

FloConnect® Chemical Injection System

REMOVE UNCERTAINTY AND INEFFICIENCIES FROM THE CHEMICAL INJECTION PROCESS

OVERVIEW

The FloConnect® surface automation platform is a breakthrough in well controllability for surface well testing applications. As part of the FloConnect platform, Halliburton Testing and Subsea offers a highly automated, electronically controlled chemical injection system that removes the uncertainty and inefficiencies of a typical chemical injection program. It also helps avoid both overdosing and underdosing, which often lead to unnecessary costs and flow assurance issues.

CONTROL AND MONITOR INJECTION PROCESSES

The innovative FloConnect chemical injection system enables an operator to control and monitor the injection process directly from a ruggedized tablet or via a secondary remote location, such as the command center.

Unique capabilities of this automated injection system include the proper management of chemicals to improve process performance, prevent downtime, and minimize chemical waste. A key function is the continuous monitoring of chemical levels via wireless connectivity that efficiently delivers data for an operator to remotely control the injection process, from anywhere, anytime. It also automates the maintenance of chemical dosages through various conditions, by determining the precise injection rates and logging them into the DAS system for tracking purposes.

The high level of automation (LoA) built-in “smart” technology leverages operational experience and standard operating procedures more advanced than basic remote-control systems. For example, when the “Fixed Dosage” mode is selected, the computer pulls process data, calculates the injection rate, adjusts the set point to the calculated rate, and controls the pump by using a closed-loop PID control system.

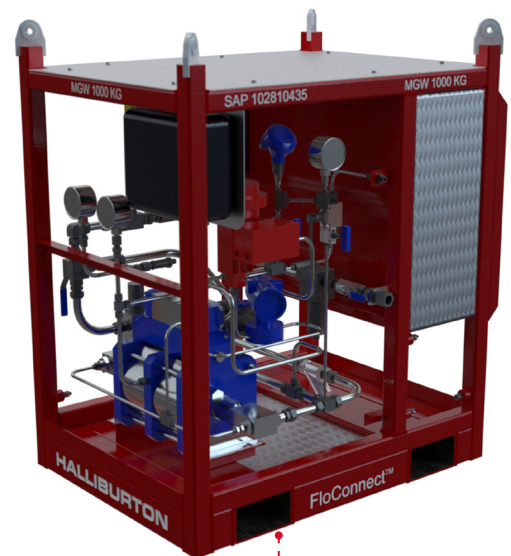
Equipment condition monitoring is continuously provided during normal operation (generating alarms, health checks, and predictive and preventive maintenance). This instant awareness informs and assists operators for better decision-making and control.

FEATURES

- » Highly automated
- » Electronically controlled
- » Built-in “smart” technology
- » Precise chemical management
- » Continuous equipment condition monitoring
- » Command center and/or tablet monitoring

BENEFITS

- » More efficient injection performance
- » Accurate chemical dosing
- » Removes uncertainty
- » Reduces downtime
- » Less chemical waste
- » Fast data delivery
- » More informed decision-making



Automation,
Wireless Control



Equipment Specifications

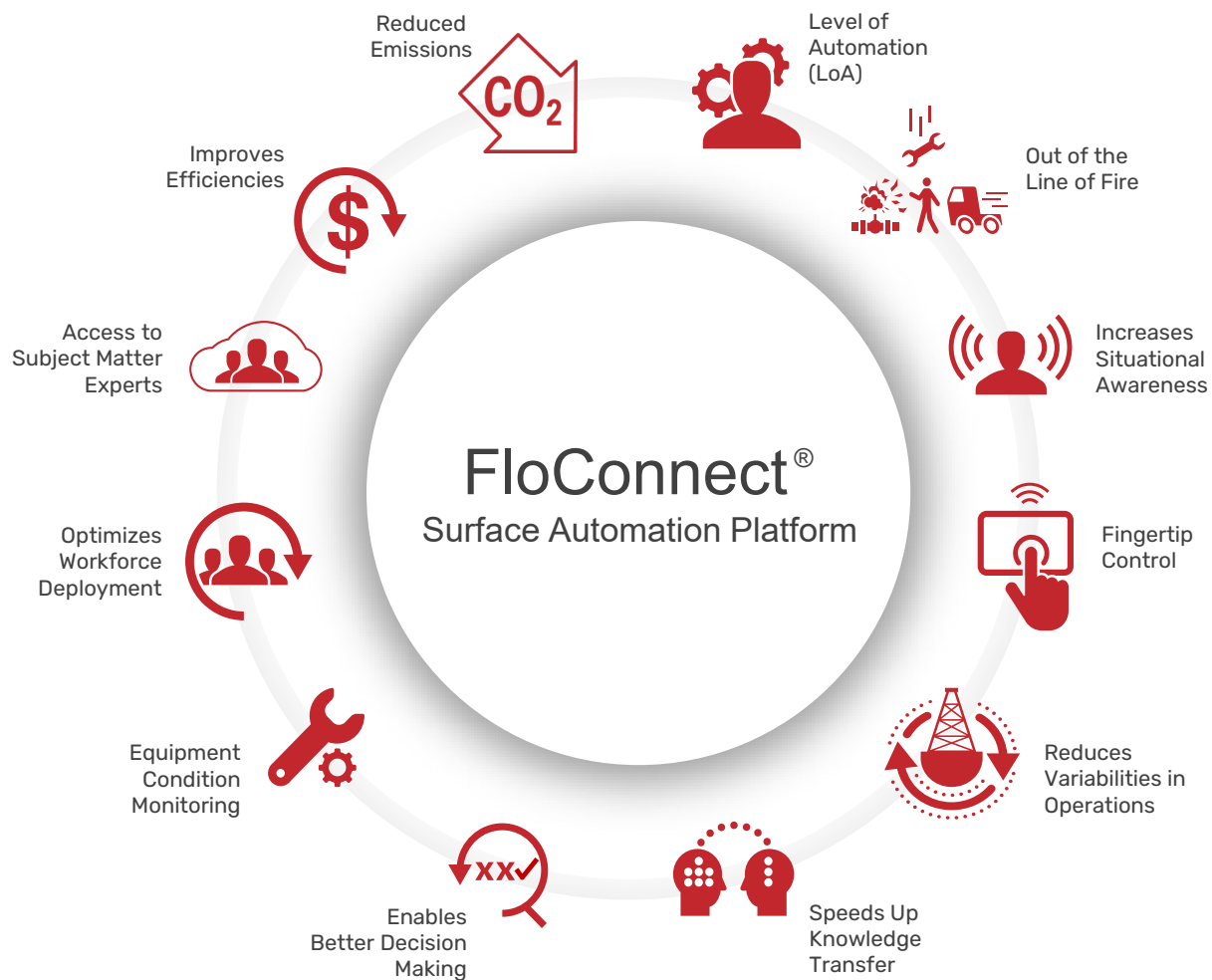
Part Number	102810435
Working Pressure, psig (bar)	0 to 15,000 (0 to 1,034)
Operating Temperature, °F (°C)	0 to 113 (-18 to 45) ⁽⁴⁾
Fluid Inlet	1 in. Female NPT
Fluid Outlet	3/8 in. AEMP
Air Inlet	1 in. Female NPT
Drain	1 in. Female NPT Plugged
Flow Rate	1.5 gpm @ 5,000 psi 1.0 gpm @ 15,000 psi
Air Consumption	380 scfm @ 1.5 gpm 250 scfm @ 1.0 gpm
Electric Power Requirements	110/230 VAC, 50/60 Hz
Skid Frame	Designed in Accordance with DNV 2.7-1
Skid Size (L x W x H), in. (mm)	50 x 35.8 x 57.7 (1,270 x 910 x 1,465)
Actual Unit Weight, lb. (kg)	1,543 (700)
Design	IECEx and ATEX CE Marked NORSOK D-007, E-001, Z-010
Hazardous Zone Area	Zone 1
Modes of Operation	Automated (Wired/Wireless) and Manual
Pump Configuration	Double-Acting, Dual-Piston Air Drive
Chemical Compatibility	Monoethylene Glycol, Methanol, Foam Breaker/Defoamer, Demulsifier, H ₂ S Scavenger, Wax Inhibitor, Scale Inhibitor, Corrosion Inhibitor ⁽⁵⁾
Control System Accuracy	0–1.5% ⁽⁶⁾
Chemical Delivery Accuracy	0–1.4% ⁽⁷⁾
Equipment Condition Monitoring (ECM)	High Pressure High-High Pressure Low Chemical Level

Notes

- » These ratings are guidelines only. Contact your local Halliburton surface well testing (SWT) representative for more information.
- » Halliburton Testing and Subsea has developed purchasing specifications to ensure that SWT equipment used by Halliburton meets or exceeds recognized international specifications and industry codes (where/as applicable).
- » Refer to the equipment databook for individual equipment specifications and codes.
- » Manual operation is possible up to 140°F (60°C).
- » Chemical compatibility highlights high-level types of chemicals and specific material safety data sheets (MSDS) for chemical products should be reviewed as part of the Halliburton Design of Service (DoS) process.
- » Control system accuracy refers to the difference between the measured injection rate and the system's target set point.
- » Chemical delivery accuracy refers to the amount of chemical injected as reported by the system, compared to the observed tank level. This is primarily dependent on the accuracy of tank measurement and flow meter accuracy for any given fluid. The meter is capable of less than 0.5% error for most fluids used.

ABOUT FLOCONNECT® SURFACE AUTOMATION PLATFORM

The FloConnect surface automation platform is a common data-centric platform with control functionality that provides automated control of surface well testing (SWT) operations, while monitoring and measuring all factors related to the production of well effluents. This highly scalable and configurable automation platform is designed to meet the needs of SWT applications to maximize operational efficiencies and address complex challenges.



For more information, contact your local Halliburton representative
or visit us on the web at www.halliburton.com

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