

# Ultra-High-Purity Regulators

## For Corrosive Service

### Models 213 and 215

Scott™ stainless steel regulators provide outstanding performance in applications involving high delivery pressure where maintenance of gas purity is essential. The single-stage design is recommended for use where inlet pressure does not vary greatly such as with liquefied gases, or where periodic readjustment of delivery pressure setting does not present a problem. Two-stage design provides constant delivery pressure with no need for periodic readjustment.



Model 213

### Benefits/Features

- Stainless steel diaphragm minimizes diffusion of air into regulator and eliminates off-gassing.
- Convolute stainless steel diaphragm (single-stage design) provides excellent delivery pressure accuracy.
- Filter traps foreign matter, extends regulator life and reduces maintenance.
- Threaded bonnet allows for easy panel mounting.
- Threaded holes in rear of single-stage regulator allow for front panel mounting.
- Stainless steel diaphragm-sealed outlet valve provides on/off flow control and helps maintain 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: Cv = 0.06  
Two-stage: Cv = 0.05
- Supply Pressure Effect:**  
Single-stage: 2 psi per 100 psi (0.1 bar per 7 bar)  
Two-stage: 0.04 psi per 100 psi (0.003 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: 3.4 lbs. (1.5 kg)  
Two-stage: 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 213, 215	Delivery Pressure Range		Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar	psig	bar	psig	bar
<b>Stainless Steel</b>						
<b>Single-Stage</b>						
Q1-213A-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000**	0 – 276
Q1-213B-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000**	0 – 276
Q1-213C-(*)	5 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Q1-213D-(*)	7 – 300	0.5 – 21	0 – 400	0 – 28	0 – 4000	0 – 276
Q1-213E-(*)	10 – 500	0.7 – 35	0 – 600	0 – 41	0 – 4000	0 – 276
<b>Two-Stage</b>						
Q1-215A-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-215B-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-215C-(*)	5 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Q1-215D-(*)	7 – 300	0.5 – 21	0 – 400	0 – 28	0 – 4000	0 – 276
Q1-215E-(*)	10 – 500	0.7 – 35	0 – 600	0 – 41	0 – 4000	0 – 276

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

\*\* For low-pressure cylinders with <300 psig (21 bar), the Model 213 regulator is available with 0 – 400 psig (28 bar) cylinder gauges. Add "4G" to the model number before the specified CGA. Example: Q1-213A4G-660.

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

Model No. Q1-CAPVENTSS captured venting configuration allows for complete capture when connected to vent line

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

# 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
<b>Stainless Steel</b>						
<b>Single-Stage</b>						
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
<b>Two-Stage</b>						
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

# Tied-Diaphragm Regulators

## Ultra-High-Purity for Corrosive Service

### Model 217CP and 2172CP

Available in single or two-stage configurations, these regulators with cross purge assemblies are designed to resist attack from strong acid-forming gases. The cross purge assembly has three diaphragm packless valves and a check valve that are utilized during inert gas purging operations.

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.



### Benefits/Features

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

Cross purge assembly provides an effective means to purge the CGA fitting and regulator during cylinder changeout.

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

Threaded bonnet allows for panel mounting.

### Specifications

**Inlet Pressure:** 3000 psig (207 bar) maximum

**Operating Temperature Range:**  
-40°F to 140°F (-40°C to 60°C)

**Flow Coefficient:**  
217CP: Cv = 0.06  
2172CP: Cv = 0.05

**Supply Pressure Effect:**  
217CP: 2 psi per 100 psi (0.1 bar per 7 bar)  
2172CP: 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 configurations

**Gauge:** 2" (53 mm) face

**Weight:** 4.4 lbs. (1.9 kg)

### Materials of Construction

**Body:** 316 Stainless Steel

**Diaphragm:** 316 Stainless Steel

**Seats:** PCTFE

**Seals:** PTFE

**Bonnet:** 300 Stainless Steel

**Gauges:** Stainless steel

217CP, 2172CP Stainless Steel	Delivery Pressure Range		Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar	psig	bar	psig	bar
<b>Single-Stage</b>						
Q1-217ACP-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-217BCP-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-217CCP-(*)	5 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
<b>Two-Stage</b>						
Q1-2172ACP-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-2172BCP-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-2172CCP-(*)	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