

# ECOSOM



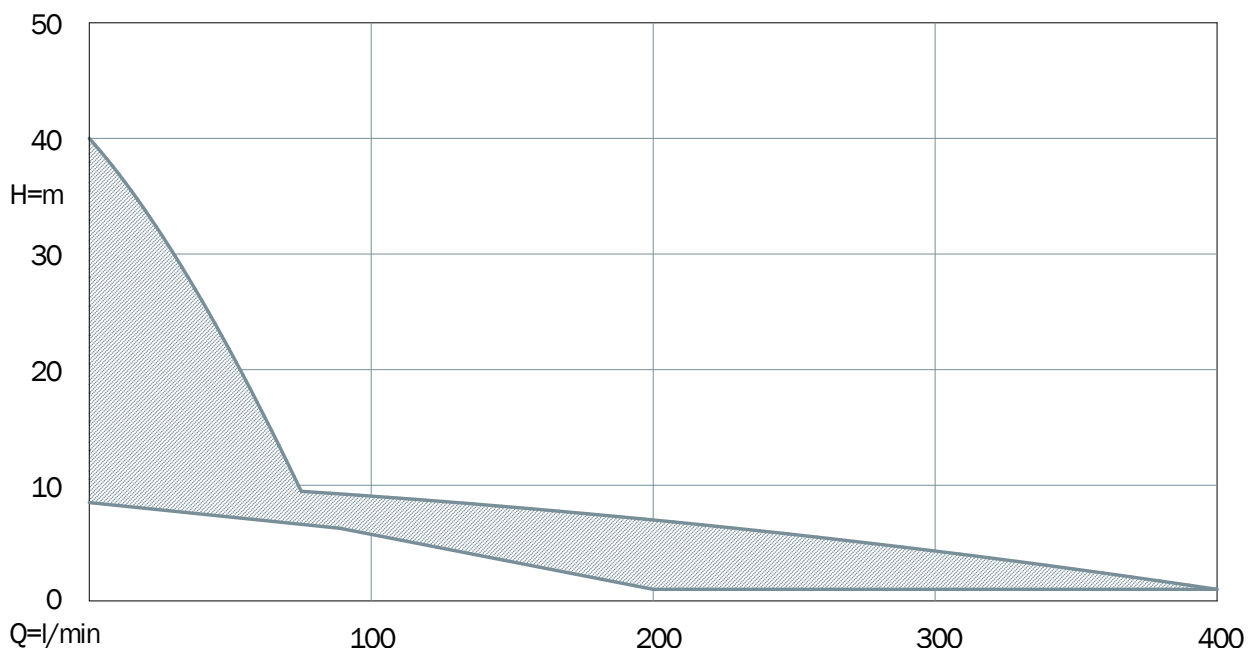
## INTRODUCTION

ECOSOM solar stations are easy-to-install pumping units that can be used wherever there is good solar radiation. The solar panels supplied with both ECOSOM “E” and “I” solar stations recharge the batteries thus to provide energy even when no solar light is available. ECOSOM “L” solar stations can run exclusively with solar light since they use, directly, the energy coming from the solar panels. ECOSOM solar stations can be combined with electric pumps type SR (for clean water) or SEMISOM (for grey or sewage water), all equipped with 24V DC permanent magnets motors.

## APPLICATION

ECOSOM E - ECOSOM I			ECOSOM L		
ECOSOM 4/80	ECOSOM 190 - 320	ECOSOM 262 - 265	ECOSOM 4/80	ECOSOM 190 - 320	ECOSOM 262 - 265
To pump water from tanks, reservoirs and boreholes	To expel rain water and waste water coming from electric household appliances	To pump water from tanks, reservoirs even in case of solids	To pump water from tanks, reservoirs and boreholes	To pump water from tanks and reservoirs	To pump water from tanks, reservoirs even in case of solids
To pressurize civil and industrial plants	To drain tanks, cellars and garages	To expel rain water, waste and sewage water from septic tanks	Irrigation	To transfer water from pools and fountains	To transfer water from pools and fountains
Irrigation	To transfer water from pools and fountains	To transfer water from pools and fountains		Surface irrigation	Surface irrigation
	Surface irrigation	Surface irrigation			

## APPLICATION RANGE



# ECOSOM solar pumping stations

## PERFORMANCE DATA ECOSOM for clean water

	Code			Available electric pumps					Q	Flow										
	Version E	Version I	Version L	Type	P2		P1	Max		Life of the batteries *	m <sup>3</sup> /h	0	0,36	0,6	1,2	1,8	2,4	3	3,6	4,2
					hp	kW	kW	A	min	l/min	0	6	10	20	30	40	50	60	70	80
<b>ECOSOM 4/80</b>	DE80/04E	DE80/04I	DE80/04L	SR 4/80 24 V DC	0,75	0,55	0,67	28	120	H (m)	40	38	37	34	30	26	21	17	11	7

\* only for "E" and "I" versions

## PERFORMANCE DATA ECOSOM for sewage water

	Code			Available electric pumps					Q	Flow									
	Version E	Version I	Version L	Type	P2		P1	Max		Life of the batteries *	m <sup>3</sup> /h	0	1,8	6	9	12	15	18	21
					hp	kW	kW	A	min	l/min	0	30	100	150	200	250	300	350	400
<b>ECOSOM 190</b>	DE190E	DE190I	DE190L	SEMISOM 190 24 V DC	0,5	0,37	0,58	24	160	H (m)	10,5	9,5	7	4	1				
<b>ECOSOM 320</b>	DE320E	DE320I	DE320L	SEMISOM 320 24 V DC	0,75	0,55	0,67	28	120		11,5	11	9	7,5	5,5	3	0,5		
<b>ECOSOM 290</b>	DE290E	DE290I	DE290L	SEMISOM 290 24 V DC	0,75	0,55	0,67	28	120		8,5	8	7	6,5	5,5	4,5	3,5	2,5	1
<b>ECOSOM 262</b>	DE262E	DE262I	DE262L	SEMISOM 262 24 V DC	0,75	0,55	0,67	28	120		10,5	10	9	8	7	6	4,5	3	1

\* only for "E" and "I" versions

## AVAILABLE ELECTRIC PUMPS

	Code	Construction	Application / materials	Characteristics
SR 24 V Direct current	RF80/04/1	see page 11	see page 12	see page 16
SEMISOM 190 24 V Direct current	SF190	see page 97	see page 97	see page 101
SEMISOM 320 24 V Direct current	SF320	see page 97	see page 97	see page 101
SEMISOM 262 24 V Direct current	SF262	see page 109	see page 109	see page 115
SEMISOM 290 24 V Direct current	SF290	see page 109	see page 109	see page 114

## ECOSOM E with fibreglass cabinet for external installations

### CONTROL PANEL

#### CHARACTERISTICS

IP rating IP44

Ambient temperature -5/+40 °C

Suitable for external installation

Possibility of installing it to the base of the fixing frame

Easy-to-inspect battery location

Facility to wire float switches for dry running protection

Facility to wire pressure switch, stop and run float switch, etc.

#### MAIN COMPONENTS

Fibreglass cabinet

Hand - off - auto selector switch

30 A unipolar thermal protector switch

80 A power relay

Indicator light for: run - pump cut-out - low battery cut-out

20 A automatic charge controller to provide the correct power to the batteries

Fuse holder with fuses on both main and auxiliary circuit

### SOLAR MODULES

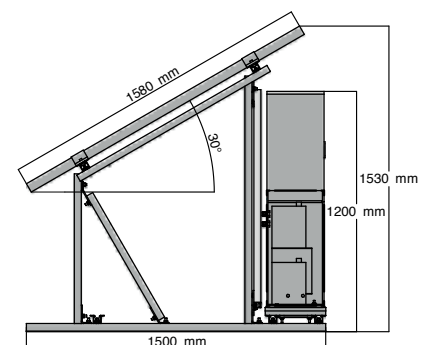
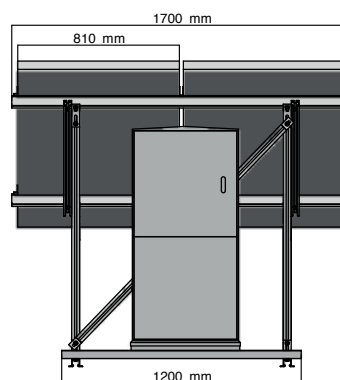
2 x 180 Wp (+/- 3%) monocrystalline silicon solar cells supplied with fixing bars and frame

### ELECTRIC WIRING

The pumping station is supplied with: all cables (pre-wired) for the electric wiring of the solar modules, the control panel and the batteries

### ACCESSORIES

Code	Description
07210005	<p>FRAME: designed for open-space, land installations with an angle of incidence at 30°. The installation is easy and quick and doesn't require particular tools. All components are in aluminium or stainless steel and their high resistance gives them a long life.</p>
02086005	<p>BATTERY 12 V 100 Ah: 100 Ah 12 V AGM Long-Life, monobloc, stationary Maintenance-free; 120 minutes life with no light (160 minutes for ECOSOM 190); 8 hours to charge them totally, with pump in stand-by.</p>



# ECOSOM solar pumping stations

## ECOSOM I with plastic panel

### CONTROL PANEL

#### CHARACTERISTICS

IP rating IP55

Ambient temperature -5/+40 °C

Suitable to be installed in sheltered places, away from solar beams

Facility to wire float switches for dry running protection

Facility to wire pressure switch, stop and run float switch, etc.

#### MAIN COMPONENTS

Plastic panel: 300 x 400 x 120 mm

Hand - off - auto selector switch

30 A unipolar thermal protector switch

80 A power relay

Indicator light for: run - pump cut-out - low battery cut-out

20 A automatic charge controller to provide the correct power to the batteries

Fuse holder with fuses on both main and auxiliary circuit

### SOLAR MODULES

2 x 180 Wp (+/- 3%) monocrystalline silicon solar cells supplied with fixing bars and frame

### ELECTRIC WIRING

The pumping station is supplied with: all cables (pre-wired) for the electric connection of the solar modules, the control panel and the batteries

### ACCESSORIES

Code	Description
07210005	<p><b>FRAME:</b> designed for open-space, land installations with an angle of incidence at 30°. The installation is easy and quick and doesn't require particular tools. All components are in aluminium or stainless steel and their high resistance gives them a long life.</p>
02086005	<p><b>BATTERY 12 V 100 Ah:</b> 100 Ah 12 V AGM Long-Life, monobloc, stationary Maintenance-free; 120 minutes life with no light (160 minutes for ECOSOM 190); 8 hours to charge them totally, with pump in stand-by.</p>



## ECOSOM L with plastic panel

### CONTROL PANEL

### CHARACTERISTICS

IP rating IP65

Ambient temperature -5/+40 °C

Suitable to be installed in sheltered places, away from solar beams

Facility for automatic device (ex: level control)

### MAIN COMPONENTS

Plastic panel: 220 x 300 x 120 mm

Hand - off - auto selector switch

Unipolar thermal protector switch to protect the electric pump from overload

Indicator light for pump running

### SUGGESTED SOLAR MODULES (NOT included)

Open circuit voltage (Voc) < 40 V

Maximum power voltage (Vmp) > 29 V

Required power to run the station:  
P1 of the electric pump + 30% (Max. 1000 Wp)

