



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,
100 psig (7 bar) outlet**
- ◆ **Absolute version for sub-atmospheric
delivery of low vapor pressure gases**
- ◆ **Stainless Steel or Brass construction**
- ◆ **Poppet attached to diaphragm
(tied diaphragm) improves positive shut
off across the seat**
- ◆ **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 Stainless Steel
diaphragm**



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" NPTF (optional porting available)
Flow coefficient, Cv	0.45
Internal volume	0.65 in ³ (10.6 cm ³)
Operating temperature	-40 to +160F (-40 to +71C)***
Leak rate	1 x 10 ⁻⁹ sccs
Delivery pressure rise	1.6 psig per 100 psig source pressure drop

MATERIALS OF CONSTRUCTION

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

	AK 1400TS
SS 316	
Hastelloy C-22	
SS 316	
Hastelloy C-22	
PCTFE**	

	AK 1400TSH
SS 316	
Hastelloy C-22	
Hastelloy C-22	
Hastelloy C-22	
PCTFE**	

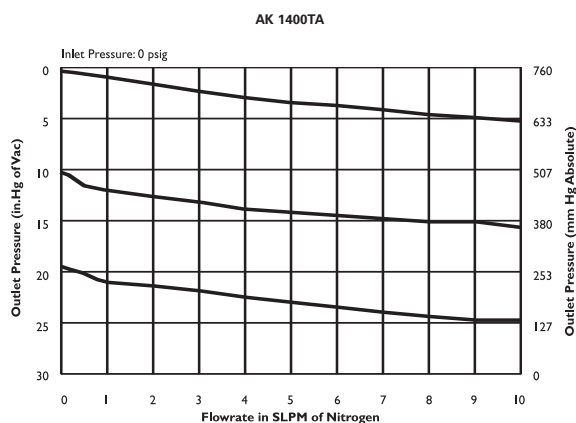
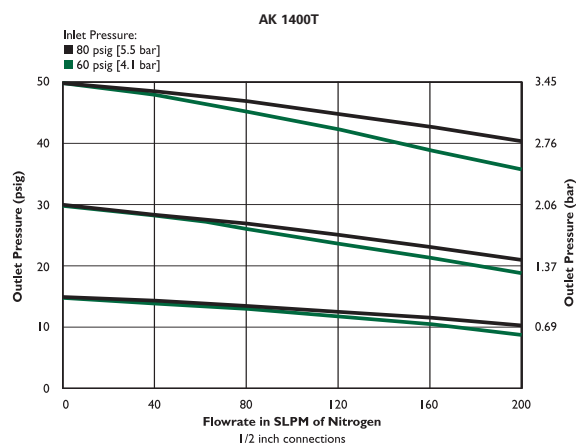
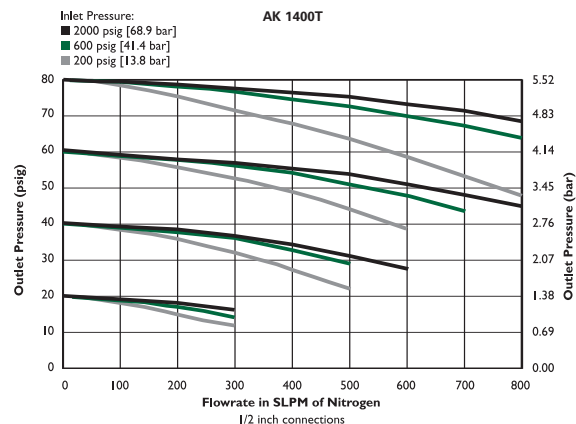
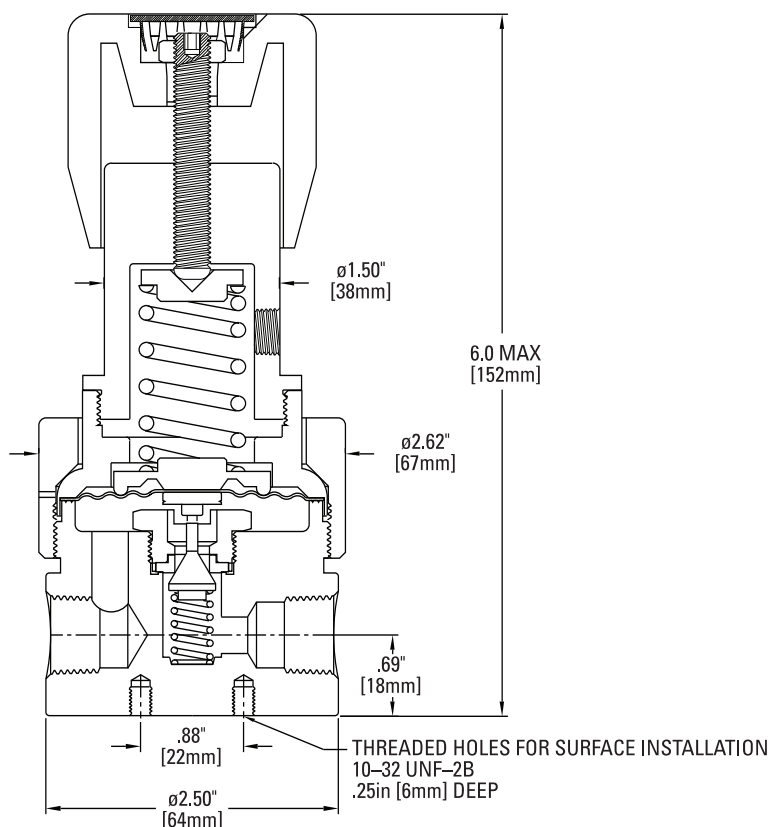
* Flow rating based upon N₂ @ 100 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating.

** Optional seat materials available, Vespel®.

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

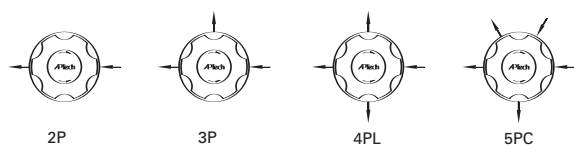
All specifications subject to change without notice.
Hastelloy C-22® Haynes
Vespel® DuPont

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



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

Porting Configurations



NOTE: Gauge and relief ports are 1/4 inch NPTF and are shipped capped from the factory unless device installed.

ORDERING INFORMATION

AK 1400T Series	S Material	A Range Options	5PC Ports	6 6 Connections Inlet / Outlet	40 V3 Ports (Gauge/Accessory)	P Options
AK 1402T = 1-30 psig (.07 to 2 bar) AK 1410T = 2-100 psig (.14 to 7 bar)	S = Stainless steel (SS) SH = SS with Hastelloy internals B = Brass		2P = 2 Ports 3P = 3 Ports 4PL = 4 Ports 5PC = 5 Ports	4 = 1/4 inch NPTF 6 = 3/8 inch NPTF 8 = 1/2 inch NPTF	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
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.		