



DAYLIFF SUNFLO-B pumps are specifically designed for PV solar powered water supply from wells and boreholes. They are of centrifugal and rotary screw design and material of construction for rotary screw design are principally stainless steel with a rubber stator while centrifugal design features noryl impellers and stainless steel chambers. Pumps are supplied complete with a controller, cable connectors, water level sensor, solar PV connecting cables and spare rotor for helical type.

### Motor

Permanent magnet, oil filled, brushless, DC motor specifically designed for maximum efficiency from solar module power sources. It should be powered by solar array configured to provide the input voltage required and sized at approximately 130% of the rated motor power.

### Controller

The pump is supplied with a self-contained multifunction MPPT (Maximum Power Point Tracking) controller that tracks the solar module's maximum power output voltage which varies with module temperature and irradiation levels. This ensures maximum current output, typically +25% higher than conventional module controllers and a similar increase in daily water output. The controller also protects from over and under voltage, over current and low water level (if electrodes are fitted) and features various indicator lights that give the pump's operating status. The system can be installed either with or without batteries. If batteries are included, the pump will operate when there is insufficient solar irradiation for direct power.

### Pump Outputs

Performance curves are given at standard test conditions of 1000W/m<sup>2</sup> solar irradiance and 25°C. Output will vary throughout the year depending upon prevailing irradiation levels. For estimated daily outputs at continuous pumping, multiply the indicated output at the duty point by the daily irradiation given in Graph 1. For indicative purposes, factors of 1.1 can be applied for hot arid areas and 0.9 for temperate high altitude areas in the Tropics. Output will vary throughout the day as a proportion of the estimated hourly irradiation as shown in Graph 2.

### Operating Parameters

- Pumped Liquid:** Thin, clean, chemically non-aggressive liquids with a sand content of less than 0.1%.
- Ambient Temperature:** -20°C - +50°C
- Maximum Liquid Temperature:** +40°C
- Minimum Immersion Depth:** 0.5m
- Maximum Immersion Depth:** 30m
- Minimum Borehole Diameter:** 125mm
- Enclosure Class:** IP68
- Insulation Class:** B
- Speed:** 2900rpm

### Pump Data

Model	Type	Input Voltage (V)	Motor Rating (W)	Max Input Voltage (V)	Input Power (W)	Peak Voltage (V)	Open Circuit Voltage (VOC)	DN (")	Dimensions (mm)		Weight (kg)
									C	D	
SUNFLO-B 120H	Helical Rotor	24	120	50	160	≥30	<50	3/4"	76	820	12
SUNFLO-B 500C	Centrifugal	48	500	100	680	≥60	<100	1"	76	1020	17
SUNFLO-B 1000C	Centrifugal	100	1000	200	1400	≥112	<200	1 1/4"	100	860	21

