

## SERIES AK 1400T SINGLE STAGE PRESSURE REGULATOR TIED DIAPHRAGM—SAFETY AND RELIABILITY



- ◆ **Flow capacity<sup>‡</sup>**  
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**
- ◆ **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)
AK 1402TA	vacuum to 300 psig (20 bar)
HR option	vacuum to 3,000 psig (207 bar)
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
	5 to 150 psig (0.3 to 10 bar) AK 1415T*
Proof pressure	150% of maximum rating
Burst pressure	300% of maximum rating

#### 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
Supply pressure effect	1.6 psig per 100 psig source pressure change

### MATERIALS OF CONSTRUCTION

	AK 1400TB	AK 1400TS	AK 1400TSH
Body	brass	SS 316	SS 316
Diaphragm	Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022
Nozzle	SS 316	SS 316	Ni-Cr-Mo alloy / UNS N06022
Poppet	Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022
Seat	PCTFE**	PCTFE**	PCTFE**

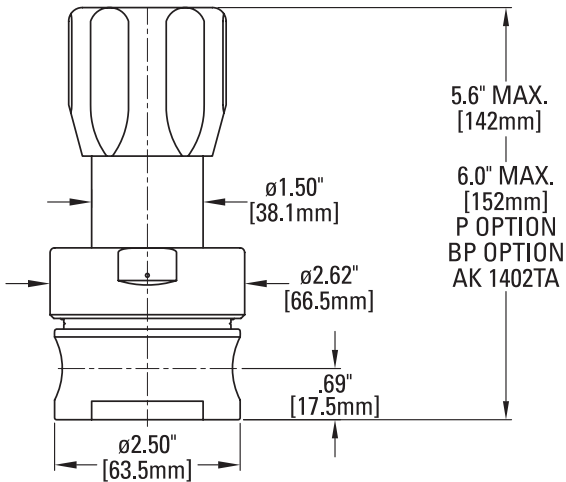
<sup>‡</sup> Flow rating based upon N2 @ 100 psig inlet, varying gas type and, or inlet/outlet pressures may effect rating.

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

\*\* Optional seat materials available, Polyimide

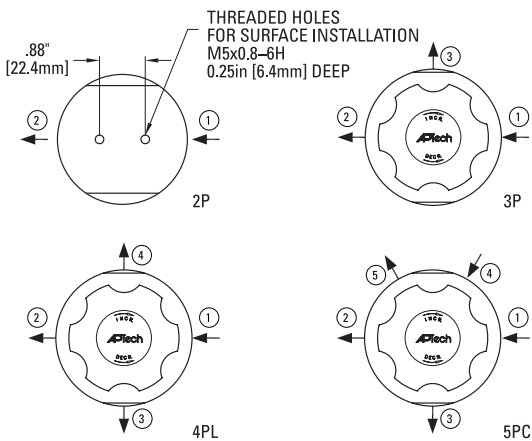
All specifications subject to change without notice.

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



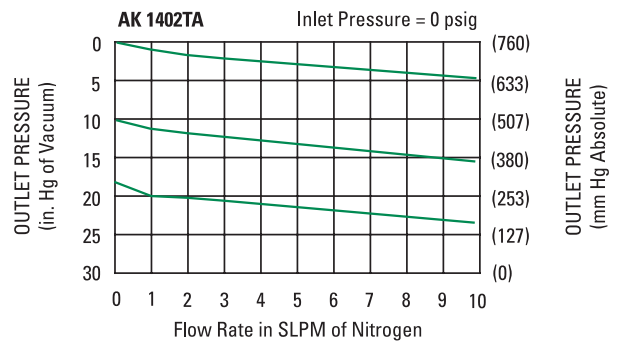
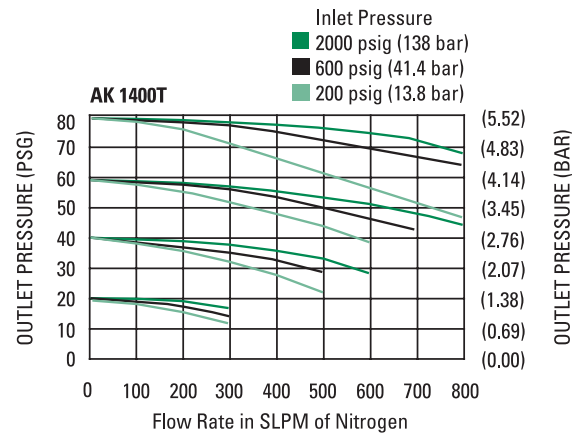
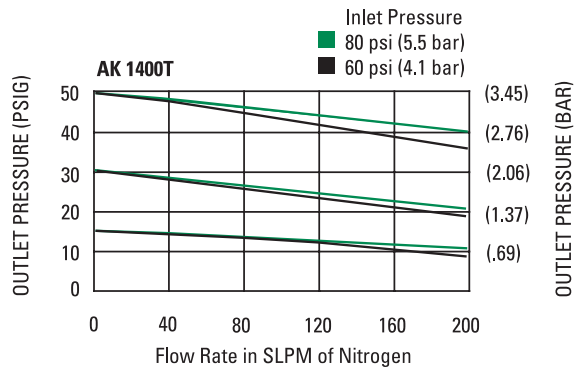
All dimensions in inches (mm).  
Metric dimensions are for reference only.

## Porting Configurations



**NOTE:** Not all porting configurations are available in brass.  
Ports, other than 1 and 2, are only available 1/4 inch NPT.

**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 (1.4 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	A = 100 mm Hg absolute (26 in Hg vac) to 30 psig (2 bar) AK 1402T only	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 = Polyimide seat HR = High inlet pressure

**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.