

Tied-Diaphragm Regulators

Ultra-High-Purity for Corrosive Service

Models 217 and 2172

Tied-diaphragm regulators resist attack from strong acid-forming gases and facilitate safe handling of corrosive, toxic and reactive gases with an inlet pressure of up to 3000 psig (207 bar). They are especially useful in semiconductor manufacturing applications.

Single-stage design is recommended for use where inlet pressure does not vary greatly or where periodic manual readjustment of delivery pressure setting does not present a problem. Two-stage design is recommended for use where constant delivery pressure is desired.



Model 217

Benefits/Features

Diaphragm and poppet are mechanically linked to provide a positive shutoff.

Two-stage design features stainless steel construction and a linked poppet in both stages.

Filter traps foreign matter, extends regulator life and reduces maintenance.

Bonnet vent port and stem packing allows for complete capturing of bonnet when connected to a vent line.

Threaded bonnet allows for easy panel mounting.

Threaded holes in the rear of single-stage regulator allow for front panel mounting.

Stainless steel diaphragm-sealed outlet valve maintains gas purity.

Specifications

Inlet Pressure: 3000 psig (207 bar) maximum

Operating Temperature Range:

-40°F to 140°F (-40°C to 60°C)

Flow Coefficient:

Single-stage design: $C_v = 0.06$

Two-stage design: $C_v = 0.05$

Supply Pressure Effect:

Single-stage design: 2 psi per 100 psi
(0.1 bar per 7 bar)

Two-stage design: 0.06 psi per 100 psi
(0.004 bar per 7 bar)

Regulator Inlet Port: 1/4" NPT Female

Inlet Connection: Specify CGA

Outlet Connection: 1/4" NPT Female and all other inlet/outlet configurations

Gauge Size: 2" (53 mm) face

Weight:

Single-stage design: 3.4 lbs. (1.5 kg)

Two-stage design: 4.9 lbs. (2.2 kg)

Materials of Construction

Body: 316 Stainless Steel

Diaphragm: 316 Stainless Steel

Seats: PCTFE

Seals: PTFE

Bonnet: 300 Stainless Steel

Gauges: Stainless steel

Model 217, 2172	Delivery Pressure Range		Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar	psig	bar	psig	bar
Stainless Steel						
Single-Stage						
Q1-217A-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-217B-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-217C-(*)	5 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Two-Stage						
Q1-2172A-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-2172B-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-2172C-(*)	5 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276

* Specify CGA. Other cylinder connections are available – please contact your Air Liquide representative.

Options: Model No. Q1-HLRI helium leak rate certification

Model No. Q1-PMNCP chrome-plated panel mounting nut