Sun. Water. Life.

LORENTZ

PS4000 C

Solar-operated Submersible Pump System

Characteristics

- **flow rate up to 70 m³/h**
- **lift up to 170 m**
- **maintenance-free**
- **excellent efficiency thanks to modern brushless DC motor technology**

Application

- drinking water supply
- livestock watering
- pond management
- irrigation
- etc.

picture may differ from actual product

Components

Controller PS4000

- controlling of the pump system and monitoring of the operating states
- mounted at surface (no electronic parts submerged)
- two control inputs for well probe (dry running protection), float or pressure switches, remote control etc.
- automatic reset 20 minutes after well probe turns pump off
- protected against reverse polarity, overload and high temperature
- speed control, max. pump speed adjustable to reduce flow rate to c. 30 %
- solar operation: integrated MPPT (Maximum Power Point Tracking), Voc = 375 V DC, Vmp > 238 V DC
- battery operation: low voltage disconnect and restart after battery has recovered
- max. efficiency 92% (motor + controller)
- enclosure: IP 54 (sealed, weatherproof)
- ambient temperature: –30 to +40° C/–20 to +115° F

Motor ECDRIVE 4000C

- 2-pole, synchronous brushless DC motor
- high life expectancy, electronically commutated, sensorless
- voltage: max. 240 V EC (electronically commutated)
- power: 3.5 kW/4.6 HP, nmax = 3,300 RPM
- no electronics inside motor
- water filled
- IP68, pressure balanced, max. submersion 250 m
- water lubricated dynamic slide bearings, material: carbon/ceramic
- raw earth magnets, sealed in stainless steel and encapsulated in synthetic resin
- unlimited number of starts/stopps per hour
- wetted material: stainless steel (AISI 316), POM, rubber, cable drinking water approved
- max. water temperature: 40° C/105° F

Pump End (PE)

- centrifugal mulistage direct-coupled pump end
- non-return valve
- material: stainless steel (AISI 304), rubber
- dry running protection (optional)
- max. sand content: 50 g/m³, a higher content will wear the pump and reduce its life span considerably
- max. salt content: 300 – 500 ppm at max. 30° C/85° F, higher salt contents require lower water temperatures
- pH value: 6-9
- high life expectancy

Motor and controller can only operate as unit. The motor cannot be operated without controller or with a different controller.

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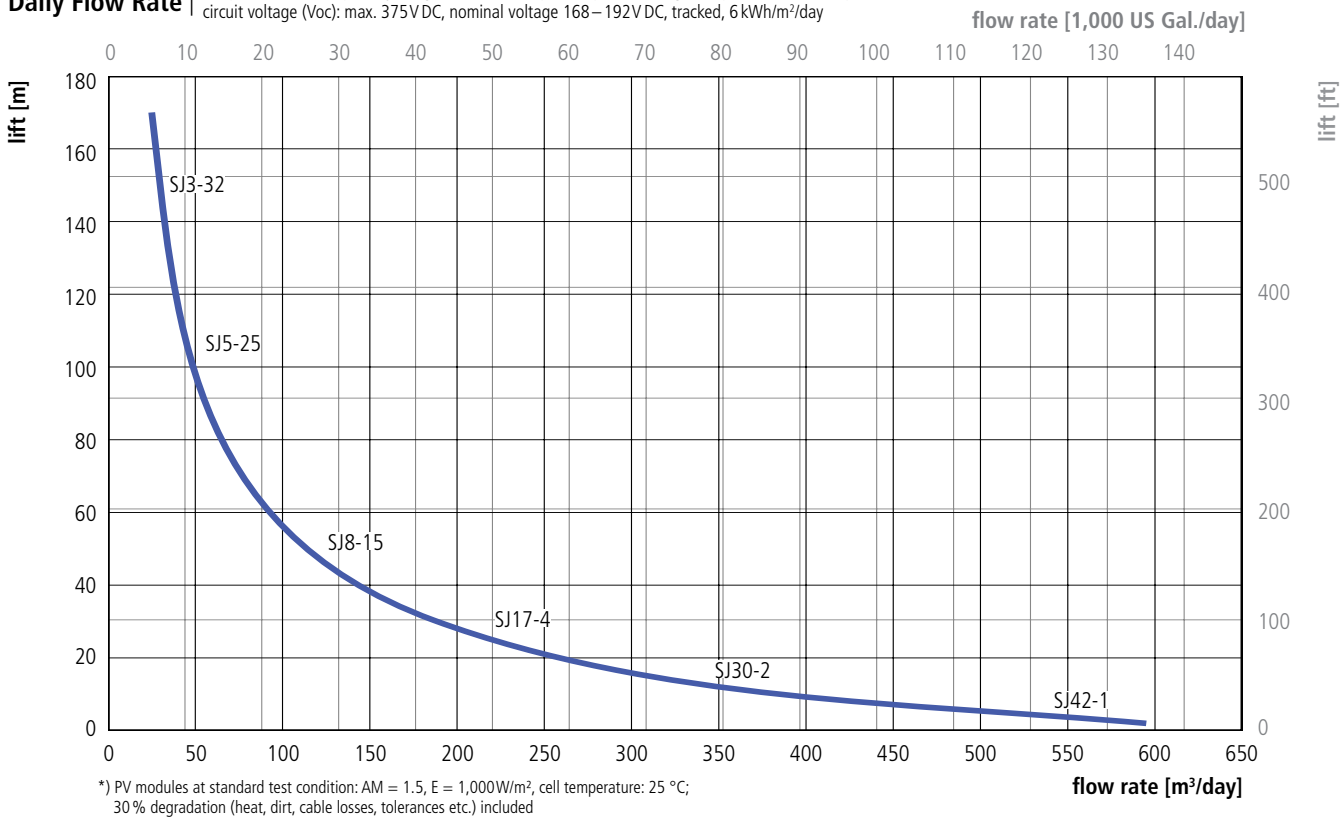
Performance

Pump Head	Lift		Flow Rate	
	[m]	[ft]	[m³/h]	[US-Gal./h]
C-SJ3-32	130 – 170	430 – 560	3.3 – 3.8	800 – 1,000
C-SJ5-25	70 – 130	260 – 430	4.3 – 6.6	1,150 – 1,720
C-SJ8-15	30 – 80	100 – 260	6.9 – 12.2	1,700 – 3,200
C-SJ17-4	15 – 50	50 – 165	14.0 – 24.5	3,700 – 6,500
C-SJ30-2	12 – 22	40 – 70	33 – 44	8,500 – 11,000
C-SJ42-1	up to 12	up to 40	44 – 70	11,000 – 18,500

Daily Flow Rate

8.5 peak flow hours per day, PV generator:* 5 kWp, max. power voltage (Vmp)*: > 238 V DC, open circuit voltage (Voc): max. 375 V DC, nominal voltage 168 – 192 V DC, tracked, 6 kWh/m²/day



*) PV modules at standard test condition: AM = 1.5, E = 1,000 W/m², cell temperature: 25 °C; 30 % degradation (heat, dirt, cable losses, tolerances etc.) included

Dimensions

Pump	Dimensions						Minimum internal borehole diameter	Weight
	A	B	C	D	E_{max}	BSP		
	[mm]	[mm]	[mm]	[mm]	[mm]	[in]	[in / mm]	[kg]
SJ3-32	1,088	245	843	96	98	1 ¼	4 / 104	19.5
SJ5-25	941	245	696	96	98	1 ½	4 / 104	18.0
SJ8-15	1,118	245	873	96	98	2	4 / 104	20.5
SJ17-4	754	245	509	96	131	2 ½	6 / 150	20.5
SJ30-2	705	245	460	96	131	3	6 / 150	19.5
SJ42-1	625	245	380	96	147	3	6 / 150	18.0
Controller								
PS4000	595	178	165	150				6.0