Conergy Solaram Surface Pump

The Conergy Solaram Surface Pump draws water from a shallow well, spring, pond, river or tank. It can push water uphill and over long distances for home, village, irrigation or livestock uses. It can use power directly from a photovoltaic array to fill a storage tank.

Ultra-efficient
Uses less power than any other pump in its range, starts pumping in low light conditions

Economical
Reduces power system cost by 25-75 % compared to centrifugal or AC pumps

Rugged and Reliable
Proven design with a 20 year life expectancy

Simple to Maintain

Dirt-tolerant

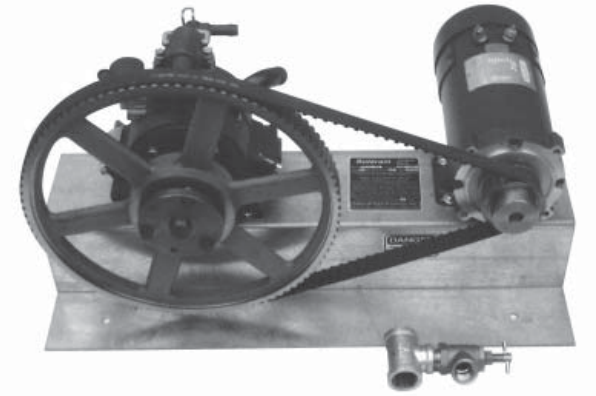
Dry Run-tolerant

Easy-to-install

High Lift and Flow

Suction Capacity
25 vertical feet (7.6 m) at sea level. Subtract 1 ft for every 1,000 ft elevation (1 m for every 1,000 m). Suction capacity may be further limited by intake pipe friction or gases in water. For best reliability, place the pump as close to the water source as possible.

Construction
- Multiple diaphragm industrial design
- Cast aluminum pump body
- Neoprene diaphragms backed by pistons
- Non-toxic oil-filled crankcase
- Massive ball bearings
- Permanent Magnet DC Motor
- Gear (timing) belt drive
- Pressure relief valve include



Power System Requirements
- Solar (PV) array: Chart indicates power (W) required at the pump. For solar array-direct (non-battery) systems, the rated power of the PV array must exceed the pump watts by 25 % or more.
- 120 V models: Use 10 x 12 V or 5 x 24 V modules in series.
- Linear Current Booster (pump controller) is required to facilitate starting and to prevent stalling in low-light conditions.
- Solar tracker: Optional, to increase daily yield (typically 30%).

Accessories
- $1^1/_4$" (31.2 mm) Foot Valve (Item #DSP-11044) if pump is placed higher than water source
- Float Switch (Item #DSP-11003) for remote shut-off of the pump when tank fills
- Diaphragm and Oil Kit (Item #DSP-08503): Supplies for regular preventive maintenance
- Long-term Parts Kit: (Item #DSP-08504) Three Diaphragm and Oil Kits, plus a gearbelt and a motor brush set

Fittings
- Intake: 1-$1^1/_4$" (25.4-31.2 mm) male pipe thread
- Outlet: 1" (25.4 mm) female pipe thread

Dimensions
- 28" W x 16.5" H x 16" D (710 x 420 x 410 mm)
- Weight, max. 150 lbs (68 kg)

Warranty
1 year against defects in materials and workmanship

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SOLAR PUMPS

Reading the Chart

Use the chart to determine a four-digit model number. Make note of the voltage indicated.

Total Lift = vertical distance from surface of the water source to the pipe outlet or top of storage tank, plus pipeline friction loss

gpm = U.S. gallons per minute

lpm = liters per minute

Total Lift		Model #1 _ _ 21			Model #1 _ _ 22			Model #1 _ _23			Model #[2]
ft	m	gpm	lpm	W	gpm	lpm	W	gpm	lpm	W	V
0-80	24	3.0	11.4	170	3.7	14.0	207	4.6	17.4	285	
120	37	2.9	11.0	197	3.7	14.0	238	4.5	17.1	319	
160	49	2.9	11.0	225	3.6	13.6	268	4.5	17.1	352	
200	61	2.9	11.0	247	3.6	13.6	296	4.5	17.1	388	
240	73	2.8	10.6	265	3.6	13.6	327	4.5	17.1	427	
280	85	2.8	10.6	286	3.6	13.6	356	4.4	16.7	466	81 _ _
320	98	2.8	10.6	315	3.5	13.3	388	4.4	16.7	496	24 V
360	110	2.8	10.6	342	3.5	13.3	416	4.4	16.7	536	
400	122	2.7	10.6	363	3.4	12.9	450	4.4	16.7	572	
480	146	2.7	10.2	416	3.4	12.9	505	4.3	16.3	649	
560	1712.7	10.2	456	3.3	12.5	570	4.3	16.3	693		
640	195	2.7	10.2	502	3.3	12.5	623	4.2	15.9	774	
720	220	2.6	10.2	551	3.2	12.1	690	4.1	15.5	856	
800	244	2.6	9.9	589	3.2	12.1	715	4.1	15.5	931	
880	268	2.6	9.9	647	3.2	12.1	774	4.0	15.2	1,082	83 _ _
960	293	2.6	9.9	705	3.1	11.7	838	4.0	15.2	1,190	120 V

Total Lift		Model #1 _ _ 41			Model #1 _ _ 42			Model #1 _ _43			Model #2
ft	m	gpm	lpm	W	gpm	lpm	W	gpm	lpm	W	V
0-80	24	6.2	23.5	258	7.5	28.4	339	9.4	35.6	465	
120	37	6.0	22.7	305	7.3	27.7	396	9.1	34.5	539	81 _ _
160	49	5.8	22.0	354	7.2	27.3	453	8.9	33.7	619	24 V
200	61	5.7	21.6	400	7.1	26.9	513	8.9	33.7	693	
240	73	5.6	21.2	453	7.0	26.5	572	8.6	32.6	724	
280	85	5.5	20.8	499	6.9	26.2	628	8.4	31.8	801	82 _ _
320	98	5.4	20.5	548	6.8	25.8	686	8.3	31.5	869	24 V
360	110	5.4	20.5	592	6.6	25.0	733	8.2	31.1	927	
400	122	5.3	20.1	649	6.5	24.6	782	8.7	33.0	1,122	83 _ _
480	146	5.3	20.1	717	6.5	24.6	900	8.5	32.2	1,265	120 V
560	171	5.2	19.7	800	6.5	24.6	1,045	8.4	31.8	1,397	
640	195	5.1	19.3	893	6.5	24.6	1,116	8.2	31.1	1,540	84 _ _
720	220	5.1	19.3	1,031	6.4	24.3	1,287	8.1	30.7	1,683	120 V
800	244	5.1	19.3	1,114	6.4	24.3	1,408	8.0	30.3	1,815	
880	268	5.1	19.3	1,206	6.3	23.9	1,529	8.0	30.3	1,958	85 _ _
960	293	5.0	18.9	1,289	6.1	23.1	1,650	8.0	30.3	2,145	120 V

Performance may vary +/- 10 %

[1] Second two model number digits

[2] First two model number digits