Solar Surface Pump Technical Data

Dankoff Solar Flowlight Booster Pump

The Dankoff Flowlight Booster Pump provides city water pressure anywhere. It has been a standard in home renewable energy systems since 1986 and is economical for domestic water supply, drip irrigation, and water purification.

A booster pump is far more cost effective than an elevated tank, providing pressure equivalent to over 100 feet (30 m) of elevation.

A Flowlight Booster Pump uses one third to one half the energy of a conventional AC pump and eliminates high starting surges.

It is more powerful, quieter, and much more durable than plastic RV/Marine pumps. Wearable parts are replaceable, and typically last 5 to 10 years. Overall life expectancy is 15 to 20 years.

Our complete instruction manual and easy installation kit make this pump simple for anyone to install and service, with no previous experience.

Suction Capacity

- Low speed model 20 vertical feet (6 m) at sea level
- Standard model 10 Feet (3 m) at sea level
- Subtract 1 ft. for every 1,000 ft. altitude (1 m for every 1,000 m) for both versions.
  Note: Suction capacity may be further limited by intake pipe friction
- Excessive suction causes cavitation (vapor bubbles) creating noise and excessive wear. Intake piping should be 1" or larger
- Pump should be mounted as close to the water source as possible.

Choice of Capacity

- Standard Model for highest flow
- Low speed model (DC only) has higher pressure capacity, and is best when:
  - Suction lift is greater than 10 feet
  - Intake pipe is smaller than 1" size
  - Extra-quiet operation is desirable

Choice of Voltage

- 12, 24 or 48 VDC
- 115 VAC (low surge motor reduces inverter and wiring)

Construction

- Rotary vane pump mechanism (pulsation-free)
- Solid forged brass pump body with carbon-graphite and stainless steel working parts
- NSF® approved for drinking water
- Handles sea water and dissolved minerals
- Survives most freezes
- Permanent magnet, ball bearing DC motor, thermally protected
- Clear flexible hoses and pressure relief valve included

Additional Needs

- Battery-based power system (12 or 24 V) or AC (minimum 300 W inverter)
- Pressure tank, captive air type, minimum size: 40 gallon (150 l); larger is better, to reduce cycling and increase reserve capacity; available locally
- Foot valve (if pump is placed higher than water source)

DANKOFF SOLAR
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Filtration Requirement

This pump cannot tolerate dirt; water must be filtered clear

Accessories

- Intake strainer/foot valve with fine monel metal screen, stops coarse debris
- Inline filter (10") uses standard drinking water cartridges
- Intake filter/foot valve (30") replaces Intake Strainer and Inline Filter with a single unit, best for lowering into a shallow well
- Spare filter cartridges (10 micron spun fiber)
- Easy Installation Kit includes: pressure switch, pressure gauge, check, drain and shut-off valves and tank tee (manifold)
- Dry run switch prevents battery drain and pump damage if water source runs dry

Installation

- Pump may be mounted horizontally or vertically.
- Pump must not be submerged.
- It may be placed inside a 6" (120 cm) or larger well casing, suspended by rope.

Dimensions

- Length 16.5" (42 cm)
- Weight 15 lbs (7 kg)
- Flexible hose ends have 3/4" or 1" male pipe thread

Warranty

1 year against defects in materials and workmanship

V = Voltage ·Specify 12, 24, 48, 115 AC

	Standard Model 2920-V				Low Speed Model 2910-V[1]			
Pressure PSI (kg/sq cm)	30 (2.1)	40 (2.8)	50 (3.5)	65 (4.6)	30 (2.1)	40 (2.8)	50 (3.5)	65 (4.6)
Flow Rate GPM (lpm)	4.5 (17)	4.3 (17)	4.3 (16)	4.1 (15)	3.4 (13)	3.3 (12)	3.1 (12)	2.7 (10)
Watt-Hrs. Per Gallon (per ltr) Pumped	0.6 (0.16)	0.67 (0.18)	0.75 (0.2)	1.1 (0.3)	0.6 (0.16)	0.67 (0.18)	0.75 (0.2)	1.1 (0.3)
Current Draw:								
AMPS 12V	13	15	16	22	10	11	12	15
AMPS 24V	6.5	7.5	8	11	5	5.5	6	7.5
AMPS 115V AC	1.7	2	2.1	2.9	AC data not yet available			

[1] Higher Suction Lift Capacity - See Text

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