



ADVANCED PRESSURE TECHNOLOGY

# 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,  
0 to 100 psig (7 bar) outlet**
- ◆ **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)
- ◆ **Hastelloy® C-22 Internals, 'SH' option,  
for added corrosion resistance**
- ◆ **Cleaned for O2 service**
- ◆ **Field repairable**
- ◆ **Diffusion resistant Hastelloy C-22  
diaphragm**
- ◆ **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 2,300 psig (158 bar) vacuum to 300 psig (20 bar) AK 1402TA
Delivery pressure	1 to 30 psig (0.07 to 2 bar) AK 1402T 100 mm Hg absolute (26 in Hg vac) to 30 psig (2 bar) AK 1402TA 2 to 100 psig (0.14 to 7 bar) AK 1410T (optional delivery pressure available)
Proof pressure	4,000 psig (276 bar)
Burst pressure	8,000 psig (552 bar)

### 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 in <sup>3</sup> (10.6 cm <sup>3</sup> )
Operating temperature	-40 to +160F (-40 to +71C)
Leak rate	1 x 10 <sup>-9</sup> sccs
Delivery pressure rise	1.6 psig per 100 psig source pressure drop

## MATERIALS OF CONSTRUCTION

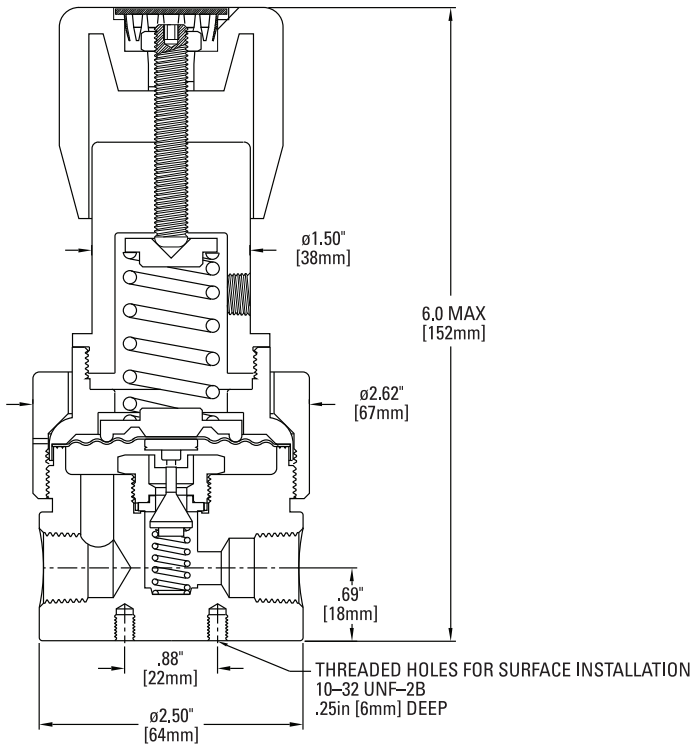
	AK 1400TB	AK 1400TS	AK 1400TSH
Body	brass	SS 316	SS 316
Diaphragm	Hastelloy C-22	Hastelloy C-22	Hastelloy C-22
Nozzle	SS 316	SS 316	Hastelloy C-22
Poppet	Hastelloy C-22	Hastelloy C-22	Hastelloy C-22
Seat	PCTFE**	PCTFE**	PCTFE**

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

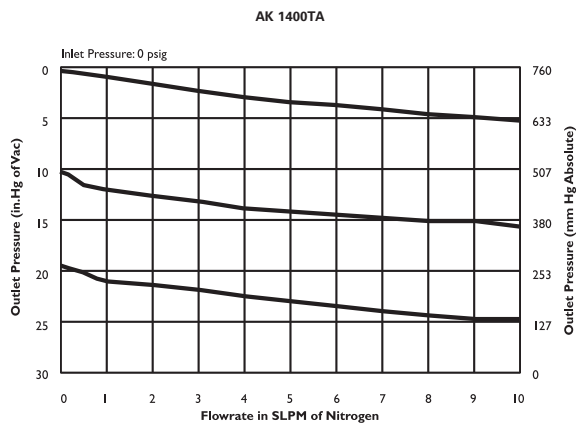
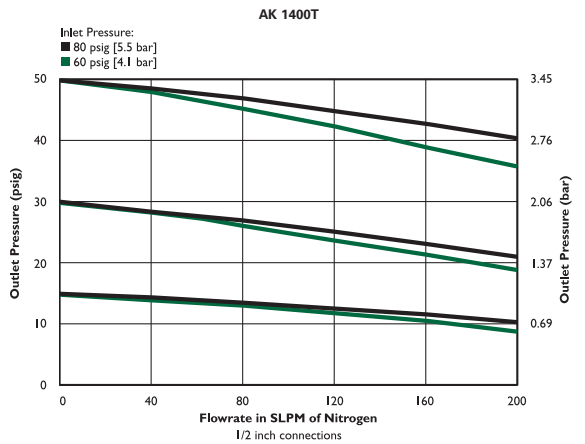
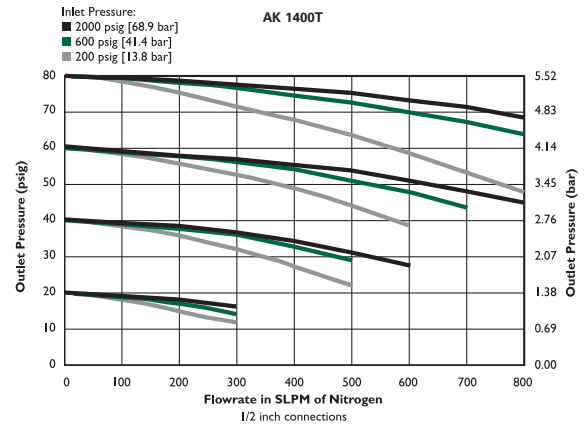
\*\* Optional seat materials available, VespeI®.

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

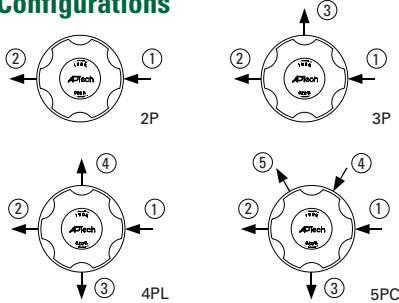
# UNCOMPROMISING QUALITY, RELIABILITY & PERFORMANCE FROM A COMPANY KNOWN FOR SERVICE



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



## Porting Configurations



**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 1402T Series	S Material	A Range Options	3P Ports	6 6 Connections Inlet / Outlet	V3 Ports (Gauge/Accessory)	P Options
AK 1402T = 1-30 psig (.07 to 2 bar) AK 1410T = 2-100 psig (.14 to 7 bar)			2P = 2 Ports 3P = 3 Ports 4PL = 4 Ports 5PC = 5 Ports	① ② 4 = 1/4 inch NPT 6 = 3/8 inch NPT 8 = 1/2 inch NPT 4T = 1/4 inch comp. 6T = 3/8 inch comp. 8T = 1/2 inch comp.	③ ④ ⑤ 0 = No gauge 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	P = Panel installation* CGA = Inlet fitting 320, 330, 326, 660, 678 VS = Vespel seat
S = Stainless steel (SS) SH = SS with Hastelloy internals B = Brass						
A = 100 mm Hg absolute (26 in Hg vac) to 30 psig (2 bar) AK 1402T only						

**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.

\*On panel mount option, bonnet port is not threaded. Panel hole 1.56 inch diameter.