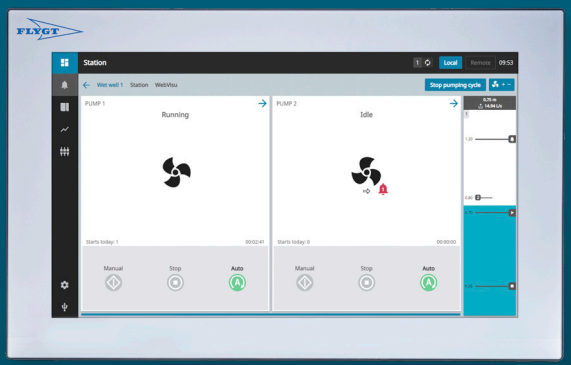
xylem

Multismart powered by Nexicon®

Preprogrammed wastewater pumping controller



A more efficient way to control and monitor your pumping station.

With today's complex and critical environmental conditions, challenges related to water and wastewater are increasing. Monitoring, automation, and optimization are needed to help secure access to a well-functioning water cycle and reduce the environmental impact by preventing overflows, decreasing energy consumption, and improving resource utilization.

With more than 120 years of combined knowledge from treating and transporting water and wastewater, Xylem experts have developed a modular, easy-to-install-and-operate pump station control solution for up to four pumps.

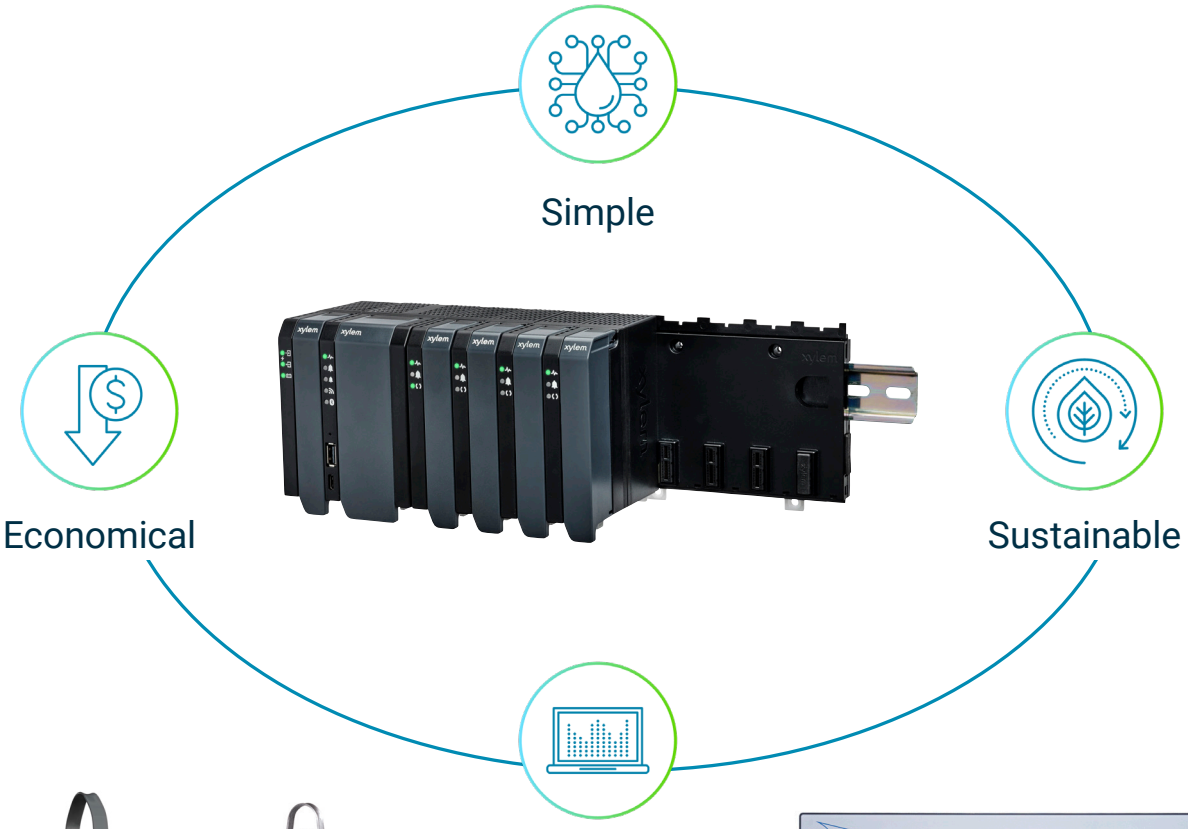
Maintain operational resilience with a multi-layered approach

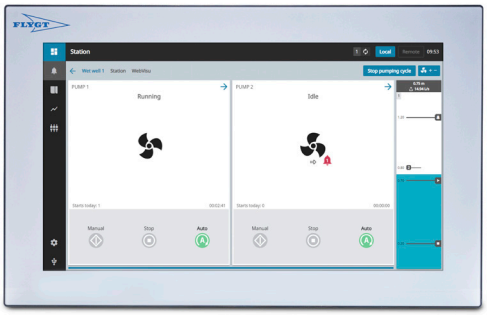
MultiSmart powered by Nexicon has been preprogrammed with basic and advanced functionalities for optimized pump station management for ease of use.

The controller has been developed in accordance with international cybersecurity standards (IEC-62443) to meet the demands and regulations for critical applications. Implementing these cybersecurity measures helps protect critical infrastructure, ensuring continuous and reliable service while mitigating risks of disruptions.

Thanks to DNP3 and Modbus communication protocols, it can be connected to SCADA systems, creating a powerful network to remotely monitor and manage operations while helping to reduce downtime and unplanned visits.

MultiSmart powered by Nexicon has been developed with expertise of more than 120 years in wastewater pumping.





Simple

Preprogrammed with a wide range of advanced wastewater pumping functions. The controller will configure itself based on selected hardware and the full installation is easy to complete using the Setup Wizard.

Sustainable

Designed with sustainability in mind. Because of its energy-optimizing features, built-in cybersecurity, and capability to run Flygt Concertor at its best, this is one of the most energy efficient solutions to run your pump station.

Expandable

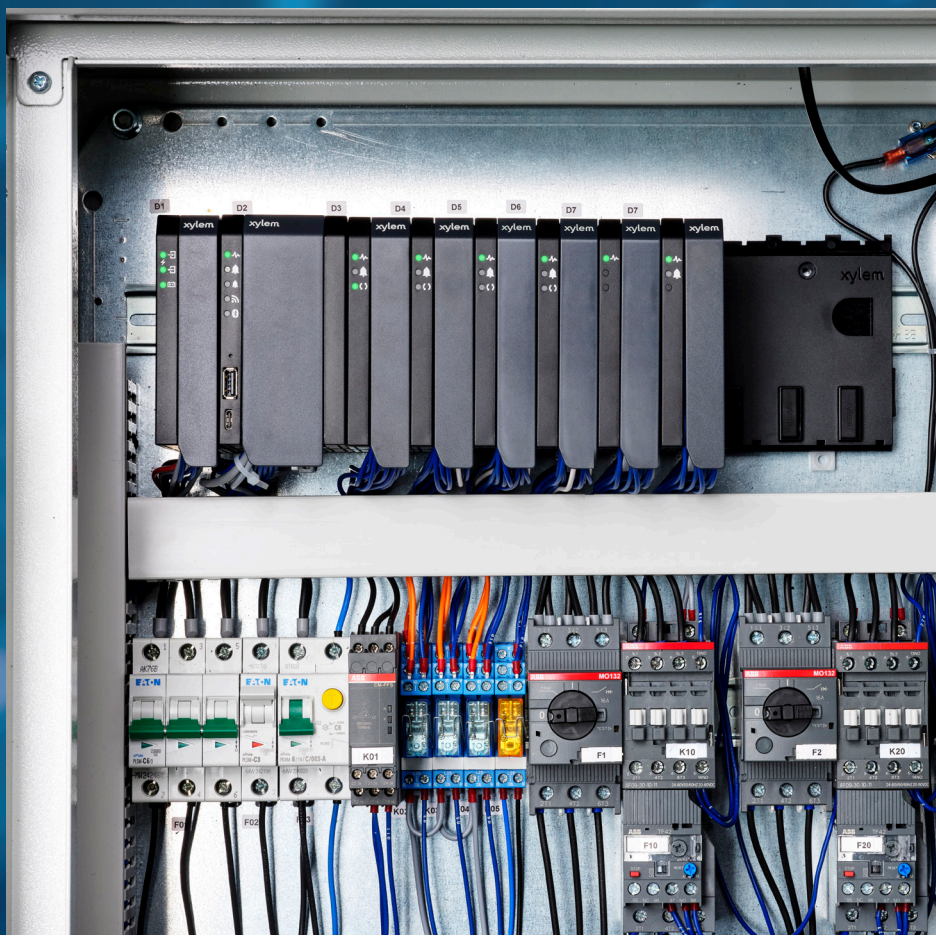
Designed with modular architecture that allows system adaptation to different situations. Thanks to CODESYS standard programming, the controller is future-proof and can adapt to your current needs and those that come up later.

Economical

Ready to use without the need for extra engineering hours. The controller offers energy savings and streamlined operations, including built-in automatic monitoring and reporting. As a result, easier planned maintenance will provide better protection for assets and reduce downtime.

Outcomes you can expect

- Up to 70% energy savings with a Flygt Concertor system
- Better resource planning, less unplanned maintenance
- Reduced downtime and operational costs



Energy efficient anti-clog solution for Flygt pumps

With functions like dry run and motor protection, sump cleaning and overflow detection as well as inbuilt redundancy for basic operation, MultiSmart powered by Nexicon will control the system to increase energy efficiency and reduce clogging, callouts, and maintenance costs. In addition, Flygt Concertor pumps will benefit from specific features like Energy Minimizer and Pump Cleaning.

Remote monitoring with a cloud-based solution

The controller integrates with cloud-based solutions. This enables remote monitoring with smart functions, providing insights to help detect issues before failures. Industry-standard protocols, such as Modbus, allow you to interface with compatible external equipment and instrumentation.

Prepared for current and future cybersecurity regulations

MultiSmart powered by Nexicon is built according to ISA/IEC 62443-4-2 standard requirements, which makes it secure by design and establishes a cybersecurity foundation for current and future statutes and regulations.

Modular and flexible solution

Core modules

Award-winning industrial design

Recognized by two prestigious design competitions for flexible design, functionality, and social impact.

DESIGN AWARD 2025

reddot winner 2025
industrial design

Base modules

Backplane	Power and communication supply to backplane	(2) RS-485, (1) USB, (1) Ethernet (IPv4)
Application manager	The application manager is the controller in the Nexicon system. • Control and monitoring of a pumping station • Connection to supervision systems through Fieldbus • Plug and play functionality as a standard setup • Configurable for different applications • Optional programming with CODESYS • A real-time clock (RTC) energized by a battery • Option to install an SD card	• 6 digital inputs • 4 digital outputs (configurable)
Backplane supply	• Connection to a backup battery • Connection to an HMI and to a service tool	• +24 VDC to the other modules • +24 VDC to external equipment

Pump modules

Direct online pump	• Machine interface for leakage and temperature sensors • High-level switch • Monitoring of the current • Pump feedback signals	• 1 analog input (dedicated) • 2 digital outputs (dedicated) • 5 digital inputs
Variable frequency drive pump	• Monitoring and control of an external VFD • Machine interface for leakage and temperature sensors	• 1 analog input (dedicated) • 1 analog output (dedicated) • 4 digital inputs (dedicated) • 3 digital outputs (dedicated)
Concertor pump	• Machine interface for pump communication • Alarm handling • High-level switch	• 1 analog input (dedicated) • 3 digital outputs (dedicated) • 3 digital inputs

Additional modules

Motor protection	Two-slot module for power monitoring and testing • Power analyzing • Insulation resistance testing • Grid monitoring	
Redundancy	For connection of a single-slot module, for example a pump module, to a backup power supply	
Analog input/output	• For extra analog inputs and outputs	• 4 analog inputs • 4 analog outputs
Digital input/output	• For extra analog inputs and outputs	• 6 digital inputs • 4 digital outputs
Probe	• For the use of a Flygt level probe	• 10 probe inputs • 2 analog inputs (dedicated) • 1 digital outputs (dedicated)

Features and configuration

Pre-programmed pump logic features	• Pump station control for 1-4 direct online started pumps and/or Concertor pumps • Set up wizard for quick and easy installation • Event log for simplified trouble shooting • Power and energy calculation • Grease stripe minimization, alternating the start level to prevent build up of fat around the sump edges • Overflow calculation • Pump alternation on number of starts/classic pump alternation • Pump redundancy feature guarantees continued operation
Pump/motor protection configuration	• Support for flow measurement equipment • Max run time • Leakage • Dry run protection with low level switch • Temperature • Pressure transducer and float water level and customizable alarm thresholds • Standard pump control (HOA) • Flexible and intelligent alarm management • Maintenance run

Technical specifications

Power supply	11-32 VDC and 12 V backup battery
Interface	(2) RS-485, (1) USB, (1) Ethernet (IPv4)
Protocols	Modbus RTU/TCP, DNP3, IEC 60870-5-104
Temperature	-20°C to +60°C (-4°F to +140°F)
Enclosure	IP 20
Communication	Ethernet (IPv4)
Cybersecurity	IEC 62443-4-1

Modular pre-packaged solutions

The MultiSmart Powered by Nexicon controller system is designed to adapt to your requirements with modules for efficient pump control, telemetry, and safety in mind.

For your convenience, we have created pre-assembled controller options which can easily be configured by adding or exchanging modules on the backplane.

Pump control

A simple controller package that can be tailored to your specific pump station needs. Add Probe, Motor Protection, Redundancy or additional I/O modules to expand input data to run your system.

Choose from 3 different pump module configurations:

1. Direct On Line
2. Flygt Concertor
3. VFD

Qty	Unit
1	10" Touchscreen
1	5 Slot backplane
1	Backplane Supply Module
1	Application Manager Module
2	Pump Module
+	Optional modules

Grow your customer's digital journey

Take it to the next level with a **premium controller solution** by adding these modules to the Pump Control base package:

Redundancy: Connects to a backup power source which kicks in during an unexpected loss of power to the supply module, ensuring smooth running of pumps without interruption and risk of downtime.

Motor protection: Keeps your motors running optimally by measuring voltage and resistance to the pump. As a maintenance tool, this helps operators troubleshoot issues by checking the degradation of the motor and activating alarms and faults when the insulation is below a set threshold.

Additional analog and digital I/O modules can be added to further tailor the system to your requirements.

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