Series AK 1400T
Single Stage Pressure Regulator
Tied Diaphragm—Safety and Reliability

- Flow capacity†
  200 sccm to 500 slpm (0.007 to 17.6 scfm)
- Vacuum to 2,300 psig (158 bar) inlet
  HR option to 3,000 psig (207 bar) inlet
- Absolute version for sub-atmospheric delivery of low vapor pressure gases
- Stainless Steel or Brass construction
- High leak integrity
- Machined from bar stock
- Optional accessories
- Fine adjustment control
  (six turns of the knob from off to wide open)
- Ni-Cr-Mo alloy internals, ‘SH’ option,
  for added corrosion resistance
- Cleaned for O2 service
- Field repairable
- Diffusion resistant Ni-Cr-Mo alloy diaphragm
- Knob LOTO option
- Installation and operating instructions available at www.aptech-online.com

### Engineering Data
### Operating Parameters

- **Source pressure:**
  - AK 1402TA vacuum to 2,300 psig (158 bar)
  - AK 1402TA HR option vacuum to 3,000 psig (207 bar)
- **Delivery pressure:**
  - AK 1402T 1 to 30 psig (0.07 to 2 bar)
  - AK 1402TA 100 mm Hg absolute (26 in Hg vac) to 30 psig (2 bar)
- **Proof pressure:** 150% of operating pressures
- **Burst pressure:** 300% of operating pressures

### Other Parameters

- **Inlet/outlet ports:** 1/4”, 3/8” and 1/2” NPT and compression (optional porting available)
- **Flow coefficient, Cv:** 0.45
- **Internal volume:** 0.65 in³ (10.6 cm³)
- **Operating temperature:** -40º to +160ºF (-40º to +71ºC)**
- **Leak rate:** 1 x 10⁻⁹ sccs
- **Supply pressure effect:** 1.6 psig per 100 psig source pressure change

### Materials of Construction

<table>
<thead>
<tr>
<th>AK 1400TB</th>
<th>AK 1400TS</th>
<th>AK 1400TSH</th>
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</thead>
<tbody>
<tr>
<td>Body</td>
<td>Body</td>
<td>Body</td>
</tr>
<tr>
<td>Brass</td>
<td>SS 316L</td>
<td>SS 316L</td>
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<tr>
<td>Diaphragm</td>
<td>Ni-Cr-Mo alloy / UNS N06022</td>
<td>Ni-Cr-Mo alloy / UNS N06022</td>
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<tr>
<td>Nozzle</td>
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<td>SS 316</td>
</tr>
<tr>
<td>Poppet</td>
<td>Ni-Cr-Mo alloy / UNS N06022</td>
<td>Ni-Cr-Mo alloy / UNS N06022</td>
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<tr>
<td>Seat</td>
<td>PCTFE***</td>
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</tbody>
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† Flow rating based upon N2 @ 100 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating.

*AK 1415T will not achieve full outlet pressure rating at all inlet pressures.

**VS option 14º to 194ºF (-10º to +90ºC).

***Optional seat materials available, Polyimide.

All specifications subject to change without notice.
ORDERING INFORMATION

AK 1402T = 1-30 psig (.07 to 2 bar)
AK 1410T = 2-100 psig (.14 to 7 bar)
AK 1415T = 5-150 psig (0.3 to 10 bar)

S = Stainless steel (SS)
SH = SS with Ni-Cr-Mo alloy internals
B = Brass

Series
AK 1402T
AK 1410T
AK 1415T

Material
S
SH
B

Range
1-30 psig (.07 to 2 bar)
2-100 psig (.14 to 7 bar)
5-150 psig (0.3 to 10 bar)

Ports
2P = 2 Ports
3P = 3 Ports
4PL = 4 Ports
5PC = 5 Ports

Connections
6 6
1 2
3 4 5

Outlet/Inlet
4 = 1/4 inch NPT
6 = 3/8 inch NPT
8 = 1/2 inch NPT
10 = 1/4 inch comp.
6T = 3/8 inch comp.
8T = 1/2 inch comp.

Options
P = Panel installation*
CGA = Inlet fitting 320, 330, 326, 660, 678
VS = Polyimide seat
HR = High inlet pressure
KL = Knob LOTO (refer to AP KL data sheet)

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 1410T S 2P 44 not AK 1410T S 2P 44 000.

NOTE: 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.

CAUTION: Brass only available with 4PL or 5PC porting. Ports, other than 1 and 2, are only available 1/4 inch NPT.

A = 100 mm Hg absolute (26 in Hg vac) to 30 psig (2 bar) AK 1402T only

metric dimensions are for reference only.

All dimensions in inches (mm).

Porting Configurations

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

Ports, other than 1 and 2, are only available 1/4 inch NPT.

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