



**SOLAR**

**PUMPING**

**SOLUTIONS**

be  
think  
innovate

**GRUNDFOS** 



# SOLAR PUMPING SOLUTIONS MADE EASY

Grundfos offers submersible and surface mounted solar pumping solutions for a range of applications including stock watering, irrigation and agricultural water supply.

Solar pumping solutions from Grundfos present a cost effective, flexible and reliable water supply solution using renewable energy.



Grundfos solar pumping solutions offer many benefits over traditional mains power and generator powered pumping systems.

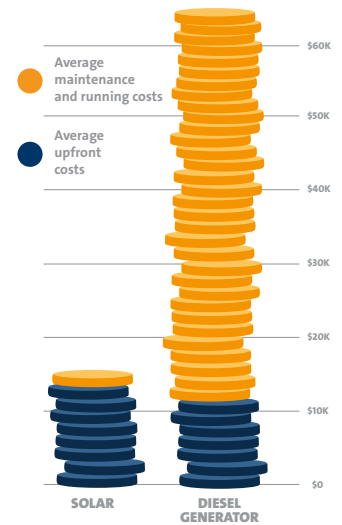
## LOW COST, OFF-GRID WATER SUPPLY

Grundfos solar pumping packages are the perfect off-grid water supply solution.

Their long service life, very low maintenance and near zero running costs make them superior to generator and wind powered systems.

**Solar is up to four times cheaper than a diesel generator powered system over the first 10 years of operation and can pay for itself in less than 3 years\***

### COSTS OVER 10 YEARS



## EASY TO SELECT AND INSTALL

The Grundfos range of packaged solar solutions bring together pumps, controllers and solar arrays that have been designed to work together seamlessly, making it easier to make the right choice.

Solar Solution Packages include everything you need to easily install the system and get pumping, fast.

If our pre-determined Solar Solution Packages are not for you, then we can bring together your own bespoke solar pumping package, from our range of pumps, motors, PV panels, controllers and accessories to suit your requirements.

## VIRTUALLY NO MAINTENANCE

Grundfos solar pumps and controllers feature a comprehensive range of protective features, minimising downtime and reducing ongoing maintenance cost to near zero.

\*Costs provided are an estimation only and not a guarantee. Payback period is an indication only and not a guarantee. Costs and payback will vary depending on a range of site specific conditions and equipment specifications. For more detailed cost comparison and payback information go to [www.grundfos.com/au](http://www.grundfos.com/au)

# PUMPS

## SQ FLEX

### SOLAR POWERED SUBMERSIBLE PUMP

**EXTENDED RANGE**

**2 YEAR WARRANTY**

#### WATER SOURCE



Bore



Dam



River

#### APPLICATION



Irrigation



Stock Watering



Transfer

#### Ultra Long Life

SQ Flex comes standard with base mount zinc anodes, which protect the pump casing from aggressive saline water, further extending life expectancy

#### Smart Control

The smart internal motor control (Max. Power Point Tracking) adjusts pump speed accordingly to Solar DC power input

#### High Quality Materials

High grade stainless steel construction to ensure a long, trouble-free life

#### Permanently Protected

If your bore runs dry, the motor is protected and will stop running, restarting automatically. Also features electrical and overheating motor protection.

#### All-in-one Solution

SQ Flex comes with a built-in DC to AC frequency inverter, eliminating the need for extra equipment

#### Wide Voltage Range

Able to work under widely fluctuating AC/DC voltages.



#### RECOMMENDED ACCESSORIES

CU200 or CIU903 - Controller



IO101 - Isolator/Manual Switch



Level Switch/Float Kit



Pressure Kit/Pressure Switch



#### POWER INPUT OPTIONS



Solar DC



Mains AC



Generator DC



Battery Back-up DC

#### PROTECTION & CONTROL

	SQ Flex
Max. Power Point Tracking	✓
Dry Run Protection	✓
Over & Under Voltage Protection	✓
Over Temperature Protection	✓

#### TECHNICAL DATA

Power Supply Voltage	SQF (<1.4 kW): 30-300 VDC 90-240 VAC 50 Hz
	SQF (>1.4 kW): 100-300 VDC 90-240 VAC 50 Hz
Liquid Temperature	0° to +40°C
Maximum Suspended Sand Content	50 g/m <sup>3</sup>

# CR FLEX

## SOLAR POWERED SURFACE MOUNT PUMP



### WATER SOURCE



Dam River

### APPLICATION



Irrigation Stock Watering Transfer

#### Smart Control

The smart internal motor control (Max. Power Point Tracking) adjusts pump speed accordingly to Solar DC power input

#### Low Power Consumption

A highly efficient motor means less power is required from solar panels to operate the pump

#### High Quality Materials

Wetted components are of high grade stainless steel construction to ensure a long, trouble-free life

#### Permanently Protected

Features electrical and overheating motor protection for added peace of mind

#### Wide Voltage Range

Able to work under widely fluctuating AC/DC voltages.



### RECOMMENDED ACCESSORIES

IO 101 - Isolator/Manual Switch



PT100 Temperature Sensor



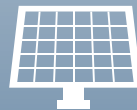
Level Switch/Float Kit



Pressure Switch/Pressure Tank



### POWER INPUT OPTIONS



Solar DC



Mains AC



Generator DC



Battery Back-up DC

### PROTECTION & CONTROL

	CR Flex
Max. Power Point Tracking	✓
Over Temperature Protection	✓
Over & Under Voltage Protection	✓

### TECHNICAL DATA

Power Supply Voltage	30-300 VDC 90-240 VAC 50 Hz
Liquid Temperature	0° to +120°C
Maximum Suspended Sand Content	20 g/m <sup>3</sup>

## SOLAR INVERTER & CONTROLLER

# RSI - RENEWABLE SOLAR INVERTER

OFF-GRID SOLAR INVERTER FOR CONVERTING DC POWER FROM LARGER SOLAR PANEL ARRAYS TO AC POWER SUPPLY



### Simple to Use

Built-in set-up wizard makes solar system set-up quick and easy via LED screen

### Smart Control

The smart internal controller (Max Power Point Tracking) adjusts the attached pump speed according to Solar DC power input

### Multiple Input Options

Pre-configured inputs available for Start/Stop control, Level Switches and Flow Switches for ultimate solar pumping control

### Built Tough for Harsh Conditions

Suitable for outdoor installation and able to handle temperatures up to 60°C

### Permanently Protected

Features a range of electrical and overheating protection to cope with extreme operating conditions

### Flexible Power Options

Compatible with both DC and AC power sources, making it an ideal pump controller for mains power connected pumping and generator back-up. The RSI can be used with a wide variety of Grundfos AC powered pumps, such as the SP, TP, NKG, NKG and SPG ranges.



### POWER INPUT OPTIONS



Solar DC



Mains AC



Generator DC

### PROTECTION & CONTROL

	RSI
Max. Power Point Tracking	✓
Over & Under Voltage Protection	✓
Over Temperature Protection	✓

### TECHNICAL DATA

Power Supply Voltage	Standard voltage RSI: up to 800VDC or 3x380-415VAC 50Hz Low Voltage RSI: 3x20 for 240 VAC
Ambient Temperature	-10° - +60°C
Enclosure Class	Up to 37kW: IP66 > 37kW: IP54

## CU200

CONTROL AND MONITORING UNIT DESIGNED FOR SQ FLEX

### Flexible Control

Built-in set-up wizard makes solar system set-up easy and quick

### Simple Monitoring

Features intuitive, easy to read system control panel providing pump status and LED alarm indication.

### TECHNICAL DATA

*Compatible with SQ Flex up to 1.4 kW*

Power Supply Voltage	30-300 VDC, 90-240 VAC, 50 Hz
Enclosure Class	Undercover installation recommended (IP55)



## IO101

ISOLATOR / MANUAL SWITCHING UNIT FOR SQ FLEX AND CR FLEX

### Simple Operation

Manual start, stop and reset controller

### Solar & Back-Up Generator Switch

Allows for switching between solar panels and mains or a connected back-up generator for night pumping

### TECHNICAL DATA

*Compatible with SQ Flex up to 1.4 kW*

Power Supply Voltage	30-225 VDC, 90-240 VAC, 50 Hz
Enclosure Class	Undercover installation recommended (IP55)



## CIU903

CONTROL AND COMMUNICATION UNIT DESIGNED FOR SQ FLEX

### Simple Operation

Start/stop, level control and maximum speed setting

### Feedback on the Go

Set-up and system monitoring with Grundfos Remote Management (GRM) or Grundfos GO provides detailed motor and power consumption information

### TECHNICAL DATA

*Compatible with all models of SQ Flex*

Power Supply Voltage	24-240 VDC, 24-240 VAC, 0-60 Hz
Enclosure Class	Undercover installation recommended (IP55)



# GRUNDFOS REMOTE MANAGEMENT

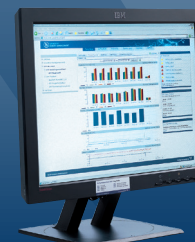
LIVE MONITOR AND MANAGE REMOTE SOLAR PUMP INSTALLATIONS

### Communication Options

Operates via either GPRS or SMS from Grundfos pumps or controllers

### Live Feedback

Monitor and adjust pump operations in real-time. Check operating data and receive a notification when services are due.



## PACKAGES

# COMPLETE SOLAR PACKAGES

SOLAR SOLUTIONS PACKAGES INCLUDE:  
SQ FLEX PUMP, PV PANELS, POST MOUNT  
ARRAY FRAME, CONTROLLERS, PRESSURE KIT,  
CABLING AND OTHER ACCESSORIES

**25**  
YEAR  
WARRANTY

**10**  
YEAR  
WARRANTY

**2**  
YEAR  
WARRANTY

25 Years Solar PV Panels, 10 Years Solar Array Frame,  
2 Years all other components



**SQ Flex**



**2 - 6 Solar PV Panel  
and Post Mount Array Frame**



**Pressure Tank**



**CU200**



**IO101**

### **SQ Flex**

Choose from a range of SQ Flex Submersible pumps with base zinc anodes included as standard

### **Solar Panels and Post Mount**

From 2 – 6 PV Panel sets to suit your Solar Zone and SQ Flex Pump. Post Mount Array Frame to suit the number of PV Panels supplied.

### **Controller**

CU200 controller for ultimate pump control and options for additional monitoring. Refer to Control and Monitoring page.

### **Isolator/Manual Switch**

IO101 Isolator/Manual Switch for connection directly to the PV panel array. Connect back-up generator or mains power for night time pumping.

### **Pressure Tank and Accessories**

An 18 litre pressure tank is included along with reverse acting pressure switch and pressure gauge

### **Cabling and Earthing**

All plug-and-play cabling and earth wiring required to connect the system is provided

### **ADD Sensors and Switches**

Easily add float switches, pressure switches or flow switches to suit your needs



# 2-8 POST MOUNTED PV PANELS

WITH IO101 & CU200  
(FOR USE WITH SQ FLEX)

25  
YEAR  
WARRANTY

10  
YEAR  
WARRANTY

2  
YEAR  
WARRANTY

25 Years Solar PV Panels, 10 Years Solar Array Frame,  
2 Years all other components

## PV Panels

SW270W PV Panels with a 25 Year Warranty

## Post Mount Kit

Heavy duty Grundfos PV-ezRack Post Mount kit, specifically designed to suit the supplied PV Panels. Includes IO101/CU200 mounting brackets

## Isolator and Controller

Includes IO101 Isolator/Manual Switch and CU200 Controller for totally flexible control and feedback on the go. Refer to Control and Monitoring page.

## Cablling and Earthing

All plug-and-play cabling and earth wiring required to connect the system is provided

*Separate kit available without CU200 Controller for use with CR Flex*



# 9-20 TERRACE MOUNTED PV PANELS

## PV Panels

SW270W PV Panels with a 25 Year Warranty

## Terrace Mount Kit

Heavy duty Grundfos PV-ezRack SolarTerrace11-A kit, specifically designed to suit the supplied PV Panels

## DC Isolator, Cablling and Earthing

Isolator switch plus all plug-and-play cabling and earth wiring required to connect the system is provided

25  
YEAR  
WARRANTY

10  
YEAR  
WARRANTY

2  
YEAR  
WARRANTY

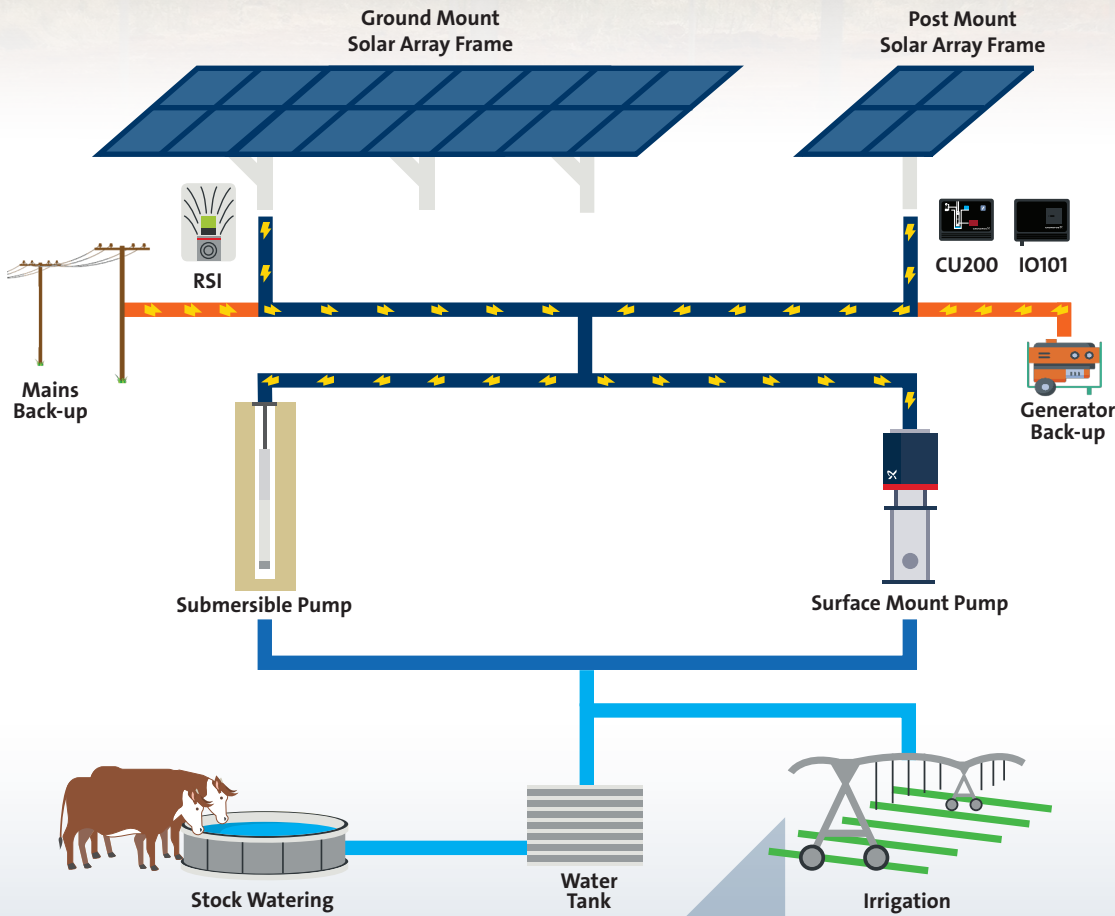
25 Years Solar PV Panels, 10 Years Solar Array Frame,  
2 Years all other components



## SOLAR SELECTION

# TYPICAL SOLAR INSTALLATIONS

Grundfos has a wide range of solar powered water supply solutions, combining pumps, solar panels, controllers, monitoring and other components to suit any situation or water supply need.



## SOLAR SELECTION MADE EASY

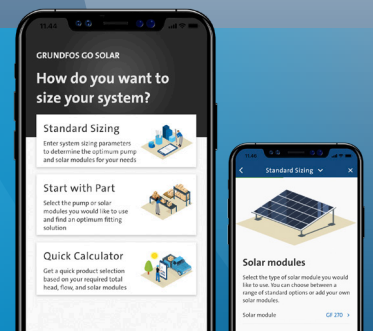
To ensure you take full advantage of the low life-cycle costs a Grundfos solar pumping system can offer, correct sizing, selection and installation is critical. With some basic information about your location, water source, application and other site specific measurements and specifications, a Grundfos Authorised Dealer will be able to make a recommendation best suited to your needs.

Complete as much of the Solar Pumping Solutions Enquiry Form on the next page before visiting or calling your local Grundfos Authorised Dealer. Alternatively you can use the **Grundfos GO Solar** App, which provides quick and easy solar pump selection regardless of your location or application needs. Don't worry if you don't know all the facts, just fill in what you can and your local Dealer will do the rest.

## GO SOLAR APP

Size and select your solar pumping system in three different ways

- ✔ **Size by pump.**  
Choose a pump that the dealer has in stock or is in your budget.
- ✔ **Size by number of solar panels.**  
Make the most of the application space and your budget.
- ✔ **Size by application requirements.**  
Ensure the pump is tailored to your requirements.



# SOLAR PUMPING SOLUTIONS ENQUIRY

## CONTACT DETAILS

Name	<input type="text"/>
Address	<input type="text"/>
Location	<input type="text" value="Nearest town"/>
Phone	<input type="text"/>
Email	<input type="text"/>

## JOB DETAILS

Water source	<input type="text" value="Circle: Bore / Dam / River / Tank / Other (please specify):"/>		
Application	<input type="text" value="Circle: Stock Watering / Irrigation / Water Transfer / Domestic Supply / Other (please specify):"/>		
Volume of water required	<input type="text" value="litres/day"/>	Month of peak demand	<input type="text"/>

INLET	<b>Bore Pump drawing from a Borehole (Use Bore Drilling Report to complete this section)</b>			
	Maximum flow available:	<input type="text"/>	l/sec	
	Inside Diameter of bore:	<input type="text" value="mm"/>	Depth of bore:	<input type="text" value="m"/>
	Pumping water Level:	<input type="text" value="m"/>		
	Recommended pump setting :	<input type="text" value="m"/>	Riser pipe size:	<input type="text" value="mm"/>
<b>Surface Pump drawing from a Dam, River or Tank</b>				
	Vertical height from <u>Water Source</u> to <u>Pump inlet</u> :	<input type="text" value="m"/>		
	Horizontal distance from <u>Water Source</u> to <u>Pump Inlet</u> :	<input type="text" value="m"/>		
	Pipe type and diameter from <u>Water Source</u> to <u>Pump</u> :	<input type="text" value="Circle: Poly / PVC / Metal"/>	<input type="text" value="mm"/>	

OUTLET	Vertical height from <u>Pump</u> to highest <u>outlet</u> :	<input type="text" value="m"/>	
	Horizontal distance from <u>Pump</u> to furthest <u>outlet</u> :	<input type="text" value="m"/>	
	Pipe type and diameter from <u>Pump</u> to <u>outlet</u> :	<input type="text" value="Circle: Poly / PVC / Metal"/>	<input type="text" value="mm"/>

AC generator backup option required?	<input type="text" value="Circle: Yes / No"/>
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Comments or other questions:

be think innovate

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**GRUNDFOS** 

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