

Face-Seal Connection Regulators

Ultra-High-Purity, 10 Ra Finish, Single-Stage
Models 1000 and 1500

These 316L Stainless Steel bar stock body regulators are most often used with the highest electronic grade (greater than 99.9995% or purity grade 5.5) inert, toxic, corrosive and flammable semiconductor gases. They have a 10 Ra surface finish and are electronic grade cleaned. The all-welded, metal-to-metal face-seal (VCR® compatible) connections eliminate generation of unwanted particles, reduce entrapment zones, and provide zero axial clearance for ease of component installation and removal. Model 1000 regulators have standard diaphragm and seat design; Model 1500 regulators have a positive-seal tied-diaphragm design and positionable ported bonnet.

Benefits/Features

Face-seal configuration provides zero axial clearance allowing for ease of component installation and removal

Gasket/face-seal design provides metal-to-metal seal with no entrapment zones

Face-seal connections eliminate generation of unwanted metal particles

Face-seal versatility permits use in both vacuum and positive pressure applications

Tied diaphragm (Model 1500) ensures positive shut-off while minimizing droop and particle entrapment

Positionable captured vent bonnet (Model 1500) provides complete capture of bonnet and allows for 360° rotation of bonnet port without changing regulator position

Specifications

Internal Surface Finish:

10 Ra microinch/0.25 micrometer

Cleaning: DI water electronic grade

Design Proof Pressure:

150% of maximum rated

Inlet Pressure (maximum): See ordering table

Inlet Pressure Gauge: See ordering table

Delivery Pressure Range: See ordering table

Delivery Pressure Gauge: See ordering table

Operating Temperature Range:

-40°F to 140°F (-40°C to 60°C)

Flow Coefficient: Cv = 0.06

Inlet and Outlet Connections:

1/4" female swivel

Gauge Port Connections: 1/4" male swivel

(1/4" female swivel gauges installed)

Supply Pressure Effect: 0.8 psi per 100 psi (0.05 bar per 7 bar)

Inboard Leak Rate: 1 x 10⁻⁹ atm cc/sec He

Gauge Size: 2" (53 mm) face

Approximate Weight: 4 lbs. (1.8 kg)

Materials of Construction

Body: 316L Stainless Steel electro-polished

Diaphragm: 316L Stainless Steel

Gauges: 316 Stainless Steel

Other Metal Parts Exposed to Gas: 316 Stainless Steel

Seat: PCTFE



Model 1000

Ordering Information

Model Number	Inlet Pressure (maximum)		Inlet Pressure Gauge (dual-scale)		Delivery Pressure Range		Delivery Pressure Gauge (dual-scale)	
	psig	bar	psig	bar	psig	bar	psig	bar
Model 1000								
Q1-1000A	3500	241	0 – 4000	0 – 275	0 – 30	0 – 2	-30" Hg – 0 – 60	-1 – 0 – 4
Q1-1000B	3500	241	0 – 4000	0 – 275	0 – 100	0 – 7	-30" Hg – 0 – 200	-1 – 0 – 14
Q1-1000C	3500	241	0 – 4000	0 – 275	0 – 250	0 – 17	0 – 400	0 – 27
Q1-1000D	3500	241	0 – 4000	0 – 275	0 – 500	0 – 35	0 – 600	0 – 41
Model 1500 Tied Diaphragm								
Q1-1500A	3500	241	0 – 4000	0 – 275	0 – 30	0 – 2	-30" Hg – 0 – 60	-1 – 0 – 4
Q1-1500B	3500	241	0 – 4000	0 – 275	0 – 100	0 – 7	-30" Hg – 0 – 200	-1 – 0 – 14
Q1-1500C	3500	241	0 – 4000	0 – 275	0 – 150	0 – 10	-30" Hg – 0 – 200	-1 – 0 – 14