



Model 3810 Series

Dual-Stage High-Purity Stainless Steel Regulator



Description

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

Gas Chromatography Detectors requiring the Dual-Stage Model 3810 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.

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.
- Supply of high-purity non-corrosive or semi-corrosive gases to applications requiring constant delivery pressure.

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
- Optional interstage relief valve available
- Panel mountable

Materials of Construction

Gauges:	316 stainless steel
Body:	316 stainless steel
Bonnets:	Stainless steel
Diaphragms:	316 stainless steel
Seats:	1st Stage – Teflon 2nd Stage – Teflon
Seals:	Metal to metal

Specifications

Maximum Inlet Pressure:	3000 psig (20,700 kPa)
Maximum Flow Rate:	Model 3810: 300 SCFH (140 SLPM) Model 3813: 130 SCFH (60 SLPM) Model 3816: 500 SCFH (235 SLPM)
(At 2500 psig, N ₂)	
Flow Capacity (Cv):	0.05
Operating Temperature:	-40°F to 165°F (-40°C to 74°C)
Porting (Regulator Body):	1/4" NPT Female
Porting Configuration:	2 High, 2 Low, 1 Interstage
Shipping Weight:	5 lbs

Ordering Information

Model Number *	Delivery Pressure Range	Delivery Pressure Gauge	Cylinder Pressure Gauge
3810-CGA	4-100 psig	30" vac-0-200 psig	0-3000 psig
3813-CGA	2-30 psig	30" vac-0-60 psig	0-3000 psig
3816-CGA	10-250 psig	0-400 psig	0-3000 psig
3818-CGA	15-350 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
ADP-0162-BO	Bonnet Vent Adapter to 1/8" FNPT (2 Required)
KIT-0204-SA	Bonnet Panel Mounting Kit
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