

K-Series Pressure Reducing Regulators

Swagelok®

Summary of Regulator Models

- **Pressure Reducing**

- Diaphragm Sensing
 - KPR – General Purpose
 - KCY – Two-Stage
 - KLF – High Sensitivity
 - KHF – High-Flow, High-Sensitivity
- Piston Sensing
 - KCP – Compact
 - KPP – Medium-to High Pressure
 - KHF – High-Flow
 - KPF – Medium-Pressure High-Flow
 - KHP – High-Pressure
 - KHR – High-Pressure Hydraulic

- **Back-Pressure**

- Diaphragm Sensing
 - KBP – General Purpose
 - KFB – High-Flow, High-Sensitivity
- Piston Sensing
 - KCB – Compact
 - KPB – Medium-to-High Pressure
 - KHB – High-Pressure

- **Specialty**

- KCM – Auto Changeover Manifold
- KSV – Steam Heated
- KEV – Electrically Heated

Quick Selection Guide

- K-series Pressure Reducing Regulators

Important Feature	Consider	Comments
General Purpose	KPR	Suits most applications
Supply Pressure Effect (Inlet Dependency)	KCY, KHF, KPF	Dual Stage or Balanced Poppet
High Flow Requirement	KHF, KPF	Cv = 1.0
High Outlet Pressure	KPP, KHP	Piston Sensor
Pumping or Pulsating System	KPP, KCP, KHP	Piston resists metal fatigue which can effect diaphragm life
Sensitivity	KLF, KHF	Large area diaphragm
Heating	KEV, KSV	To vaporise liquids or to keep gas above its dew point
Compact Size	KCP	For Size & Weight restricted areas
Low Pressure Control	KLF	Low inlet and outlet (<2psi) ranges
Hydraulic System	KHR	Self venting relief port

Selecting a Regulator: Information needed

Required 

Helpful 

Nice to have 

Parameter	Notes
Inlet pressure	Minimum and Maximum
Outlet pressure	How accurate (range)
Flow	At what Inlet and Outlet Pressures? What units?
Medium	Gas or Liquid?
Temperature Range	Include fluid min and max temps as well as environmental min and max temps
Loading mechanism	Spring- or dome-loaded? External feedback? May be driven by accuracy above
End Connections	Specify size, spec, and pressure class
Material	What body, seal, seat, and diaphragm materials?
Surface finish and lubrication	Specify Ra value if needed, what lubricants are preferred?
Certification of material, special testing, PED, and ATEX.	Detail all special requirements

