

DAYLIFF DSOLAR-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.

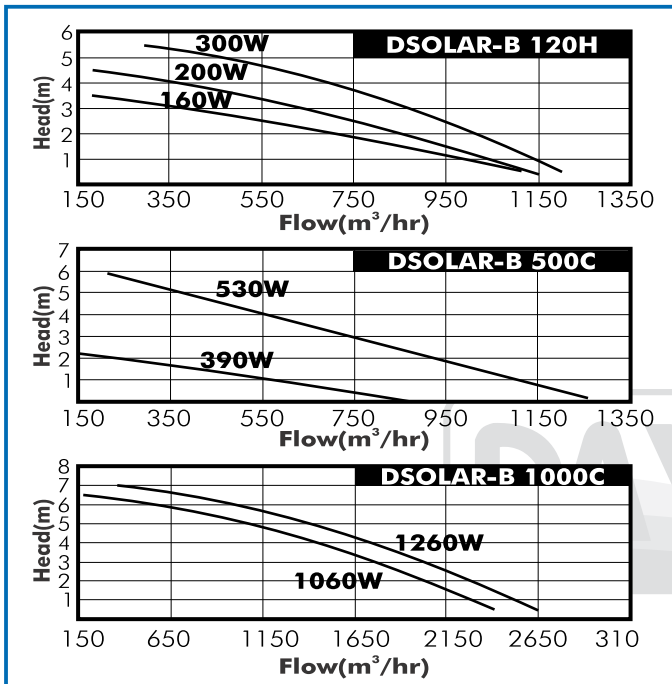
**Enclosure Class:** IP68

**Insulation Class:** B

**Speed:** 2900rpm

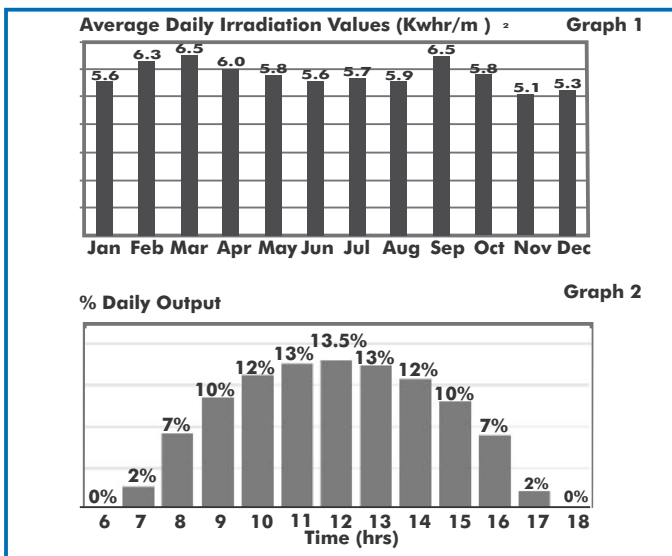
### Controller

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.



### Power Outputs

Pump output 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 East Africa. 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-corrosive with a sand content of less than 0.1%.

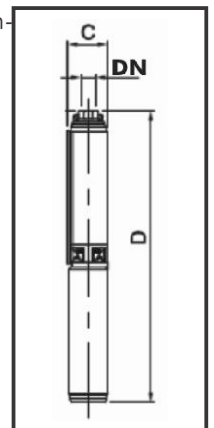
**Minimum Immersion Depth:** 0.5m

**Maximum Immersion Depth:** 20m

**Minimum Borehole Diameter:** 125mm

**Ambient Temperature:** -20°C - +50°C

**Maximum Liquid Temperature:** +40°C



Model	Type	Motor (W)	Power (W)	Input Power(V)	Input Voltage(V)	Dimensions(mm)			Weight (kgs)
						DN	C	D	
D3SOLAR-B 120H	Helical Rotor	120	50	160	24	3/4"	76	820	12
D3SOLAR-B 500C	Centrifugal	500	500	680	48	1"	76	1020	17
D4SOLAR-B 1000C	Centrifugal	1000	200	1400	110	1 1/4"	100	860	21