

SIMPROVE YOUR PROCESS

FOCUS-1 – THE **SMART METER VALVE** FOR FLOW-, PRESSURE- AND PROCESS CONTROL

WINNER 2023

BI
BEST OF
INDUSTRY
A W A R D



FOCUS-ON

A SAMSON & KROHNE COMPANY

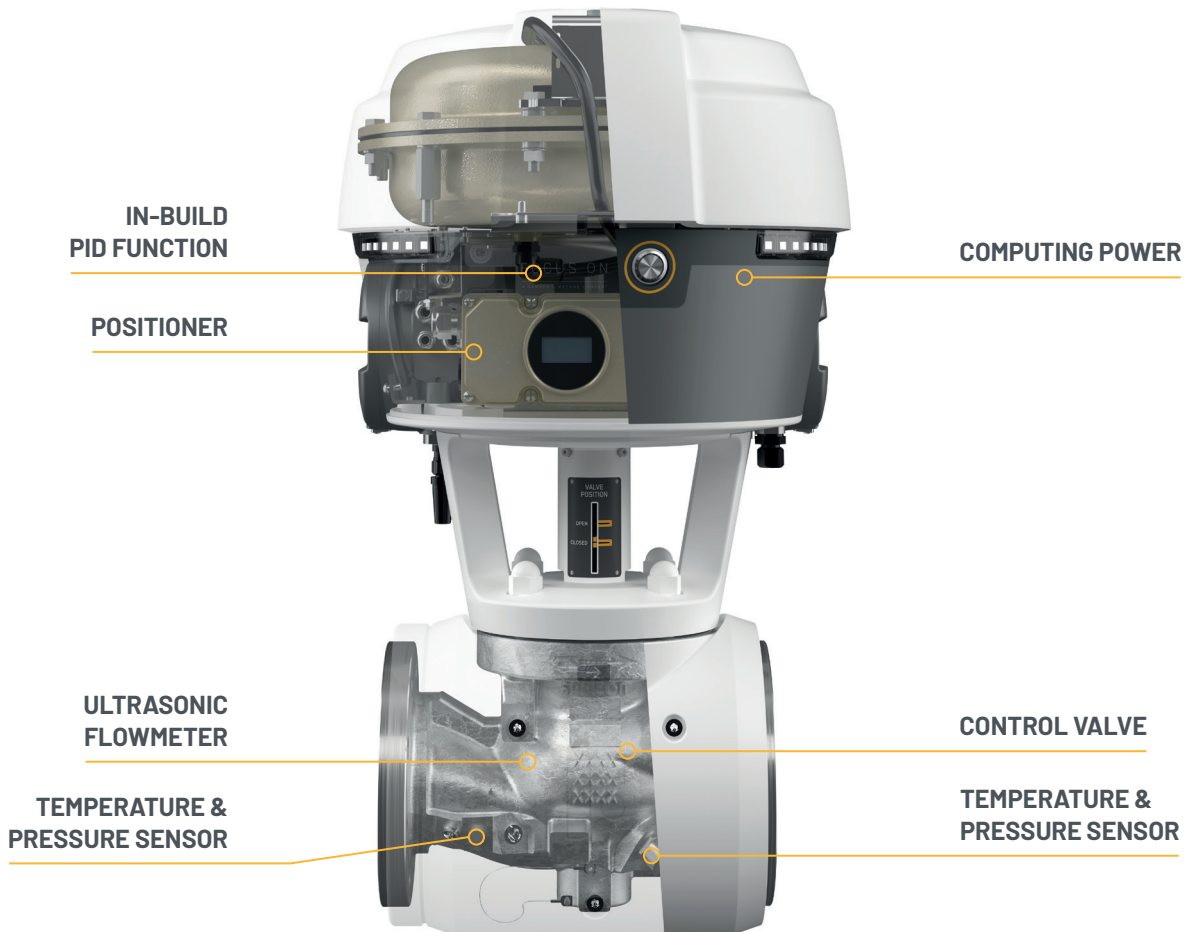
SIMPLIFY
ENGINEERING AND INSTALLATION
OF CONTROL LOOPS



IMPROVE
CONTROL QUALITY AND
PLANT UPTIME

FOCUS-1 features integrated control valve, flowmeter, pressure and temperature sensors combined with extensive computing power in one single device.

The smart meter valve replaces traditional control installations with conventional sensors, valves and control functionalities. It allows for increased control quality, plant uptime whilst simplifying installation and engineering efforts.

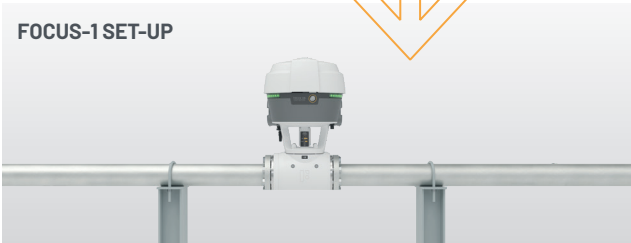
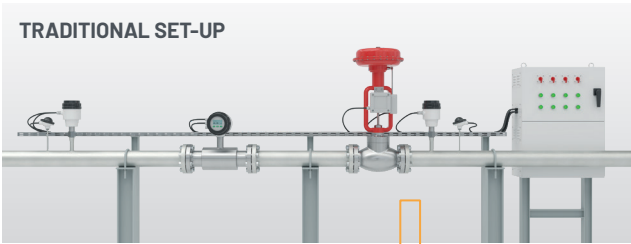


SIMPLIFY ENGINEERING,
INSTALLATION AND COMMISSIONING

MAXIMUM PROCESS AND COSTS TRANSPARENCY

Traditional installations for control tasks in process plants usually consist of several sensors, a control valve and a DCS with control algorithms.

The process operator relies on proper functioning of all these components to ensure process quality.



By **combining all these components in one device**, FOCUS-1 simplifies the installation dramatically and reduces significantly the number of flanges, cables and I/O points.

In addition to the above, the commissioning efforts are also heavily simplified, as **all the control algorithms are implemented within FOCUS-1**. Only a setpoint needs to be sent from the DCS to the FOCUS-1. Also, only one instead of several components need to be engineered, installed and commissioned.

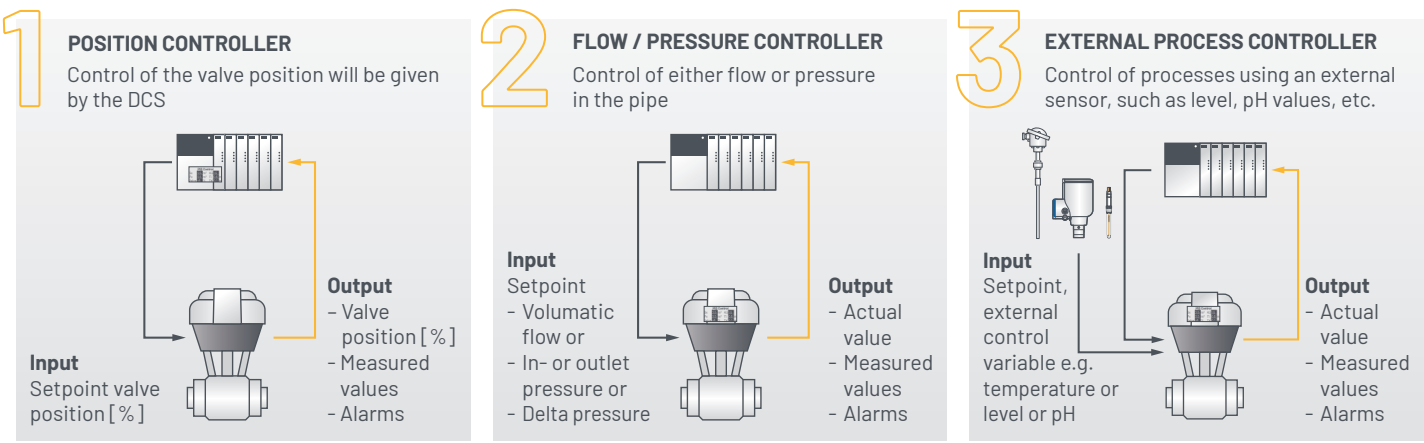
REFERENCES



SIMPLIFY AND IMPROVE PROCESS CONTROL

FLEXIBLE USE DEPENDING ON YOUR CONTROL NEEDS

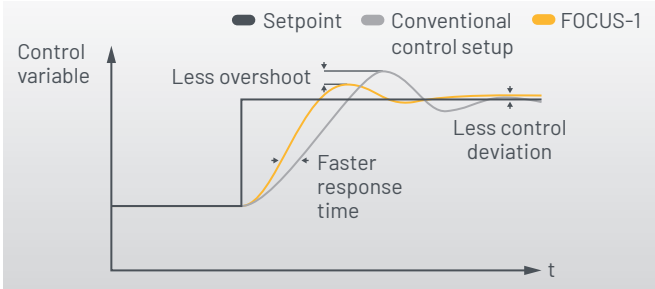
FOCUS-1 allows in principle for three modes of operation:



BETTER ACCURACY FOR IMPROVED CONTROL QUALITY

Any control task is more simplified and improved at the same time: As all control functions (PID), sensors and the control valve is integrated in FOCUS-1, the system accuracy and thus the control quality is much improved:

- **Setpoints** can be reached **faster**
- **Final control deviations can be minimized**
- **Overshoots** in the control can be **reduced** to a minimum



TYPICAL APPLICATIONS

- **Pressure control** e.g. water supply networks, liquid injection, etc.
- **Flow control** e.g. ratio control of product supply, direct flow input in a product line, etc.
- **Level control** e.g. liquid storage or quick product movement between tanks
- **Temperature control** e.g. heat exchangers or feedwater boilers



IMPROVE YOUR PLANT UPTIME

UNIQUE COMBINATION OF PROVEN TECHNOLOGY, REDUNDANCY AND DIAGNOSTICS

The highest priority in the design of FOCUS-1 was the reliability of the device to ensure the upmost plant availability.

This was reached by three measures:

✓ All components, such as pneumatic drive, positioner, valve and the measuring sensors are **standard SAMSON & KROHNE devices**, successfully used for decades.

🔍 All sensors are designed redundantly. The **digital twin model** can detect and replace any sensor deviation within milliseconds, allowing FOCUS-1 to maintain operational.

🔍 Implementation of **sophisticated diagnostic functions**:

- Cavitation detection
- Valve leak detection

The combination of the above grants the highest possible plant uptime that can be achieved with today's available technology.

TECHNICAL DATA

Media	Liquids with < 2 % gas, < 5 % solids
Nominal sizes	DN 50, 80, 100 / 2, 3, 4"
Process temp.	-40...+180°C / -40...+356°F
Max. pressure	40 bar / 580.1 psi
Communication	4...20 mA + HART® 7, Ethernet (TCP/IP), PROFINET™, WiFi
Approvals/Standards	ATEX, IECEx, FM, NAMUR

„All the measurements that take place in the little white cover of the device, bring us more information compared to the previous situation...“

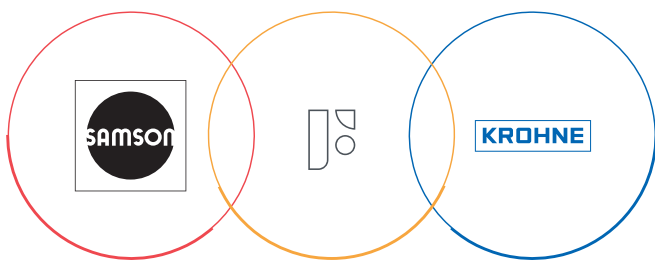
EDWIN LOOS Technical Manager, SRC



FOCUS-ON

THE SMART METER VALVE COMPANY BEHIND FOCUS-1

FOCUS-ON is a company established to develop, produce, and market autonomous control solutions for process industry 4.0 environments. It is a unique collaboration between two leading companies, SAMSON and KROHNE, active in the process valve and measuring instruments industry, respectively.



This 50:50 joint-venture follows a clear vision to provide breakthrough and technologies that combine control and measure elements to simplify plants and reduce CAPEX and OPEX.

Meet FOCUS-1



 website



 youtube



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