

SF2 Solar Irrigation Pump

The Futurepump SF2 is a robust surface pump designed for smallholder farmers with shallow water sources, it can pump up to 1 litre per second of water using just the power of the sun.



Futurepump solar pumps have three main parts: the power source (**PV panels**) which convert sunlight into electrical energy to drive, the **DC motor** that turns a flywheel which drives a reciprocating, positive displacement, high efficiency **piston pump**.

BENEFITS

- No fuel or electricity costs
- Robust & farmer-fixable (as simple as a bicycle)
- Pumps enough to irrigate up to two acres
- Ideal with tanks, sprinklers, hoses or drip systems
- Futurepump supplies removable, folding solar PV panels for increased portability
- Solar panel tilting system for best performance
- No damage caused by dry pumping
- Tolerant of grit, sand, mud and debris
- 5V USB charging socket for mobile phones and small electrical items
- Supplied with 120W or 240W panels or purchase 'pump only' and add your own
- Optional high-head adapter kit (SF2H)
- Optional remote monitoring & PAYGo connectivity for large orders

SPARE PARTS & TOOLS

Every Futurepump solar pump comes with a free maintenance set of spare parts and tools. Our online support guides and videos allow for minimum downtime for quick maintenance.

HIGH-HEAD VARIANT (SF2H)

The SF2 comes with the option to add an SF2H pump kit for higher head applications.

The SF2H kit can be purchased as an additional add on or ordered instead of SF2 at point of order.

Considerations when choosing an SF2H:

- The SF2H is ideal for total heads of above 15m and up to 45m (with 240W solar).
- It is optimised for high-head so has a lower flowrate than the SF2

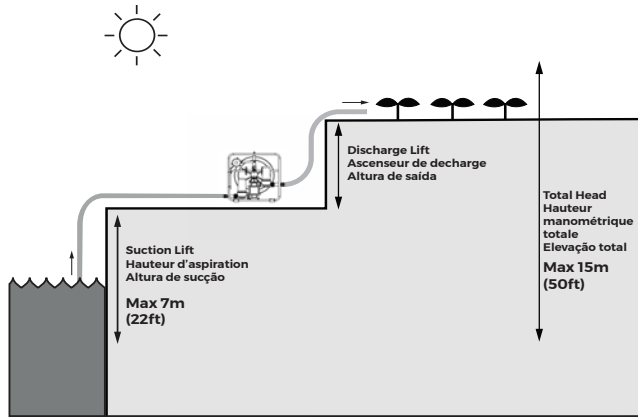
WEIGHT & DIMENSIONS

- Pump weight: SF2: 20.5kg SF2H: 20kg
- Pump dimensions: 520mm x 200mm x 535mm
- Pump carton weight (incl. spares and suction pipe): SF2: 26kg; SF2H: 25.5kg
- Pump carton dimensions (incl. spares and suction pipe): 560mm x 260mm x 560mm
- 120W PV panels (2 x 60W series) carton weight and dimensions: 15kg; 640mm x 100mm x 700mm
- 240W PV panels (2 sets of 120W in parallel) carton weight and dimensions: 30kg (2 cartons of 15kg); 640mm x 100mm x 700mm
- Supplied with 6m flexible inlet/suction pipe: Internal diameter of 30mm, external diameter 36.20mm.

ELECTRICAL / MECHANICAL

- Maximum pump voltage: 64V DC
- Maximum motor current: 3 amps DC
- Maximum PV panel wattage: 360W
- Piston diameter SF2: 104mm; SF2H: 61mm
- Inlet/outlets designed for 1 1/4 (32mm) pipe
- Displacement volume per stroke: SF2: 150cm³; SF2H: 55cm³
- Normal flywheel RPM range: SF2: 100-250, SF2H: 100-500
- SF2: Two pulley sizes: 70mm for 0-6m total head, short hose pipes and >800 W/m² and 40mm for >6m total head
- SF2H: Two pulley sizes: 90mm for 15-30m total head; 50mm for >30m total head

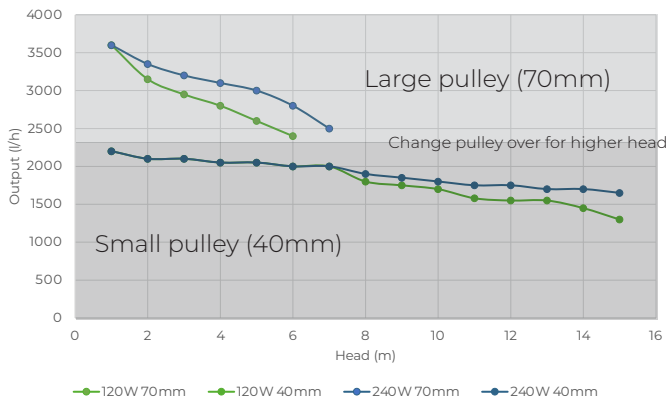
PERFORMANCE - SF2



Total head = 15m pressure or 147kpa or 1.47 bar

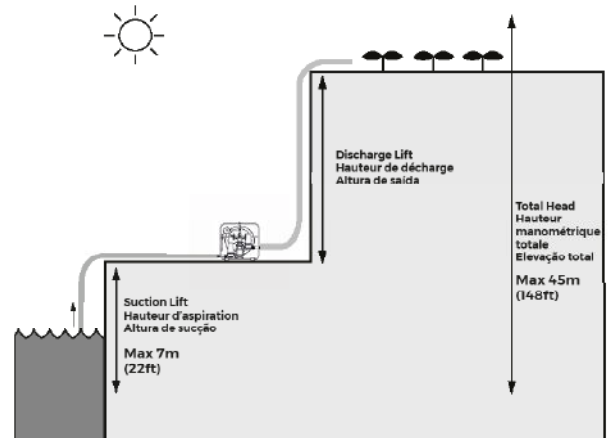
At shallow heads, with short hosepipe length, the SF2 can deliver up to 1 L/s of water, which is 3,600 L/hr or over 21,000 litres per 6-hour pumping day.

1 meter lift	6.5 meter lift
3600 L/hr	2200 L/hr



- Inlet side vertical suction limit: 7 metres
- Maximum total head SF2: 15 metres
- Horizontal discharge: up to 500m

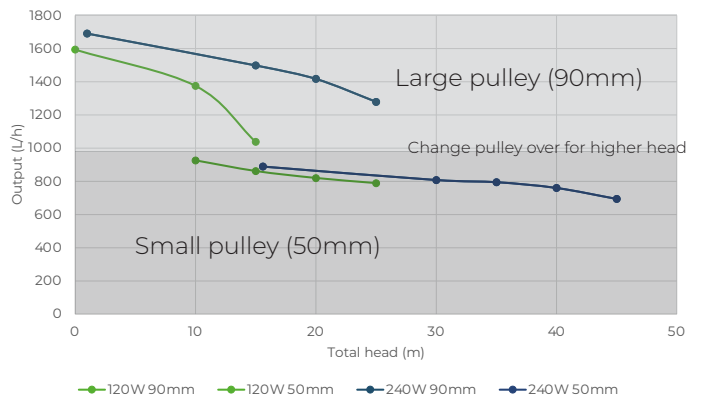
PERFORMANCE - SF2H



Total head (120W) = 25m pressure (245kpa;2.45 bar)

Total head (240W) = 45m pressure (543kpa;5.43 bar)

15m lift	25m lift	45m lift
1000 L/hr (120W) 1500 L/hr (240W)	800 L/hr (120W) 1200 L/hr (240W)	700 L/hr (240W only)



- Inlet side vertical suction limit: 7 metres
- Maximum total head SF2H: 25 metres (120W); 45m (240W)
- Horizontal discharge: up to 500m

SOLAR PANEL OPTIONS

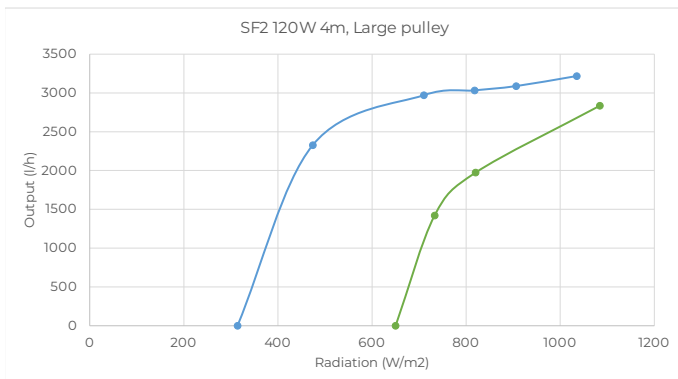
Both the SF2 and SF2H can be supplied with 120W (2 x 60W panels series), 240W (2 sets of 120W in parallel), or as a pump only unit to attach your own panels (up to a maximum of 360W).




Attaching higher wattage solar panels to your pump will improve its low radiation performance and should be considered if in a cloudy location or to pump earlier in the morning/later in the evening.



Please be aware, using higher wattage solar panels in **high radiation** may shorten the motor life.

An example showing the difference in flow at different radiations is shown on the right for the SF2 pump running on the large pulley at 4m head.



Solar irradiance	< 500 W/m ²	500 - 800 W/m ²	> 800 W/m ²
Approximate cloud cover			

WARRANTY & CERTIFICATION

Futurepump solar pumps are supplied with a ten-year manufacturer-backed warranty. To find out more about what our warranty covers and any exclusions, please visit futurepump.com/support-centre

The best support can be provided if you register your pump upon purchase at warranty.futurepump.com

Futurepump solar pumps are manufactured by Futurepump (India) Pvt Ltd who use an ISO 9001:2015-certified quality management system.

REMOTE MONITORING



The Futurepump SF2 can be ordered with data loggers for remote performance monitoring and PAYGo. Please note we can only add data loggers to large volume orders and at point of order.

Please contact us to discuss your requirements.

DISTRIBUTORS

To find your nearest distributor please visit shop.futurepump.com.

For information on becoming a distributor, visit futurepump.com/distribute