



## Model 3510 Series

### Single-Stage High-Purity Stainless Steel Regulator



#### Description

High purity regulators designed for analytical applications using non-corrosive or semi-corrosive gases.

#### Applications

- Supply of carrier gas/detector support gas for a variety of gas chromatography applications (see table below for details).
- Supply of calibration standards to on-line process analyzers, emission monitoring systems, etc.

#### Gas Chromatography Detectors requiring the Single-Stage Model 3510 Series Regulator

| Detector Type  | Detection Level |
|--|-----------------|
| Electrolytic Conductivity Detector (ELCD or Hall Detector) | Levels <50 ppm  |
| Electron Capture Detector (ECD)                            | Levels <50 ppm  |
| Mass Selective Detector or Mass Spec (MSD or MS)           | All levels      |
| Atomic Emission Detector (AED)                             | All levels      |

*Note: A small amount of polychlorotrifluoroethylene is added to the threads to facilitate assembly. For ECD, MS or AED applications where method detection limits are sub-ppm, it is recommended to use a No Lube (-NL) model.*

#### Design Features/Components

- High-purity 316 stainless steel barstock body
- High-purity 316 stainless steel diaphragm
- Metal to metal seals minimize diffusion of contaminants
- 2" inlet and delivery pressure gauges
- Bonnet ported and threaded to pipe gases away from work area
- Equipped with outlet diaphragm valve
- 1/4" compression tube outlet connection
- Porous metal filter protects seat from contamination
- Panel mountable

#### Materials of Construction

|             |                     |
|-------------|---------------------|
| Gauges:     | 316 stainless steel |
| Body:       | 316 stainless steel |
| Bonnets:    | Stainless steel     |
| Diaphragms: | 316 stainless steel |
| Seat:       | Teflon              |
| Seals:      | Metal to metal      |

#### Specifications

|                           |  |
|---------------------------|--|
| Maximum Inlet Pressure:   | 3000 psig (20,700 kPa)   |
| Maximum Flow Rate:        | Model 3510: 550 SCFH (260 SLPM)<br>(At 2500 psig, N <sub>2</sub> )<br>Model 3511: 135 SCFH (60 SLPM)<br>(At 300 psig, N <sub>2</sub> )<br>Model 3512: 210 SCFH (100 SLPM)<br>(At 1000 psig, N <sub>2</sub> )<br>Model 3513: 210 SCFH (100 SLPM)<br>(At 2500 psig, N <sub>2</sub> )<br>Model 3515: 550 SCFH<br>(At 1000 psig, N <sub>2</sub> )<br>Model 3516: 1350 SCFH (640 SLPM)<br>(At 2500 psig, N <sub>2</sub> ) |
| Flow Capacity (Cv):       | 0.06   |
| Operating Temperature:    | -15°F to 165°F (-26°C to 74°C)   |
| Porting (Regulator Body): | 1/4" NPT Female  |
| Porting Configuration:    | 2 High, 2 Low  |
| Optional Porting:         | 3 High, 3 Low  |
| Shipping Weight:          | 5 lbs  |

#### Ordering Information

| Model Number* | Delivery Pressure Range | Delivery Pressure Gauge | Cylinder Pressure Gauge |
|---------------|-------------------------|-------------------------|-------------------------|
| 3510-CGA      | 4-100 psig              | 30" vac-0-200 psig      | 0-3000 psig             |
| 3511-N/I      | 2-30 psig               | 30" vac-0-60 psig       | 30" vac-0-300 psig      |
| 3512-CGA      | 2-30 psig               | 30" vac-0-60 psig       | 0-1000 psig             |
| 3513-CGA      | 2-30 psig               | 30" vac-0-60 psig       | 0-3000 psig             |
| 3515-CGA      | 4-100 psig              | 30" vac-0-200 psig      | 0-1000 psig             |
| 3516-CGA      | 10-250 psig             | 30" vac-0-300 psig      | 0-3000 psig             |
| 3517-CGA      | 20-500 psig             | 0-1000 psig             | 0-3000 psig             |

*For No Lube applications, specify Model Numbers 35XX-NL-CGA.*

*\*Note: Some CGA limitations may apply.*

#### Options

| Model Number | Description   |
|--------------|---|
| 4754-CGA     | Tee Purge Assembly  |
| 4774-CGA     | Cross Purge Assembly  |
| KIT-0204-SA  | Bonnet Panel Mounting Kit                                   |
| ADP-0162-SA  | Bonnet Vent Adapter to 1/8" FNPT                            |
| OPN-0301-SA  | Swagelok 1/4" Tube Fitting (Stainless Steel)                |
| MSP-0012-XX  | Inboard Helium Leak Rate Certification                      |
| MSP-0013-XX  | Combination Inboard/Outboard Helium Leak Rate Certification |