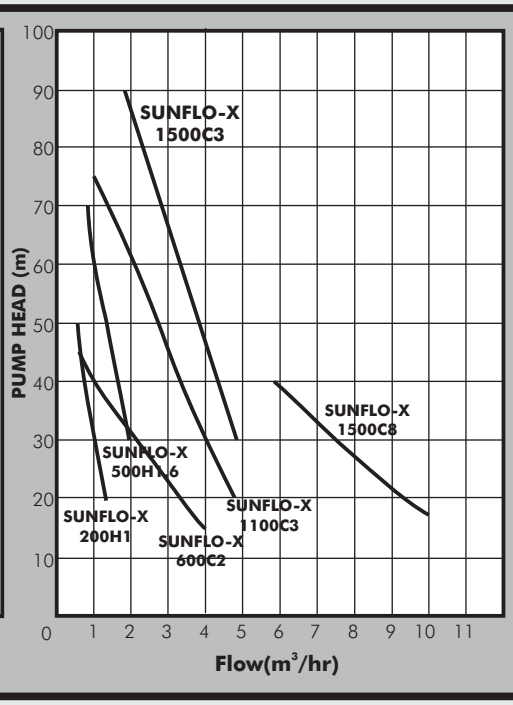
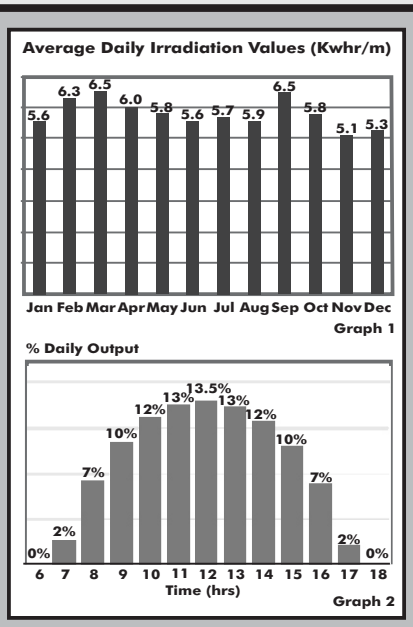
UPDATED

SUNFLO-X

DC Solar Submersible Pump





PUMP

DAYLIFF SUNFLO-X Range of pumps are high specification solar powered centrifugal and helical rotor DC pumps specifically designed for wells/borehole applications and feature a remote surface mounted controller. Pumps are constructed principally from AISI 304 stainless steel and are engineered to the highest standards to give serviceability, excellent efficiency, high reliability and long life.

MOTOR

Pumps are fitted with Permanent Magnet brushless high efficiency, maintenance free DC motors without integrated electronics specifically designed for maximum efficiency. They should be powered by solar arrays configured to provide the input voltage required and sized at approximately 130% of the rated motor power.

Insulation Class: F ***Enclosure Class:*** IP68 ***Speed:*** 4000rpm

CONTROLLER

Pumps are provided with matched controllers for monitoring, protecting and controlling pump operations with the following features:-

- Protection against reverse polarity, overload and over temperature.
- Integrated MPPT (Maximum Power Point Tracking) with 99% energy conversion efficiency to maximize module power output.
- Fully automatic operation and complete protection including low level control, dry running and over/under voltage.
- Enhanced pump start on low sun intensity.
- Easy trouble shooting, where fault code is displayed on LCD screen for fast identification and problem solving.
- Enclosure Class: IP52

PUMP OUTPUTS

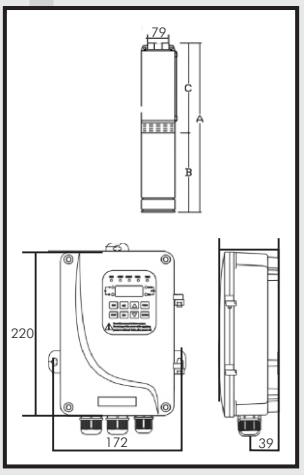
Performance curves are given at standard test conditions of 1000W/m2 solar irradiance and 250C. Output will vary throughout the year depending upon prevailing irradiation levels. For estimated daily outputs at continuous pumping multiply the indicated output at the duty point by the daily irradiation 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 CONDITIONS

Pumped Liquid: Thin, clean, chemically non-aggressive liquids with a sand content of less than 0.1%.
Maximum Liquid Temperature: 0-35°C
Controller Ambient Temperature: -20°C to +60°C
Max Immersion Depth: 70m
Minimum Borehole Diameter: 125mm

PUMP DATA

Model	Type	Power				D&S Rated Range	PV Configration	Dimensions (mm)				Weight (kg)
		kW	Rated Motor Voltage (V)	Max Input Voltage (V)	Recommended MPP Voltage (V)			A	B	C	Outlet	
SUNFLO-X 200H1	Helical Rotor	0.2	24	60	30-50	6m³/day at 30m Head	1x335Wx1String	365	170	195	¾″	6
SUNFLO-X 500H1.6	Helical Rotor	0.5	48	100	60-80	10m³/day at 40m Head	2x335Wx1String	375	180			7
SUNFLO-X 600C2	Centrifugal	0.6	48	100	60-18	12m³/day at 30m Head		500		320	1¼″	7
SUNFLO-X 1100C3	Centrifugal	1.1	110	200	120-160	20m³/day at 40m Head	4x335Wx1String	630	200	430		8
SUNFLO-X 1500C3	Centrifugal	1.5	110	200	120-160	20m³/day at 60m Head	6x335Wx2Strings	690		490		10
SUNFLO-X 1500C8	Centrifugal	1.5	110	200	120-160	50m³/day at 25m Head	6x335Wx2Strings	550	230	320	2″	



D&S DAVIS & SHIRTLIFF