



ADVANCED PRESSURE TECHNOLOGY

# SERIES AK 1100 ABSOLUTE PRESSURE REGULATOR LOW FLOW – SUB-ATMOSPHERIC



- ◆ Vacuum to 300 psig (21 bar) inlet, 100 mm Hg absolute outlet
- ◆ Flow rate to 500 sccm
- ◆ Stainless Steel or Brass construction
- ◆ Ni-Cr-Mo alloy internals, 'SH' option, for added corrosion resistance
- ◆ High leak integrity
- ◆ Machined from bar stock
- ◆ 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
- ◆ Knob LOTO option (refer to AP KL data sheet)
- ◆ Installation and operating instructions available at [www.aptech-online.com](http://www.aptech-online.com)

## ENGINEERING DATA

### Operating Parameters

Source pressure	300 psig (21 bar)
Delivery pressure	100 mm Hg absolute to 10 psig
Proof pressure	150% of operating pressures
Burst pressure	300% of operating pressures

### Other Parameters

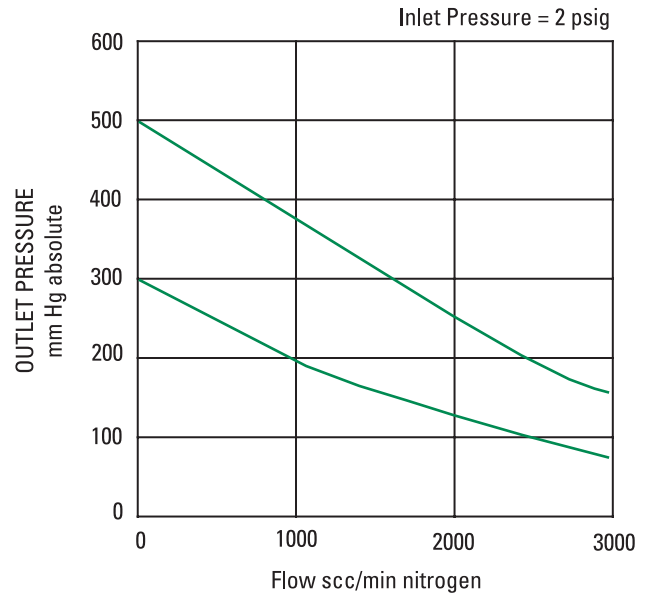
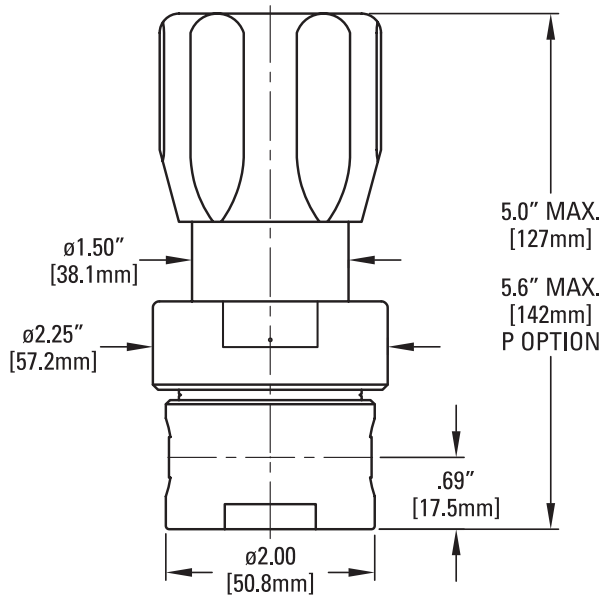
Inlet/outlet ports	1/4" NPT; 1/4" & 3/8" compression (optional porting available)
Flow coefficient, Cv	0.05
Internal volume	0.49 in <sup>3</sup> (8 cm <sup>3</sup> )
Operating temperature	-40° to +160°F (-40° to +71°C)*
Leak rate	1 x 10 <sup>-9</sup> sccs

## MATERIALS OF CONSTRUCTION

	AK 1100B	AK 1100S	AK 1100SH
Body	brass	SS 316L	SS 316L
Poppet and diaphragm	SS 316	SS 316	Ni-Cr-Mo alloy / UNS N06022
Seat	PCTFE (Polyimide and PEEK® Opt)	PCTFE (Polyimide and PEEK Opt)	PCTFE (PEEK Opt)
Bonnet	SS 303	SS 303	SS 303

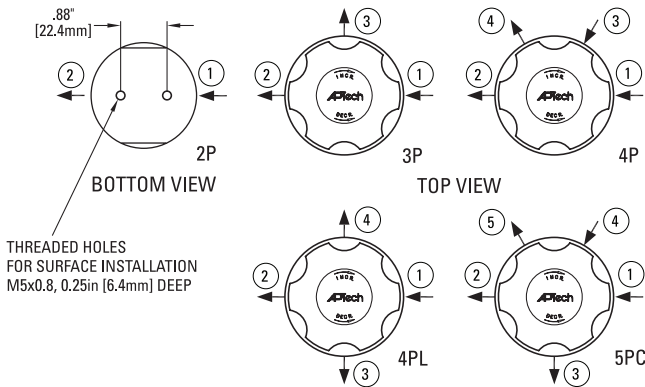
\*VS option 14° to 194°F (-10° to + 90°C). All specifications subject to change without notice.

PEEK® Victrex Manufacturing LTD



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

### Porting Configurations



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

**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 1101 Series	S Material	3P Port Configuration	4 1 2 Ports	4 4 Ports	0 3 4 5 Ports (Gauge/Accessory)	P Options
AK 1101= 100 mm Hg to 10 psig		2P = 2 Ports 3P = 3 Ports 4P = 4 Ports 4PL = 4 Ports 5PC = 5 Ports	4 = 1/4 inch NPT 4T = 1/4 inch compression 6T = 3/8 inch compression		0 = No gauge or device installed V3 = 30-0-30 psig/bar 1 = 30-0-100 psig/bar 2 = 0-200 psig/bar 4 = 0-400 psig/bar	P = Panel installation* CGA = Inlet fitting 320, 330, 350, 580, 660, 678 VS = Polyimide seat PK = PEEK seat KL = Knob LOTO (refer to AP KL data sheet)
S = Stainless steel (SS) SH = SS with Ni-Cr-Mo alloy internals B = Brass						*Panel hole 1.42 diameter.

**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 1101 S 2P 44 not AK 1101 S 2P 44 000.

AP Tech has product options and variations which are not documented in data sheets. If you have a model number that is not defined by the ordering information, please consult the factory or your local representative.