

Taking process control to a new level

Regulator for process gases

PGM Series

CKD's process gas regulators boast industry-leading sealing performance, hysteresis, and repeatability. Achieves a stable process through high-precision pressure/flow rate adjustment of supply gas.

HIGH PRECISION CONTROL OF PROCESS GAS IN ETCHING / FILM DEPOSITION APPARATUS

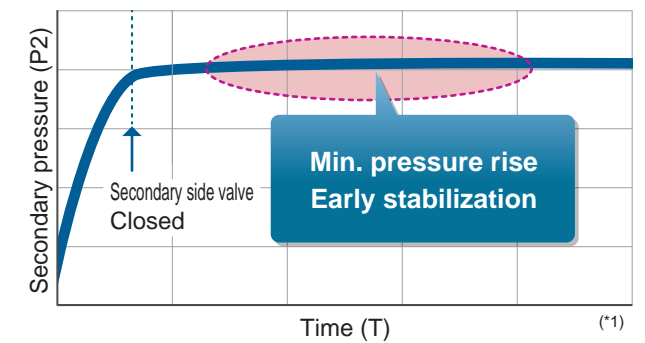


High sealability

Contributes to process stabilization

- Optimal design of valve seat and ultra-precise machining
- Minimizes leakage (outflow) to the secondary side when the valve is closed

*1: Secondary pressure rise image assuming valve closing operation in which the secondary pressure is maintained at flow rate 0.

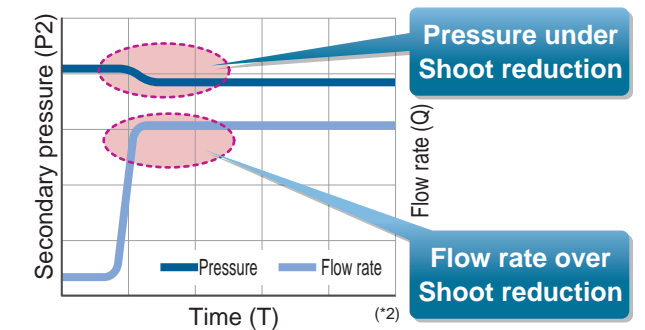


■ High micro flow rate controllability

Achieves stable and smooth operation

- Optimized design of valve seat shape
- Stable control even at very small flow rates

*2: Pressure fluctuation image when controlled with a flow rate of 10sccm.

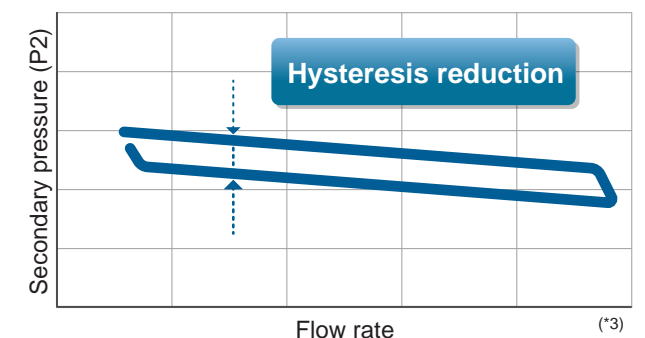


Hysteresis reduction

Goals pressure is met securely

- High-quality materials
- Ultra-precise machining

*3: Secondary → when flow rate is increased or decreased.

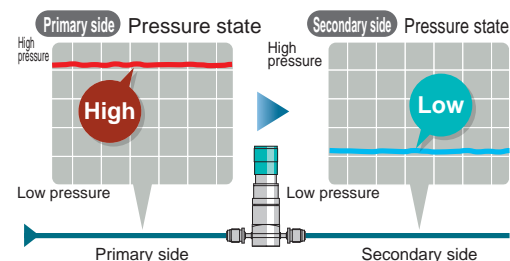


Diverse product lineup

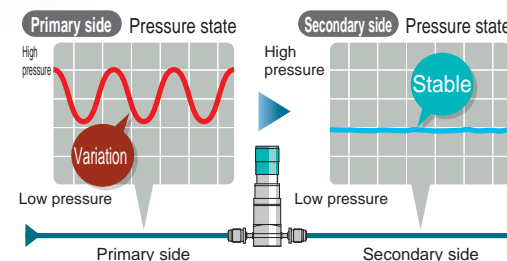
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Usage case

Pressure control / depressurization

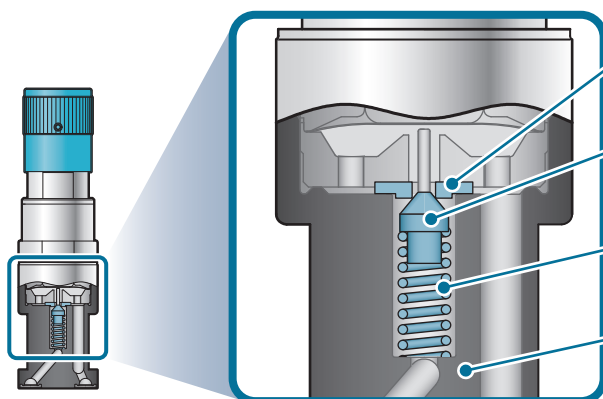


Pressure stabilization



High corrosion / High quality material

- High corrosion-resistant material
- Electropolishing / ultra-precision machining / ultra-precision cleaning



Optimum design

- Reduced sliding parts to the limit
- Optimized diaphragm structure
- Material optimization for smooth operation

Seat	PFA
Poppet	SUS316L
Spring	SUS316
Body	SUS316L

Can also be changed to different highly corrosion-resistant materials

High-spec materials and design realize actual durability of more than 3 million cycles
Ensures high controllability and high cleanliness even after long-term use