

Nickel-Plated Regulators

High-Purity for Noncorrosive Service

Model 14

Model 14 Series regulators are recommended wherever precise, low-pressure delivery of high-purity gases is needed. Compact, two-stage design provides constant delivery pressure with no need for periodic readjustment. Nickel-plated brass construction protects gas purity and ensures long regulator life when used with noncorrosive gases.



Benefits/Features

Two-stage design eliminates the need to readjust delivery pressure as inlet pressure decreases.

Stainless steel diaphragm on the second stage minimizes diffusion of air into regulator to eliminate off-gassing.

Sintered filter protects the internal parts and extends the life of the regulator.

Low internal dead volume minimizes purge time.

Economical, with many years of proven service life.

Specifications

Inlet Pressure: 3000 psig (207 bar) maximum

Operating Temperature Range:
-20°F to 140°F (-29°C to 60°C)

Flow Coefficient: $C_v = 0.014$

Supply Pressure Effect: 0.1 psi per 100 psi
(0 bar per 7 bar)

Regulator Inlet Port: 1/4" NPT Female

Inlet Connection: Specify CGA

Outlet Connection: 1/8" NPT Female and all other configurations

Gauge Size: 1.5" (41 mm) face

Weight: 1.8 lbs. (0.8 kg)

Materials of Construction

Body: Nickel-plated brass

Diaphragm: Stainless steel

Piston: Brass

Seat: PTFE, Viton®

Seal: Viton®

Gauges: Chrome-plated brass

Bonnet: Nickel-plated brass

Model 14 Nickel-Plated Brass	Delivery Pressure Range		Flow Capacity Air scfh	Delivery Pressure Gauge		Cylinder Pressure Gauge	
	psig	bar		psig	bar	psig	bar
Q1-14B-(*)	1 – 10	0.1 – 0.7	10	0 – 15	0 – 1	0 – 3000	0 – 207
Q1-14C-(*)	2 – 50	0.1 – 4	25	0 – 100	0 – 7	0 – 3000	0 – 207
Q1-14D-(*)	2 – 100	0.1 – 7	50	0 – 160	0 – 11	0 – 3000	0 – 207

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

General Purpose Regulators

For Noncorrosive Service

Models 202 and 209

These regulators are designed for general purpose, noncorrosive service. Single-stage is recommended where inlet pressure does not vary greatly. Two-stage is ideal when constant delivery pressure is desired.



Model 202

Benefits/Features

Neoprene diaphragm permits accurate delivery pressure settings.

Outlet needle valve provides flow control.

Sintered metal filter in the seat assembly traps foreign particles and extends regulator life.

Specifications

Inlet Pressure:

202A, B, C, D; 209: 3000 psig (207 bar) max
202-300, 202-510: 400 psig (28 bar) max

Operating Temperature Range:

-40°F to 140°F (-40°C to 60°C)

Flow Coefficient:

202: Cv = 0.18

209: Cv = 0.15

Supply Pressure Effect:

202: 1 psi per 100 psi (0.1 bar per 7 bar)

209: 0.1 psi per 100 psi (0 bar per 7 bar)

Regulator Inlet Port: 1/4" NPT Female

Inlet Connection: Specify CGA

Outlet Connection: 1/4" NPT Male

and all other configurations

Gauge: 2" (53 mm) face

Weight:

202: 3.4 lbs. (1.5 kg)

209: 5.1 lbs. (2.3 kg)

Materials of Construction

Body: Brass

Diaphragm: Neoprene

Seat: PTFE

Seal: PTFE

Gauge: Brass

Bonnet: Painted zinc

Model 202, 209	Delivery Pressure Range		Flow Capacity Air	Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar		psig	bar	psig	bar
Brass			scfh				
Single-Stage							
Q1-202-300 or 510	4 – 50	0.3 – 4	750	0 – 100	0 – 7	0 – 400	0 – 28
Q1-202A-(*)	2 – 15	0.1 – 1	350	0 – 30	0 – 2	0 – 4000	0 – 276
Q1-202B-(*)	4 – 50	0.3 – 4	750	0 – 100	0 – 7	0 – 4000	0 – 276
Q1-202C-(*)	10 – 125	0.7 – 9	1000	0 – 150	0 – 10	0 – 4000	0 – 276
Q1-202D-(*)	20 – 250	1 – 17	1500	0 – 400	0 – 27	0 – 4000	0 – 276
Two-Stage							
Q1-209-(*)	2 – 15	0.1 – 1	250	0 – 30	0 – 2	0 – 4000	0 – 276
Q1-209A-(*)	4 – 50	0.3 – 4	500	0 – 100	0 – 7	0 – 4000	0 – 276
Q1-209B-(*)	10 – 125	0.7 – 9	750	0 – 150	0 – 10	0 – 4000	0 – 276
Q1-209C-(*)	20 – 250	1 – 17	1000	0 – 400	0 – 27	0 – 4000	0 – 276

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

Acetylene Regulator

For Noncorrosive Service

Model 202-510A

This regulator is designed for acetylene service. The delivery pressure gauge is red lined above 15 psig (1 bar).



Benefits/Features

Neoprene diaphragm permits accurate delivery pressure settings.

Outlet needle valve provides flow control.

Sintered metal filter in the seat assembly traps foreign particles and extends regulator life.

Limited delivery pressure adjustment does not allow delivery pressure above 15 psig (1 bar) as recommended for acetylene service.

Red lined delivery pressure gauge provides visual indication should delivery pressure exceed allowable withdrawal pressure of 15 psig (1 bar).

Specifications

Inlet Pressure: 400 psig (28 bar) maximum

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

Flow Coefficient: $C_v = 0.18$

Supply Pressure Effect:
1 psi per 100 psi (0.1 bar per 7 bar)

Regulator Inlet Port: 1/4" NPT Female

Inlet Connection: CGA 510

Outlet Connection: 1/4" NPT Male

Gauge: 2" (53 mm) face

Weight: 3.4 lbs. (1.5 kg)

Materials of Construction

Body: Brass

Diaphragm: Neoprene

Seat: PTFE

Seal: PTFE

Gauge: Brass

Bonnet: Painted zinc

Model 202-510A	Delivery Pressure Range		Flow Capacity Air	Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar		psig	bar	psig	bar
Brass			scfh				
Q1-202-510A	2 – 15	0.1 – 1	350	0 – 30	0 – 2	0 – 400	0 – 28

Chrome-Plated Regulators

High-Purity for Noncorrosive Service

Models 205 and 211

Chrome-plated regulators are designed for high-purity laboratory applications involving noncorrosive gases. 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 is recommended for use where constant delivery pressure is desired.



Model 211

Benefits/Features

Stainless steel diaphragm minimizes diffusion of air into regulator and eliminates off-gassing.

High-purity regulator design permits vacuum purging of regulator.

Sintered metal filters in seat assembly trap foreign particles and extend regulator service life.

Chrome-plated surface provides polished appearance for easy cleaning.

Chrome-plated outlet valve with diaphragm seal provides on/off flow control and helps maintain gas purity.

Two-stage design ensures constant delivery pressure as inlet pressure decreases.

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: Cv = 0.18
Two-stage design: Cv = 0.15

Supply Pressure Effect:
Single-stage design: 1 psi per 100 psi
(0.1 bar per 7 bar)
Two-stage design: 0.04 psi per 100 psi
(0 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: 4.3 lbs. (1.9 kg)
Two-stage design: 5.8 lbs. (2.6 kg)

Materials of Construction

Body: Chrome-plated brass

Diaphragm: 304 Stainless Steel

Seat: PTFE

Seal: PTFE

Bonnet: Chrome-plated zinc

Gauges: Chrome-plated brass

Model 205, 211 Chrome-Plated Brass	Delivery Pressure Range		Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar	psig	bar	psig	bar
Single-Stage						
Q1-205A-(*)	2 – 15	0.1 – 1	30" Vac – 0 – 30	-1 – 0 – 2	0 – 4000**	0 – 276
Q1-205B-(*)	4 – 50	0.3 – 4	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000**	0 – 276
Q1-205C-(*)	10 – 125	0.7 – 9	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Q1-205D-(*)	20 – 250	1 – 17	0 – 400	0 – 28	0 – 4000	0 – 276
Two-Stage						
Q1-211A-(*)	2 – 15	0.1 – 1	30" Vac – 0 – 30	-1 – 0 – 2	0 – 4000	0 – 276
Q1-211B-(*)	4 – 50	0.3 – 4	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-211C-(*)	10 – 125	0.7 – 9	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Q1-211D-(*)	20 – 250	1 – 17	0 – 400	0 – 28	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 205 regulator is available with 0 – 400 psig (28 bar) cylinder gauges. Add "4G" to the model number before the specified CGA. Example: Q1-205B4G-510.

Ultra-High-Purity Regulators

For Noncorrosive Service

Models 3300 and 318

Brass regulators provide excellent service wherever precise high-pressure delivery of ultra-high-purity gases is needed. Brass construction protects gas purity and ensures long regulator service life. 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 318

Benefits/Features

- Stainless steel diaphragm minimizes diffusion of air into regulator and eliminates off-gassing.
- Brass diaphragm-sealed outlet valve provides on/off flow control and helps maintain gas purity.
- 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.

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: 1 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 design: 4 lbs. (1.8 kg)
 - Two-stage design: 5.5 lbs. (2.5 kg)

Materials of Construction

- Body:** Brass
- Diaphragm:** 316 Stainless Steel
- Seats:** PCTFE
- Seals:** PTFE
- Bonnet:** Brass
- Gauges:** Brass

Model 3300, 318	Delivery Pressure Range		Delivery Pressure Gauge (dual scale)		Cylinder Pressure Gauge (dual scale)	
	psig	bar	psig	bar	psig	bar
Brass						
Single-Stage						
Q1-3300A-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-3300B-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-3300C-(*)	4 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Q1-3300D-(*)	7 – 300	0.5 – 21	0 – 400	0 – 28	0 – 4000	0 – 276
Q1-3300E-(*)	10 – 500	0.7 – 35	0 – 600	0 – 41	0 – 4000	0 – 276
Two-Stage						
Q1-318A-(*)	1 – 30	0.1 – 2	30" Vac – 0 – 60	-1 – 0 – 4	0 – 4000	0 – 276
Q1-318B-(*)	2 – 75	0.1 – 5	30" Vac – 0 – 100	-1 – 0 – 7	0 – 4000	0 – 276
Q1-318C-(*)	4 – 150	0.3 – 10	30" Vac – 0 – 200	-1 – 0 – 14	0 – 4000	0 – 276
Q1-318D-(*)	7 – 300	0.5 – 21	0 – 400	0 – 28	0 – 4000	0 – 276
Q1-318E-(*)	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.

- Options: Model No. Q1-HLRI helium leak rate certification
- Model No. Q1-CAPVENTBR captured venting configuration allows for complete capture when connected to vent line
- Model No. Q1-PMNCP chrome-plated panel mounting nut