

4" AC/DC PLASTIC IMPELLER SOLAR PUMP

MATERIAL & FEATURES

- ▶ **Motor:** Permanent-magnet synchronous (PMSM) — up to 92% efficiency, 20–30% more energy-saving
- ▶ **Drive / MPPT:** Sensorless FOC sine-wave drive · MPPT >99% · LED display (V/A/W/RPM/error)
- ▶ **Wetted parts:** plastic impeller impeller · stainless steel body · stainless steel outlet
- ▶ **Power:** Solar DC or 220 V AC (90–240 V, 50/60 Hz) / generator — external transfer switch
- ▶ **Material grades:** SUS304 standard · SUS316 optional for coastal / brackish water
- ▶ **Key components:** 100% copper motor windings · NSK-grade sealed ball bearings · SUS304 shaft + engineering-plastic impellers · Silicon-carbide (SiC) mechanical seal
- ▶ **Ingress:** Motor IP68 (submersible motor) · Controller IP66 · Class F insulation · oil cooling
- ▶ **Protection:** Dry-run · over/under-voltage · overload · over-current · reverse · over-temp · soft-start
- ▶ **Cable:** PV-to-controller & motor cable 2.5 mm² by model (copper, sized for a ~50 m run; step up one size per additional ~50 m of drop).
- ▶ **Warranty:** 2 years
- ▶ **Standards:** CE · RoHS · CB · TUV · SGS · ISO 9001 · ISO 14001 · IEC 62253


190 m

MAX HEAD

30 m³/h

MAX FLOW

600–2200 W

POWER

92%

EFFICIENCY

2 yr

WARRANTY

APPLICATIONS



Irrigation



Livestock



Village supply

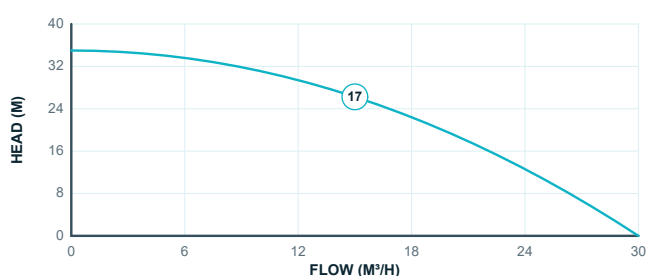
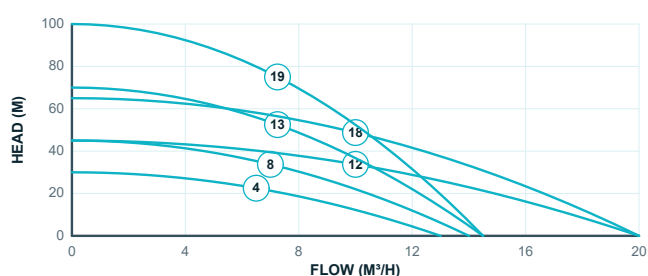
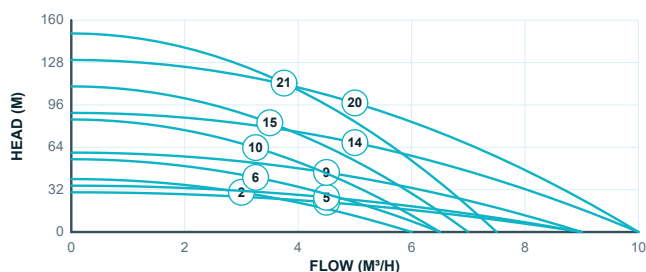
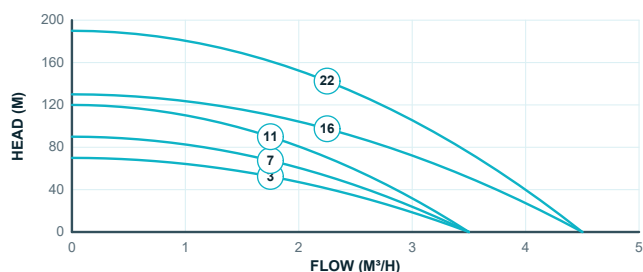


Off-grid



Industry

PERFORMANCE CURVES (Q-H)



4" AC/DC PLASTIC IMPELLER SOLAR PUMP - SPECIFICATIONS

Model no.: size (") · type · max flow (m³/h) – max head (m) – system voltage (V) – power (W)

NO.	MODEL	VOLT. (V)	INPUT Voc (V)	POWER (W)	MAX FLOW (M³/H)	MAX HEAD (M)	OUTLET (inch)	REC. PV
1	4PSC9.0-30-72-600-H	72	60~150	600	9	30	2"	3 × 300 Wp
2	4PSC6.0-40-72-600-H	72	60~150	600	6	40	1.5"	3 × 300 Wp
3	4PSC3.5-70-72-600-H	72	60~150	600	3.5	70	1.25"	3 × 300 Wp
4	4PSC13.0-30-96-750-H	96	60~200	750	13	30	2"	3 × 300 Wp
5	4PSC9.0-35-96-750-H	96	60~200	750	9	35	2"	3 × 300 Wp
6	4PSC6.5-55-96-750-H	96	60~200	750	6.5	55	1.5"	3 × 300 Wp
7	4PSC3.5-90-96-750-H	96	60~200	750	3.5	90	1.25"	3 × 300 Wp
8	4PSC14.0-45-144-1100-H	144	90~340	1100	14	45	2"	6 × 300 Wp
9	4PSC9.0-60-144-1100-H	144	90~340	1100	9	60	2"	6 × 300 Wp
10	4PSC6.5-85-144-1100-H	144	90~340	1100	6.5	85	1.5"	6 × 300 Wp
11	4PSC3.5-120-144-1100-H	144	90~340	1100	3.5	120	1.25"	6 × 300 Wp
12	4PSC20.0-45-192-1500-H	192	90~430	1500	20	45	2"	8 × 300 Wp
13	4PSC14.5-70-192-1500-H	192	90~430	1500	14.5	70	2"	8 × 300 Wp
14	4PSC10.0-90-192-1500-H	192	90~430	1500	10	90	2"	8 × 300 Wp
15	4PSC7.0-110-192-1500-H	192	90~430	1500	7	110	1.5"	8 × 300 Wp
16	4PSC4.5-130-192-1500-H	192	90~430	1500	4.5	130	1.25"	8 × 300 Wp
17	4PSC30.0-35-280-2200-H	280	100~490	2200	30	35	2"	10 × 300 Wp
18	4PSC20.0-65-280-2200-H	280	100~490	2200	20	65	2"	10 × 300 Wp
19	4PSC14.5-100-280-2200-H	280	100~490	2200	14.5	100	2"	10 × 300 Wp
20	4PSC10.0-130-280-2200-H	280	100~490	2200	10	130	2"	10 × 300 Wp
21	4PSC7.5-150-280-2200-H	280	100~490	2200	7.5	150	1.5"	10 × 300 Wp
22	4PSC4.5-190-280-2200-H	280	100~490	2200	4.5	190	1.25"	10 × 300 Wp

OPERATING CONDITIONS

Liquid temp	0–40 °C
Max. sand	≤ 0.05 % (≤ 500 g/m³)
pH value	5–9
Ambient	-15 to 70 °C
Max. immersion	150 m
Duty	S1 (continuous)

DIMENSIONS & WEIGHT

Pump outer Ø	98 mm
Min. borehole	100 mm
Net weight	10.8–20.9 kg
Overall length	840–1205 mm
Controller	360 × 260 × 140 mm
Controller wt.	7 kg

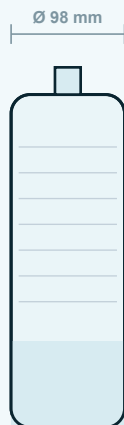
MATERIALS & CERTIFICATION

Standard	SUS304 sleeve + engineering-plastic impeller & diffuser + SUS304 shaft
Option	SUS316 sleeve + plastic impeller (plastic is inherently corrosion-proof)

CE	RoHS	CB	TUV	SGS	ISO 9001
ISO 14001	IP68	IEC 62253			

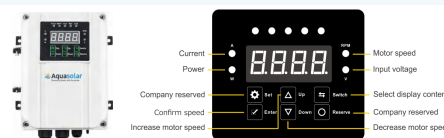
4" AC/DC PLASTIC IMPELLER SOLAR PUMP - DIMENSIONS & CONTROLLER

DIMENSIONS & WEIGHT



Pump outer Ø	98 mm
Min. borehole	100 mm
Overall length	840–1205 mm
Net weight	10.8–20.9 kg
Controller size	360 × 260 × 140 mm
Controller wt.	7 kg

CONTROLLER



Drive	Sensorless FOC, pure sine-wave output
MPPT efficiency	>99%
Enclosure	IP66
Mount	Both
Display	V / A / W / RPM / error
Remote monitor	Optional 4G / Wi-Fi (add-on)

MOTOR & DRIVE

Motor	PM brushless (PMSM)
Efficiency	up to 92%
Drive	Sensorless FOC sine-wave
MPPT	>99%
Insulation	F (155 °C)
Duty	S1 (continuous)
Cooling	Oil cooling
Speed	Variable, MPPT-tracked

SOLAR ARRAY CONNECTION

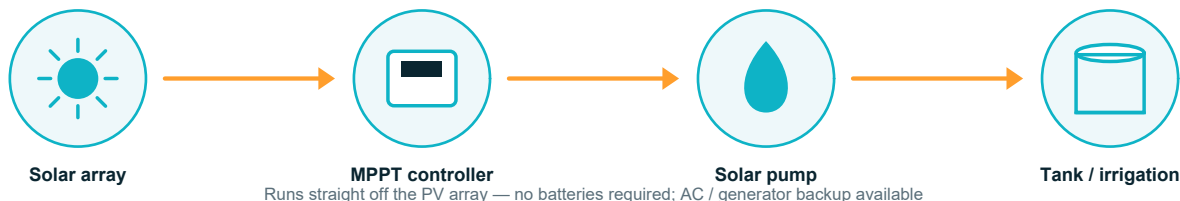
SYSTEM	Voc (V)	POWER	ARRAY
72 V	60~150	600 W	3 × 300 Wp
96 V	60~200	750 W	3 × 300 Wp
144 V	90~340	1100 W	6 × 300 Wp
192 V	90~430	1500 W	8 × 300 Wp
280 V	100~490	2200 W	10 × 300 Wp

Array 1.3–1.5 × pump power · Voc within MPPT window.

CABLE & INSTALLATION

Run ≤ 50 m	2.5 mm ² (per model)
Run 50–100 m	one size up
Run > 100 m	two sizes up
Cable type	3-core copper + earth
▶ Waterproof splice kit on the drop cable	
▶ Stainless safety rope; ≥1 m above well bottom	

SYSTEM LAYOUT



Runs straight off the PV array — no batteries required; AC / generator backup available

WHY AQUASOLAR



FOC + MPPT >99%
Pure sine-wave drive — max water per day



IP68 · SUS304
Submersible, corrosion-resistant build



Dry-run protected
8 protections + soft start



2-year warranty
Trusted in 70+ countries

ABOUT AQUASOLAR

POWERING WATER WITH SUNSHINE

Aquasolar is a professional solar water pump manufacturer since 2010, offering a full range of DC and AC/DC solar pumps for agricultural irrigation, livestock, off-grid homes and community water supply. Reliable products, complete solutions and dedicated service — trusted in 70+ countries worldwide.

2010
SINCE

70+
COUNTRIES

600,000+
ANNUAL OUTPUT

2 yr
WARRANTY

24/7
SERVICE