

# Matheson Gas Cylinder Dual Stage Regulators D65

## Model 3120 Series

### Dual Stage High Purity Brass Regulator



#### Design Features

- B16 Brass Barstock construction
- Equipped with an outlet diaphragm valve with compression tube fitting
- Metal to metal seals throughout
- Bonnet threaded for panel mounting as standard

The Model 3120 Series is a new product being offered for use on Gas Chromatographs and other scientific instruments. The Model 3120 Series regulators have been designed with a reduction in the internal dead space of the regulator and a reduction in the quantity of non-metal parts. The dual stage design of the product ensures accurately delivered pressures over the usable life of cylinder gases.

The Model 3120 Series regulators are recommended for use in applications requiring high purity delivery of gases in a non-corrosive environment. These applications typically include use of the regulators for high purity carrier gases, calibration standards and GC applications using PID, HID or ECD detection methods. The reduced dead space of the regulator and the reduction in non-metal parts ensures high purity control of gases. The Model 3120 Series is compatible with gases that are non-corrosive in nature and gases that are compatible with the materials in the process stream.

#### Materials of Construction

Body:	B16 Brass Barstock
Bonnets:	B16 Brass Barstock
Diaphragms:	316 Stainless Steel
Seats:	1st Stage—PFA PTFE 2nd Stage—TFE PTFE
Seals:	Metal to Metal

#### Specifications

Maximum Inlet Pressure:	3000 psig (20,700 kPa)
Maximum Flow Rate:	Model 3121: 70 CFH (30 LPM)
(At 2500 psig, N <sub>2</sub> ):	Model 3122: 300 CFH (130 LPM)
Flow Coefficient (Cv):*	0.05
Operating Temperature:	-40 to 165°F (-40 to 74°C)
Porting:	1/4" NPT female
Porting Configuration:	2 high, 2 low

Part Number	Delivery Pressure Range	Delivery Pressure Gauge	Cylinder Pressure Gauge
3121 (specify CGA)	2-30 psig	30" vac-0-60	0-3000 psig
3122 (specify CGA)	4-100 psig	30" vac-0-200	0-3000 psig
3126 (specify CGA)	10-250 psig	30" vac-0-400	0-3000 psig
3128 (specify CGA)	5-350 psig	30" vac-0-1000	0-3000 psig

\*Specify CGA fitting when ordering all regulators.

## Model 3810 Series

### Dual Stage High Purity Stainless Steel Regulator



#### Design Features

- 316 Stainless Steel construction
- Equipped with an outlet diaphragm valve with integral compression tube fitting
- Metal to metal seals throughout
- Bonnet threaded for panel mounting as standard

The Model 3810 Series has been improved to meet the demands of the gas chromatographer. The Model 3810 Series has been long established as a standard in the laboratory and processing facilities as a high purity corrosion resistant product. The dual stage design of the product ensures accurately delivered pressures over the usable life of gases in cylinders.

The Model 3810 Series regulators are recommended for use in applications requiring high purity delivery of gases in a non-corrosive or semi-corrosive environment at a constant outlet pressure. These applications typically include use of the regulators for analysis of samples, calibration standards, semiconductor applications and doping applications. The Model 3810 Series is compatible with gases that are non-corrosive or semi-corrosive in nature and gases that are compatible with the materials in the process stream.

#### Materials of Construction

Body:	316 Stainless Steel
Bonnets:	Nickel Plated Brass
Diaphragms:	316 Stainless Steel
Seats:	1st Stage—Kel-F 2nd Stage—PFA PTFE
Seals:	Metal to Metal

#### Specifications

Maximum Inlet Pressure:	3000 psig (20,700 kPa)
Maximum Flow Rate:	Model 3810: 450 CFH (200 LPM)
(At 2500 psig, N <sub>2</sub> ):	Model 3813: 130CFH (60 LPM)
Flow Coefficient (Cv):*	0.05
Operating Temperature:	-40 to 165°F (-40 to 74°C)
Porting:	1/4" NPT female
Porting Configuration:	2 high, 2 low

Part Number	Delivery Pressure Range	Delivery Pressure Gauge	Cylinder Pressure Gauge
3813 (specify CGA)	2-30 psig	30" vac-0-60	0-3000 psig
3810 (specify CGA)	4-100 psig	30" vac-0-200	0-3000 psig
3816 (specify CGA)	10-250 psig	30" vac-0-400	0-3000 psig
3818 (specify CGA)	5-350 psig	30" vac-0-1000	0-3000 psig

\*Specify CGA fitting when ordering all regulators.