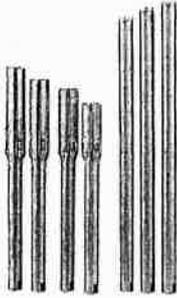


Qty. Description

1 SQF 2.5-2



Note! Product picture may differ from actual product

Product No.: 95027330

The 3" SQFlex centrifugal pump is for medium heads and flow rates.

The SQFlex system is a reliable water supply system based on renewable energy sources, such as solar and wind energy.

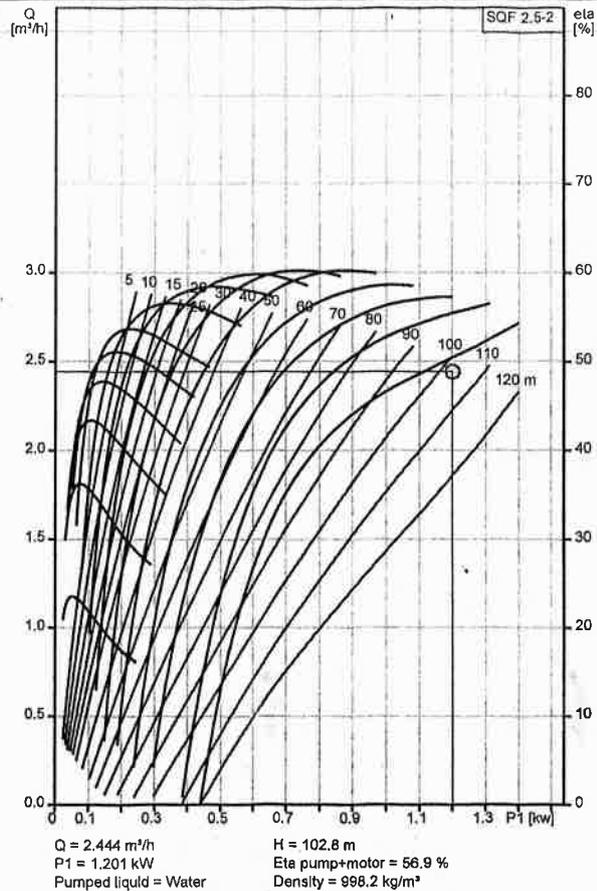
Thanks to its flexible energy supply and performance, the SQFlex system can be combined and adapted to meet any need on the installation site.

The SQFlex system has a wide voltage range, built-in maximum power point tracking (MPPT) as well as dry-running, voltage and overload protection.

Qty.	Description
1	<p data-bbox="252 327 331 349">CU 200</p> <div data-bbox="300 416 560 618" style="text-align: center;">  </div> <p data-bbox="612 640 1046 663" style="text-align: center;">Note! Product picture may differ from actual product</p> <p data-bbox="252 674 496 696">Product No.: 96625360</p> <p data-bbox="252 701 1382 745">The CU 200 control unit is a combined status, control and communication unit especially developed for the SQFlex system. Furthermore, the CU 200 enables connection of a level switch.</p> <p data-bbox="252 779 691 801">The CU 200 incorporates cable entries for ...</p> <ul data-bbox="252 808 512 913" style="list-style-type: none"> -power supply connection, -pump connection, -earth connection, -level switch connection. <p data-bbox="252 947 1374 1014">Communication between the CU 200 and the pump takes place via the pump power supply cable. This is called mains borne signalling (or Power Line Communication), and this principle means that no extra cables between the CU 200 and the pump are required.</p> <p data-bbox="252 1025 999 1048">It is possible to start, stop and reset the pump by means of the on/off button.</p> <p data-bbox="252 1081 555 1104">The CU 200 control unit offers:</p> <ul data-bbox="252 1111 443 1155" style="list-style-type: none"> -System monitoring -Alarm indication. <p data-bbox="252 1189 975 1211">The following indications allow the operation of the pump to be monitored:</p> <ul data-bbox="252 1218 603 1294" style="list-style-type: none"> -Water reservoir is full (level switch) -Pump is running -Input power. <p data-bbox="252 1328 743 1350">The CU 200 offers the following alarm indications:</p> <ul data-bbox="252 1357 520 1514" style="list-style-type: none"> -Dry running -Service needed in case of: <ul style="list-style-type: none"> - no contact to pump - overvoltage - overtemperature - overload. -Insufficient energy supply. <p data-bbox="252 1570 959 1592">In addition, the CU 200 shows the symbols of the energy supply options.</p> <p data-bbox="252 1648 347 1671">Technical:</p> <p data-bbox="252 1677 616 1700">Approvals: CE</p> <p data-bbox="252 1733 360 1756">Installation:</p> <p data-bbox="252 1762 691 1785">Range of ambient temperature: 30 .. 50 °C</p> <p data-bbox="252 1792 635 1814">Relative humidity: 95 %</p> <p data-bbox="252 1848 392 1870">Electrical data:</p> <p data-bbox="252 1877 624 1899">Power consumption: 5 W</p> <p data-bbox="252 1906 711 1928">Rated voltage ac: 1 x 90-240 V</p> <p data-bbox="252 1935 675 1957">Rated voltage dc: 30-300 V</p> <p data-bbox="252 1964 632 1986">Enclosure class (IEC 34-5): IP55</p> <p data-bbox="252 2020 320 2042">Others:</p> <p data-bbox="252 2049 624 2072">Net weight: 2 kg</p>

Description	Value
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General information:	
Product name:	SQF 2.5-2
Product No:	95027330
EAN number:	5700834791741
Technical:	
Stages:	2
Approvals:	UKCA, CE, EAC, CN RoHS Exempt, Morocco, Sepro
Pump No:	95027414
Valve:	pump with built-in non-return valve
Zinc Anodes:	NO
Materials:	
Pump:	Stainless steel
Pump:	DIN W.-Nr. 1.4301
Pump:	AISI 304
Impeller:	DIN W.-Nr. 1.4301
Rotor:	Stainless steel
Rotor:	DIN W.-Nr. 1.4301
Rotor:	AISI 304
Stator:	Stainless steel / EPDM
Stator:	DIN W.-Nr. 1.4301
Stator:	AISI 304
Installation:	
Maximum ambient pressure:	15 bar
Pump outlet:	Rp 1 1/4
Minimum borehole diameter:	76 mm
Liquid:	
Pumped liquid:	Water
Liquid max temp:	40 °C
Electrical data:	
Motor type:	MSF3
Power input - P1:	1.4 kW
Rated voltage ac:	1 x 90-240 V
Rated voltage dc:	30-300 V
Rated current:	8.4 A
Power factor:	1.0
Rated speed:	3600 rpm
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F
Built-in motor protection:	Y
Thermal protec:	internal
Length of cable:	2 m
Motor No:	96275336
Udc:	300 V
Udc:	30 V
Others:	
Minimum efficiency index, MEI ≥:	---
Net weight:	10.2 kg
Gross weight:	11.3 kg
Shipping volume:	0.024 m³
Sales region:	Europe/South America/Japan



Description	Value
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General information:	
Product name:	IO50, Metric
Product No:	97907253
EAN number:	5710626175826
Price:	EUR 153.22
Installation:	
t max amb:	50 °C
Electrical data:	
Mains frequency:	50 / 60 Hz

Description	Value
Rated voltage:	1 x VDC 30-300 V

Description	Value
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General information:

Product name:	CU 200
Product No:	96625360
EAN number:	5700835135131
Price:	EUR 985.22

Technical:

Approvals:	CE
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Installation:

Range of ambient temperature:	30 .. 50 °C
Relative humidity:	95 %

Electrical data:

Power consumption:	5 W
Rated voltage ac:	1 x 90-240 V
Rated voltage dc:	30-300 V
Enclosure class (IEC 34-5):	IP55
Back-up fuse:	10 A
Maximum load:	100 mA

Others:

Net weight:	2 kg
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95027330 SQF 2.5-2

Input - summary

Water volume (max): 20 m³/day
 Month for sizing: August
 Dynamic water level: 100 m
 Sun tracking: No (fixed)
 Location: Peace Drive, Western Area, SL
 Latitude: 8.402412539319231 DD, Longitude: -13.166133450940235 DD

Sizing results - summary

Water production, Peak flow and Price
 Total water production per year: 8030 m³
 Avg. water production per day: 22 m³/day
 Average water production per watt per day: 6.1 l/Wp/day

Solar module configuration:

Number of solar modules in series: 6, in parallel: 2
 Solar array rated power: 3.6 kW
 Solar array rated volts: 196 V
 Sun tracking: No (fixed)
 Tilt angle: 9 deg.

AC power (backup) - water production

Recommended minimum output: 1.301 kW
 AC 115 V: Produces: 1.914 m³/h
 AC 230 V: Produces: 2.444 m³/h

Products

Pump: SQF 2.5-2, 1 x 95027330
 Solar module: 12 x NN 300W
 Switch box / control unit: IO50, Metric, 1 x 97907253
 Switch box / control unit: CU 200, 1 x 96625360

Typical performance at solar radiation 800 W/m²

Flow: 2.4 m³/h
 Total head: 102.8 m

Cables and pipes:

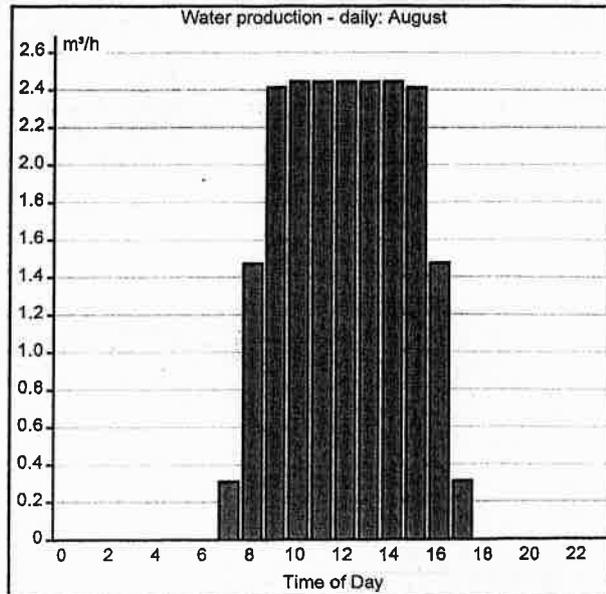
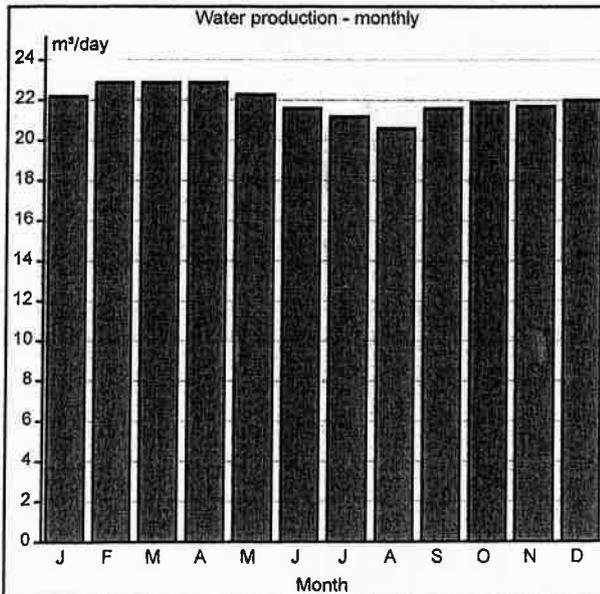
Pump cable length: 130 m
 Pump cable size: 10 mm²
 Total cable loss: 2.0 %

Pipe size (inner diameter), riser pipe
 Pipe size (inner diameter), discharge pipe
 Friction loss, riser pipe: 0
 Friction losses: 2.824 m

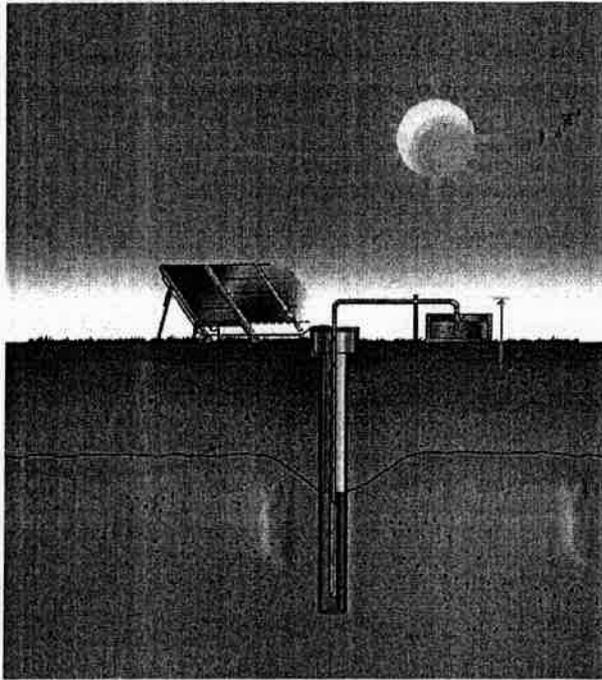
System performance - monthly average

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Water production [m ³ /day]	22.2	22.9	22.9	22.9	22.3	21.6	21.2	20.6	21.6	21.9	21.7	22
Energy production Solar [kWh/day]	14.1	14.4	14.5	14.4	13.9	13.4	13.0	12.5	13.6	13.8	13.8	14.0
Radiation horizontal [kWh/m ² day]	5.7	6.3	6.3	6.2	5.7	5.1	4.8	4.4	5.2	5.5	5.4	5.6
Radiation tilt [kWh/m ² day]	6.0	6.5	6.3	6.1	5.5	4.9	4.6	4.3	5.2	5.6	5.6	6.0
Avg. Temp. [°C]	25.8	26.2	26.6	27.4	27.3	25.8	24.2	23.8	24.6	25.5	26.1	26.1

Data location: Latitude: 9 DD, Longitude: -13 DD



Installation and Input



Sizing Results

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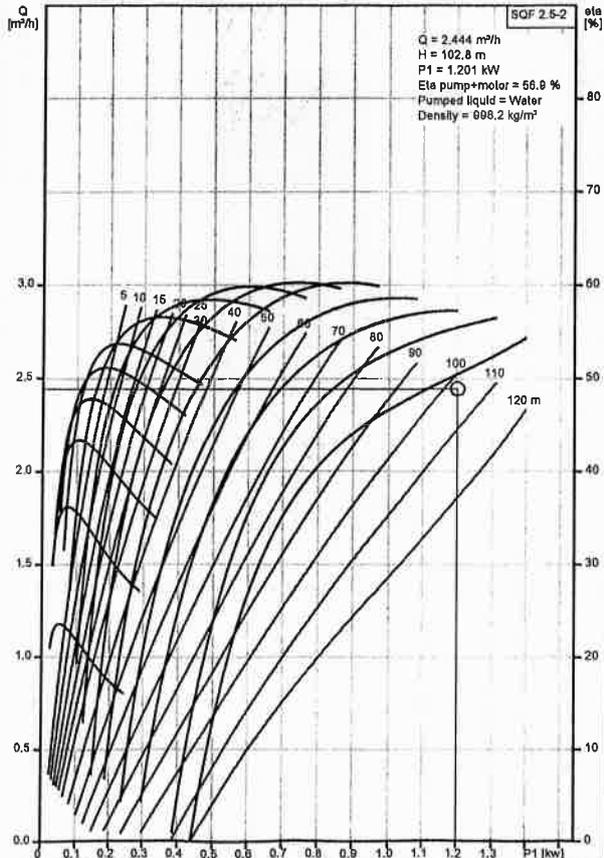
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 Pump cable size: 10 mm²
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Pipe size (inner diameter), riser pipe
 Pipe size (inner diameter), discharge pipe
 Friction loss, riser pipe: 0
 Friction losses: 2.824 m

Location: Peace Drive, Western Area, SL
 Latitude: 8.402412539319231 DD, Longitude:
 -13.166133450940235 DD

Pump Curve



Dimensional Drawing

