

Integrated measuring systems for the whole water cycle



Pegasus + Electronic pressure controller



Modulation with self-learning using the critical point

Closed-loop control

Built-in four-band GPRS modem

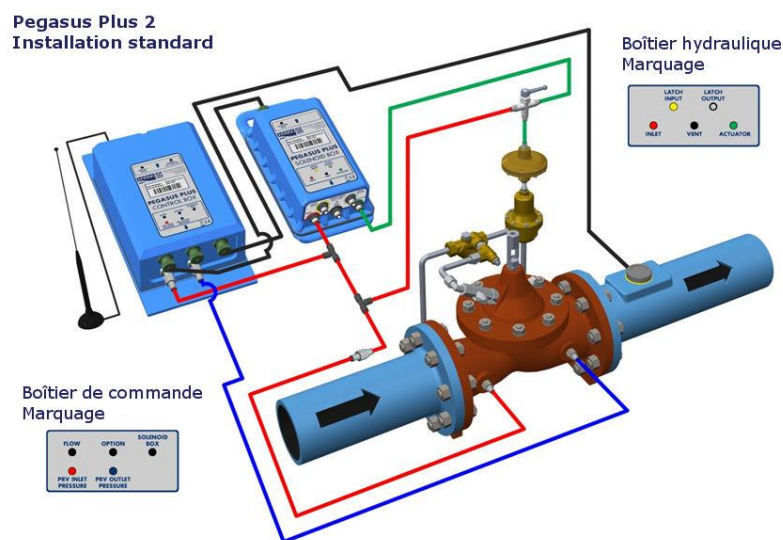
5-year battery life

Application

Pressure control can be the most immediate and the simplest method of reducing water leakage and the frequency of pipe bursts. Active management by electronic controllers provides optimum pressure according to demand. The Pegasus + controls system pressure downstream from the pressure stabiliser according to the zone flow demand (flow rate modulation) or according to a user-programmed daily or weekly schedule.

The system is equipped with a self-learning function equipped with critical point monitoring. Pegasus + has a built-in four-band SMS/GPRS modem combined with pressure loggers placed at the critical point(s) to offer flexible control. The control parameters are automatically readjusted and optimised according to the logger data, so that pressure can be optimised at the network's own particular critical point(s).

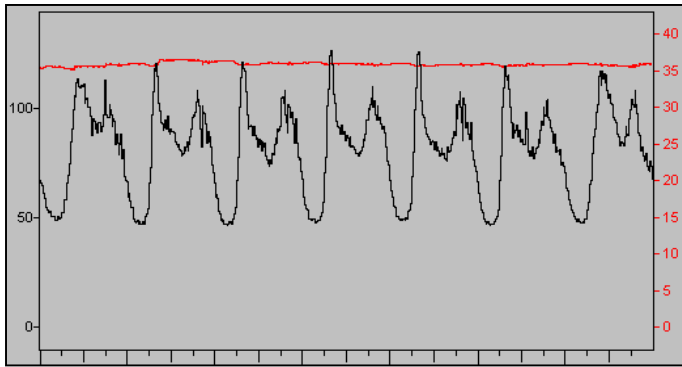
Pegasus + allows almost real-time control with automatic correction of its response table according to any alarms. It can be equipped with an external battery pack, for battery life of five years assuming one data exchange every 15 minutes.



Advantages

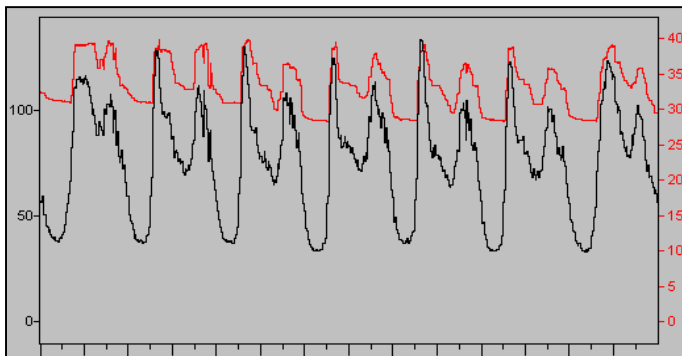
- Maximum quantity of water saved,
- Standalone, smart operation, closed-loop control up to three critical points,
- Self-learning: continuously adjusted output pressure profile,
- Reduces the hammer effect, which can burst the pipe,
- Remote programming without visiting the site,
- Optimising the profile according to the time (day of the week, month, etc.) or demand,
- Flow fault detection and alert,
- Compatible with most downstream pressure stabilisers on the market,
- GPRS communication,
- Internal power supply by replaceable battery (5-year battery life),
- Optional external battery for transmission up to every quarter of an hour (5-year battery life),
- Optional mains power supply,
- Improved solenoids for longer battery life,
- Digital input (standard) and 4-20 mA input (optional),
- New Quick-fit hydraulic connector standard for ease of installation,
- Internal or external pressure sensors (customer choice).

Results



Without pressure regulation

The downstream pressure (**red curve**) remains constant for variable demand upstream (**black curve**).



With pressure regulation

The downstream pressure (**red curve**) is adjusted according to the variable demand upstream (**black curve**).

Others

Hydraulic servomotor



Our range of pressure modulators is sold with a hydraulic servomotor, which is used as an interface between the electronic controller and the downstream pressure stabiliser. The hydraulic servomotor is installed instead of the screw of the controller used to define the fixed output pressure set-point of the downstream pressure stabiliser.

Downstream pressure adjustment is performed step by step via a mobile stem (deployed or retracted) according to the information sent by the Pegasus +. This method provides very high precision and very good repeatability of downstream pressure control. When the hydraulic servomotor is installed, the minimum and maximum pressure values are mechanically defined and locked into it.

This provides a fail-safe such that it is impossible for the valve to close completely in the event of operator error, electronic fault, or pipe breakage or freezing.

Implementation / Programming

The Pegasus + is very easy to install using the hydraulic connection kit and its quick-fit connectors. The pressure measurement readings displayed on the PC or tablet screen let you accurately adjust the hydraulic servomotor position in just a few minutes. The control box is programmed either directly via the PC connected locally or remotely via the server application.

Technical specifications

Inputs / Outputs	Two digital inputs	Uni-or bi-directional pulses
		Count or event logging, 128 Hz maximum
	Two analog inputs	Internal (standard): 0-20 bars, other measurement ranges available on request
		Precision: 0.1%
		External (optional): 0-20 bars Precision: 0.1%
	3 solenoid valve outputs	4-20mA (optional)
1 switching solenoid output, operates the top chamber of the valve to fill or empty it completely		
2 pulsed outputs Maximum of 2500 firings per day. Beyond that, the device goes into error mode to prevent premature battery discharge.		
Logging	Memory capacity	179,760 values (block or cyclic)
	Logging interval	Two independent logging channels: <ul style="list-style-type: none"> ○ 1 to 59 s ○ 1 to 59 min ○ 1 to 24 hrs.
	Alarms	16 alarms, each one programmable with a different telephone number, Operation on threshold or profile
Control features	Clock	24-hour real-time management and dates Summer/winter time management
	Time base	Periodic up to 32 table entries with interpolation according to: each day of the week individually, weekdays and weekends, every day of the week identical
	Flow base	According to external flow meter
	Security	The safety system can be configured in case of error (e.g. "faulty sensor" / "no flow") to: <ul style="list-style-type: none"> ○ Open or close the latching solenoid valve ○ Switch to time-based modulation ○ Revert to fixed pressure
Power supply	Internal	Lithium batteries, battery life 5 years or more in standard conditions
	External	Optional external battery kits to transmit every 60, 30, or 15 minutes
Communication	Local	Via RS232 (19200 baud)
	Remote management	Via bi-directional GPRS communication
	RTC	Optional modem
Others	Material	Cast aluminium casing with built-in handle
	Dimensions	Two casings, 315 mm x 153 mm x 87 mm
	Weight	3.5 kg (x2)
	Operating temperature	-20 to +70°C (-5 to 160°F)
	Waterproofing	IP 68 protection (fully submersible)
	Connection	Connection cable available in 5 m (standard), 10 and 15 m lengths (optional)

Pegasus+ v2 – EN – 05/15 – Hydreka reserves the right to modify product technical characteristics without notice.

Products available for sales. Please contact us for more information.

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