



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
- ◆ Fine adjustment control (six turns of the knob from off to wide open)
- ◆ Cleaned for O2 service
- ◆ Constant pressure delivery as cylinder pressure decays (immunity from supply pressure effect)
- ◆ Diffusion resistant Stainless Steel diaphragm

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
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

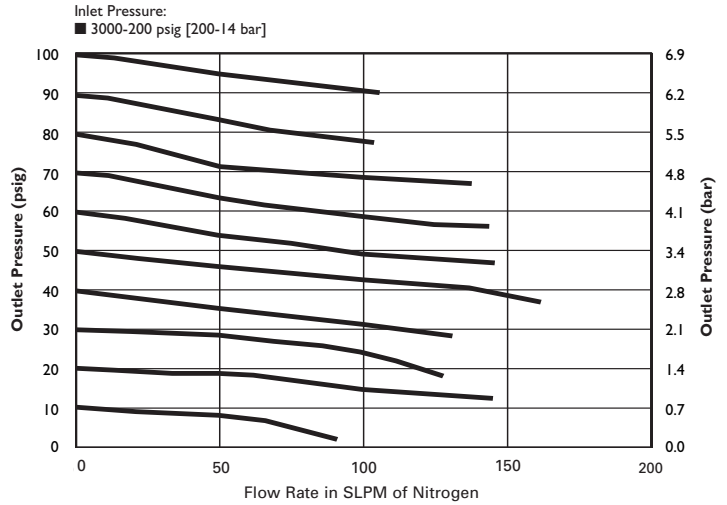
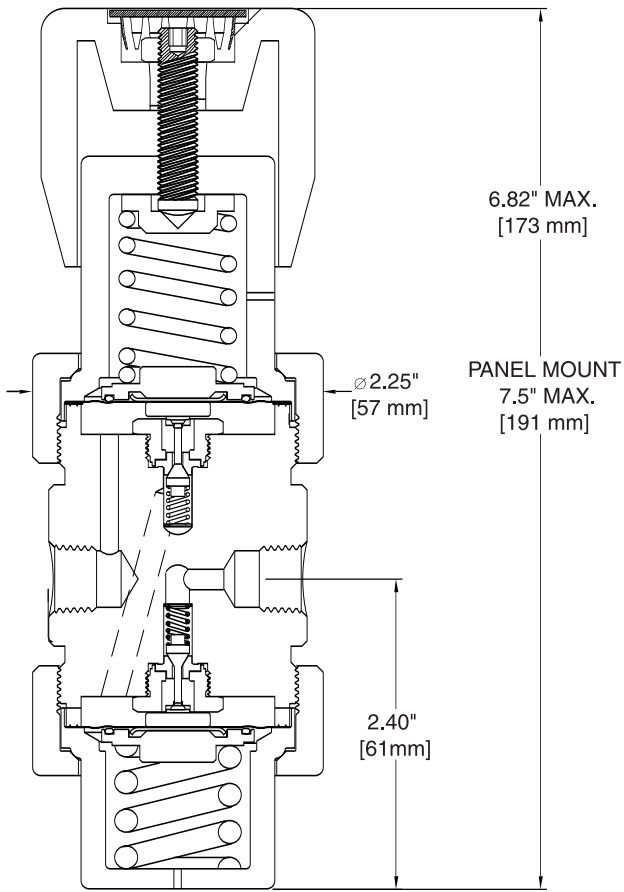
MATERIALS OF CONSTRUCTION

	AK 1700B	AK 1700S	AK 1700SH
Body	brass	SS 316	SS 316
Poppet and diaphragm	SS 316	SS 316	Hastelloy C-22
Seat	PCTFE**	PCTFE**	PCTFE**
Bonnet	SS 303	SS 303	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.

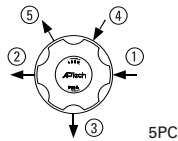
All specifications subject to change without notice
 Hastelloy C-22 ® Haynes
 Vespel ® DuPont

AK1700



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

Porting Configuration



ORDERING INFORMATION

AK 1702 Series	S Material	5PC Port Configuration	4 4 Ports	0 40 V3 Ports (Gauge/Accessory)	P Options
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)		5PC = 5 Ports	4 = 1/4 inch NPT	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/bar 40 = 0-4000 psig/bar	P = Panel installation CGA= Inlet fitting 320, 330, 350, 580, 660, 678 VS = Vespel seat PK = PEEK seat NT = First stage tied second stage free poppet
S = Stainless steel (SS) SH = SS with Hastelloy internals B = Brass		NOTE: Designators required for all ports, but "0" not required if there isn't a port. A 2P has designators only for 1 & 2 ports, as example AK 1710 S 2P 44 not AK 1710 S 2P 44 000.			