

3" AC/DC STAINLESS STEEL 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:** 304 stainless steel impeller · stainless steel body · 304 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 & 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:** 3 years
- ▶ **Standards:** CE · RoHS · CB · TUV · SGS · ISO 9001 · ISO 14001 · IEC 62253


200 m

MAX HEAD

4.5 m³/h

MAX FLOW

600–2200 W

POWER

92%

EFFICIENCY

3 yr

WARRANTY

APPLICATIONS



Irrigation



Livestock



Village supply

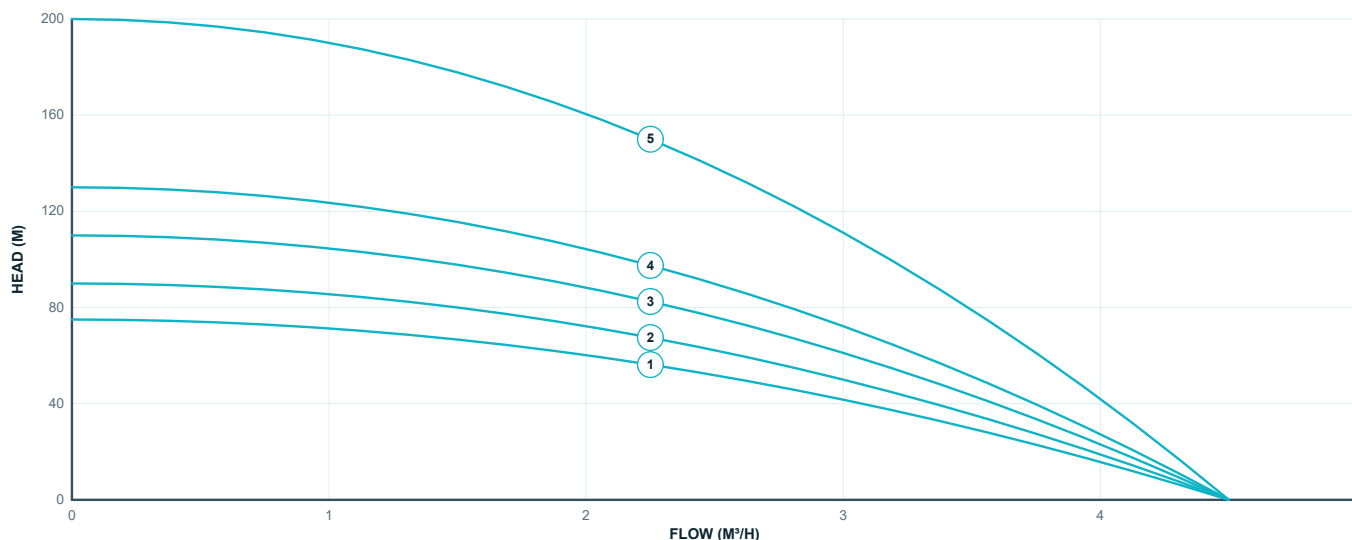


Off-grid



Industry

PERFORMANCE CURVES (Q-H)

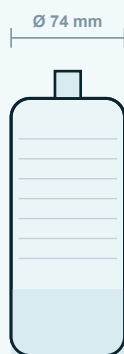


3" AC/DC STAINLESS STEEL IMPELLER SOLAR PUMP - SPECIFICATIONS

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

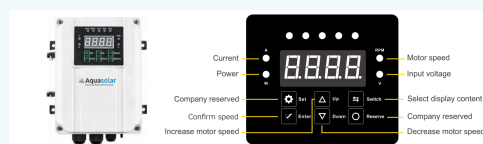
NO.	MODEL	VOLT. (V)	INPUT Voc (V)	POWER (W)	MAX FLOW (M³/H)	MAX HEAD (M)	OUTLET (inch)	REC. PV
1	3PPSS4.5-75-72-600-H	72	60~150	600	4.5	75	1.25"	3 × 300 Wp
2	3PPSS4.5-90-96-750-H	96	60~200	750	4.5	90	1.25"	3 × 300 Wp
3	3PPSS4.5-110-144-1100-H	144	90~340	1100	4.5	110	1.25"	6 × 300 Wp
4	3PPSS4.5-130-192-1500-H	192	90~430	1500	4.5	130	1.25"	8 × 300 Wp
5	3PPSS4.5-200-280-2200-H	280	100~490	2200	4.5	200	1.25"	10 × 300 Wp

DIMENSIONS & WEIGHT



Pump outer Ø	74 mm
Min. borehole	76 mm
Overall length	840~1355 mm
Net weight	7.5~14.2 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)

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)

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 impeller, diffuser, sleeve & shaft
Option	SUS316 wetted parts

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

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 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

3-year warranty
 Trusted in 70+ countries