4C-110-1100-13-49	110	1100	1100	540w *3PCS	13m3/h	49m	G 5" 125mm	G2" 50mm
3	HBP4C-110-1300-13-54	110	1500	1300	335w*6PCS, 3pcs *2	13m3/h	54m	G 5" 125mm	G2" 50mm
4	HBP4C-110-1500-13-60	110	1500	1500	335w*6PCS, 3pcs *2	13m3/h	60m	G 5" 125mm	G2" 50mm
5	HBP4C-300-2200-13-110	300	2200	2200	335w*9PCS in series	13m3/h	110m	G 5" 125mm	G2" 50mm
6	HBP4C-110-1500-17-48	110	1500	1500	335w*6PCS, 3pcs *2	17m3/h	48m	G 5" 125mm	G2" 50mm
7	HBP4C-300-2200-17-72	300	2200	2200	335w*9PCS in series	17m3/h	72m	G 5" 125mm	G2" 50mm

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Solar Deep well Pump

Advantage of solar pump

Maintenance-Free Brushless DC Motor
Integrated DSP & MPPT(Maximum Power Point remote controlTracking)
Suitable for Wide DC voltage Operation
Control inputs for well probe,dry running protection
Battery Operation,low voltage disconnect for battery etc.
Overload and high Adjustable speed control of motor
Temperature Protection and against reverse polarity

Material of Parts



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Outlet
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AISI 304 SS/316SS



02

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Stainless Stell
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03

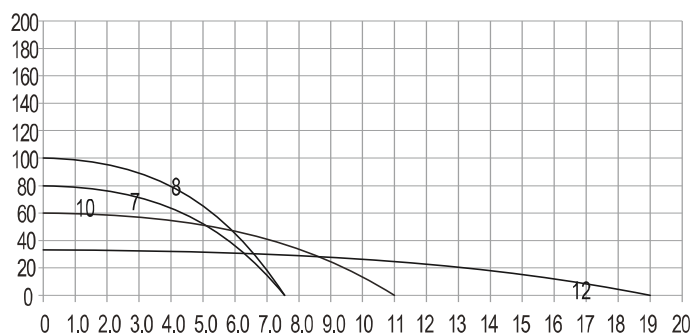
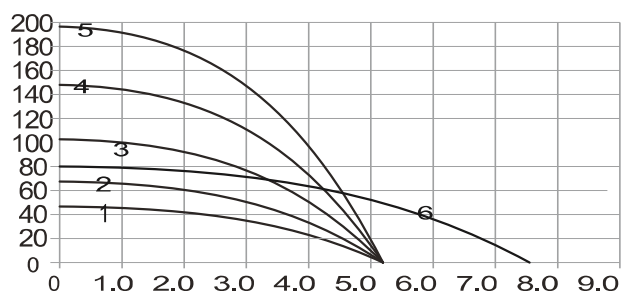
Bottom support
Stainless Stell
AISI 304 SS/316SS



Peformance Datasheet

Model No.	Solar Pump Model Name	Voltage	Controller Power	Motor Power	Solar panels Reference	Max Flow & Lift		Well Diameter	Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)	(inch)
1	HBP4SC-48-500-5.2-45	48	750	500	335w *2PCS	5.2m3/h	45m	G 5" 125mm	G 1 1/4" 32mm
2	HBP4SC-96-750-5.2-67	96	750	750	450w *3PCS	5.2m3/h	67m	G 5" 125mm	G 1 1/4" 32mm
3	HBP4SC-110-1100-5.2-101	110	1100	1100	540w *3PCS	5.2m3/h	101m	G 5" 125mm	G 1 1/4" 32mm
4	HBP4SC-110-1300-5.2-146	110	1500	1300	335w*6PCS, 3pcs *2	5.2m3/h	146m	G 5" 125mm	G 1 1/4" 32mm
5	HBP4SC-110-1500-5.2-198	110	1500	1500	335w*6PCS, 3pcs *2	5.2m3/h	198m	G 5" 125mm	G 1 1/4" 32mm
6	HBP4SC-300-2200-5.2-255	300	2200	2200	335w*9PCS in series	5.2m3/h	255m	G 5" 125mm	G 1 1/4" 32mm
7	HBP4SC-110-1300-7.5-80	110	1500	1300	335w*6PCS, 3pcs *2	7.5m3/h	80m	G 5" 125mm	G 1 1/4" 32mm
8	HBP4SC-110-1500-7.5-100	110	1500	1500	335w*6PCS, 3pcs *2	7.5m3/h	100m	G 5" 125mm	G 1 1/4" 32mm
9	HBP4SC-300-2200-7.5-150	300	2200	2200	335w*9PCS in series	7.5m3/h	150m	G 5" 125mm	G 1 1/4" 32mm
10	HBP4SC-110-1500-11-60	110	1500	1500	335w*6PCS, 3pcs *2	11m3/h	60m	G 5" 125mm	G2" 50mm
11	HBP4SC-300-2200-11-120	300	2200	2200	335w*9PCS in series	11m3/h	120m	G 5" 125mm	G2" 50mm
12	HBP4SC-110-1500-19-35	110	1500	1500	335w*6PCS, 3pcs *2	19m3/h	35m	G 6" 125mm	G3" 75mm
13	HBP4SC-300-2200-19-60	300	2200	2200	335w*9PCS in series	19m3/h	60m	G 6" 125mm	G3" 75mm

Curve



Solar Deep well Pump

Advantage of solar pump

Maintenance-Free Brushless DC Motor
Integrated DSP & MPPT(Maximum Power Point remote controlTracking)
Suitable for Wide DC voltage Operation
Control inputs for well probe,dry running protection
Battery Operation,low voltage disconnect for battery etc.
Overload and high Adjustable speed control of motor
Temperature Protection and against reverse polarity



Material of Parts



01
Outlet
Stainless Stell
AISI 304 SS/316SS



02
Inlet
Stainless Stell
AISI 304 SS/316SS

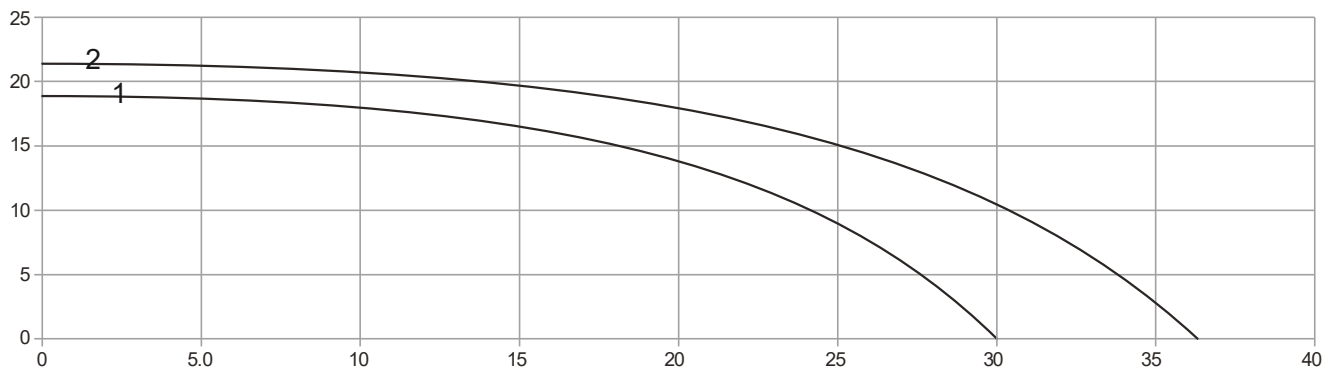


03
Bottom support
Stainless Stell
AISI 304 SS/316SS

Peformance Datasheet

Model No.	Solar Pump Model No.	Voltage	Controller Power	Motor Power	Solar panels Reference	Max Flow & Lift		Well Diameter	Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)	(inch)
1	HBP4SC-110-1100-36-19	110	1500	1100	335w*6PCS, 3pcs *2	36m3/h	19m	G 6"	G3" 75mm
2	HBP4SC-110-1500-36-22	110	1500	1500	335w*6PCS, 3pcs *2	36m3/h	22m	G 6"	G3" 75mm
3	HBP4SC-300-2200-36-38	300	2200	2200	335w*9PCS in series	36m3/h	38m	G 6"	G3" 75mm

Curve



Solar Surface Booster Pump

💡 Advantage of solar pump

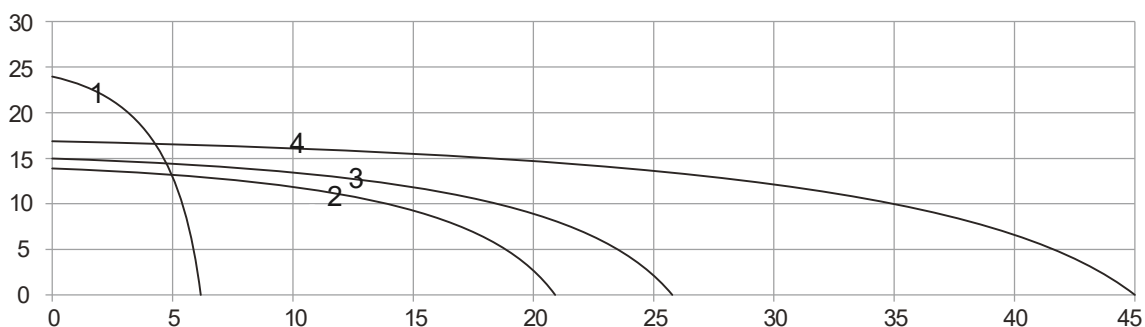
Maintenance-Free Brushless DC Motor
Integrated DSP & MPPT(Maximum Power Point remote controlTracking)
Suitable for Wide DC voltage Operation
Control inputs for well probe,dry running protection
Battery Operation,low voltage disconnect for battery etc.
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Temperature Protection and against reverse polarity



💡 Performance Datasheet

Model No.	Solar Pump Model No.	Motor Voltage	Motor Power	Controller Power	Solar panels Reference Power(W/PCS)	Max Flow & Lift		Outlet (inch)
		V/DC	W	W		Max.flow	Max.head	
1	HBPF-72-550-6-24	72	550	750	450w *2PCS	6m3/h	24m	G1" 25mm
2	HBPF-96-750-21-14	96	750	750	450w *3PCS	21m3/h	14m	G2" 50mm
3	HBPF-110-1100-26-15	110	1100	1100	540w *3PCS	26m3/h	15m	G2" 50mm
4	HBPF-110-1500-45-17	110	1500	1500	335w*6PCS, 3pcs *2 strings	45m3/h	17	G3" 75mm

💡 Curve



Solar Submersible Pump

Advantage of solar pump

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 Suitable for Wide DC voltage Operation
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 Battery Operation,low voltage disconnect for battery etc.
 Overload and high Adjustable speed control of motor
 Temperature Protection and against reverse polarity



Material of Parts



01
Outlet
Cast Iron



02
Inlet
Cast Iron

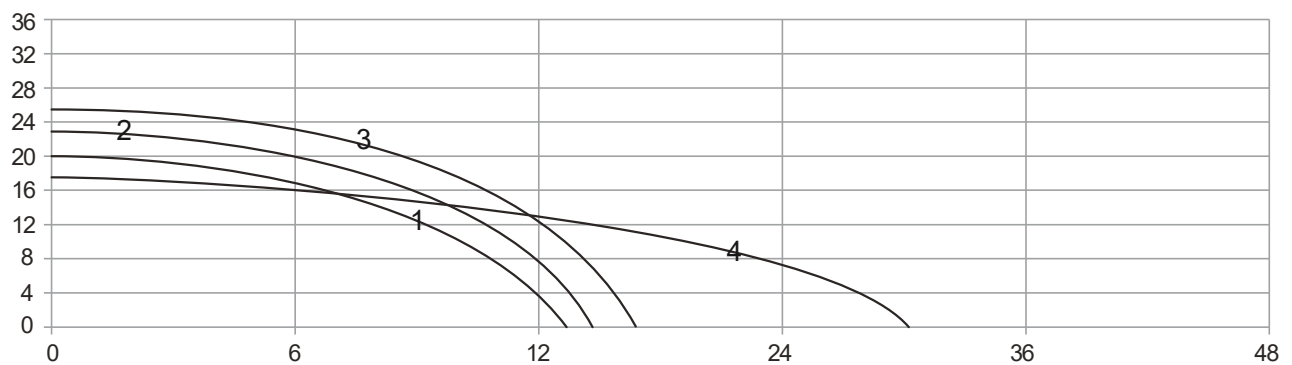


03
Bottom support
Cast Iron

Performance Datasheet

Model No.	Solar Pump Model No.	Motor Voltage	Motor Power	Controller Power	Solar panels Reference	Max Flow & Lift		Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)
1	HBPSQD-72-550-13-20	72	550	750	450w *2PCS	13m3/h	20m	G2" 50mm
2	HBPSQD-96-750-14-23	96	750	750	450w *3PCS	14m3/h	23m	G2" 50mm
3	HBPSQD-150-1100-16-25	150	1100	1100	540w *3PCS	16m3/h	25m	G2" 50mm
4	HBPSQD-180-1300-17-30	180	1500	1500	335w*6PCS, 3pcs *2 strings	17m3/h	30m	G2" 50mm

Curve



Solar Submersible Pump

Advantage of solar pump

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Material of Parts



01

Outlet

Cast Iron



02

Inlet

Cast Iron



03

Bottom support

Cast Iron

Peformance Datasheet

Model No.	Solar Pump Model No.	Motor Voltage	Motor Power	Controller Power	Solar panels Reference	Max Flow & Lift		Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)
1	HBPSQD-96-750-30-7	96	750	750	450w *3PCS	30m3/h	7m	G3" 75mm
2	HBPSQD-150-1100-36-10	150	1100	1100	540w *3PCS	36m3/h	10m	G3" 75mm
3	HBPSQD-180-1300-40-12	180	1500	1500	335w*6PCS, 3pcs *2 strings	40m3/h	12m	G3" 75mm
4	HBPSQD-200-1500-45-12	200	1500	1500	335w*6PCS, 3pcs *2 strings	45m3/h	12m	G4" 100mm
5	HBPSQD-300-2200-56-14	300	2200	2200	335w*9PCS in series	56m3/h	14m	G4" 100mm

Curve

