



ADVANCED PRESSURE TECHNOLOGY

# SERIES AK 10PA SINGLE STAGE PRESSURE REGULATOR PNEUMATIC ACTUATION



- ◆ 100 psig outlet achieved with 80 psig control pressure or less
- ◆ Actuation control pressure isolated from process gas
- ◆ Vacuum to 3,500 psig (241 bar) inlet, 150 psig (10 bar) outlet
- ◆ Flow capacity\*  
0 to 100 slpm (0 to 3.5 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
- ◆ Cleaned for O2 service
- ◆ Field repairable
- ◆ Actuator 'fail safe' normally closed (NC)
- ◆ Installation and operating instructions available at [www.aptech-online.com](http://www.aptech-online.com) in the Tech Briefs section

## ENGINEERING DATA

### Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar)
Delivery pressure	7 to 150 psig (0.5 to 10 bar)
Proof pressure	4,500 psig (307 bar)
Burst pressure	10,000 psig (690 bar)
Control pressure	150 psig (10 bar) maximum

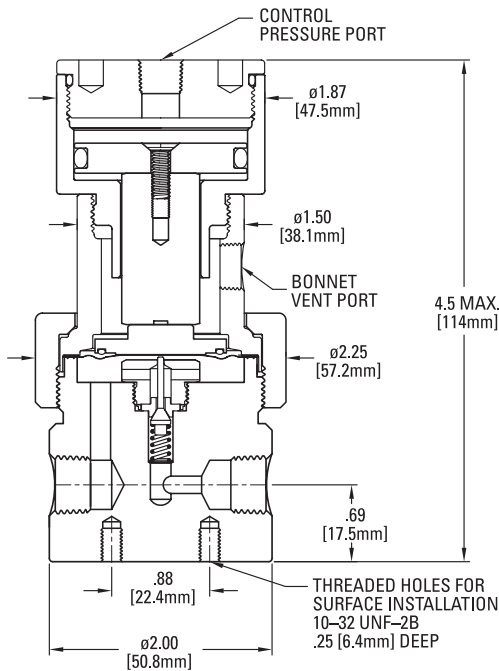
### Other Parameters

Inlet/outlet ports	1/4" NPT; 1/4" & 3/8" compression (optional porting available)
Control pressure port	1/8 inch NPT
Bonnet vent port	1/8 inch NPT
Flow coefficient, Cv	0.09 (HF option 0.15)
Internal volume	0.5 in <sup>3</sup> (8.20 cm <sup>3</sup> )
Operating temperature	-40 to +160F (-40 to +71C)
Leak rate	1 x 10 <sup>-9</sup> sccs
Supply pressure effect	0.25 psig per 100 psig source pressure change (HF 0.75 psi per 100 psig)

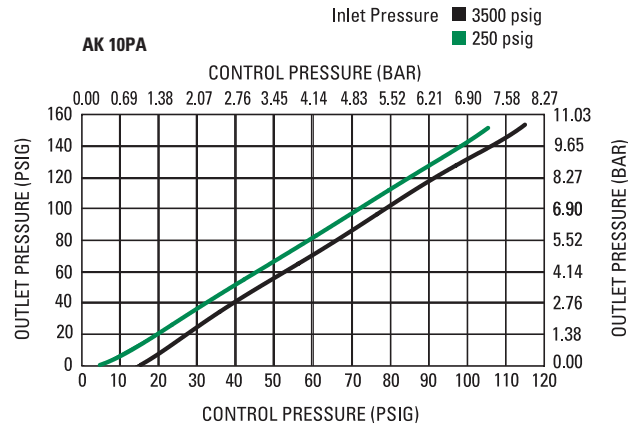
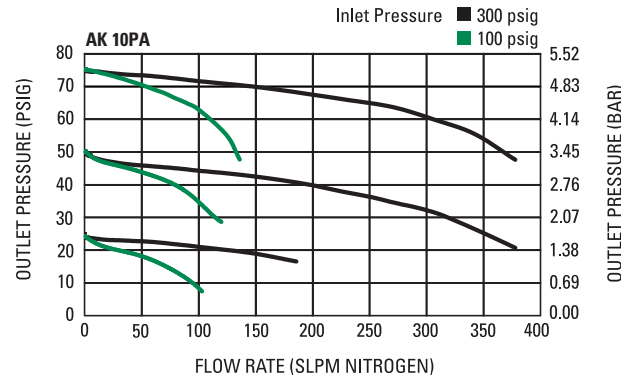
## MATERIALS OF CONSTRUCTION

	AK 10PAB	AK 10PAS	AK 10PASH
Body	brass	SS 316	SS 316
Poppet and diaphragm	SS 316	SS 316	Ni-Cr-Mo alloy / UNS N06022
Seat	PCTFE (Polyimide and PEEK Opt)	PCTFE (Polyimide and PEEK Opt)	PCTFE (PEEK Opt)
Bonnet	SS 303	SS 303	SS 303

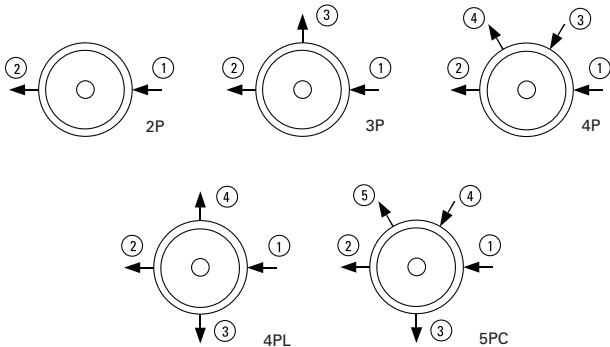
\* Flow rating based upon N2 @ 100 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating. All specifications subject to change without notice.



All dimensions in inches (mm).  
Metric dimensions 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 10PA Series	S Material	3P Port Configuration	4 4 ① ② Ports	0 ③ ④ ⑤ Ports (Gauge/Accessory)	VS Options
AK 10PA = 7-150 psig (0.5 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	VS = Polyimide seat PK = PEEK seat HF = High flow
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 10PA S 2P 44 not AK 10PA S 2P 44 000.

AP Tech has product options and variations which are not documented in data sheets. If you have a model number that is not defined by the ordering information, please consult the factory or your local representative.