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 in the Tech Briefs section

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**Engineering Data**

**Source parameters**
- Delivery pressure: 7 to 150 psig (0.5 to 10 bar)
- Proof pressure: 150% of operating pressures
- Burst pressure: 300% of operating pressures
- 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 in³ (8.20 cm³)
- Operating temperature: -40º to +160ºF (-40º to +71ºC) **
- Leak rate: 1 x 10⁻⁹ scs
- Supply pressure effect: 0.25 psig per 100 psig source pressure change (HF 0.75 psi per 100 psig)

**Materials of construction**

<table>
<thead>
<tr>
<th></th>
<th>AK 10PAB</th>
<th>AK 10PAS</th>
<th>AK 10PASH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>brass</td>
<td>SS 316L</td>
<td>SS 316L</td>
</tr>
<tr>
<td>Poppet and diaphragm</td>
<td>SS 316</td>
<td>SS 316</td>
<td>Ni-Cr-Mo alloy / UNS N06022</td>
</tr>
<tr>
<td>Seat</td>
<td>PCTFE</td>
<td>PCTFE</td>
<td>PCTFE</td>
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<tr>
<td>Bonnet</td>
<td>SS 303</td>
<td>SS 303</td>
<td>SS 303</td>
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</tbody>
</table>

*Flow rating based upon N2 @ 100 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating.
**VS option 14º to 194ºF (-10º to + 90ºC).
All specifications subject to change without notice.
### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>AK 10PA Series</th>
<th>S Material</th>
<th>3P Port Configuration</th>
<th>4 Ports (Gauge/Accessory)</th>
<th>0 Ports (Gauge/Accessory)</th>
<th>VS Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK 10PA</td>
<td>S = Stainless steel (SS)</td>
<td>2P = 2 Ports</td>
<td>4 = 1/4 inch NPT</td>
<td>0 = No gauge or device installed</td>
<td>VS = Polyimide seat</td>
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<tr>
<td></td>
<td>SH = SS with Ni-Cr-Mo alloy internals</td>
<td>3P = 3 Ports</td>
<td>4T = 1/4 inch compression</td>
<td>1 = 30-0-100 psig/bar</td>
<td>PK = PEEK seat</td>
</tr>
<tr>
<td></td>
<td>B = Brass</td>
<td>4PL = 4 Ports</td>
<td>6T = 3/8 inch compression</td>
<td>2 = 0-200 psig/bar</td>
<td>HF = High flow</td>
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<tr>
<td></td>
<td></td>
<td>5PC = 5 Ports</td>
<td></td>
<td>10 = 0-1000 psig/bar</td>
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<td></td>
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<td>40 = 0-4000 psig/bar</td>
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</table>

**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.

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Porting Configurations

![Porting Configurations Diagram]

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

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**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.

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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.