FLUID SOLAR

4" Solar submersible pumps

Clean water

Domestic use

Agricultural use

INSTALLATION AND USE

FLUID SOLAR pumps are engineered to draw clean water from wells using power from photovoltaic modules.

They feature a high-efficiency motor with integrated electronic control that adjusts the motor's speed based on the solar energy available.

This ensures optimal performance: high speed and efficiency in sunny conditions, and lower speed with reduced efficiency on cloudy days.

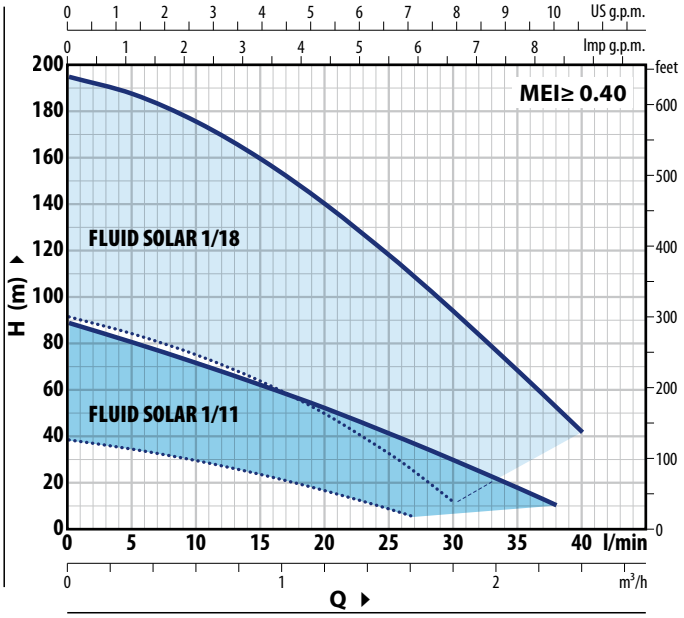
These pumps utilize a high-efficiency, oil-bathed, permanent magnet motor for enhanced performance and durability.

APPLICATION LIMITS

- Liquid temperature up to **+35 °C**
- Maximum sand content **200 g/m³**
- Capable of operating at depths of up to **100 metres** below water level

PATENTS - TRADEMARKS - DESIGNS

- Patent No. 0001413386, EP2419642
- Patent No. EP2300717
- Patent No. 102021000030575
- FLUID SOLAR® Registered trademark No. 001516301



FLUID SOLAR 1/11

POWER CONSUMPTION P1 **750 W**

Q		0	0.3	0.6	0.9	1.2	1.5	1.6	1.8	2.1	2.3
m³/h		0	0.3	0.6	0.9	1.2	1.5	1.6	1.8	2.1	2.3
l/min		**0**	**5**	**10**	**15**	**20**	**25**	**27**	**30**	**35**	**38**
H metres	▬	89	80.5	71.5	62	52	41	36.5	29.5	17.5	10
	••••	38	34	29.1	23.2	16.3	8.5	5			

Performance with photovoltaic modules for a total rated power of 980 Wp

FLUID SOLAR 1/18

POWER CONSUMPTION P1 **1500 W**

Q		0	0.3	0.6	1.2	1.5	1.62	1.8	2.1	2.4
m³/h		0	0.3	0.6	1.2	1.5	1.62	1.8	2.1	2.4
l/min		**0**	**5**	**10**	**20**	**25**	**27**	**30**	**35**	**40**
H metres	▬	194.5	187	175	139.5	117.5	108	93.5	68	41.5
	••••	91.5	84	74.8	49.4	32.3	24.5	11.5		

Performance with photovoltaic modules for a total nominal power of 1960 Wp

▬ **Performance under 1000 W/m² Solar Irradiation and 100 VDC No-load Voltage from Photovoltaic Modules**

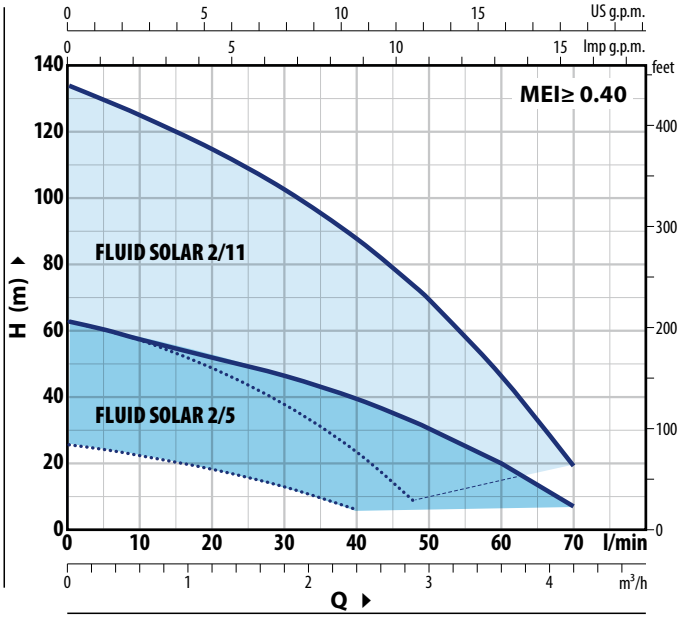
•••• **Performance under 300 W/m² Solar Irradiation and 70 VDC No-load Voltage from Photovoltaic Modules**

The performance curves shown above are based on photovoltaic modules positioned towards the SOUTH (or NORTH for installations in the Southern Hemisphere). The angle of inclination is adjusted according to the latitude of the installation site to optimize performance.

※ **Start of production 06.2024** ※

CURVES AND PERFORMANCE DATA

Performance curves comply with EN ISO 9906 Grade 3B tolerance limits.



FLUID SOLAR 2/5

POWER CONSUMPTION P1 **750 W**

Q	m³/h	0	0.3	0.6	1.2	1.8	2.4	2.88	3	3.6	4.2
	l/min	**0**	**5**	**10**	**20**	**30**	**40**	**48**	**50**	**60**	**70**
H metres	▬	63	60.5	57.5	52	46.5	39.5	32.5	30.5	20	7
	••••	26	24.5	22.6	18.4	13	6				

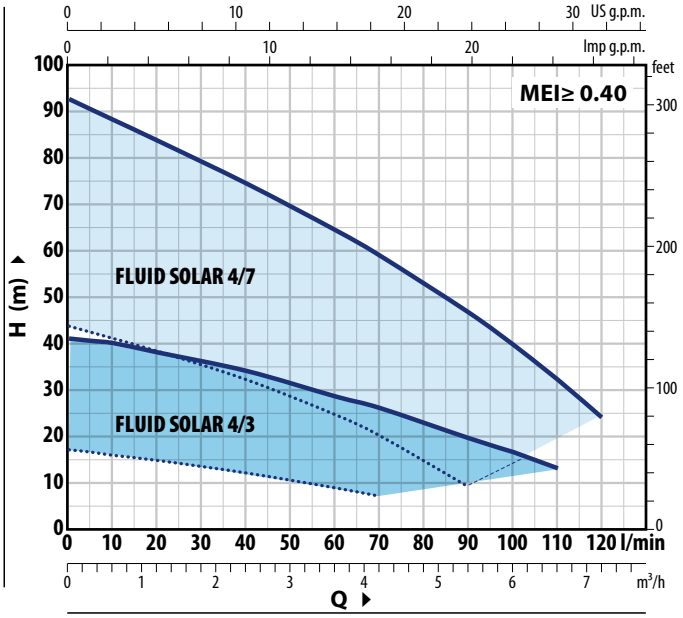
Performance with photovoltaic modules for a total rated power of 980 Wp

FLUID SOLAR 2/11

POWER CONSUMPTION P1 **1500 W**

Q	m³/h	0	0.3	0.6	1.2	1.8	2.4	2.88	3	3.6	4.2
	l/min	**0**	**5**	**10**	**20**	**30**	**40**	**48**	**50**	**60**	**70**
H metres	▬	134	129.5	125	115	102.5	88	73.5	69.5	47	19.5
	••••	63	60.5	57.4	49.3	38.1	23.2	8			

Performance with photovoltaic modules for a total nominal power of 1960 Wp



FLUID SOLAR 4/3

POWER CONSUMPTION P1 **750 W**

Q	m³/h	0	0.3	0.6	1.2	2.4	3.6	4.2	5.4	6	6.6
	l/min	**0**	**5**	**10**	**20**	**40**	**60**	**70**	**90**	**100**	**110**
H metres	▬	41	40.5	40	38	34	28.5	26	19.5	16.5	13
	••••	17	16.5	15.8	14.7	12	8.8	7			

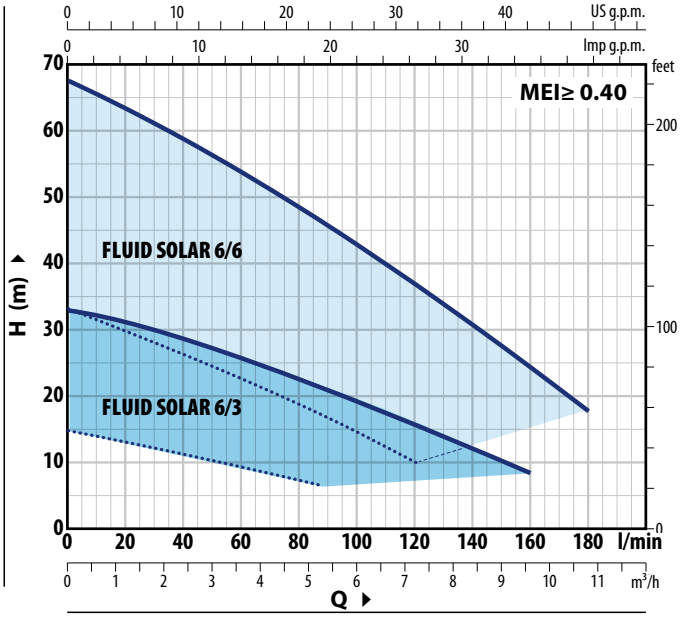
Performance with photovoltaic modules for a total rated power of 980 Wp

FLUID SOLAR 4/7

POWER CONSUMPTION P1 **1500 W**

Q	m³/h	0	0.3	0.6	1.2	2.4	3.6	4.2	5.4	6	6.6	7.2
	l/min	**0**	**5**	**10**	**20**	**40**	**60**	**70**	**90**	**100**	**110**	**120**
H metres	▬	93	90.5	88.5	84	74.5	64.5	59	46.5	40	32	24
	••••	44	42.5	41.1	38.3	32.2	24.6	20.1	9			

Performance with photovoltaic modules for a total nominal power of 1960 Wp



FLUID SOLAR 6/3

POWER CONSUMPTION P1 **750 W**

Q	m³/h	0	0.3	1.2	2.4	3.6	4.8	5.4	6	7.2	7.2	8.4	9.6
	l/min	**0**	**5**	**20**	**40**	**60**	**80**	**90**	**100**	**120**	**120**	**140**	**160**
H metres	▬	33	32.5	31.5	29	26	22.5	20.5	19	15	15	11.5	8.5
	••••	15	14.5	12.8	11	9.4	7.5	6.5					

Performance with photovoltaic modules for a total rated power of 980 Wp

FLUID SOLAR 6/6

POWER CONSUMPTION P1 **1500 W**

Q	m³/h	0	0.3	1.2	2.4	3.6	4.8	5.4	6	7.2	8.4	9.6	10.8
	l/min	**0**	**5**	**20**	**40**	**60**	**80**	**90**	**100**	**120**	**140**	**160**	**180**
H metres	▬	68	67	63.5	59	54	48.5	46	43	37	31	24.5	18
	••••	33.5	32.5	30	26.5	22.8	18.9	16.8	14.7	10			

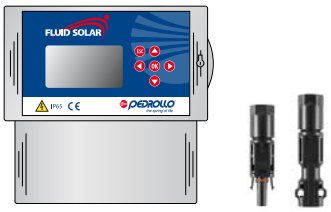
Performance with photovoltaic modules for a total nominal power of 1960 Wp

FLUID SOLAR

STANDARD EQUIPMENT

P1 = 750 W

ELECTRICAL PANEL



CONNECTORS

No. 1 male connector type **SMK**

No. 1 female connector type **SMK**

P1 = 1500 W

ELECTRICAL PANEL

CONNECTORS

No. 1 male connector type **SMK**

No. 1 female connector type **SMK**

No. 1 Y-connector female/ male type **MC4**

No. 1 male-female Y-connector type **MC4**

EXAMPLES OF INSTALLATION

FLUID SOLAR 1/11 - 2/5 - 4/3 - 6/3

※ To achieve maximum rated performance, the pump requires **photovoltaic modules** with a total rated power of **980 Wp** or higher.

※ The pump can run on lower-power photovoltaic modules than recommended, but with reduced performance.

※ Each module must have an open-circuit voltage between **35 - 55VDC**.

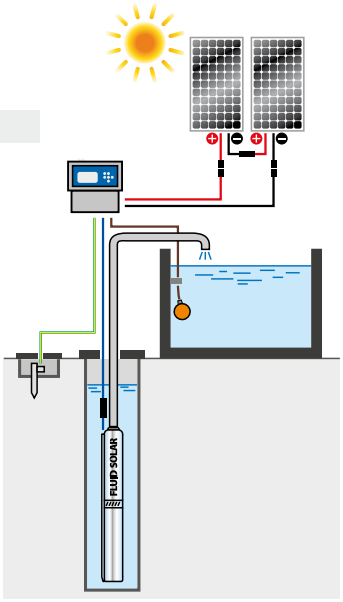
FLUID SOLAR 1/18 - 2/11 - 4/7 - 6/6

※ To achieve maximum rated performance, the pump requires photovoltaic modules with a total rated power of **1960 Wp** or higher.

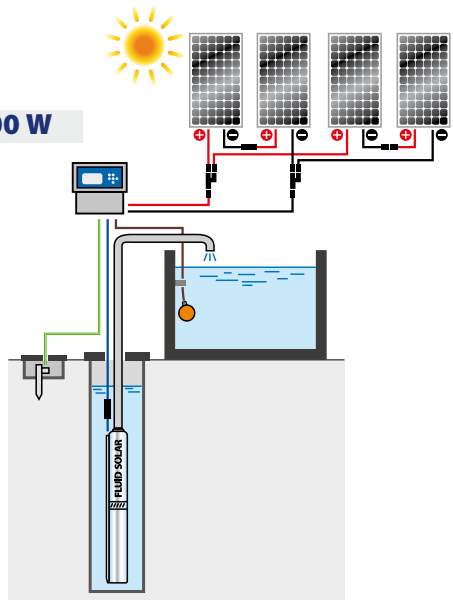
※ The pump can run on lower-power photovoltaic modules than recommended, but with reduced performance.

※ Each module must have an open-circuit voltage between **35** and **55VDC**.

P1=750 W



P1=1500 W



DIMENSIONS AND WEIGHT

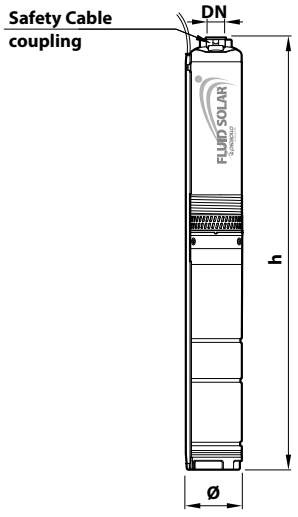
P1 = 750 W

TYPE	PORT DN	DIMENSIONS mm Ø	h	kg *
FLUID SOLAR 1/11	**1¼"**	100	746	14.2
FLUID SOLAR 2/5			625	13.3
FLUID SOLAR 4/3			601	13.0
FLUID SOLAR 6/3			621	12.5

P1 = 1500 W

FLUID SOLAR 1/18	**1¼"**	100	956	18.5
FLUID SOLAR 2/11			816	17.7
FLUID SOLAR 4/7			771	16.8
FLUID SOLAR 6/6			785	16.6

(* weight of pump with control panel)



MATERIALS AND COMPONENTS

1	**Delivery port and pump jacket**	Stainless steel **AISI 304** with thread according to ISO 228/1
2	**Pump bearing**	EPDM
3	**Impellers**	Delrin®
4	**Diffusers**	Noryl™
5	**Stadium boxes**	Stainless steel **AISI 304**
6	**Pump shaft**	Stainless steel **AISI 304**
7	**Cable sheath**	Stainless steel **AISI 304**
8	**Filter**	Stainless steel **AISI 304**
9	**Coupling motor bracket**	Technopolymer and brass
10	**Motor shaft**	Stainless steel **AISI 431**
11	**Motor sleeve**	Stainless steel **AISI 304**

12 Mechanical seal

Seal	Shaft	Materials
ST4-16	Ø 16 mm	Ceramic / Graphite / NBR

13 Vectoral

14 Electric motor
- High-efficiency permanent magnet oil filled motor (non-toxic food-safe oil), rewindable.
- Continuous running duty S1
- Insulation: Class F
- Protection rating: IP X8

15 Compensating diaphragm

16 Power cord

Cable approved for use in drinking water by ACS, KTW, WRAS

※ Standard length 2.2 metres

※ Standard equipment: RPS2 cable splice kit