



Smart Valve Diagnostics

Products and digital solutions from one single source

SAM[®]
DIGITAL

AT A GLANCE



Critical situations and valve states that require an immediate operator response can occur while process plants are running.

SAM VALVE MANAGEMENT is a web-based solution for the smart monitoring and management of control valves installed in process plants. SAM VALVE MANAGEMENT has many benefits:

- Overview of all connected valves equipped with smart SAMSON positioners
- Clearly structured dashboard with all relevant operating and diagnostic parameters
- Immediate detection of malfunctions
- Support in the advance planning of maintenance work with algorithm-based recommended action

On this basis, SAM VALVE MANAGEMENT provides clear and concise diagnostic information for every valve.

Various options are available to synchronize the data in the positioners and SAM VALVE MANAGEMENT:

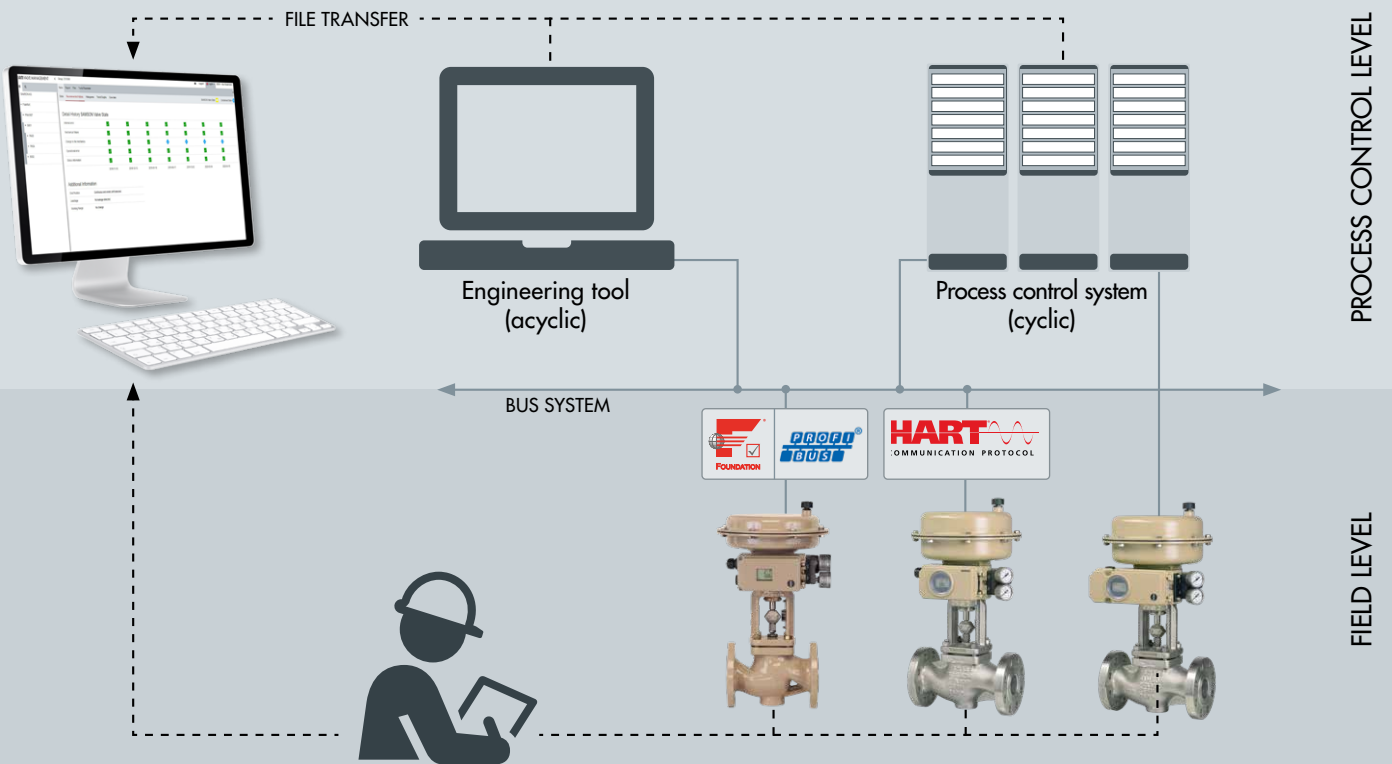
- XML file upload
- Data transfer from common process control systems
- Data transfer from TROVIS-VIEW software
- Readout service performed by SAMSON's asset management service



Our expertise for you:

You can contact SAMSON via a dedicated e-mail account if you have any questions. SAMSON has access to the historical valve data and can provide you with specialist advice based on the data.

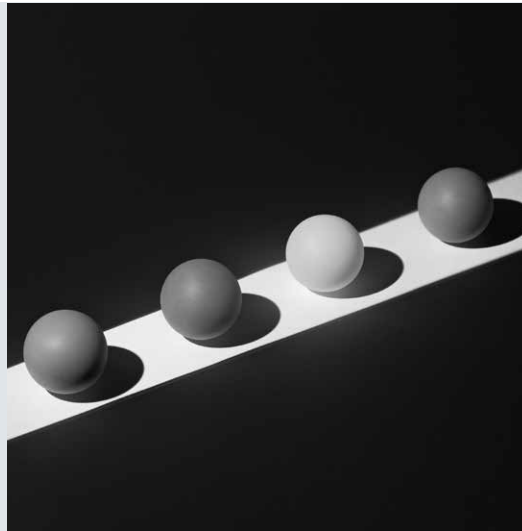
CONNECTIVITY



PRODUCT FEATURES



OPTIMIZED COSTING



CLEAR OVERVIEW



DATA ANALYSIS



Optimized costing

- Optimized profitability and plant availability
- Prevention of unplanned plant downtime
- Supported maintenance work
- Optimized business processes



Clear overview

- Complete overview of all SAMSON valves with mapping of existing asset structures
- Dashboards providing an overview of the entire plant and single tags
- Geodata for all integrated valves



Data analysis

- Efficient monitoring of all relevant diagnostic data
- Automatic and manual analysis of data
- Asset- and plant-related reporting
- Visualization of valve operating modes including histograms and trend graphs



DATA MANAGEMENT



PREDICTIVE MAINTENANCE



SECURITY



Data management

- View operating states
- Built-in file management to save valve-related information
- Note function to add customized information
- Export function
- Access from anywhere at any time



Predictive maintenance

- Efficient, proactive maintenance planning
- Prevention of costly unplanned plant downtime
- Extended diagnostic functions, such as identification of the valve's working range, clear diagnostic Notifications with recommended action
- Direct contact with SAMSON's after-sales service possible



Security

- German computing centers certified according to ISO 27001
- Compliance with the EU General Data Protection Regulation (GDPR)
- Certificate-based SSL/TLS encryption
- Regular security updates
- 100% web-based services, modern web technology (HTML5/CSS3)
- Maximum access protection
- Redundant saving of data
- Logon using two-factor authentication possible
- Multiple clients possible

SYSTEM-BASED SUPPORT



SAM VALVE MANAGEMENT analyzes the data with the support of an extensive range of algorithms. The rule-based data analytics developed by SAMSON are the basis for the support provided by the web-based solution.

- Status reading for each asset classified according to NAMUR and the SAMSON valve state (a combination of the condensed state generated by the positioner and the advanced analysis of the diagnostic data)
- Asset-specific diagnosis with recommended action
- Recommended action with illustrated step-by-step guide
- Historical trend of the asset-specific state assessment
- Further information including end position, leakage and working range
- Continuous upgrade of diagnostic functions and recommended action

SAM VALVE MANAGEMENT



Check operating behavior

Message Check operating behavior
Description The operating range has shifted since the last readout.
Recommended action Check whether the process conditions have changed. If this is not the case, check the seat and plug for wear.

⚠ DANGER

Risk of severe injury due to residual hazards posed by the valve, actuator and positioner.
→ Read the associated documentation for the valve, actuator, positioner and other valve accessories before performing any work on the control valve.

⚠ DANGER

Risk of fatal injury due to ineffective explosion protection.
The explosion protection becomes ineffective when the positioner cover is opened.
→ The following regulations apply to installation in hazardous areas: EN 60079-14 (VDE 0165, Part 1).

⚠ WARNING

Risk of injury by possible movement of exposed parts (positioner, actuator or valve).
→ Do not touch or block exposed moving parts.

💡 Tip

The documentation for the SAMSON devices (positioners, actuators, valves etc.) can be found on our website
▶ www.samsongroup.com (Service & Support > Downloads > Documentation). Table 1 (at the end of this document) lists the positioner documentation.

Checking the plug stem's ability to move

→ Check plug stem for external influences that could be blocking it (visual inspection only).
→ If an object is blocking the plug stem's ability to move, remove the object.

⚠ WARNING

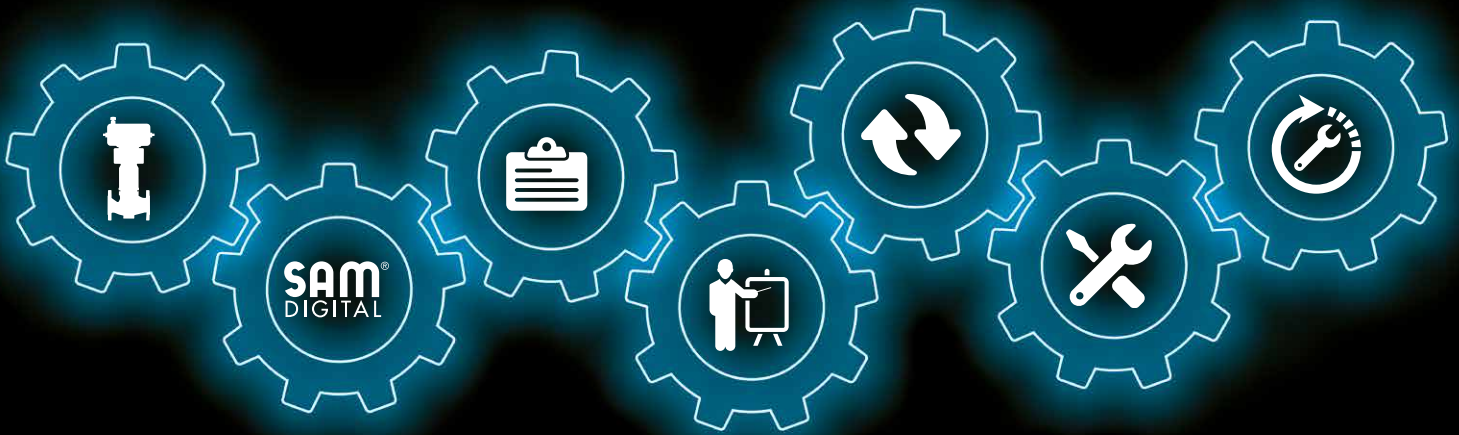
Risk of injury as a result of supply air escaping and the actuator stem moving.
Before performing any mounting or service work on the positioner, put the positioner out of operation:
→ Shut off and lock the supply air line.
→ Disconnect and lock the electrical power supply.

If the mounting situation has changed, reinitialize the positioner after putting it back into operation (see Fast initialization of the positioner on page 3).



SAMSON is geared towards improving the quality of the valve diagnostics to advance the evolution from preventive maintenance to predictive maintenance.

APPLICATIONS AND MARKETS



SAMSON's asset management service also supports you in all matters concerning SAM VALVE MANAGEMENT. Our engineering specialists can take over the regular monitoring of critical tags in your plant on your behalf and notify you directly when action needs to be taken. The digital management of documents, certificates and maintenance records gives you quick access to a tag's history over its entire life cycle.

Digital retrofit

- Retrofit of smart field devices
- Retrofit of electronic nameplates and RFID tags with one-to-one device marking according to DIN SPEC 91406
- Digital inventory of positioners already installed in the plant
- Smart asset management
- Implementation and management of electronic nameplate

Value-added services

- Service to read out positioner data
- Analysis of the asset- and plant-related reporting
- Consultation to discuss reports generated by SAM VALVE MANAGEMENT
- Monitoring of critical tags

General services

- Maintenance and repair of SAMSON devices
- Spare parts management
- Planning, monitoring and management of plant shutdowns
- Training and qualification focusing on diagnostics in field devices



If you have any further questions, e-mail us at samvalvemanagement-de@samsongroup.com

SAMSON AT A GLANCE



STAFF

- Worldwide 4,500
- Europe 3,700
- Asia 600
- Americas 200
- Frankfurt am Main, Germany 2,000

INDUSTRIES AND APPLICATIONS

- Chemicals and petrochemicals
- Food and beverages
- Pharmaceuticals and biotechnology
- Oil and gas
- Liquefied Natural Gas (LNG)
- Marine equipment
- Power and energy
- Industrial gases
- Cryogenic applications
- District energy and building automation
- Metallurgy and mining
- Pulp and paper
- Water technology
- Other industries

PRODUCTS

- Valves
- Self-operated regulators
- Actuators
- Positioners and valve accessories
- Signal converters
- Controllers and automation systems
- Sensors and thermostats
- Digital solutions

SALES SITES

- More than 50 subsidiaries
in over 40 countries
- More than 200 representatives

PRODUCTION SITES

- SAMSON Germany, Frankfurt, established in 1916
Total plot and production area: 150,000 m²
- SAMSON France, Lyon, established in 1962
Total plot and production area: 23,400 m²
- SAMSON Turkey, Istanbul established in 1984
Total plot and production area: 11,053 m²
- SAMSON USA, Baytown, TX, established in 1992
Total plot and production area: 9,200 m²
- SAMSON China, Beijing, established in 1998
Total plot and production area: 10,138 m²
- SAMSON India, Pune district, established in 1999
Total plot and production area: 18,000 m²
- SAMSON Russia, Rostov-on-Don, established in 2015
Total plot and production area: 5,000 m²
- SAMSON AIR TORQUE, Bergamo, Italy
Total plot and production area: 27,684 m²
- SAMSON CERA SYSTEM, Hermsdorf, Germany
Total plot and production area: 14,700 m²
- SAMSON KT-ELEKTRONIK, Berlin, Germany
Total plot and production area: 1,060 m²
- SAMSON LEUSCH, Neuss, Germany
Total plot and production area: 18,400 m²
- SAMSON PFEIFFER, Kempen, Germany
Total plot and production area: 35,400 m²
- SAMSON RINGO, Zaragoza, Spain
Total plot and production area: 18,270 m²
- SAMSON SED, Bad Rappenau, Germany
Total plot and production area: 10,370 m²
- SAMSON STARLINE, Bergamo, Italy
Total plot and production area: 26,409 m²
- SAMSON VDH PRODUCTS, the Netherlands
- SAMSON VETEC, Speyer, Germany
Total plot and production area: 27,090 m²

SAMSON AKTIENGESELLSCHAFT

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