FLOW SOLUTIONS GUIDE
CHEMICAL INJECTION SOLUTIONS
FOR THE OIL AND GAS INDUSTRY

GLOBAL EXPERIENCE
SAFETY
REDUCED COSTS
EFFICIENCY
RELIABILITY
REPEATABILITY

ACCURATE AND REPEATABLE MEASUREMENT IN PRESSURE RANGES UP TO 15000 PSI (1034 BAR)
How much does your company spend every year on chemicals? For most, chemical injection is a sunk cost of production – it can be a challenge to track how much is spent versus how much chemical is actually required.

Yet without preventive chemicals, scales and waxes could plug tubing and shutting down facilities; hydrates could block production, costing up to $1M/day in shut-in production as it’s dissociated. Without corrosion inhibitors, complete loss of well or infrastructure could occur over time. With such severe consequences, producers consistently inject more than the recommended quantity of chemical.

**Emerson’s Flow Technologies, Systems & Services expertly address critical operations and production processes to help...**

**INCREASE UPTIME**

**REDUCE OPEX**

**DECREASE MAINTENANCE EXPENSES**

**IMPROVE MEASUREMENT**

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| Improve system reliability | • Reduce the over-injection of chemicals with a more accurate and repeatable measurement and control system  
• Smart Meter Verification available to check system integrity without pulling meter out of service | ✓ High pressure Coriolis flow meter technology able to handle up to 15,000 psi (1034 bar)  
✓ Optimization of chemical usage with TESCOM 56 Series  
✓ Predictive diagnostics and remote insight into performance of equipment  
✓ Automatically compensate for changes in inlet pressure, outlet pressure, flow demand, temperature changes and provide accurate chemical flow rate control  
✓ Lifecycle services for ongoing support  
✓ Reduced maintenance with no moving parts that could wear out over time or need to be replaced |
| Increase operational efficiency | • Automate the injection process for more control by eliminating human error  
• Eliminate spare parts and reduce downtime for maintenance and repair |  |

The annual cost of over injection for a flow meter operating at 20% additional could be as high as $400k per year
OFFSHORE OPTIMIZATION AND RELIABILITY

**COMPLETE CHEMICAL INJECTION SYSTEM**

Switching from dedicated chemical tanks to a single tank can save space, weight and capital on the chemical injection system; however, the savings in space and weight from a single tank requires that the control and measurement devices for each well’s chemical injection line be rated to the full possible discharge and injection pressure. For many technologies, the requirements of high pressure or deepwater assets has been prohibitive. Until now.

The TESCOM 56 Series devices paired with the Micro Motion HPC010 provides:

- Active control that compensate for changes in inlet pressure, outlet pressure, flow demand, temperature changes and provide accurate chemical flow rate control.
- Consistent flow of chemicals to your production infrastructure no matter how the conditions change.
- Optimization of chemical usage to prevent problems associated with under-injection and the waste associated with over injection.
- Reduced operational and maintenance costs while increasing safety by extending the service life and being easy to maintain.
- Robust high quality components for longevity in offshore applications reduce maintenance costs and unplanned downtime.
- PID algorithm control that can update every 25ms, which results in unparalleled accuracy and responsiveness to real-time well data.

**HPC010 TAILORED FOR YOUR APPLICATION**

- 0.2% mass/volume flow accuracy
- Flow range of 50-240 kg/hr (1.8-8.8 lb/min)
- 0.005 g/cc density accuracy
- 0-15000 psig (0-1034 barg) operating pressure
- CSA, IECEx and ATEX Approvals
- Stainless steel, 5700, direct-connect, and 2-wire transmitters available to suit any the needs of any application

**56 SERIES TAILORED FOR YOUR APPLICATION**

- Flow rate range of .005 - 30.0 gpm /113.56 l/m
- Inlet pressure up to 15,000 psig /1034 bar
- Outlet pressure up to 15,000 psig /1034 bar
- CSA, IECEx and ATEX Approvals
- Full stainless steel construction
- Kalrez® elastomers
Emerson’s flow solutions deliver what you need

FLOW TECHNOLOGIES
Using the best fit-for-purpose flow technology, leveraging field-proven best practices and utilizing inherent device data ensures process visibility and enhances the performance of critical process units.

FLOW SYSTEMS
Utilizing best-in-class technology, proven system design processes and practices and global project support enhances measurement system operational effectiveness and capital efficiency.

FLOW SERVICES
Partnering for a broad range of maintenance, reliability and performance services assures long-term asset integrity and performance.

BY USING EMERSON’S FLOW SOLUTIONS, AN OFFSHORE PLATFORM CAN REDUCE MAINTENANCE AND UNPLANNED OUTAGES
ONE OFFSHORE TECHNICIAN WAS ABLE TO STOP THEIR OVERDOSING OF CHEMICALS TO REDUCE THEIR CHEMICAL SPEND BY OVER 40%
REDUCE OVER-INJECTING EXPENSIVE CHEMICALS ON YOUR PLATFORM BY UP TO 50%

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