

# Plug&Go.Evo

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# PLUG&GO.EVO

## SINGLE-PHASE COMPLETE AUTOMATIC SUBMERSIBLE PUMP (1X220-230V / 50 HZ)

### THE EASIEST 4" SUBMERSIBLE PUMP TO INSTALL!

4" complete submersible pump, made of ZDS hydraulic part, ZDS 2-wire single-phase encapsulated water-cooled motor, supply cable in different lengths and Evo diagnostic device.

It is particularly recommended for domestic installations, since it is completely automatic and easy to install (it only needs a pressure tank to compensate for any leaks in the plant). The integrated electronics ensures the operation of the pump (pressure switch is not needed) and protects the pump against many other possible problems.

The Evo diagnostic device allows to continuously display the Plug&GO.Evo operation and to monitor the possible system faults, such as current overload, low voltage or high voltage, too frequent starts and stops and dry running; ensuring a high degree of automation and restoration.

Evo allows to continuously monitor the submersible pump, guaranteeing its operation in the most efficient way through a Soft start procedure (first start attempt with low starting torque) and if needed, a Strong start procedure to benefit of more starting torque.

Evo allows to continuously detect and monitor in real time the power: the electrical parameters obtained are processed by a special software, which will efficiently guarantee the correct working conditions. With Evo, the Plug&Go.Evo submersible pump can work and be continuously protected also when actual supply voltage values are at tolerance limit, providing the effectiveness of the protection operation. In addition, Evo, thanks to a "smart software" at variable time and automatic restart, can ensure the optimization of water withdrawal from the borehole or tank when the pump is dry running.



**kW:** 0,37 - 1,1

**Voltage range:** 220-230V / 50Hz

**Voltage tolerance 50Hz from nominal:** +6% / -10%  $U_n$

**Degree of protection:** IP 68

**Maximum quantity of suspended sand:** 120 g/m<sup>3</sup>

**Insulation:** F

**Rated ambient temperature:** maximum 30° C

**Cooling flow:** minimum 8 cm/sec

**Mounting:** vertical/horizontal, shaft upwards

**Maximum delivery (Q):** 6.000 l/h

**Maximum head (H):** 79 m

**Maximum depth:** 20 m - 50 m

**Outlet diameter:** 1" ¼

**Allowed range of water pH:** 6,4 - 8,0

## AUTOMATIC PROTECTIONS

### DRY-RUNNING PROTECTION

The Plug&GO.Evo pump completely protects itself against lack of water in the well or tank, without the aid of other equipment (probes, cables, sensors, control panels etc.). In case of dry running, the Plug&GO.Evo pump automatically stops, to restart after a programmed cycle time.

### THERMAL PROTECTION

The Plug&GO.Evo pump is automatically protected against motor overheating due to an incorrect installation. In such cases, the thermal protection system stops the pump, which automatically restarts as soon as the correct working temperature parameters are restored.

### CURRENT OVERLOAD PROTECTION

The Plug&GO.Evo pump is completely protected against overload. In case the pump is partially or totally blocked, the Plug&GO.Evo software, after some automatic restart attempts, makes the pump enter the stand-by mode.

### PROTECTION AGAINST LOW/HIGH VOLTAGE

The Plug&GO.Evo pump is protected against low or high voltage, that can damage the motor. In these situations, in order to avoid potential damages, the pump stops running. A number of consecutive automatic attempts verifies if the operating parameters are correct; if they are not, the pump enters stand-by mode.

### PROTECTION AGAINST TOO FREQUENT START&STOPS

The Plug&GO.Evo pump is automatically protected against leaks in the piping system (also when the pressure tank is exhausted or its membrane is damaged) and too frequent starts and stops (for example if the tank is of the incorrect size). In these cases, the Plug&GO.Evo automatically enters the stand-by mode.

## VOLTAGE PEAKS PROTECTION

The Evo diagnostic device is equipped with internal filters, designed to prevent voltage peaks from damaging the electronic components integrated in the Plug&GO.Evo. The filters are replaceable and easy to access. It is designed to filter the voltage peaks, eventually by interrupting the power supply. Evo diagnostic device works automatically and does not need any scheduled maintenance.

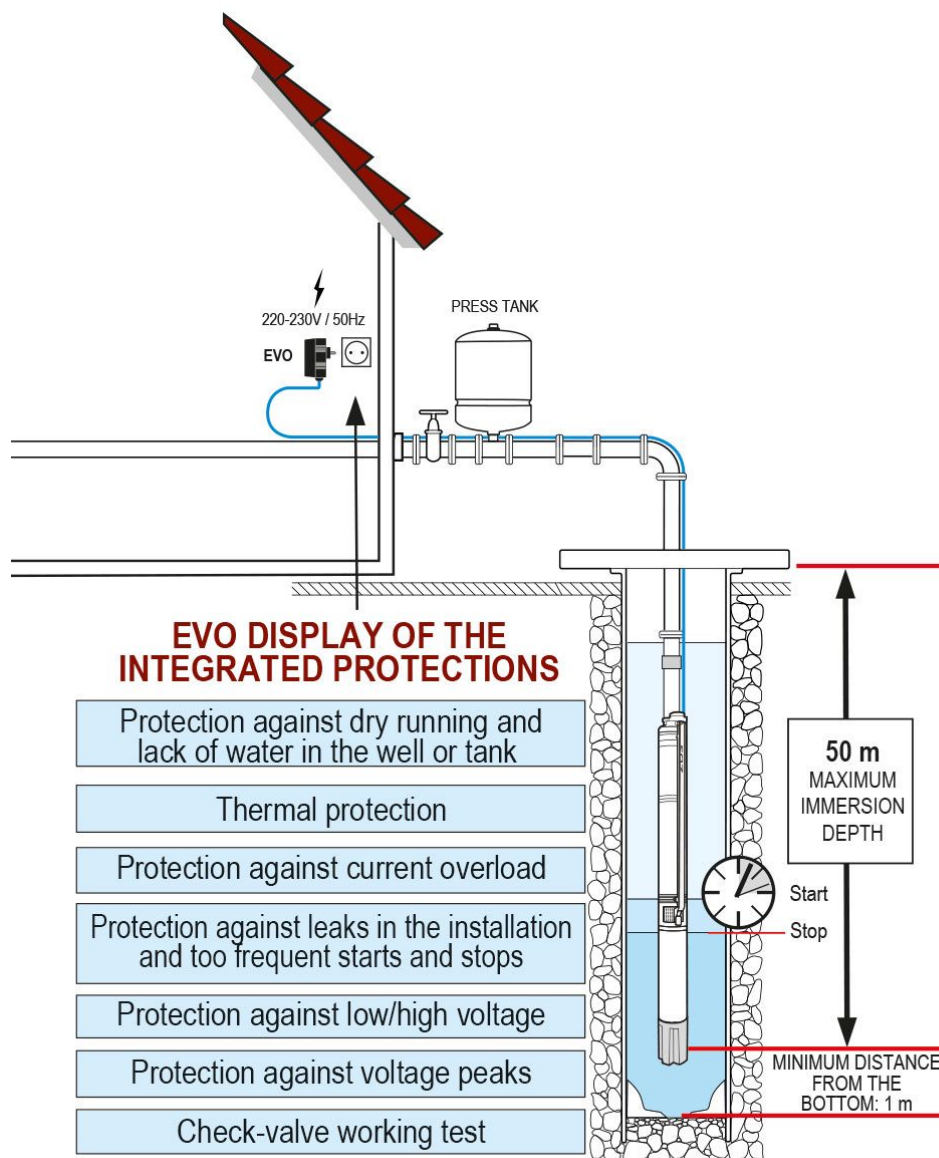
## CHECK-VALVE WORKING TEST

The Plug&GO.Evo pump regularly controls if the check valve works properly and if it is not clogged by any impurities. In case it is clogged, a special software procedure mechanically releases the check valve or makes the pump enter the stand-by mode.

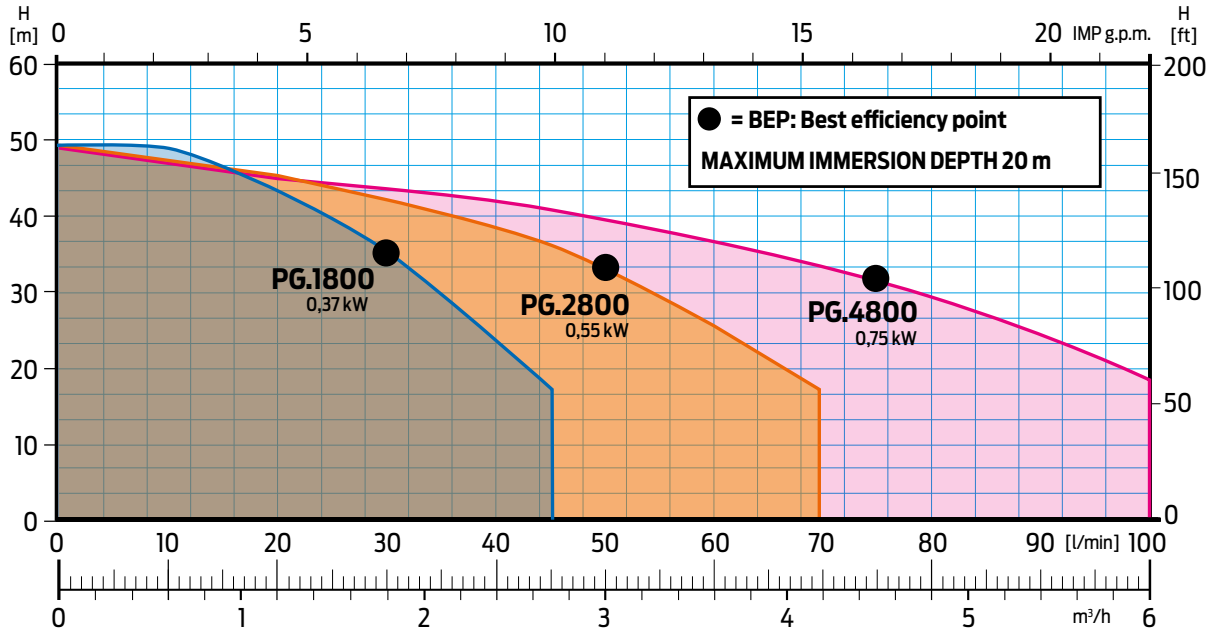
# INFORMATION ON A PROPER INSTALLATION

To guarantee the correct operation of Plug&GO.Evo, it is necessary to install a pressure tank if not provided already.

The pressure tank should be correctly sized according to the installation requirements.



## Product codes and hydraulics performance chart

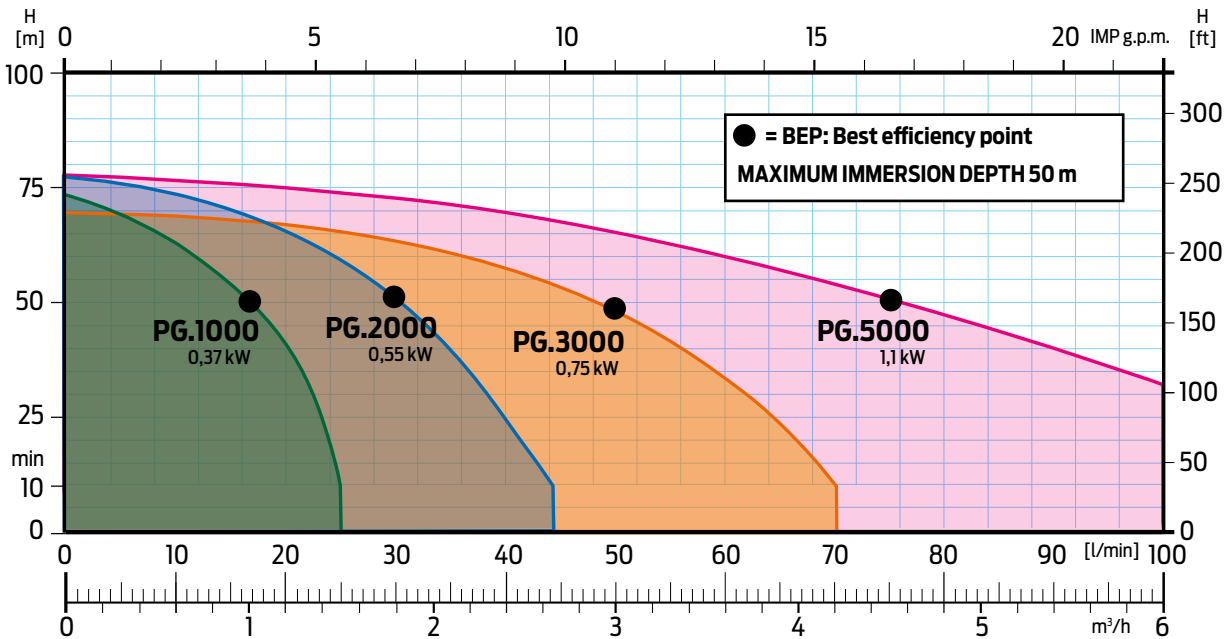


220-230V

Model	Power kW HP	P.C.* kW	C.C.** (A) / I <sub>a</sub>	Soft Start A <sub>start</sub> / I <sub>start</sub>	Start A <sub>start</sub> / I <sub>start</sub>	Hydraulic performance (n~2.850 min <sup>-1</sup> )										Cable 1,5 m		Cable 15 m		Cable 30 m		Cable 45 m		L. mm	W. Kg
																CODE	CODE	CODE	CODE						
						m <sup>3</sup> /h	0	0,6	1,2	1,5	1,8	2,7	3,6	4,2	4,8	6,0									
PG.1800.Evo	0,37	0,5	0,73	3,4	7,5	9,8		49,6	48,7	43,3	40	35,3	17,3					1960705200E	1960705200L	1960705200L1	1960705200L2	870	15,7		
PG.2800.Evo	0,55	0,75	0,93	4	10	13,5	H	48,5		45,7	44,3	42,2	36	25,6	17,3			1960705210E	1960705210L	1960705210L1	1960705210L2	1010	17,4		
PG.4800.Evo	0,75	1	1,23	5,7	13	17		49,2				44,3	41,2	36,9	33,2	29,5	19,1	1960705220E	1960705220L	1960705220L1	1960705220L2	1040	19,2		

\*Power consumption \*\*Current consumption - L=Lenght - P=Weight - Total head in meters = H= dynamic total pressure

Evo device included in the price



220-230V

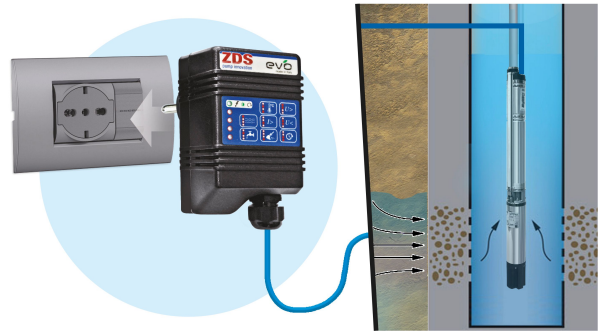
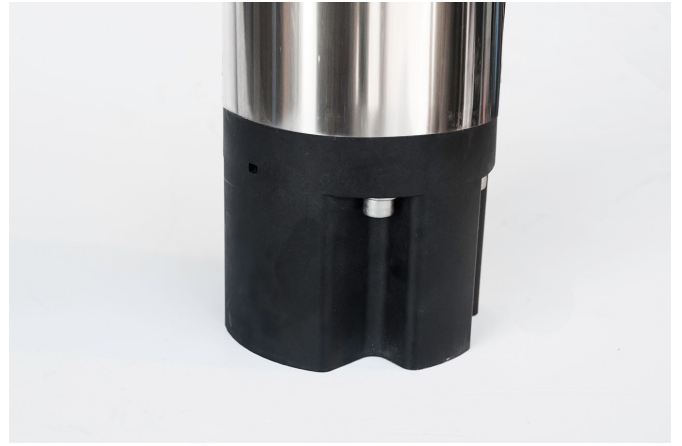
Model	Power kW HP	P.C.* kW	C.C.** (A) / I <sub>a</sub>	Soft Start A <sub>start</sub> / I <sub>start</sub>	Start A <sub>start</sub> / I <sub>start</sub>	Hydraulic performance (n~2.850 min <sup>-1</sup> )										Cable 1,5 m		Cable 15 m		Cable 30 m		Cable 45 m		L. mm	W. Kg
																CODE	CODE	CODE	CODE						
						m <sup>3</sup> /h	0	0,3	0,6	1,2	1,5	1,8	2,7	3,6	4,2	4,8	6,0								
PG.1000.Evo	0,37	0,5	0,69	3,3	7,5	9,8		71	68	63	41	24						1960705112E	1960705112L	1960705112L1	1960705112L2	955	16		
PG.2000.Evo	0,55	0,75	0,97	4,4	10	13,5	H	74,4		73	65	60	53	26				1960705212E	1960705212L	1960705212L1	1960705212L2	1010	17,4		
PG.3000.Evo	0,75	1	1,24	5,8	13	17		70			66	64	61	52	37	25		1960705313E	1960705313L	1960705313L1	1960705313L2	1230	19,4		
PG.5000.Evo	1,1	1,5	1,7	8,8	19	25		79,7					72	67	60	54	48	31	1960705513E	1960705513L	1960705513L1	1960705513L2	1260	20,7	

Evo device included in the price

### APPLICATIONS

Submersible pump designed to be used in 4" boreholes (or larger) and tanks, for lifting, distribution, pressurization of water in water systems.





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