

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 (optional inlet 4,500 psig (310 bar))
- ◆ Flow capacity*
0 to 15 slpm (0 to 0.5 scfm)
1 to 120 slpm (4 scfm) HF option
- ◆ Stainless Steel or Brass construction
- ◆ Ni-Cr-Mo alloy 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



ENGINEERING DATA

Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar) HR option vacuum to 4,500 psig (310 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	150% of maximum rating
Burst pressure	400% of maximum rating

Other Parameters

Inlet/outlet ports	1/4" NPT or compression
Flow coefficient, Cv	0.05 (0.07 HF option)
Internal volume	0.9 in ³ (15 cm ³)
Operating temperature	-40 to +160F (-40 to +71C)***
Leak rate	1 x 10 ⁻⁹ sccs
Supply pressure effect	0.05 psig per 100 psig source pressure change

MATERIALS OF CONSTRUCTION

	AK 1700B	AK 1700S	AK 1700SH
Body	brass	SS 316	SS 316
Poppet and diaphragm	SS 316	SS 316	Ni-Cr-Mo alloy / UNS N06022
Seat	PCTFE****	PCTFE****	PCTFE****
Bonnet	SS 303	SS 303	SS 303

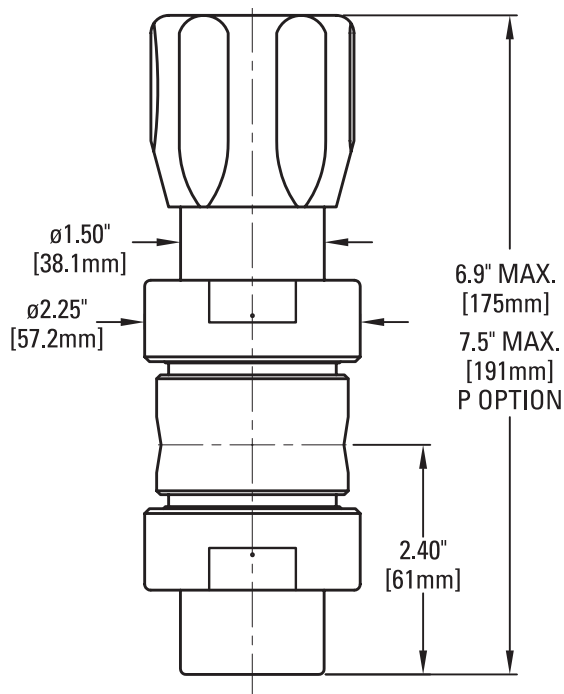
*Flow rating based upon N2 @ 400 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating.

**HR option not available in brass.

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

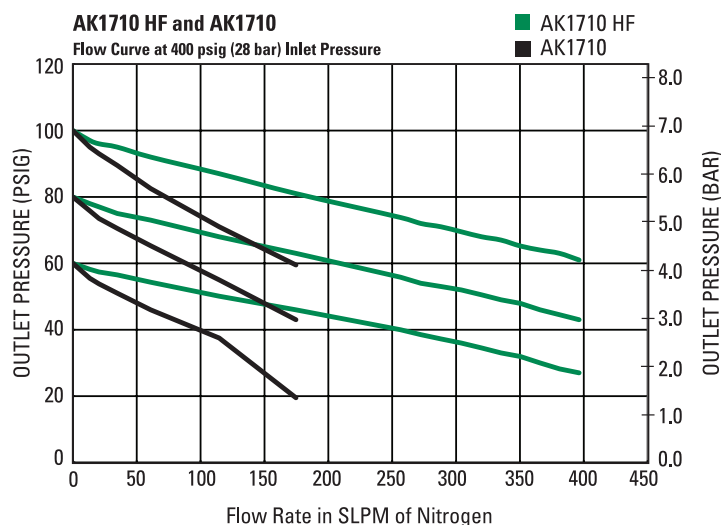
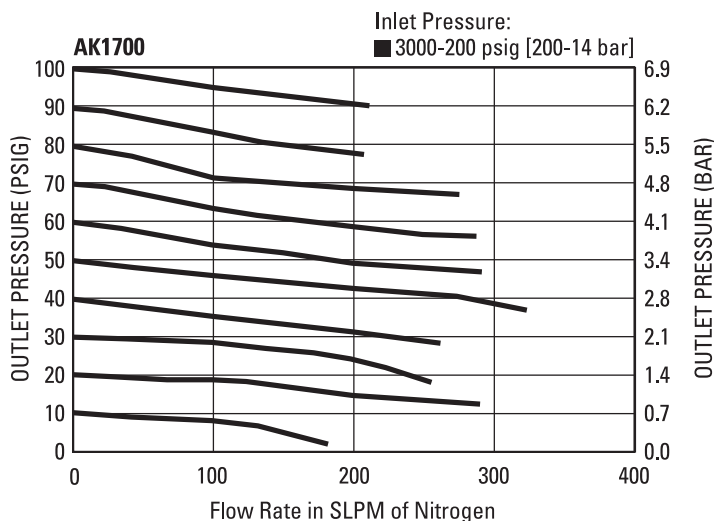
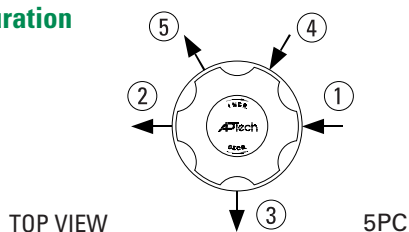
****Optional seat materials available, Polyimide and PEEK.

All specifications subject to change without notice.



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	4 4 ① ② Ports	0 40 V3 ③ ④ ⑤ 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 4T = 1/4 inch compression	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 60 = 0-6000 psig/bar	VS = Polyimide seat PK = PEEK seat NT = First stage tied second stage free poppet* P = Panel installation** CGA = Inlet fitting 320, 330, 350, 580, 660, 678 HF = High flow HR = High inlet rating***
S = Stainless steel (SS) SH = SS with Ni-Cr-Mo alloy internals B = Brass					

*NT option required for AK 1720

**Panel hole 1.42 diameter

***HR option not available in brass