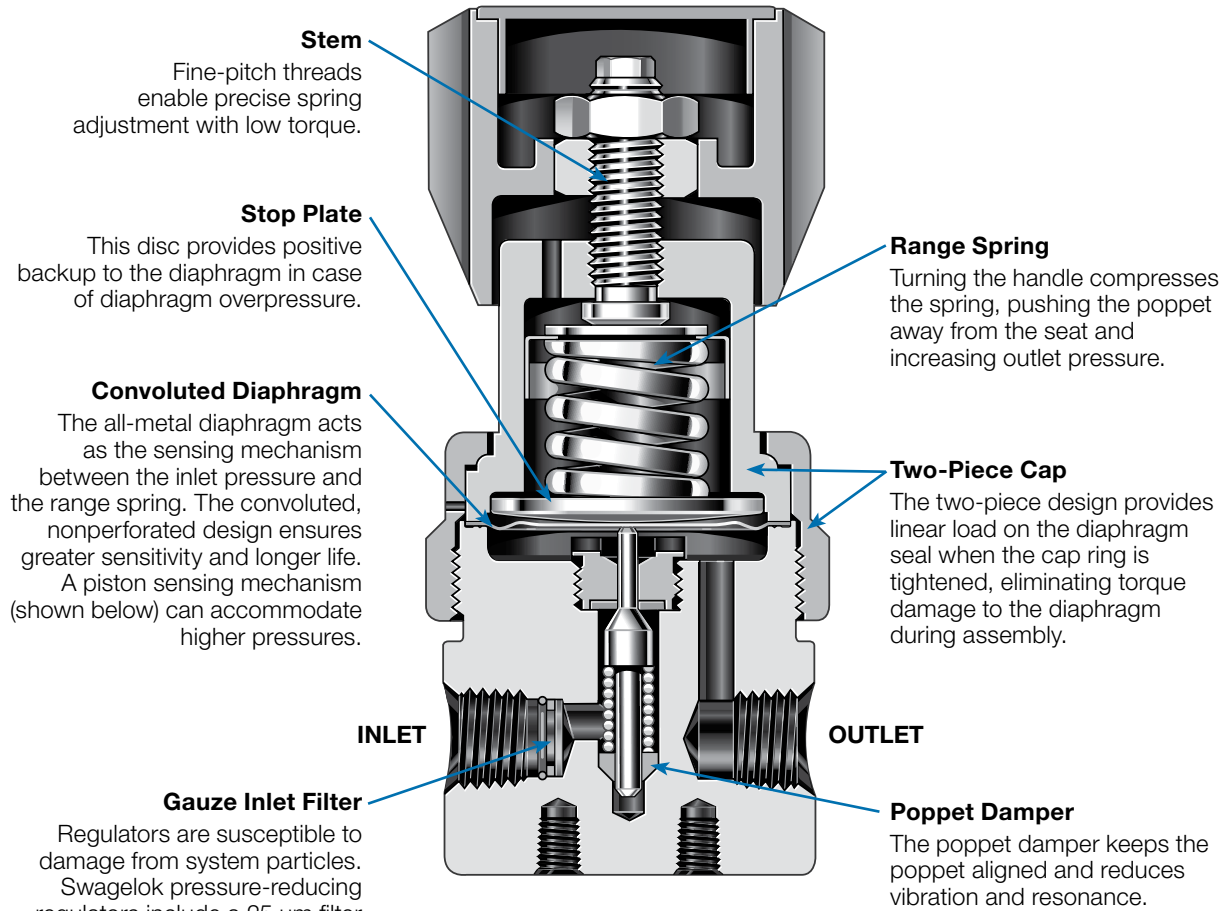


Swagelok® Pressure Regulators

Pressure Reducing Regulators



Stem
Fine-pitch threads enable precise spring adjustment with low torque.

Stop Plate
This disc provides positive backup to the diaphragm in case of diaphragm overpressure.

Convoluted Diaphragm
The all-metal diaphragm acts as the sensing mechanism between the inlet pressure and the range spring. The convoluted, nonperforated design ensures greater sensitivity and longer life.
A piston sensing mechanism (shown below) can accommodate higher pressures.

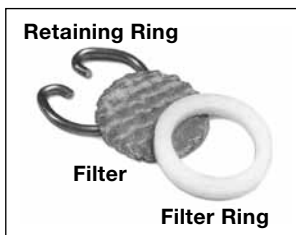
Range Spring
Turning the handle compresses the spring, pushing the poppet away from the seat and increasing outlet pressure.

Two-Piece Cap
The two-piece design provides linear load on the diaphragm seal when the cap ring is tightened, eliminating torque damage to the diaphragm during assembly.

INLET **OUTLET**

Gauze Inlet Filter
Regulators are susceptible to damage from system particles. Swagelok pressure-reducing regulators include a 25 µm filter held in the inlet port by a retaining ring. It can be removed easily for cleaning or to use the regulator in liquid service.

Poppet Damper
The poppet damper keeps the poppet aligned and reduces vibration and resonance.



Retaining Ring

Filter

Filter Ring

Venting Options

The self-vent option allows excess outlet pressure to vent through the body cap. This can occur when downstream flow is suddenly reduced or when the handle is adjusted to a lower pressure with little or no flow downstream.

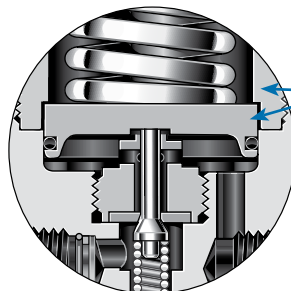
The captured-vent option includes a 1/8 in. female NPT connection and stem seal in the body cap[Ⓢ] to allow monitoring of the diaphragm or piston sensing mechanism. It also allows containment of hazardous gas or liquid media should a diaphragm or piston rupture.

Self-vent and captured-vent options can be ordered together so that hazardous gas or liquid media can be contained if vented.

[Ⓢ] The captured-vent port is in the bottom of the KHR series body.

Piston Sensing Mechanism

Piston sensing mechanisms typically are used to regulate higher pressures than a diaphragm can withstand. They are also more resistant to damage caused by pressure spikes and have a short stroke to maximize cycle life.



Fully-Contained Piston

The piston is contained by a shoulder in the regulator body cap to prevent piston blowout if the regulator outlet is overpressurized.

Swagelok Pressure Regulators

Pressure-Reducing: Spring-Loaded



KPR Series

Compact design features a convoluted diaphragm, providing a metal-to-metal seal to help ensure maximum accuracy, stability, and sensitivity.



KCY Series

Two-stage regulator is designed for applications that require constant outlet pressure when inlet pressures vary, such as cylinder gases



KLF Series

Low-flow regulator with a large convoluted diaphragm provides high sensitivity control with minimum droop.



KHF Series

High-flow (C_v 1.0) regulator provides minimum droop; the balanced poppet design provides pressure regulation accuracy of 0.2%



KCP Series

Compact, spring-loaded design features low internal volume



KPP Series

Compact lightweight design is used in liquid or gas applications with up to 6000 psig (413 bar) inlet pressures



KPF Series

High flow (C_v 1.0) provides minimum droop across the flow range while maintaining outlet pressures up to 4000 psig (275 bar)



KHP Series

High-pressure regulator controls supply pressures up to 10 000 psig (689 bar)



KHR Series

Hydraulic pressure regulator operates in systems up to 10 000 psig (689 bar)

Back-Pressure: Spring-Loaded



KBP Series

High-sensitivity back-pressure regulator controls upstream pressures up to 500 psig (34.4 bar)



KFB Series

High-sensitivity back-pressure regulator maintains controlled pressures in a high-flow system (C_v up to 1.0)



KCB Series

Compact design offers high sensitivity



KPB Series

Compact, lightweight regulator provides back-pressure control up to 4000 psig (275 bar)



KHB Series

High back-pressure regulator provides back-pressure control up to 10 000 psig (689 bar)

Specialty: Gas Cylinder Changeover



KCM Series

Automatic gas cylinder changeover manifold helps reduce cost associated with system downtime and maintenance expense of continuously monitoring the supply of critical gases.

Vaporizing: Pressure-Reducing



KEV Series

ATEX, IECEx and CSA certified for critical/hazardous environments
Inlet pressures up to 3600 psig (248 bar)



KSV Series

Steam heated with inlet pressures up to 3600 psig (248 bar); outlet pressures up to 500 psig (34.4 bar)

Swagelok