



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
- ◆ Flow capacity\*  
0 to 30 slpm (0 to 1 scfm)
- ◆ Stainless Steel or Brass construction
- ◆ Hastelloy® C-22® 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
- ◆ Fine adjustment control (six turns of the knob from off to wide open)
- ◆ Cleaned for O2 service
- ◆ Field repairable
- ◆ Diffusion resistant Stainless Steel diaphragm



#### ENGINEERING DATA

##### Operating Parameters

|                   |                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| Source pressure   | vacuum to 3,500 psig (241 bar)                                                                                          |
| Delivery pressure | 1 to 30 psig (0.07 to 2 bar) AK 1502<br>2 to 100 psig (0.14 to 7 bar) AK 1510<br>5 to 150 psig (0.35 to 10 bar) AK 1515 |
| Proof pressure    | 4,500 psig (307 bar)                                                                                                    |
| Burst pressure    | 10,000 psig (690 bar)                                                                                                   |

##### Other Parameters

|                        |                                             |
|------------------------|---------------------------------------------|
| Inlet /outlet ports    | 1/4" NPT                                    |
| Flow coefficient, Cv   | 0.09                                        |
| Internal volume        | 0.49 in <sup>3</sup> (8 cm <sup>3</sup> )   |
| Operating temperature  | -40 to +160F (-40 to +71C)**                |
| Leak rate              | 1 x 10 <sup>-9</sup> sccs                   |
| Delivery pressure rise | 0.25 psig per 100 psig source pressure drop |

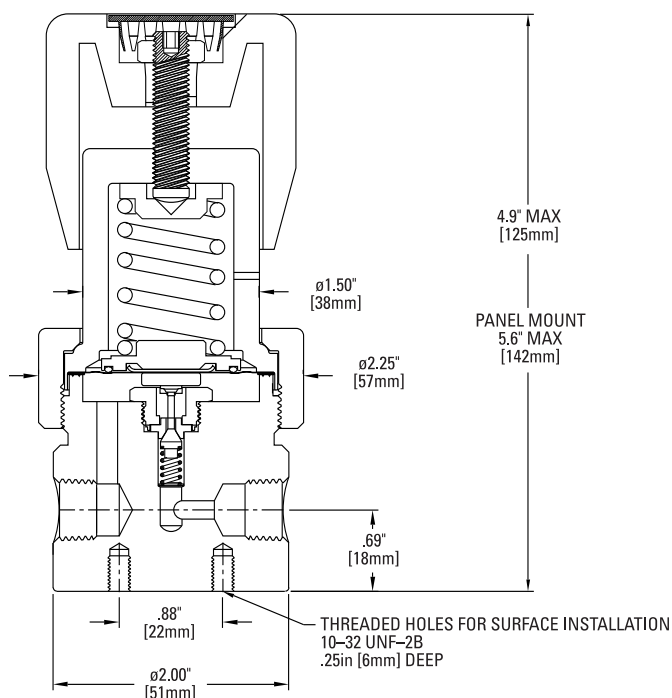
#### MATERIALS OF CONSTRUCTION

|                      | AK 1500B                   | AK 1500S                  | AK 1500SH         |
|----------------------|----------------------------|---------------------------|-------------------|
| Body                 | brass                      | SS 316                    | SS 316            |
| Poppet and diaphragm | SS 316                     | SS 316                    | Hastelloy C-22    |
| Seat                 | PCTFE (Vespel®, PEEK Opt.) | PCTFE (Vespel, 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.

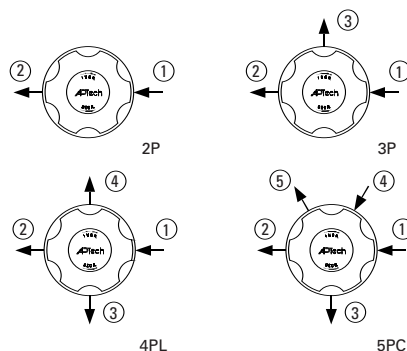
\*\* Optional temperature ranges available. Please consult factory.

All specifications subject to change without notice.  
Hastelloy® C-22® Haynes Corporation  
Vespel® DuPont

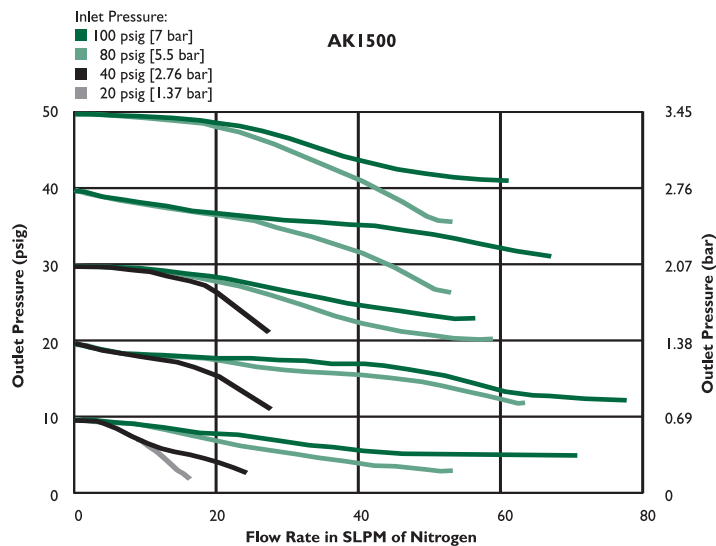
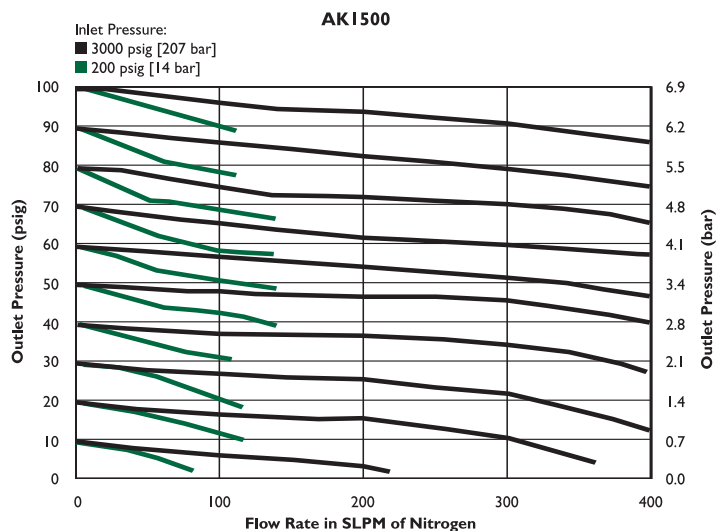


All dimensions in inches (mm).  
Metric dimensions are for reference only.

## Porting Configurations



**NOTE:** Not all porting configurations available in brass.



## ORDERING INFORMATION

| AK 1510 Series                                                                                                                                                                              | S Material                                                                | 5PC Port Configuration                                         | 4 4<br>① ②<br>Ports<br>4 = 1/4 inch NPT | 0 40 1<br>③ ④ ⑤<br>Ports (Gauge/Accessory)<br>0 = No gauge or device installed<br>V3 = 30-0-30 psig/bar<br>1 = 30-0-100 psig/bar<br>2 = 0-200 psig/bar<br>10 = 0-1000 psig/bar<br>40 = 0-4000 psig/bar | P Options<br>P = Panel installation<br>CGA = Inlet fitting<br>320, 330, 350, 580, 660, 678<br>VS = Vespel seat<br>PK = PEEK Seat |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| AK 1502 = 1-30 psig (.07 to 2 bar)<br>AK 1510 = 2-100 psig (.14 to 7 bar)<br>AK 1515 = 5-150 psig (.35 to 10 bar)                                                                           | S = Stainless steel (SS)<br>SH = SS with Hastelloy internals<br>B = Brass | 2P = 2 Ports<br>3P = 3 Ports<br>4PL = 4 Ports<br>5PC = 5 Ports |                                         |                                                                                                                                                                                                        |                                                                                                                                  |
| <b>NOTE:</b> 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. |                                                                           |                                                                |                                         |                                                                                                                                                                                                        |                                                                                                                                  |