**Series AP 1700**
TWO-STAGE, TIED DIAPHRAGM REGULATOR
Low Flow — High Pressure

- Regulator of choice for B₂H₆ cylinder applications
- SS 316L VAR secondary remelt construction
- Surface finish 15 Ra max/10 Ra avg (10, 7 & 5 Ra max options)
- Vacuum to 3,500 psig (241 bar) inlet; HR option to 4,500 psig (310 bar)
- Higher flow HF option
- Two stage pressure reduction eliminates supply pressure effect
- Knob LOTO option (refer to AP KL data sheet)
- Installation and operating instructions available at www.aptech-online.com in the Tech Briefs section

**Operating Parameters**

| Source pressure | vacuum to 3,500 psig (241 bar) |
| Delivery pressure AP 1702 | 1 to 30 psig (0.07 to 2 bar) |
| AP 1706 | 2 to 60 psig (0.14 to 4 bar) |
| AP 1710 | 2 to 100 psig (0.14 to 7 bar) |
| AP 1720NT | 5 to 200 psig (0.35 to 14 bar) |
| First stage pressure | 175 psig (12 bar) nominal |
| Proof pressure | 150% of operating pressures |
| Burst pressure | 300% of operating pressures |

**Other Parameters**

| Inlet/outlet connectors | 1/4 or 3/8 inch face seal or tube weld |
| Bonnet port | 1/8 inch NPT |
| Flow coefficient (Cv) | 0.05 (0.07 HF option) |
| Internal volume | 0.92 in³ (15.1 cm³) |
| Operating temperature | -40° to +160°F (−40° to +71°C)* |
| Surface finish | 15 µin Ra max / 10 µin. Ra avg. (0.4/0.25 µm) standard; 10 µin (0.25 µm); 7 µin (0.18 µm); and 5 µin (0.13 µm) Ra max optional |
| Inboard leakage | 2 x 10⁻¹⁰ scs |
| Outboard leakage | 2 x 10⁻⁹ scs He at 1,500 psig inlet pressure |
| Leakage across seat | 4 x 10⁻⁸ scs He at 1,000 psig inlet pressure |
| Installation | panel (optional) |
| Supply pressure effect | 0.05 psig per 100 psig source pressure change |

**Materials**

| Type of Service | Series AP 1700 S Noncorrosive | Series AP 1700 SH Corrosive |
| Wetted Parts | Body | SS 316L secondary remelt | SS 316L secondary remelt |
| | Poppet, nozzle and diaphragm | SS 316L electropolished and passivated | Ni-Cr-Mo alloy / UNS N06022 electropolished and passivated |
| | Finish | PCTFE (Polyimide optional) | PCTFE |

*VS option 14º to 194ºF (-10º to +90ºC).

All specifications subject to change without notice.

NOTE: AP Tech recommends monitoring the intermediate pressure (first stage outlet/second stage inlet) for safety. Please refer to product note 409 for further information.
SERVICE AND SUPPORT BEYOND COMPARE

DIMENSIONAL INFORMATION

PORTING CONFIGURATIONS

ORDERING INFORMATION

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.

Sample Order Number

<table>
<thead>
<tr>
<th>AP 1702SM</th>
<th>4PW FV4 FV4 40 V3 P</th>
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**Series**

AP 1702 = 1-30 psig (0.07 to 2 bar)
AP 1706 = 2-60 psig (.14 to 4 bar)
AP 1710 = 2-100 psig (.14 to 7 bar)
AP 1720 = 5-200 psig (.35 to 14 bar)*

**Material**

S = Stainless steel (SS)
SH = SS/Hastelloy internals

**Surface Finish Options**

M = 10 µin. Ra max
V = 7 µin. Ra max
X = 5 µin. Ra max

**Ports**

2PW = 2 ports butt weld
3PWQ = 3 ports butt weld
4PW = 4 ports butt weld
5PWQ = 5 ports butt weld

**Connections Inlet / Outlet**

FV4 = 1/4 inch face seal female
FV6 = 3/8 inch face seal female
MV4 = 1/4 inch face seal male
MV6 = 3/8 inch face seal male

**Gauges***

0 = No gauge
V3 = 30-0-30 psig/bar
L = 30-0-60 psig/bar
1 = 30-0-100 psig/bar
2 = 0-200 psig/bar
10 = 0-1000 psig/bar
40 = 0-4000 psig/bar
60 = 0-6000 psig/bar

**Options**

**NT** = First stage tied, second stage free poppet
**VS** = Polyimide seat
**P** = Panel installation ring***
**HR** = High inlet pressure****
**HF** = High flow
**SC** = Short bonnet2
**KL** = Knob LOTO2

**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.

MP = Monitor port, first stage outlet pressure (second stage inlet pressure). Number at each port note order for specifying fitting type.

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

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