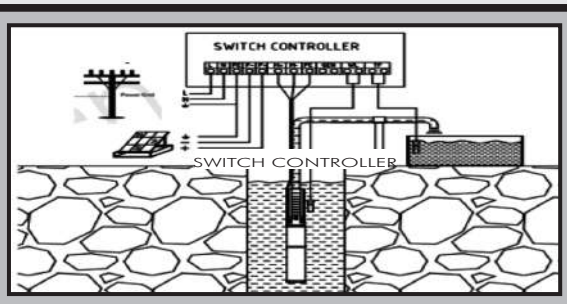
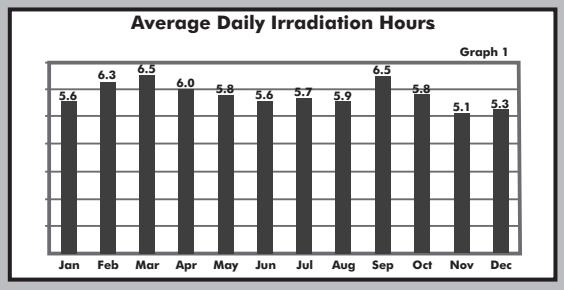
NEW PRODUCT

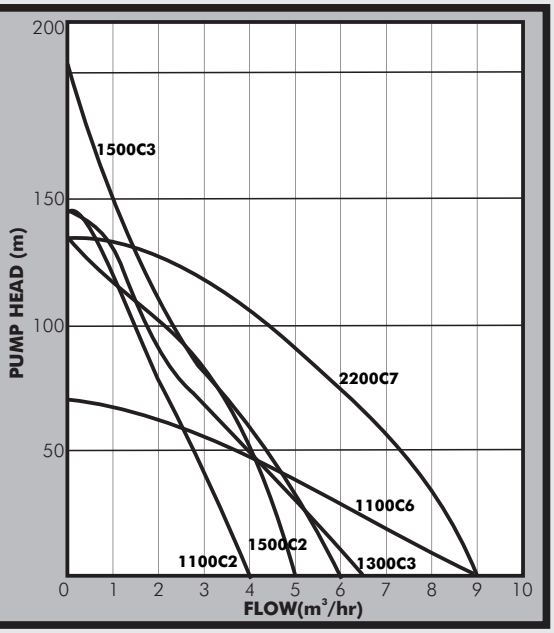
DAYLIFF

SUNFLEX2

Hybrid AC/DC Solar Pump







PUMP

Dayliff Sunflex2 is a multistage centrifugal submersible pump designed for water supply from boreholes and wells. A particular feature is hybrid capability with the option of running the pump on DC solar or AC mains supply or generator power with an external intelligent MPPT controller incorporating a frequency converter automatically configuring to the connected input power source. Other features include:-

- Pump construction is of hard-wearing stainless steel throughout including impellers and stages with water lubricated bearings.
- Separate motor controller incorporating MPPT capability for DC power input and Power Factor Correction for AC power input to maximise power input efficiency with DC power automatically prioritized.
- Wide voltage range and flexibility for both AC and DC power sources.
- Built-in dry running protection.
- Soft start operation to extend motor and pump life.
- Motor protection including overload/underload and overvoltage / undervoltage sensing.

Dayliff Sunflex2 is a cost-effective and reliable solution for hybrid water supply where both solar and mains power supplies are available. The pump incorporates a number of innovative technology features to optimize system efficiency and minimize operating costs and provides unbeatable flexibility for all borehole applications.

MOTOR

The pump is coupled to an oil filled brushless permanent magnet variable speed motor that can be powered either by AC or DC power supply. The motor is provided with an external control module which uses MPPT technology to continuously optimize DC input efficiency and provides protection against over/under voltage, electrical and mechanical overload.

For optimal performance it is recommended to size the PV solar module array with a nominal output about 50% greater than the specified motor size and ensure that the input voltage is between the specified limits.

EXTERNAL PUMP CONTROLLER

An external controller is provided to enhance pump functionality which primarily provides for power source selection of either DC only, AC only or Auto which prioritizes the use of DC solar over mains/generator AC power and switches to AC when DC solar power is insufficient or unavailable. It also provides for on/off switching, digital VAC and VDC values, connection for a high-level control switch with 'Full' indication, 'Low' warning for low borehole water level and system Error warning. Other extra features include protection against low and high voltage, over current , over temperature, high and low water level (15min recovery) and over load and an LED display for voltage, current, power, speed and error codes.

Enclosure Class: Pump -IP68, Controller -IP65 ***Insulation Class:*** F ***Max. Controller Current:*** 18A ***Speed :*** 4,000rpm

PUMP OUTPUTS

Performance curves are given at standard test conditions of 1000W/m^2 solar irradiance and 25°C temperature. 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 the graph. 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.

OPERATING CONDITIONS

Pumped Liquid: Thin, clean, non-aggressive liquids without fibres or particles with a sediment concentration not exceeding 50gms/m^3
Max. Liquid Temperature: 35°C
Max Immersion Depth: 100m
Installation: Pump should be installed vertically

PUMP DATA

Model	Power (kW)	MPPT Voltage (Vmp)	Input Voltage(V)		Open Circuit Voltage (VOC)	PV Modules (Connected in Series)	Outlet (")	Dimensions (mm)			Weight (kg)
			AC, 1ph	DC				A	B	D	
SUNFLEX2 1100C2	1.1	150-350	80-280	80-430	<430	4x545W	1¼	454	258	100	13
SUNFLEX2 1100C6							2	329			
SUNFLEX2 1300C3	1.3	180-350				5x545W	1¼	433			
SUNFLEX2 1500C2	1.5							490	205	78	11
SUNFLEX2 1500C3								538	258	100	16
SUNFLEX2 2200C7	2.2	280-350				7x545W	2	473	278		15