

USER'S MANUAL ELECTRONIC PUMP CONTROLLER



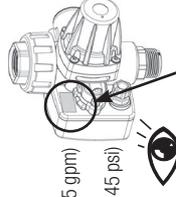
PRESFLO

PRESFLO® is a device that starts and stops the pump to which it is fitted, thus replacing traditional pressure switch / surge tank systems. The pump is started when, as a tap is turned on, the pressure within the system drops below the "start-up pressure" (Pm), and is stopped when the flow rate required is zero or less than the "shut-off flow rate" (Qa).

PRESFLO®'s electronics protect the pump against unsuitable operating conditions such as dry running or repeated start-ups due to leaks.

Technical specifications

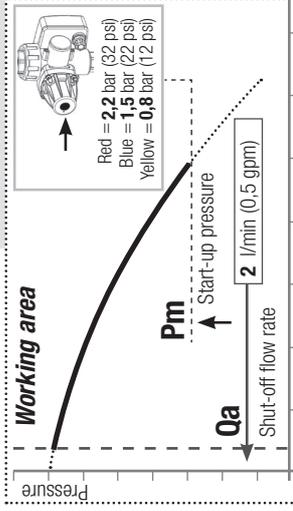
- Voltage: ~230 Volt / ~115 Volt
- Frequency: 50-60 Hz
- Current: 10A, max 12A for 3 sec.
- Current: 12A, max 16A for 3 sec.
- Protection grade: IP 65
- Start-up pressure (Pm): 0,8 ÷ 2,4 bar (12 à 35 psi)
- Shut-off flow rate (Qa): 2 litres/min (0,5 gpm)
- Connections: 1" BSP / 1" NPT
- Maximum working pressure: 10 bar (145 psi)
- Bursting pressure: 40 bar (580 psi)
- Weight: 650 g
- Protection against:
 - dry running (automatic restart)
 - repeated start-ups
- Max room temperature: 40°C
- Max liquid temperature: 55°C
- Type of drive: 1C
- Max manual operations on push button: 1000
- Max automatic operations on relay: 100000
- Class 3A PTI
- Pollution degree: 2
- Max rated voltage pulse: 2,5 kV
- 230V 12A for EMC test
- Pressure operating differential: 10 bar



CODE: 50066/115
V / Hz: ~230 / 50 - 60
I max: 16 A
P start: 1,5 Bar
SN 15060002 B



Working area



Operating conditions

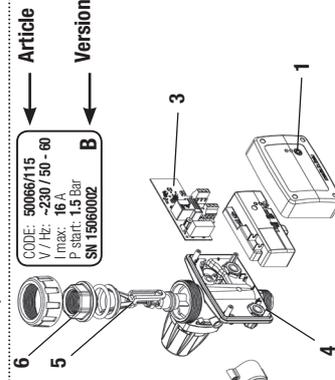
- A. Compatible/non compatible fluids**
PRESFLO® is suitable for use with clean water and chemically non-aggressive liquids. If the fluid contains impurities, a filter should be fitted upstream.
- B. Environmental conditions**
PRESFLO® should not be used where there is the risk of an explosion. The temperature of the location should range between 0°C and 40°C, and the humidity should not exceed 90%.
- C. Power supply**
Make sure that the variation

Problems	Signals	Possible causes	Solutions
PRESFLO® will not turn on		No power PRESFLO® model with an inadequate start-up pressure (Pm) for the chosen application. Faulty electrical connections or pump out of service PRESFLO® "STAND-BY"	Check the electrical connections Relocate PRESFLO® to another position Install a model with a higher start-up pressure (Pm) Check the electrical connections and that the pump is working Reset PRESFLO® (See Operation, point 3).
The pump will not start when a tap is turned on		PRESFLO® in temporary shut down due to "DRY RUNNING" due to lack of water Maximum pump pressure is insufficient	Wait for the automatic restart or press START to restart manually (See Operation, point 4a) Replace the pump with one with more suitable characteristics Install a model with a lower start-up pressure (Pm)
The pump delivers no or low pressure		PRESFLO® in temporary shut down due to "FREQUENT START-UP" Filters or pipes may be partly blocked PRESFLO®'s valve will not open completely	Wait for the automatic restart or press START to restart manually (See Operation, point 4b). Remove any cause of leakage from system or install an expansion tank Check the water pipes Check that the valve is not blocked by any foreign objects and clean if necessary
The pump stops and starts repeatedly		Leaks within the system (less than the shut-off flow rate Qa) The flow rate is higher than the shut-off flow rate (Qa) PRESFLO®'s check valve will not close or is damaged	Check the hydraulic connections and repair any leaks. If a leak cannot be repaired, install an expansion tank Make sure that all taps are turned off and that there are no leaks within the system Check that the valve is not blocked by any foreign objects and clean if necessary
The pump will not stop			

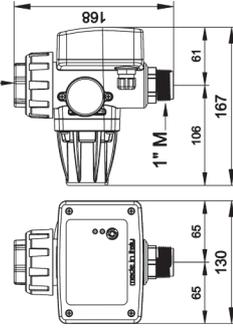
○ = Off ● = On ☀ = Flashing

Exploded view of spare parts

- Attention: when ordering spare parts, always state the position n° from the diagram below and the product code number found in the pressure-flow regulator technical data table.
- 1 - Circuit board cover
 - 2 - Pressure gauge
 - 3 - Circuit board
 - 4 - Cable bushings
 - 5 - Valve unit
 - 6 - two-pieces joint with OR



Size



Made in Italy by



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Statement of Compliance: we declare, under our own responsibility, that the product in question is in compliance with the following European Directives and national implementation provisions

- 2006/95/CEE Low Voltage Directive
 - 2002/95/CEE (RoHS)
 - 2002/96/CEE - 2003/108/CEE (WEEE)
 - 2004/108/CEE Electromagnetic Compatibility Directive (EMC)
 - EN 60730-2-6
 - EN 61000 6-3
- Bigarello 06.02.15
DGFLOW S.r.l.
President
Stelano Concini

Disposal

When disposing of any PRESFLO® parts, adhere to the relevant laws and regulations in force in the country in which the equipment is being used. Do not dispose of any polluting parts in the environment.



Safety regulations

- Before installing or using PRESFLO®, read this manual carefully and thoroughly.
- The pump should be installed and serviced by qualified personnel, responsible for making the hydraulic and electrical connections in compliance with the relevant regulations.
- DGFLOW® shall not be held liable for any damage relating to, or resulting from, an improper use of the product, or for any damage relating to, or resulting from, servicing or repairs carried out by unqualified personnel and/or with non-OEM spare parts.

The warranty, which is valid for 24 months from the date of purchase, will no longer be applicable should the product suffer damage as a consequence of the use of non-OEM spare parts, tampering or improper use.
When starting the installation, check the following:



PRESFLO® is put STAND-BY.

Never disassemble water accumulator



Preliminary checks

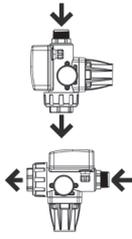
Take the PRESFLO® out of the packaging and check the following:

- check for damage,
- check the RATINGS correspond with those required,
- that the cable bushings and screws are in place,
- that PRESFLO®'s inlets and outlets are clean and free of any packaging materials,
- that the check valve moves smoothly.

Hydraulic connections
The joint in two pieces allows rapid connection to the system. DO NOT apply sealant inside the 2-piece joint because it already has an internal O-ring.



Orientation
PRESFLO® can be installed at any angle depending on the flow direction, as indicated in the diagrams.



Position

PRESFLO® can either be fitted directly to the pump outlet or anywhere along the delivery line. Never install taps between the pump and PRESFLO®. Do not install a non-return valve between PRESFLO® and the taps, meanwhile it is possible, although not necessary, to install a non-return valve on the suction piping of the pump.

NOTE 1 - DRY RUN PROTECTION = there is no flow and the pressure is lower than that of the pump start-up pressure (Pm). It occurs when there is no water. After 15 seconds PRESFLO® stops the pump and indicates an ERROR message. PRESFLO® AUTOMATICALLY tries to resume NORMAL SERVICE at intervals of increasing time (1, 15, 30, 60 minutes and successively once every hour). If PRESFLO® detects any pressure and/or flow, NORMAL SERVICE is resumed, otherwise, the pump is stopped again until the next attempt is made. A MANUAL attempt to resume NORMAL SERVICE can be made at any time.

NOTE 2 - EXCESSIVE STARTS = the repeated stopping and starting of the pump at intervals of less than 1 minute from each other. This occurs when the flow rate is less than 2 litres/min. This may cause damage to the pump. In event of small leaks (dripping),

Attention

The pressure applied by the water column above PRESFLO® must not exceed that of the pump start-up pressure (Pm). If, for example, PRESFLO® is installed at a height 1.5 m (50 ft) below that of the highest tap in the system, the pressure detected by PRESFLO® will be approximately 1.5 bar (22 psi). A model with Pm = 2.2 bar (32 psi) should, therefore, be installed in order to guarantee that the pump is started when a tap is turned on.

Attention

The maximum pressure produced by the pump must be at least 1 bar (15 psi) higher than the start-up pressure (Pm). If the pressure produced by the pump is too low, PRESFLO® will stop the pump and indicate a 'dry running' error message.

First start-up

Priming the pump
For instructions on how to prime (fill) the pump, see the pump manual.

Attention

PRESFLO® is fitted with a check valve: do not use the PRESFLO®'s outlet to fill the pump for priming.

Switching the pump on

The red (Power On) LED lights up. PRESFLO® instantly detects that there is no pressure within the system and the pump starts (the green 'Pump On' LED lights up). If, within 15 seconds of starting up, PRESFLO® does not detect the correct priming of the pump, it stops the pump and indicates a 'dry running' error message.



Attention

When the pump is started for the first time, it may have to be run for longer in order to complete the priming procedure.

STOP the RESTART button

to restart the pump and complete the priming procedure.

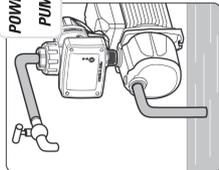


1 No power supply

PRESFLO® is switched off.

Press briefly or hold down = nothing happens

Power is restored = PRESFLO® resumes NORMAL SERVICE and starts the pump (if necessary).



2a NORMAL SERVICE: the pump is inactive.

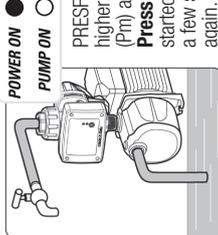
The system is pressurised. All taps are turned off. There is no demand for water.

PRESFLO® detects an assembly pressure higher than that of the start-up pressure (Pm) and no flow.

Press briefly = the pump is started manually and runs for a few seconds before stopping again.

Hold down = the pump is put STAND-BY. For instructions on how to reactivate the pump, see point 3.

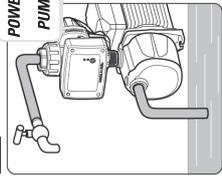
A tap is turned on = as soon as the pressure falls below the start-up pressure (Pm), the pump is started.



2c NORMAL SERVICE: pump during shutdown

The system has just ceased to require water. All taps are closed. The pump is still in operation. The system is pressurized. PRESFLO® detects a system pressure higher than the start-up pressure (Pm) and no flow. **Press briefly or hold down** = the pump is stopped and put in STAND-BY

To reset see point 3. If the absence of flow lasts for a few seconds the pump is stopped

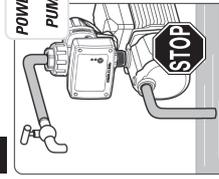


3 STAND-BY

The pump has been stopped manually. The pump will remain inactive until a new command is given.

Press briefly = nothing happens.

Hold down = the pump resumes NORMAL SERVICE. See points 2a - 2b.

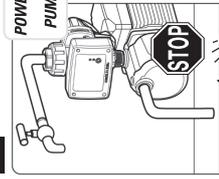


4a ERROR: stopped temporarily due to DRY RUNNING

See NOTE 1) PRESFLO® has detected that the pump is dry running and has therefore stopped it TEMPORARILY.

Press briefly = the pump is started and manually resumes NORMAL SERVICE. See points 2a - 2b.

Hold down = the pump is put STAND-BY. For instructions on how to reactivate the pump, see point 3.



4b ERROR: temporary shut down due to FREQUENT START UP

See NOTE 2) PRESFLO® has detected that the pump starting-up too often and has therefore stopped it TEMPORARILY.

Press briefly = the pump is started and manually resumes NORMAL SERVICE. See points 2a - 2b.

Hold down = the pump will not restart and goes OUT OF ORDER. The pump is put STAND-BY. For instructions on how to reactivate the pump, see point 3.

