# HPC Series

## High Flow, Automatic, Primary Changeover Systems

HPC Series Primary Changeover Systems are designed to provide a continuous supply of gas from two separate banks of cylinders. Capable of flow rates up to 50 scfm, the changeover allows the user to deplete gas from one source without the concerns of gas outages and of wasting unused gas as a result of premature change-outs.

Primary changeover systems are designed for use in processes incorporating downstream line or station regulators located at the point of use. A downstream line regulator (not included) will eliminate pressure variations to the process. The HPC Series incorporates two high flow diffusion-resistant regulators available in either brass or stainless steel construction. They are supplied entirely installed on a stainless steel panel providing for convenient, wall-mounted installation. The overall compact design allows for installation in areas where space is at a premium.

**Note:** See page 92 for additional HPC Alarm Changeover Systems with prewired switches and annunciators.

HPC Changeover

### Operation

The HPC Series incorporates two regulators set at slightly different delivery pressures. Gas discharges from the side with the higher setting first (primary side) which is indicated by the "In Service" arrow located on the hand knob. The side with the lower delivery pressure setting will remain closed until the primary side has been exhausted (approximately 180-160 psi residual pressure) at which time the changeover will automatically switch to the reserve bank (secondary side). Since a fluctuation in outlet pressure will occur at this point, a downstream line regulator (not included) should be installed to eliminate pressure variations to the process. When the operator is ready to service the depleted primary supply, the "In Service" arrow should be rotated 180° to indicate that the reserve bank is now in service. The first source can then be changed without interruption of the outlet pressure. Gas will continue to flow from the reserve bank until it is depleted and a changeover to the primary side occurs. The changeover process can be repeated continuously as long as the depleted supply is replaced.

### Ordering Information

To order a changeover system, complete the part number using the "Part Number Key" shown at the right. For example, to order a HPC Series 2-cylinder changeover regulator system for high pressure gases (>900psig), in brass construction, with flexible hoses, and with CGA 580 connections, the part number would be HPCH-BF2-580. Order by complete part number.

**Note:** A two-cylinder changeover system does not include manifold headers. The cylinders are connected directly to the changeover inlet leads (pigtails).

**Warning: Advanced does not recommend the use of stainless steel components in manifolds designed for Oxygen service and will not provide such manifolds with CGA 540 connections.**

### Specifications

Maximum Inlet Pressure:
- Model HPCH: 3000 psig
- Model HPCL: 900 psig

Inlet Pressure Gauge:
- Model HPCH: 0–4000 psig
- Model HPCL: 0–1000 psig

Minimum Inlet Pressure: 300 psig

Delivery Pressure Gauge: 0–400 psig

Delivery Pressure Range:
- 160–200 psig non-adjustable

Gauge Size: 2" Dial

Operating Temp. Range: -40°F to 140°F

Flow Coefficient: Cv = 1.2

Flow Capacity: Up to 50 scfm Air

Cylinder Leads: CGA connection with check valve nipple (standard)
- Rigid Pigtail: 36" long w/ 5" dia. service loop, providing a 23" useable length
- Flexible Hose: 36" long

Inlet Connection: ½" NPTF port (body) with CGA adapter installed and CGA connections (as specified) on pigtail

Outlet Connection: ½" NPT male with restricting flow orifice

Approximate Weight: 10 lbs.

### Materials of Construction

Body: Brass or Type 316 SS Bar Stock

Gauges: Brass or Type 316 SS

Bonnets:
- Brass Systems: Brass Bar Stock
- Stn. Stl. Systems: 300 Series SS Bar Stock

Internal Metal Parts Exposed to Gas:
- Brass Systems: Brass and Stn. Stl.
- Stainless Steel Systems: Type 316 SS

Seats:
- Regulators:
  - HPCH: PCTFE
  - HPCL: PTFE
- Check Valve Nipple:
  - Brass Systems: EPDM
  - Stn. Stl. Systems: Viton®

Diaphragm: Type 316 Stainless Steel

Seals:
- HPCH: EPR
- HPCL: PTFE

Cylinder Leads:
- Rigid Pigtail:
  - Brass with Brass assemblies
  - Type 316 SS with Stn. Stl. assemblies
- Flexible Hose:
  - Type 316 SS inner core & end fittings
  - Type 304 SS double overbraid

### Part Number Key for HPC Series Changeover Systems