

SunMill solar water pumps

The smart choice





Think SunMill

Sun Mill pumps have been serving rural Australia for over ten years.

Sun Mills contain best of breed componentry selected for robust operation, reliability and low maintenance.

The Sun Mill range of solar pumps has expanded from the original low maintenance piston pump to a variety of surface and submersible pumps that provide for all kinds of water pumping needs.

Whether you're a homeowner located away from the town supply, a livestock or crop farmer battling inconsistent rainfall or even a community representative looking for a reliable water supply, there is a Sun Mill for you.

Solar pumping

Solar pumps put water where it's needed when it's needed. Solar panels collect energy from sunlight. An electronic controller draws that energy and conditions power for an electric motor. The electric motor drives a range of mechanical water pumps, including diaphragm, helical rotor, piston and centrifugal types. It's that simple.

Solar water pumps are a naturally good way to use solar energy, because water pumped during the day and stored can still be drawn on once it is dark.

Solar pumps produce no pollution, require no ongoing fuel costs and are low maintenance. They're designed to withstand harsh conditions of light, wind and rain, and will provide water automatically, quietly and reliably day after day, year after year.

A Sun Mill for any application

 <p>Home Hobby farm</p>		 <p>Aqua Submersible Up to 3,000L/day Up to 70m TDH</p>	 <p>Cascade Submersible Up to 6,000L/day Up to 70m TDH</p>		
 <p>Livestock Irrigation</p>		 <p>Cascade Submersible Up to 6,000L/day Up to 70m TDH</p>	 <p>Rapid Submersible Up to 7,000L/day Up to 50m TDH</p>	 <p>Original Surface Transfer Up to 40,000L/day Up to 60m TDH</p>	 <p>Quicksilver Submersible Up to 70,000L/day Up to 120m TDH</p>
 <p>Irrigator Community water supply</p>		 <p>Jetstream Submersible Up to 130,000L/day Up to 120m TDH</p>			

Reliable

Sun Mills exhibit very high reliability characteristics. Solar cells are supplied with a standard 20 year performance warranty, while complete systems are supported by a 24 month workmanship warranty.

Fast

An 800 Watt Quicksilver brings water up from 30 metres down and fills a 150,000 litre tank in 5 days.



Low maintenance



Aqua

The **Sun Mill Aqua** is a low cost solar pumping system designed for low volume applications without sacrificing pressure.

The polymer submersible pump contains a viton diaphragm, making it suitable for potable water. It is ideal for home applications where less than 4,000 litres per day are required.

The fixed frame solar assembly is easy to install and requires no maintenance.



Cascade

The **Sun Mill Cascade** is a low cost solar pumping system designed for applications that are either low head and high volume, or high head and low volume.

The stainless steel submersible pump and high power solar module represent a quality upgrade over the Sun Mill Aqua. It is ideal for home or hobby farm applications where less than 6,000 litres per day are required.



Rapid

The **Sun Mill Rapid** is a mid-range submersible pump for bores or wells that performs well under high head or cloudy conditions. It is suited to small livestock supply applications or occasions where water must be pumped long distances.

Unlike a centrifugal pump, the helical rotor continues to pump even when the motor speed is low, giving that little bit extra at the start and end of the day. The stainless steel rotor moves even sandy water with minimal wear.



Original

The **Sun Mill Original** combines the principles of a traditional windmill with the latest in solar technology. Designed and built in Australia, it addresses the fact that people in remote areas need a pump that is both dependable and easily maintained.

The majority of the Original's moving parts are above ground and deliberately low tech, making it robust and easy to maintain. Most replacement parts are inexpensive, making its long term cost of ownership very low. Some Originals are now over ten years old, pumping reliably without fuel costs day after day. The Solco Maxi controller accepts a range of solar power input, providing an upgrade path should your water needs change in the future.



Quicksilver

The **Sun Mill Quicksilver** is a high flow, high head solar pump with flexible upgrade options, and is suitable for many livestock and irrigation applications.

The Quicksilver's submersible helical rotor pump delivers water even under low light, making the most of every ray of sunshine. Its TSP1000 motor controller handles solar input from 200 watts to 1000 watts in a range of configurations, providing up to 55,000 litres of water per day at low head, or 14,000 litres per day at high head.



Jetstream

The **Sun Mill Jetstream** is the ultimate solar pump. The Jetstream accepts up to 6000 watts of solar power and will easily pump over 100,000 litres of water per day at low head, or 50,000 litres per day at 100m head. A single Jetstream system can provide water for a remote community or significant livestock and irrigation applications with demanding flow and pressure requirements.

Due to the power levels involved and the range of solar configurations available, all Jetstream systems are custom-designed for each application. Qualified solar system designers and installers manage the establishment of water storage and delivery systems in addition to the solar pump. To enquire about the Jetstream, please contact Solco Solar Pumping directly on 1800 454 161.

Automatic shut off

Since solar pumps run unattended, it can be easy to fail to notice when your water source is running low. Low water protection probes and float switches detect when your water source is low, and automatically switch the pump off. High-water float switches save water by detecting when water has reached the top of your reservoir and switching the pump off automatically.

Tracking array

Tracking solar arrays use a sensor and mechanical arm to turn the solar array to face the sun during the day. This can add up to 30% to the amount of water pumped.

Power upgrade

Higher end solar pumps use power controllers that are capable of handling a range of solar input power. This flexibility allows you to purchase only the solar power you need, then upgrade by adding more panels if your water needs change at a later date.



Bore assembly

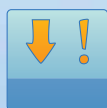
The Sun Mill Original is used in most cases as a surface transfer pump, but can be adapted with a system of columns and rods to deliver water from a bore in much the same way as a traditional windmill.

Float assembly

Most pumps in the Sun Mill range are submersible, but can be adapted by attachment of floats to deliver water from a dam or other surface water source.

Measurement and control devices

A full range of measurement devices are available through your Sun Mill dealer, including pressure gauges, flow meters and sensors, allowing you to fully automate your pump, track how much water you're using or see the effect of changes in pipework.



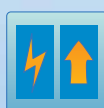
Low water shut off



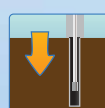
Tank full shut off



Tracking array



Power upgrade



Bore assembly



Float assembly

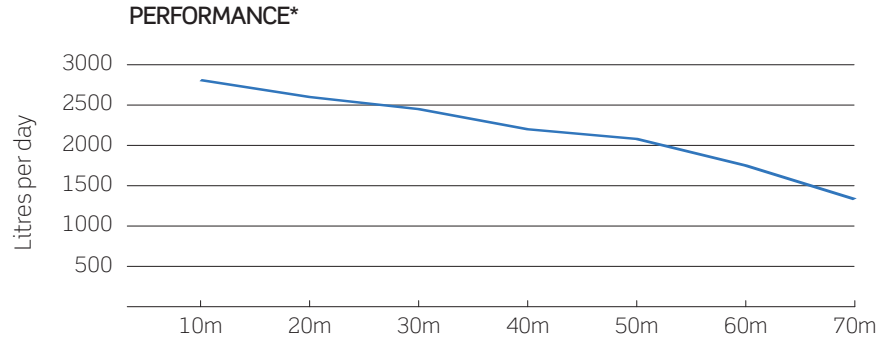


Measuring devices

Technical

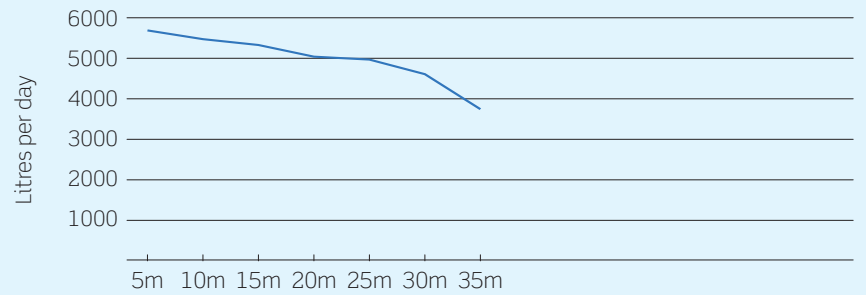
Aqua

Water pump: Shurflo 9325
Controller: EPE 200 Solar Maximiser
Solar Power: 120W to 150W
Maximum Daily Flow: 2,810L/day
 @ 10m TDH
Maximum Recommended Head:
 70m TDH (1,332L/day)



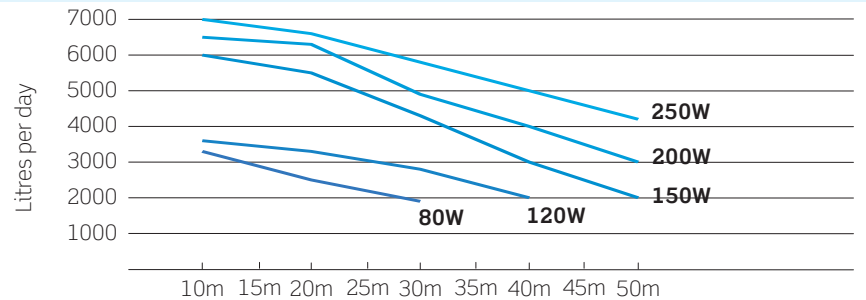
Cascade

Water pump: Sun Pump Q130
Controller: EPE 200 Solar Maximiser
Solar Power: 170W
Maximum Daily Flow: 5,688L/day
 @ 5m TDH
Maximum Recommended Head:
 35m TDH (3,744L/day)



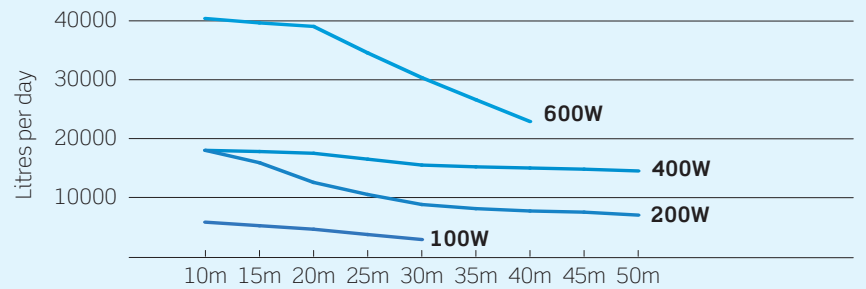
Rapid

Water pump: Lorentz wet end
 with ECDRIVE motor
Controller: Lorentz PS200
Solar Power: 80 to 250W
Maximum Daily Flow: 7,300L/day
 @ 5m TDH
Maximum Recommended Head:
 50m TDH (4,200L/day)



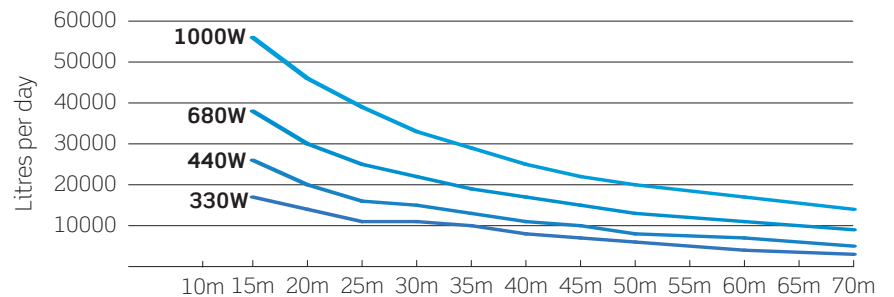
Original

Water pump: Solco piston drive
 with EMP motor
Controller: Solco Maximiser
Solar Power: 100 to 700W
Maximum Daily Flow: 37,000L/day
 @ 10m TDH
Maximum Recommended Head:
 60m TDH (17,000L/day)



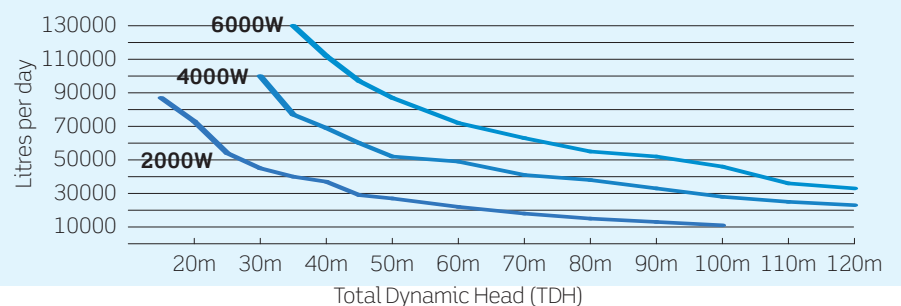
Quicksilver

Water pump: Helical rotor wet end
 with Leroy Somer motor
Controller: Tenesol TSP1000
Solar Power: 300 to 1000W
Maximum Daily Flow: 58,000L/day
 @ 15m TDH
Maximum Recommended Head:
 70m TDH (15,000L/day)



Jetstream

Water pump: Grundfos centrifugal with Leroy
 Somer motor
Controller: Tenesol TSP2000/4000/6000
Solar Power: 1500 to 6000W
Maximum Daily Flow: 130,000L/day
 @ 35m TDH
Maximum Recommended Head:
 120m TDH (33,000L/day)



*Performance figures are based on standard 6 peak sun hours per day. Actual flow will vary with location and season.

Quote

Complete this form and give it to your Sun Mill dealer for a no-obligation quote.

Q1 What is your water source? (bore, dam, well, ...)

Q2 How much water will you require on a summer day?

litres
 gallons

Q3 What will be the delivery line distance between pump and tank?

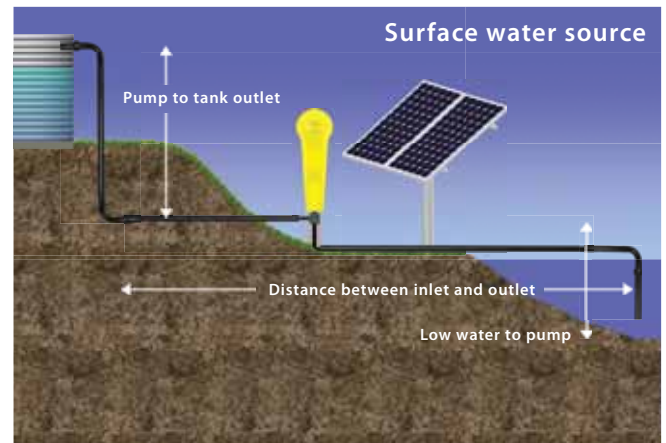
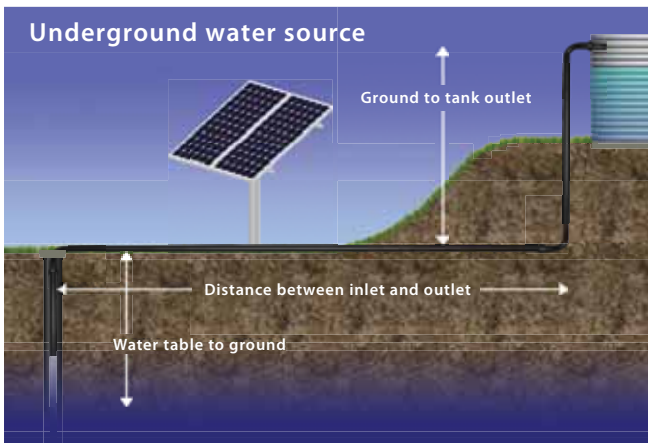
metres
 feet

Q4 What is the diameter of your delivery line pipe?

mm
 inches

Q5 Do you want automatic on/off switches to monitor tank levels?

 yes

 no


Q6 What is the vertical rise from the water table to the ground?

metres
 feet

Q7 What is the vertical rise from ground level to the tank outlet?

metres
 feet

Q8 What is the total bore or well depth?

metres
 feet

Q9 What is the diameter of the bore casing?

mm
 inches

Q10 What is the rise from the bottom of your water source to the intended location of the pump?

metres
 feet

Q11 What is the vertical rise from the intended location of the pump to the tank outlet?

metres
 feet

Q12 Do you require floats for your inlet?

 yes

 no

DEALER'S STAMP

