

Kelln Solar ETAPUMP[®] Series Solar Direct

The HR14 is a maintenance free, compact, lightweight water pumping system developed especially for photo-voltaic operation. The range of the HR14 offers package systems capable of up to 7000 US gals per day for solar direct applications and pumping heads of up to 160m. Systems are also available in 24 volt and 48 volt models with pumping depths to 200 feet. Due to the outstandingly high efficiency of the motor, unlike some other well known submersible motors, does not require any additional cooling. This pump may be used in lakes, streams or wells with diameters greater than 4" or close to the well filter with ambient temperatures up to 40° C. with out loss of motor power.

How the Pump Works



The ETAPUMP[®] comprised of a single hard-chrome plated rotor and a rubber stator. When the rotor lies inside the stator the two components touch along a ribbon of contact. Behind that ribbon of contact is a sealed capsule that moves from suction to discharge as the rotor rotates inside the stator. The pumping element is lubricated by the water itself. The rubber stator yields so that particles cannot be trapped against the hard chrome plated rotor. The rubber stator is engineered to compress momentarily during the passage of abrasive particles increasing stator life. Due to this principle the pump has a higher tolerance with sandy or silt-laden water. The pump can operate over an outstanding wide speed range of about 1:5 (700 to 3500 RPM), resulting in more liters pumped per day using the first rays of the sun to start the pump when running on solar direct. The HR14 Pump motor is a brushless DC motor designed to drive many different types of pumps at efficiencies of up to 90% compared to AC motors that are at 55 % to 60%. Its brushless design, reliable ceramic bearings and rugged construction ensure the high reliability under the most extreme conditions.

Pump Advantages:

Non - pulsating flow, positive displacement, sand damage less than other pumps, self cleaning, simplicity of only 2 parts, efficiency of more than 70 %, very long life expectancy, frost proof and chrome plated abrasion resistant rotor.

Motor Advantages:

No Brushes to replace, raw earth permanent magnets for highest efficiency, standard NEMA flange, motor filled with water, stainless steel casing and installs in 4" casings.

Warranty

The HR Series pump and controllers are warranted to be free from defects in material and workmanship for two years from date of purchase.

Self Cleaning Ability

The rotor sweeps the full surface of the rubber stator every turn. It is impossible for growth or deposits to develop there. This makes it even more superior to centrifugal pumps. There are no valves to lock, clog or wear.

Easy to Repair

This pumps principle is known not just for trouble-free long life, but for being the easiest pumps to work on. Parts are low in cost and can usually be replaced on site with basic tools.





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System wattage	Vertical Lift (Feet)																		
	25	50	75	100	125	150	175	200	250	300	350	400	450	500	550	600	650	750	
90	824	528	384	208															
120	1096	848	616	400	232	HR-04													
180	1904	1160	1016	800	568	440	320	192	128										
240	2744	1968	1352	1120	848	680	552	424	296	272	208								
300	3592	2856	1688	1328	1160	976	800	616	488	424	336	296	256	232					
480	5704	4224	3592	2536	1688	1480	1272	1160	928	784	656	568	552	488	400	360	320	232	
600	8032	5072	4440	3384	2536	2112	1904	1544	1272	1056	976	800	736	656	568	528	464	360	
720	9936	6344	4648	4016	3488	2744	1904	1856	1608	1208	1056	976	888	800	656	616	568	488	
900	11624	8032	5288	4648	4016	3384	2800	2112	1944	1624	1200	1160	1080	992	760	720	696	560	
	Centrifugal			HR-14				HR-07				HR-04H				HR-03H			

Common Pumping Situations

**130 Cow/Calf pairs (Solar Direct)
50 Feet Lift / 4”Casing / 12 US GPM
recovery**

- Pump Model HR14SD-464**
 1 – Submersible Pump HR14
 1 – Pump Controller
 4 – 64 Watt Uni-Solar Shatterproof Panels
 2 – Double Panel Stand
 1 – Float Switch
 1 – Wire Package
 1 – Low Level Probe

Required But Not Included
 2- Poles (2 3/8 O.D.) for Panel Stand

System Cost \$ 5095.00
 Pump Cable, Poly Hose and Safety Rope is
 \$ 3.00 per Lin. Foot. X Depth of pump + 10
 Feet
 (G.S.T & Shipping extra)

**170 Cow/Calf pairs (Solar Direct)
100 Feet Lift / 4”Casing / 12 US GPM
recovery**

- Pump Model HR14SD-864**
 1 – Submersible Pump HR14
 1 – Pump Controller
 8 – 64 Watt Uni-Solar Shatterproof Panels
 4 – Double Panel Stands
 1 – Float Switch
 1 – Wire Package
 1 – Low Level Probe

Required but Not Included
 4- Poles (2 3/8 O.D.) for Panel Stand

System Cost \$7995.00
 Pump Cable, Poly Hose and Safety Rope is
 \$ 3.00 per Lin. Foot. X Depth of pump + 10
 Feet
 (G.S.T & Shipping extra)