

GE Energy

# Masoneilan\* Valves Aftermarket Support and Services

Putting  
integrity  
into asset  
management



imagination at work

# Asset Integrity Management



## Commissioning Assistance

- Engineering and Technical Services
- Configuration Services
- Valve Survey Inspection
- Control System Integration
- Setup, Calibration and Startup Services
- Valve Automation Services



## Operations Support

- OEM Parts - Regional Aftermarket Centers
- ValvFAST<sup>®</sup>
- Instrumentation Cut-over - Hot Swap Program
- Inventory Management
- Safety Assurance ESD Solutions



## Managed Maintenance

- Certified Valve Repair (MARC<sup>®</sup>)
- Mobile Onsite Valve Servicing
- Valve Technician Training
- Asset Management:
  - ValvKeep<sup>®</sup> / ValVue<sup>®</sup> / AMS
- Turnaround Management



## Preemptive Maintenance

- Remote Monitoring
- Offline Diagnostics - ValScope<sup>®</sup>-PRO
- Online Diagnostics - ValVue<sup>®</sup>



## Performance Optimization

- Loop Tuning / Optimization
- Diagnostics
  - Offline
  - Online



## Life extension

- Trim Retrofit
- Refurbished Valves
- Smart Instruments Refurbishment
- Re-Instrumentation/Performance Optimization

# Optimize Equipment Performance

## Installation, Setup and Commissioning Services

From the time your equipment arrives at the receiving dock, GE stands ready to support installation, setup and commissioning with expertise that helps integrate and optimize equipment performance. In addition to helping you get the most from your investments, we can help to shorten time to revenue for additional cost-saving benefits. Factory-trained technicians perform reliable valve installation, actuator adjustment and instrumentation calibration. Plus, FieldBus configuration and control integration services ensure interoperability between the final control element and the distributed control system (DCS). Product features such as universal mounting and auto-calibration, combined with control technician expertise and real-world experience, result in fast, quality commissioning.

## Integrated Data for Improved Profitability, Productivity, and Safety

By offering systems integration with control affiliates Honeywell® and Yokogawa®, GE draws upon the expertise required to help ensure that final control elements are working in concert with the distributive control system. Through these associations, GE offers integrated information management from digital field devices to the DCS for improved productivity, safety and profitability. Our application of Masoneilan control valve expertise, coupled with global connectivity digital instrument architecture, delivers reliable control and information integration.

## Fast, Expert Implementation

- Valve Sizing and Selection
- Valve Survey Inspection
- Resident Engineer and Technical Service
- Project Management
- Setup, Calibration and Startup assistance
- Configuration Services
- Systems Integration
- Factory Technical Support
- Valve Automation Services

## Critical Valve Startup

Whether you have a Masoneilan SteamForm\* valve for steam conditioning, a boiler feedwater recirculation valve, or a special NASA cryogenic valve, GE consults on process startup and can help ensure that control equipment assets are functioning properly. What's more, factory-trained technicians can ensure the Masoneilan valve, actuator, positioner, and control valve assembly accessory components work effectively together.



# Operations Support

## Enhanced Control Valve Asset Availability, Reduced Downtime

To help ensure efficient, uninterrupted operation, GE offers a variety of value-added services -- from OEM parts to inventory management -- that can help process plant operators enhance control valve asset availability. Because we provide analog-to-digital instrumentation cut-over (Hot-Swap), product technology upgrades can occur while operations continue to run. Remote- or hazardous-areas operations can also be monitored online in real time with the same technology.

GE's regional aftermarket centers provide support for valve replacement, OEM Parts, and service. If a new valve is needed, our ValvFAST program can deliver the right one sometimes in as little as 24 hours. And, comprehensive onsite repair or depot refurbishment services round out our valve mechanical servicing offerings.

Using innovative digital instrument technology, GE offers data acquisition and diagnostics from the Masoneilan SVI\* and FVP family of digital instruments with on-board sensors, in addition to ValVue\* companion software. By remote connection to a factory technician's computer, ValVue software continuously monitors control valves in hazardous or remote locations. Furthermore, advanced software tools now allow us to conduct diagnostics online without interrupting your processes, and our Hot-Swap services allow analog positioners to be switched over to advanced digital positioners without discontinuing operations.

## Delivering Operation Improvement

GE played an instrumental role in a recent ethylene product optimization project. Our services supported the facility's operations by improving valve positioning accuracy.

Fuel gas valves retrofitted with Masoneilan SVI II positioners reduced the control set point deviation prior to loop tuning by 50 percent. When the install characteristics were linearized, the SVI units' custom flow characterization feature was used to full benefit, further improving process control performance.

## Enhanced Revenue Generation and Improved Control Performance

- **Enhanced Revenue Generation and Improved Plant Efficiency**
- **Uptime / Improved Turn-around**
  - OEM Parts from Regional Aftermarket Centers
- **ValvFAST Program**
- **Performance Optimization**
  - SVI II AP / Masoneilan FVP Diagnostics
  - Hot-Swap Program
- **Inventory Management**
  - Valve Survey/Assessment
- **Safety Assurance**
  - Emergency Shutdown Device (ESD) Products.



# Life Cycle Cost Reduction

## Managed Maintenance

When it comes to life cycle cost or downtime reduction, the Masoneilan product and service portfolio can help you to achieve your goals. The MARC<sup>®</sup> (Masoneilan Authorized Repair Center) organization from GE stands ready to provide support and expertise of valve technicians and the tools to respond to maintenance, repair and overhaul needs. Additionally, ValvKeep<sup>®</sup> maintenance data management software offers an integrated database for valve testing, repair and identification. ValvKeep software delivers quick access to specific equipment data such as bills of material, making data collection and retention easy throughout the asset's life cycle. Plus, Masoneilan SMART instruments and ValVue software with the AMS asset management snap-on application expand the capabilities of facility management equipment.

The ValScope<sup>®</sup>-PRO microprocessor-based data acquisition and diagnostic tool supports plant turnarounds or routine preventative maintenance activities, and it can run diagnostic checks on valves from various manufacturers. It easily troubleshoots problems and identifies opportunities to improve valve performance.

## Diverse Service and Tool Solutions

- Factory Certified Repair - MARC
- Turnaround Management
- Valve Technician Training
- Mobile Onsite Valve Servicing
- Asset Management
  - ValvKeep software
  - ValVue Suite software
  - ValScope-PRO tool
  - AMS asset management snap-on application

## Reliable Performance in Tough Conditions

The functionality of large high-performance butterfly valves in gas reinjection units had to be optimized for dependable operation in the middle of the Algerian Sahara desert. Two valves with Scotch yoke actuators that had been supplied by another valve manufacturer were not performing well when controlling small changes in input. Data analysis by the ValScope-PRO tool revealed that the installed positioners were not able to move the valves quickly and accurately enough for step input changes of less than 7 percent. After retrofitting the valves with SVI<sup>®</sup> positioners and Masoneilan boosters, the performance of the valve and actuator combination improved drastically. Not only did ValScope-PRO help diagnose the problem, but it also captured and reported the extent of the improvement.



# 24/7 Field Support

## Preemptive Maintenance

Masoneilan tools deliver true preemptive maintenance by alerting operators to issues before they become critical and potentially costly. Around-the-clock field support provides proactive process management and helps keep your processes optimally tuned. Our products not only monitor the health of equipment, but also furnish the intelligence necessary to help predict future non-conformance issues.

By comparing current and historical valve signatures, the ValScope-PRO system can help identify problems such as improper plug travel adjustment, excess friction and trim wear. Similarly, Masoneilan digital positioners with on-board pressure sensors assess valve conditions. For instance, SVI II AP series positioners record bellows seal stroke counts and alert the operator when the bellows risk is high. Add the ValVue OVD (On-Line Valve Diagnostics) option, and each valve can be monitored remotely.

From OVD capable of triggering warnings or alerts, to enabled data management that can catalog entire maintenance histories, our preventative maintenance approach means we can help to prevent problems before they occur.

## Performance Optimization

On-line diagnostic software tools from GE enable real-time control valve performance assessment. During normal plant operation, Masoneilan digital positioners and online diagnostic software support the continuous acquisition and analysis of control valve data. Then, trained Masoneilan technicians at the site or communicating remotely on a secure web connection can recommend necessary corrective action to improve performance. That technical expertise, along with optimized process yield and loop tuning, contributes to higher-quality performance of the control valve.

## Life Extension

Control valves with analog positioner technology can be re-instrumented and refurbished with new Masoneilan SVI II AP digital positioners. The positioner retrofit significantly improves final control element speed and accuracy and establishes the diagnostic capability to perform preemptive maintenance.

## All Parts Are Not Created Equal

Only genuine Masoneilan parts from GE are manufactured to the exacting requirements of the original valve. That means they deliver reliable and safe long-term performance, help to prevent unscheduled downtime, and reduce the need for costly, time-consuming repairs. Masoneilan parts help to ensure that your valve warranty remains intact.

Protect your valve investment. Look for the Masoneilan name on the part or packaging, and demand nothing less.



# Our Global Service Network

To provide comprehensive local support, GE maintains a global network of Masoneilan Authorized Repair Centers (MARC). MARCs are driven by a “Customer for Life” philosophy that is expressed through a comprehensive suite of aftermarket services, including OEM Rapid Parts, onsite diagnostics, service and repair. The Masoneilan service offerings from GE span all phases of the equipment life cycle, from engineering and startup to operation and maintenance:

- Technical support from custom design to applications engineering
- Support of installation, setup and commissioning
- Products with advanced control performance
- Diagnostic tools that support process control optimization objectives
- Tools providing the intelligence necessary for preventive maintenance

GE puts its industry-leading knowledge and Masoneilan technology to work through a global service network that provides factory-certified field support. By thinking globally and responding locally, with onsite support, hands-on training and depot repair, our network offers timely solutions wherever they are needed. These mobile valve servicing and resident asset management services bring Masoneilan expertise and know-how to industry's back door.

To find the MARC for your area, or to learn more about Masoneilan Aftermarket Support and Services from GE, please visit our website at [www.ge-energy.com/valveservices](http://www.ge-energy.com/valveservices)



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