

2" DC SCREW 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:** stainless steel / engineered polymer impeller · 201 stainless steel body · brass/stainless steel outlet
- ▶ **Material grades:** SUS304 standard · SUS316 optional for coastal / brackish water
- ▶ **Key components:** 100% copper motor windings · NSK-grade sealed ball bearings · SUS304 shaft + steel/NBR progressive-cavity screw (sand-tolerant) · NBR stator — handles silty / sandy water
- ▶ **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 2.5–4 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


140 m

MAX HEAD

1.7 m³/h

MAX FLOW

180–750 W

POWER

92%

EFFICIENCY

2 yr

WARRANTY

APPLICATIONS



Irrigation



Livestock



Village supply

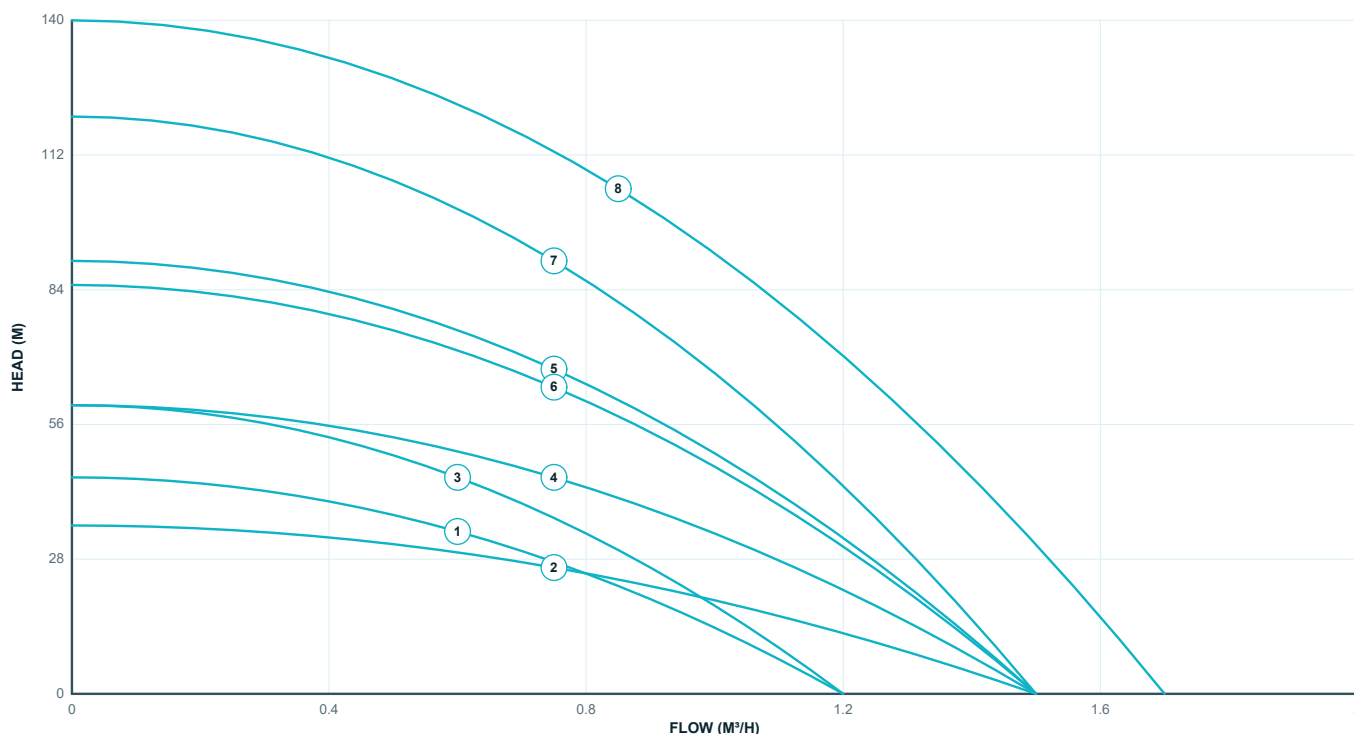


Off-grid



Industry

PERFORMANCE CURVES (Q-H)

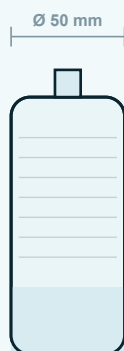


2" DC SCREW SOLAR PUMP - SPECIFICATIONS

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

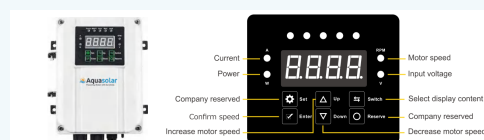
NO.	MODEL	VOLT. (V)	INPUT Voc (V)	POWER (W)	MAX FLOW (M³/H)	MAX HEAD (M)	OUTLET (inch)	REC. PV
1	2PWSS1.2-45-24-180	24	11~55	180	1.2	45	0.75"	1 × 250 Wp
2	2PSC1.5-35-24-250	24	11~55	250	1.5	35	0.75"	1 × 330 Wp
3	2PWSS1.2-60-24-250	24	11~55	250	1.2	60	0.75"	1 × 330 Wp
4	2PSC1.5-60-48-400	48	45~150	400	1.5	60	0.75"	2 × 300 Wp
5	2PWSS1.5-90-48-400	48	45~150	400	1.5	90	0.75"	2 × 300 Wp
6	2PSC1.5-85-72-600	72	60~150	600	1.5	85	0.75"	3 × 300 Wp
7	2PWSS1.5-120-72-600	72	60~150	600	1.5	120	0.75"	3 × 300 Wp
8	2PWSS1.7-140-96-750	96	60~200	750	1.7	140	0.75"	3 × 300 Wp

DIMENSIONS & WEIGHT



Pump outer Ø	50 mm
Min. borehole	52 mm
Overall length	545–620 mm
Net weight	4.3–6.9 kg
Controller size	250 × 175 × 110 mm
Controller wt.	2.5 kg

CONTROLLER



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

OPERATING CONDITIONS

Liquid temp	0–40 °C
Max. sand	≤ 0.25 % (sand-tolerant screw)
pH value	5–9
Ambient	-15 to 70 °C
Max. immersion	150 m
Duty	S1 (continuous)

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

MATERIALS & CERTIFICATION

Standard SUS304 outer sleeve + steel/NBR progressive screw rotor + SUS304 shaft

Option SUS316 sleeve, shaft & fittings

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

SOLAR ARRAY CONNECTION

SYSTEM	Voc (V)	POWER	ARRAY
24 V	11~55	180–250 W	1 × 330 Wp
48 V	45~150	400 W	2 × 300 Wp
72 V	60~150	600 W	3 × 300 Wp
96 V	60~200	750 W	3 × 300 Wp

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

CABLE & INSTALLATION

Run ≤ 50 m	2.5–4 mm² (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