



ADVANCED PRESSURE TECHNOLOGY

SERIES AK 1700

TWO STAGE PRESSURE REGULATOR

SAFETY ASSURED TIED DIAPHRAGM DESIGN

- ◆ Vacuum to 3,500 psig (241 bar) inlet, 200 psig (14 bar) outlet
- ◆ Flow capacity*
0 to 15 slpm (0 to 0.5 scfm)
- ◆ Stainless Steel or Brass construction
- ◆ Hastelloy C-22 Internals, 'SH' option, for added corrosion resistance
- ◆ High leak integrity
- ◆ Machined from bar stock
- ◆ Poppet attached to diaphragm (tied diaphragm) improves positive shut off across the seat
- ◆ Optional accessories
- ◆ Cleaned for O2 service
- ◆ Two stage pressure reduction eliminates supply pressure effect
- ◆ Diffusion resistant Stainless Steel diaphragms
- ◆ Installation and operating instructions available at www.aptech-online.com in the Tech Briefs section



ENGINEERING DATA

Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar)
Delivery pressure	1 to 30 psig (0.07 to 2 bar) AK 1702 2 to 100 psig (0.14 to 7 bar) AK 1710 5 to 200 psig (0.35 to 14 bar) AK 1720
Proof pressure	4,500 psig (307 bar)
Burst pressure	10,000 psig (690 bar)

Other Parameters

Inlet/outlet ports	1/4" NPT or compression
Flow coefficient, Cv	0.05
Internal volume	0.9 in ³ (15 cm ³)
Operating temperature	-40 to +160F (-40 to +71C)***
Leak rate	1 x 10 ⁻⁹ sccs
Delivery pressure rise	0.05 psig per 100 psig source pressure drop

MATERIALS OF CONSTRUCTION

	AK 1700B
Body	brass
Poppet and diaphragm	SS 316
Seat	PCTFE**
Bonnet	SS 303

AK 1700S
SS 316
SS 316
PCTFE**
SS 303

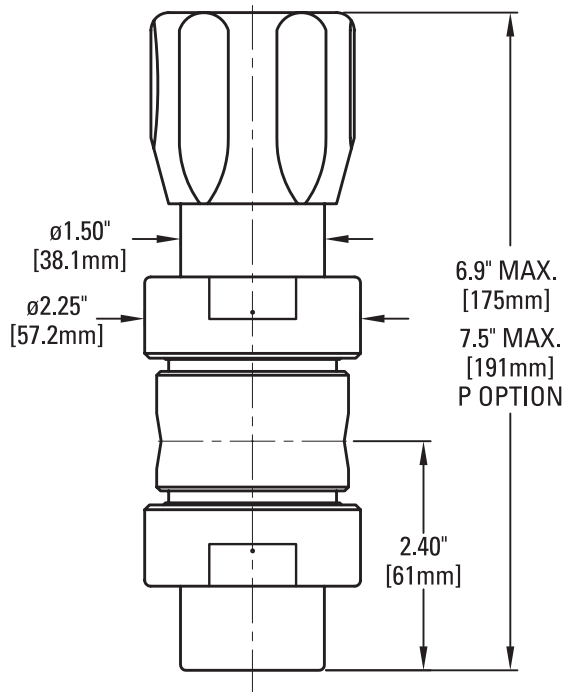
AK 1700SH
SS 316
Hastelloy C-22
PCTFE**
SS 303

*Flow rating based upon N₂ @ 100 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating.

**Optional seat materials available, Vespel® and PEEK.

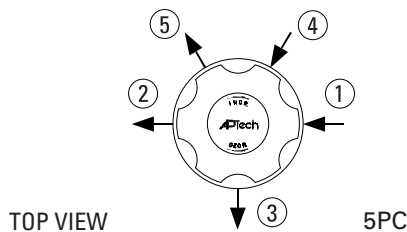
***Optional temperature ranges available. Please consult factory.

All specifications subject to change without notice
Hastelloy C-22® Haynes
Vespel® DuPont



All dimensions in inches.
Metric dimensions (mm) are for reference only.

Porting Configuration



CAUTION: Product selection is the sole responsibility of the user, regardless of any recommendations or suggestions made by the factory. The user shall make selections based upon their own analysis and testing with regard to function, material compatibility and product ratings. Proper installation, operation and maintenance are also required to assure safe, trouble free performance.

ORDERING INFORMATION

AK 1702 Series	S Material	5PC Port Configuration 5PC = 5 Ports	4 4 ① ② Ports 4 = 1/4 inch NPT 4T = 1/4 inch compression	0 40 V3 ③ ④ ⑤ Ports (Gauge/Accessory) 0 = No gauge or* device installed V3 = 30-0-30 psig/bar 1 = 30-0-100 psig/bar 2 = 0-200 psig/bar 10 = 0-1000 psig/ba 40 = 0-4000 psig/bar	P Options VS = Vespel seat PK = PEEK seat NT = First stage tied second stage free poppet P = Panel installation* CGA = Inlet fitting 320, 330, 350, 580, 660, 678 *Panel hole 1.42 diameter
AK 1702 = 1-30 psig (.07 to 2 bar) AK 1710 = 2-100 psig (.14 to 7 bar) AK 1720 = 5-200 psig (.3 to 14 bar)	S = Stainless steel (SS) SH = SS with Hastelloy internals B = Brass				

