

# COMPETITIVE **SOLAR WATER SUPPLY**

from shallow wells with  
low daily flow requirements

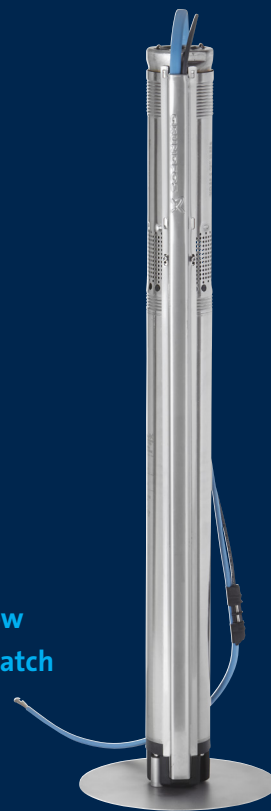
The perfect solar-powered pump  
for replacement of a wind-powered  
or hand-pump water supply



# FINALLY

## The perfect match for small-scale solar water supply

The SQFlex 1-8 is a solar submersible pump designed for water supply from shallow wells, with low daily flow requirements. Because of its small size, it is a perfect match as a replacement pump for a wind-powered or hand-pump water supply, and the pump also excels as part of a battery system. This makes it the most competitive solar water supply solution on the market for these small-scale applications.



The SQFlex 1-8 is – like its larger siblings in the world-renowned SQFlex family – an intelligent pump with high-efficiency permanent magnet motor available with multistage centrifugal hydraulics and low starting voltage.

- Built-in Maximum Power Point Tracking (MPPT) software and motor protection
- Wide voltage range and flexibility for AC/DC power sources
- Dry running protection
- Easy to install and extremely reliable
- Tank filling system by connecting to CU200 and remote monitoring through GSM by connecting to CIU Flex

### High-efficiency pump with a permanent magnet motor

The SQF 1-8 pump comprises of a MSF motor and composite hydraulic centrifugal pump (3") for low heads and low flow rates. The permanent magnet motor speed range is 3000-10700 rpm.

The pump and the motor are available in two material variants:

- SQF pump and MSF 3 motor are made of stainless steel DIN W.-Nr. 1.4301/AISI 304
- SQF-N pump and MSF-N motor are made of stainless steel DIN W.-Nr. 1.4401/AISI 316

### Build a complete SQFlex system

The SQFlex system ensures great reliability and efficiency for water supply based on renewable energy sources, such as solar and wind energy. In addition to the pump and renewable energy source, an SQFlex system incorporates all necessary controls, communication and ancillary units delivered as one complete system.

The SQFlex system can be combined and adapted to any need, matching the conditions on the installation site. The choice of energy source and wide-ranging performance ensures extreme flexibility, and the SQFlex system can also be powered by generator and battery, if required.

### Product number

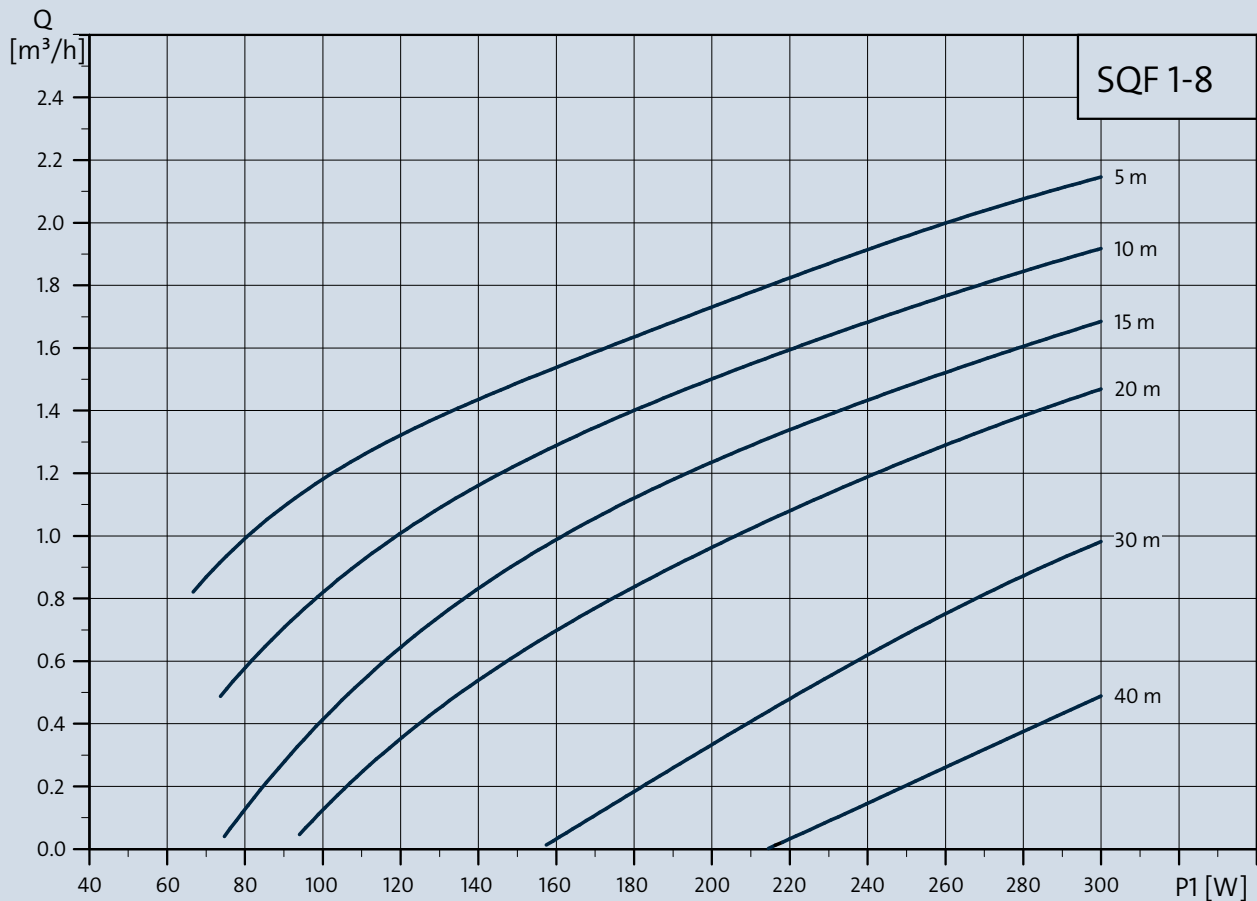
Pump type	Pump size	Product number	
		SQF	SQF-N
SQF 1-8 (N)	3"	98842452	98842517

### Electrical data

Pump type	Motor type	Maximum power input P1 (W)	Maximum current (A)
SQF 1-8 (N)	MSF 3 (N)	300	8.4

Pump type	Dimension (mm)			Gross weight (kg)	Net weight (kg)	Shipping volume (m <sup>3</sup> )
	L	B	S			
SQF 1-8	990	74	Rp 1 1/4"	5.974	5.635	0.011
SQF 1-8N	990	74	Rp 1 1/4"	5.974	5.635	0.011

## Performance curve for the SQF 1-8



TM06 8847 1217

## Specifications

Power supply to pump	30 - 300 V DC, PE 1 x 90 - 240 V, -10 %/+6 %, 50/60 Hz, PE
Power consumption	Max. 300 W
Current consumption	Max. 8.4 A
Run-up time	Depends on the energy source
Start/stop	No limitation to the number of starts/stops per hour
Enclosure class	IP68
Conductivity	≥70 µs/cm (micro Siemens)
Sound Pressure Level	The sound pressure level of the pump is lower than the limiting values stated in the EC Machinery Directive
Radio Noise	The SQF complies with the EMC Directives 2014/30/EU Tested according to the standards EN 61000-3-2:2014 and EN 61000-3-3:2013 EN55014-1:2006 + A1:2009 + A2:2011 EN55014-2:1997 + A1:2001 + A2: 2008
Reset function	The SQF can be reset via the CU200 or by disconnecting the power supply for 1 minute
Power factor	PF = 1
Operation via generator	Voltage: 230 V AC -10 % / +6 % The generator output must be minimum 1.55 kV A
Earth-leakage circuit breaker	If the pump is connected to an electric installation where an earth-leakage circuit (ELCB) is used as an additional protection, this circuit breaker must trip out when earth fault currents with DC content (pulsating DC) occur
Borehole diameter	Minimum 76 mm
Installation depth	The pump must at a minimum be completely submerged in the pumped liquid
Suction strainer	Holes of the suction strainer: Ø 2.5
Pumped liquids	pH 5 to 9, media temperature max. 40 °C Sand content up to 50 g/m³
Marking	CE



## About Grundfos Solar Water Solutions

Grundfos is a global leader in advanced pump solutions and a trendsetter in water technology. We contribute to global sustainability by pioneering technologies that improve quality of life for people and care for the planet. With an annual production of more than 16 million pump units and more than 80 companies in 55 countries, we offer a full range of modular, energy-efficient and intelligent products and services for applications within buildings, industries and water.

Grundfos Solar Water Solutions consist of a broad range of proven products that build robust and reliable solar water supply systems with long product life, low maintenance and manageable service requirements. A highly optimised Grundfos solar water solution offers low risk for your investment with low operating costs and no energy costs.

**For more information, please visit [www.grundfos.com/solar-water-solutions](http://www.grundfos.com/solar-water-solutions)**