



The Dankoff 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 the 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

Simple to Maintain

Dirt tolerant

Dry run tolerant

Easy to Install

High Lift and Flow

Suction Capacity

25 vertical feet (7.8 m) at sea level. Subtract 1 ft. for every 1,000 ft. elevation (1m for every 1,000 m). Suction capacity may be further limited by intake pipe friction or gases in water. For best reliability, place pump as close to the water source as possible.

Construction

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

Fittings

- Intake: 1-1 ¼" (25.4-31.2 mm) male pipe thread
- Outlet: 1" (25.4 mm) female pipe thread



Accessories

- 1 ¼" (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 is full
- Diaphragm and Oil Kit (Item #DSP-08503): Supplies for regular preventive maintenance
- Long-term Parts Kits (Item #DSP-08504): Three Diaphragm and Oil Kits, plus a gear belt and a motor brush set

Dimensions:

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

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.
- 120V models: Use 10 x 12V or 5 x 24V 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%).

Warranty

1 year against defects in materials and workmanship

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 #' __ 21			Model #' __ 22			Model #' __ 23			Model # ²
ft	m	GPM	LPM	W	GPM	LPM	W	GPM	LPM	W	V
0-80	24	3	11.4	170	3.7	14	207	4.6	17.4	285	
120	37	2.9	11	197	3.7	14	238	4.5	17.1	319	
160	49	2.9	11	225	3.6	13.6	268	4.5	17.1	352	
200	61	2.9	11	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	
320	98	2.8	10.6	315	3.5	13.3	416	4.4	16.7	536	81 __
360	110	2.8	10.6	342	3.5	13.3	416	4.4	16.7	572	24V
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	171	2.7	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	82 __
720	220	2.6	10.2	551	3.2	12.1	690	4.1	15.5	856	24V
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	15.2	1082	83 __
960	293	2.6	9.9	705	3.1	11.7	838	4	15.2	1190	120V

Total Lift		Model #' __ 41			Model #' __ 42			Model #' __ 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	22.7	305	7.3	27.7	396	9.1	34.5	539	81 __
160	49	5.8	22	354	7.2	27.3	456	8.9	33.7	619	24V
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	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	24V
360	110	5.4	20.5	592	6.6	25	733	8.2	31.1	927	
400	122	5.3	20.1	649	6.5	24.6	782	8.7	33	1122	83 __
480	146	5.3	20.1	717	6.5	24.6	900	8.5	32.2	1265	120V
560	171	5.2	19.7	800	6.5	24.6	145	8.4	31.8	1397	
640	195	5.1	19.3	893	6.5	24.6	1116	8.2	31.1	1540	85 __
720	220				6.4	24.3	1287	8.1	30.7	1683	120V
800	244							8	30.3	1815	

Performance may vary \pm 10%

¹ Second two model number digits

² First two model number digits

¹ First two model number digits
² Second two model number digits
Performance may vary \pm 10%

800	244							8	30.3	1815	
330	330				8.4	31.3	1581	8.1	30.3	1683	130A
280	102	2.1	10.3	823	8.2	31.0	1119	8.3	31.1	1240	82 __
240	131	2.3	10.1	800	8.2	30.9	142	8.4	31.0	1341	
180	148	2.3	10.1	111	8.2	30.9	200	8.2	30.3	1282	130A
120	175	2.3	10.1	144	8.2	30.9	185	8.2	30.3	1130	82
80	192	2.3	10.1	180	8.2	30.9	185	8.2	30.3	1130	82

Subject to technical changes
For more information, please visit or call:

www.dankoffssolarpumps.com

1 (505) 471-3469

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