

# Model APC

## Ultra High Purity, Single-Stage, Bar Stock Regulators

Model APC stainless steel bar stock regulators are designed for use in applications requiring both corrosion and diffusion resistance. These regulators are specially suited for use in gas delivery systems requiring high leak integrity and minimal internal volume for maintaining guaranteed gas purity levels.

These single-stage regulators are recommended for use with gases where inlet pressure does not vary greatly (such as liquefied gases), or where periodic readjustment of delivery pressure setting does not present a problem.



APC Regulator

### Standard Features

- Type 316 Stainless Steel Bar Stock Construction provides maximum corrosion resistance.
- Metal to Metal Diaphragm to Body Seal (without back-up o-ring) assures maximum diffusion resistance.
- High Purity Regulator Design permits vacuum purging of regulator.
- Low Internal Volume facilitates purging and reduces contamination potential.
- Diaphragm Seal Outlet Valve maintains gas purity.
- Filter traps foreign matter, extends regulator life and reduces maintenance.
- Threaded Holes in Rear of Regulator permit front panel mounting.
- 1/16" NPT Female Bonnet Vent Port allows bonnet to be connected to a vent line or disposal system as a precaution in the unlikely event of a diaphragm failure.

### Optional Features

- Captured Venting Configuration provides 1/16" NPTF vent port and stem packing allowing for complete capturing of bonnet when connected to a vent line or disposal system.
- Mounting Ring permits regulator to be panel mounted.

### Specifications

Maximum Inlet Pressure:

- APC-3: 3000 psig
- APC-2: 800 psig
- APC-1: 300 psig

Inlet Pressure Gauge: See Table I

Delivery Pressure Range: See Table I

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Filter: 40 micron

Gauge Size: 2" Dial

Operating Temp. Range: -40°F to 140°F

Flow Coefficient:

- Regulator: Cv = 0.06
- Outlet Valve: Cv = 0.17

Internal Volume:

Regulator (body only): 6.0 cc

Bonnet Vent Connection: 1/16" NPT female

Inlet Connection: CGA 296, 320, 326, 330, 346, 350, 510, 540, 580, 590, 660 or 705 as ordered

Outlet Connection: 1/4" NPT female

Approximate Weight: 3 lbs.

### Materials of Construction

Body and Outlet Valve:

Type 316 Stainless Steel Bar Stock

Gauges: Type 316 Stainless Steel

Bonnet: 300 Series Stainless Steel

Other Metal Parts Exposed to Gas:  
Type 316 Stainless Steel

Seats: PCTFE

Friction Sleeve: Teflon®

Diaphragms: Type 316 Stainless Steel

Table I

| Part No.        | Inlet Pressure               |       | Delivery Pressure |                              |         |
|-----------------|------------------------------|-------|-------------------|------------------------------|---------|
|                 | Gauge (dual scale)<br>(psig) | (bar) | Range<br>(psig)   | Gauge (dual scale)<br>(psig) | (bar)   |
| APC-3-30-(CGA)  | 0-4000                       | 0-275 | 2-30              | -30" Hg-0-60                 | -1-0-4  |
| APC-3-75-(CGA)  | 0-4000                       | 0-275 | 4-75              | -30" Hg-0-100                | -1-0-7  |
| APC-3-150-(CGA) | 0-4000                       | 0-275 | 10-150            | -30" Hg-0-200                | -1-0-14 |
| APC-3-300-(CGA) | 0-4000                       | 0-275 | 20-300            | 0-400                        | 0-27    |
| APC-3-500-(CGA) | 0-4000                       | 0-275 | 30-500            | 0-600                        | 0-41    |
| APC-2-30-(CGA)  | 0-1000                       | 0-69  | 2-30              | -30" Hg-0-60                 | -1-0-4  |
| APC-2-75-(CGA)  | 0-1000                       | 0-69  | 4-75              | -30" Hg-0-100                | -1-0-7  |
| APC-2-150-(CGA) | 0-1000                       | 0-69  | 10-150            | -30" Hg-0-200                | -1-0-14 |
| APC-2-300-(CGA) | 0-1000                       | 0-69  | 20-300            | 0-400                        | 0-27    |
| APC-2-500-(CGA) | 0-1000                       | 0-69  | 30-500            | 0-600                        | 0-41    |
| APC-1-30-(CGA)  | 0-400                        | 0-27  | 2-30              | -30" Hg-0-60                 | -1-0-4  |
| APC-1-75-(CGA)  | 0-400                        | 0-27  | 4-75              | -30" Hg-0-100                | -1-0-7  |
| APC-1-150-(CGA) | 0-400                        | 0-27  | 10-150            | -30" Hg-0-200                | -1-0-14 |

Where "(CGA)" is indicated above, insert appropriate Compressed Gas Association connection number to complete the part number. Example: APC-3-30-580. Order by complete part number.

### Optional Equipment

| Equipment                                 | Part No.    |
|---|-------------|
| Panel Mounting Ring*                      | PM3803      |
| Regulator Mounting Plate* for Model APC   | RP1         |
| Inboard Helium Leak Test and Test Report  | HT1000      |
| Outboard Helium Leak Test and Test Report | HT1001      |
| Compression Fittings* (male connectors)   |             |
| 1/4" NPT male x 1/8" compression          | SG6713      |
| 1/4" NPT male x 1/4" compression          | SG6714      |
| 1/16" NPT male x 1/8" compression         | SG6715      |
| Safety Mounting Brackets*                 | See page 62 |
| Captured Venting Configuration            | SG5650      |

\* If selected, these items are not installed on the regulator. They are shipped as separate items.