

AC/DC SOLAR SUBMERSIBLE PUMP (HIGH-FLOW)

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:** aluminium impeller · iron body · iron 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 & impellers (SUS316 optional) · 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


14 m

MAX HEAD

56 m³/h

MAX FLOW

1100–2200 W

POWER

92%

EFFICIENCY

2 yr

WARRANTY

APPLICATIONS



Irrigation



Livestock



Village supply

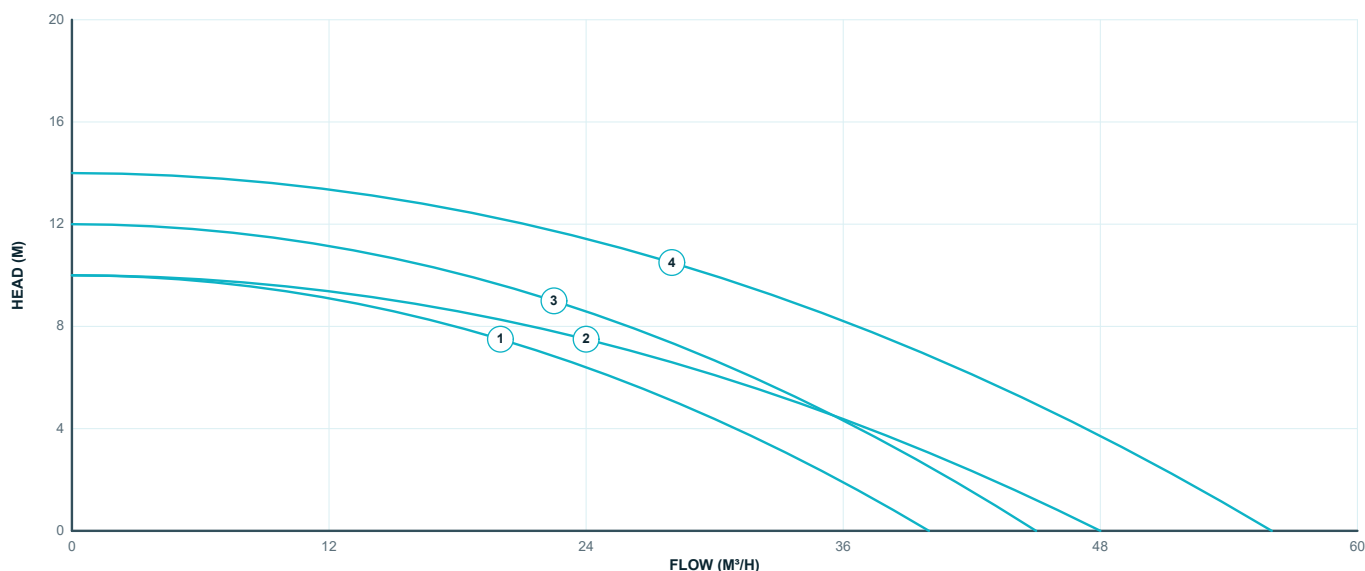


Off-grid



Industry

PERFORMANCE CURVES (Q-H)

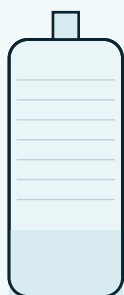


AC/DC SOLAR SUBMERSIBLE PUMP (HIGH-FLOW) - SPECIFICATIONS

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	PSG40-10-144-1100-H	144	90~340	1100	40	10	3"	6 × 300 Wp
2	PSG48-10-192-1500-H	192	90~430	1500	48	10	4"	8 × 300 Wp
3	PSG45-12-192-1500-H	192	90~430	1500	45	12	3"	8 × 300 Wp
4	PSG56-14-280-2200-H	280	100~490	2200	56	14	4"	10 × 300 Wp

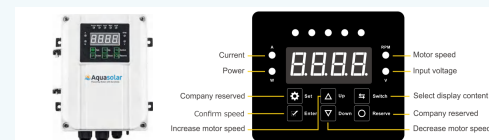
DIMENSIONS & WEIGHT



Overall length 760–870 mm
Net weight 20.6–27.2 kg
Controller size 360 × 260 × 140 mm
Controller wt. 7 kg

L 760–870 mm

CONTROLLER



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

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 20 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 Cast-iron (HT200) body + SUS304 impeller + SUS304 shaft
Option SUS304 / bronze wetted parts

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

SOLAR ARRAY CONNECTION

SYSTEM	Voc (V)	POWER	ARRAY
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 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

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