



ADVANCED PRESSURE TECHNOLOGY

# SERIES AK 1500 SINGLE STAGE PRESSURE REGULATOR TIED DIAPHRAGM—BUILT FOR SAFETY



- ◆ Vacuum to 3,500 psig (241 bar) inlet, 150 psig (10 bar) outlet (optional inlet 4,500 psig (310 bar))
- ◆ Flow capacity\* 0 to 30 slpm (0 to 1 scfm) HF to 120 slpm (4 scfm)
- ◆ Stainless Steel or Brass construction
- ◆ Ni-Cr-Mo alloy internals, 'SH' option, for added corrosion resistance
- ◆ High leak integrity
- ◆ Machined from bar stock
- ◆ Optional accessories
- ◆ Fine adjustment control (six turns of the knob from off to wide open)
- ◆ Cleaned for O2 service
- ◆ Field repairable
- ◆ Diffusion resistant Stainless Steel diaphragm
- ◆ Knob LOTO option
- ◆ Installation and operating instructions available at [www.aptech-online.com](http://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	AK 1502 1 to 30 psig (0.07 to 2 bar) AK 1510 2 to 100 psig (0.14 to 7 bar) AK 1515 5 to 150 psig (0.35 to 10 bar)
Proof pressure	150% of operating pressures
Burst pressure	300% of operating pressures

### Other Parameters

Inlet /outlet ports	1/4" NPT; 1/4" & 3/8" compression
Flow coefficient, Cv	0.09 (0.15 HF option)
Internal volume	0.49 in <sup>3</sup> (8 cm <sup>3</sup> )
Operating temperature	-40° to +160°F (-40° to +71°C)***
Leak rate	1 x 10 <sup>-9</sup> sccs
Supply pressure effect	0.25 psig per 100 psig source pressure change
HF	0.75 psig per 100 psig source pressure change

## MATERIALS OF CONSTRUCTION

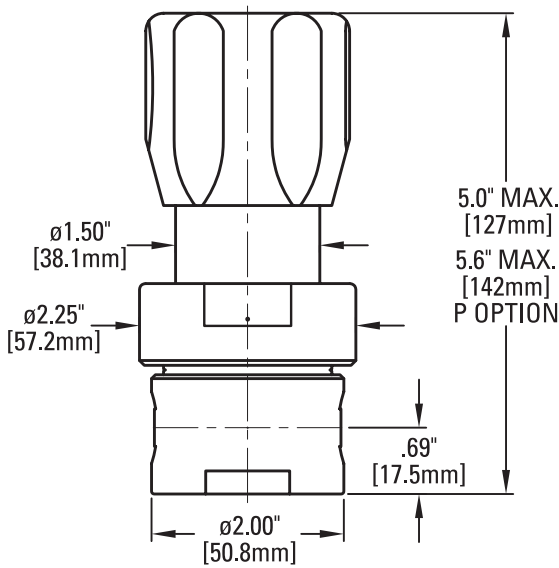
	AK 1500B	AK 1500S	AK 1500SH
Body	brass	SS 316L	SS 316L
Poppet and diaphragm	SS 316	SS 316	Ni-Cr-Mo alloy / UNS N06022
Seat	PCTFE (Polyimide, PEEK Opt.)	PCTFE (Polyimide, PEEK Opt.)	PCTFE (PEEK Opt.)
Bonnet	SS 303	SS 303	SS 303

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

\*\*HR option not available in brass.

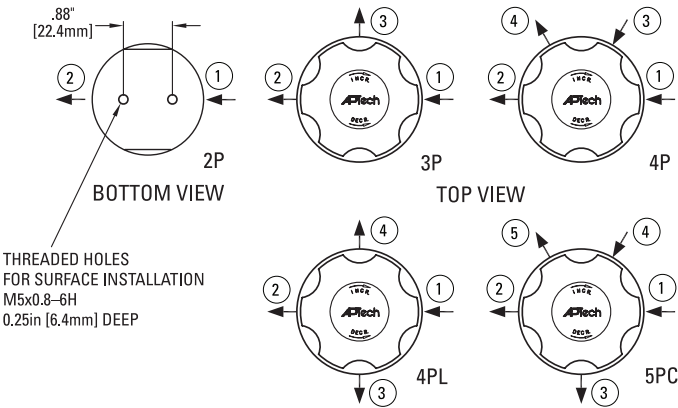
\*\*\*Optional temperature ranges available. Please consult factory. VS option 14° to 194°F (-10° to + 90°C).

All specifications subject to change without notice.



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

**Porting Configurations**



**NOTE:** Brass only available with 4PL or 5PC porting.

**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 1510 Series	S Material	5PC Port Configuration	4 4 ① ② Ports	0 40 1 ③ ④ ⑤ Ports (Gauge/Accessory)	P Options
AK 1502 = 1-30 psig (.07 to 2 bar) AK 1510 = 2-100 psig (.14 to 7 bar) AK 1515 = 5-150 psig (.35 to 10 bar)		2P = 2 Ports 3P = 3 Ports 4P = 4 Ports 4PL = 4 Ports 5PC = 5 Ports	4 = 1/4 inch NPT 4T = 1/4 inch compression 6T = 3/8 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 P = Panel installation* CGA = Inlet fitting 320, 330, 350, 580, 660, 678 HR = High inlet rating** HF = High flow KL = Knob LOTO (refer to AP KL data sheet)
S = Stainless steel (SS) SH = SS with Ni-Cr-Mo alloy 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 1510 S 2P 44 not AK 1510 S 2P 44 000.

\*Panel hole 1.42 diameter.

\*\*Not available in brass or with HF option.

