

Instrument Regulators

For Noncorrosive/Corrosive Service

Model 23

These general purpose low-flow, high-precision regulators are compact and suitable for line or panel mounting in both industrial and laboratory applications. A micrometer-type adjustment offers a precision control of delivery pressure in a nonrelieving bubble-tight shutoff design. Gauge port and filter screens in both inlet and outlet connections are standard.



Benefits/Features

UL-approved for use with air, argon, helium, hydrogen, krypton, neon, oxygen, nitrogen and xenon.

Bubble-tight shutoff at 100 psi (6.9 bar).

Inlet and outlet filter screens.

Clean room assembled.

Ideal for use at flowrates below 1 SLPM (air).

Specifications

Inlet Pressure: 250 psig (17 bar) maximum

Operating Temperature: 140°F (60°C) max

Inlet Connection: 1/8" NPT Female

Outlet Connection: 1/8" NPT Female

Gauge Size: 1.5" (41 mm) face (optional)

Weight:

23A: 0.9 lb. (0.4 kg)

23S: 0.5 lb. (0.2 kg)

Materials of Construction

Body: Aluminum or 316 Stainless Steel

Diaphragm: Buna-N

Seat: PTFE

Seal:

23A: Buna-N

23S: Viton®

Bonnet: Aluminum

Model 23		Delivery Pressure Range	
		psig	bar
Aluminum	Stainless Steel		
Q1-23A-05	Q1-23S-05	0 – 0.5	0 – 0.1
Q1-23A-10	Q1-23S-10	1 – 10	0.1 – 0.7
Q1-23A-30	Q1-23S-30	1 – 30	0.1 – 2
Q1-23A-60	Q1-23S-60	1 – 60	0.1 – 4
Q1-23A-100	Q1-23S-100	1 – 100	0.1 – 7
Q1-23A-200	Q1-23S-200	1 – 200	0.1 – 14

Option: Model 68C Series and Model 68D Series pressure gauges

Low Delivery Pressure Regulators

For Noncorrosive Service

Model 720

With extremely accurate control of delivery pressures below 10 psig (0.7 bar), these regulators are recommended for inline use with noncorrosive, low-pressure gases. Options include CGA connections for direct cylinder connection and assembly for attachment to primary regulator outlet.

Do not use these regulators with hydrogen or helium. Although these gases are compatible with the materials of construction, Air Liquide experience has shown that the seals are not sufficient to prevent leakage of those particular gases. These regulators are also not recommended for oxygen service.



Benefits/Features

Economical and reliable zinc die cast construction.

Large diaphragm for precise control of low delivery pressures.

Protective screw cap prevents accidental change to pressure adjusting screw setting.

Large easy-to-read gauge.

Specifications

Inlet Pressure: 250 psig (17 bar) maximum

Operating Temperature Range: -40°F to 165°F (-40°C to 73°C)

Inlet Connection: 1/4" NPT Female

Outlet Connection: 1/4" NPT Male

Gauge Size: 2.5" (67 mm) face

Weight: 4 lbs. (1.8 kg)

Materials of Construction

Body: Zinc die cast

Diaphragm: Buna-N

Seat: Buna-N

Seal: Buna-N, PTFE

Gauge: Phosphor bronze

Bonnet: Zinc die cast

Model 720	Delivery Pressure Range		Delivery Pressure Gauge	
	psig	bar	psig	bar
Zinc Die Cast				
Q1-720-(*)	4" – 8" WC**	—	0 – 35" WC	—
Q1-720B-(*)	0.5 – 1**	0 – 0.1	0 – 32 oz	0 – 0.1
Q1-721-(*)	1 – 5	0.1 – 0.3	0 – 15	0 – 1
Q1-722-(*)	5 – 10	0.3 – 0.7	0 – 15	0 – 1
Q1-723-(*)	10 – 15	0.7 – 1	0 – 30	0 – 2

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

** These models require inlet pressures below 50 psig to be able to provide the full delivery pressure range. Use a Model 202 regulator to reduce higher inlet pressures down to approximately 50 psig (4 bar).

Ultra-High-Purity Regulators

For Noncorrosive/Corrosive Service

Models 2700 and 2710

These single-stage regulators are designed to reduce distribution system line pressure to workable levels and handle inlet pressures up to 3000 psig (207 bar). The Model 2700 is perfect for high-flow applications and the Model 2710 is for low-flow. Select brass for noncorrosive gas service and stainless steel for corrosive service.



Model 2710

Benefits/Features

Threaded bonnet allows for easy panel mounting.

Threaded holes in rear of regulator allow for front panel mounting.

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

Port arrangement for 2700 is two inlets and two outlets. For 2710, it is one inlet and two outlets.

Specifications

Inlet Pressure: 3000 psig (207 bar) maximum

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

Flow Coefficient:
2700: Brass: Cv = 0.4
Stainless Steel: Cv = 0.6

2710: Cv = 0.06

Supply Pressure Effect:
2700: 1 psi per 100 psi (0.1 bar per 7 bar)
2710: 2 psi per 100 psi (0.1 bar per 7 bar)

Regulator Inlet Port: 1/4" NPT Female

Inlet Connection: 1/4" compression fitting

Outlet Connection: 1/4" compression fitting

Gauge:
2700: 2.5" (68 mm) face
2710: 2" (53 mm) face

Weight:

2700: Brass: 4.5 lbs. (2 kg)
Stainless Steel: 4.1 lbs. (1.9 kg)
2710: Brass: 2.3 lbs. (1 kg)
Stainless Steel: 2.4 lbs. (1.1 kg)

Materials of Construction

Body: Brass or 316 Stainless Steel

Diaphragm:
2700B: 302 Stainless Steel
2700S, 2710B, 2710S: 316 Stainless Steel

Seat:
2700B: PTFE
2700S, 2710B, 2710S: PCTFE

Seals: PTFE

Bonnet: Brass or 300 Stainless Steel

Gauges: Brass or stainless steel

Model 2700, 2710		Delivery Pressure Range		Delivery Pressure Gauge (dual scale)	
		psig	bar	psig	bar
Brass	Stainless Steel				
Low-Flow					
Q1-2710B	Q1-2710S	1 – 30	0.1 – 2	0 – 60	0 – 3
Q1-2711B	Q1-2711S	2 – 100	0.1 – 7	0 – 200	0 – 14
Q1-2712B	Q1-2712S	5 – 300	0.3 – 21	0 – 400	0 – 28
Q1-2713B	Q1-2713S	10 – 500	0.7 – 35	0 – 600	0 – 41
High-Flow					
Q1-2700B	Q1-2700S	1 – 30	0.1 – 2	0 – 60	0 – 3
Q1-2701B	Q1-2701S	2 – 75	0.1 – 5	0 – 100	0 – 7
Q1-2702B	Q1-2702S	5 – 150	0.3 – 10	0 – 200	0 – 14
Q1-2703B	Q1-2703S	7 – 300	0.5 – 21	0 – 400	0 – 28

Please note: If higher flowrates are required, please contact your Air Liquide representative about the Model 2700HF series regulator.

Options: Model No. Q1-PMNCP chrome-plated panel mounting nut for Model 2700S

Model No. Q1-PMN brass panel mounting nut for Model 2700B

General Purpose Line Regulator

For Noncorrosive Service
Models 2720

Scott™ Brand Model 2720 Gas Pressure Regulators are designed for inert gases used in line applications at inlet pressures up to 3000 psig (207 bar). These economical regulators are recommended for general purpose laboratory or industrial use such as purging, blanketing or pressure testing where high-purity is not a consideration. They are not recommended for GC carrier gases or applications that may be sensitive to trace hydrocarbon, oxygen or moisture contamination in the gas stream. For applications such as these requiring high-purity specialty gases, we recommend using Scott brand Model 2710 regulators.



Benefits/Features

Filter in-seat assembly traps foreign matter, extends regulator life and reduces maintenance
Neoprene diaphragm permits accurate delivery pressure settings
In-line porting permits direct installation of regulator in piping systems
Compression fittings installed in inlet and outlet ports allow connection to 1/4" tubing

Specifications

Inlet Pressure:
3000 psig (207 bar) maximum
Operating Temperature Range:
-40°F to 140°F (-40°C to 60°C)
Flow Coefficient: Cv = 0.17
Regulator Inlet Port: 1/4" NPT Female
Inlet Connection: 1/4" compression fitting
Outlet Connection: 1/4" compression fitting
Filter: 10 micron
Gauge Size: 2" (53 mm) face
Weight: 3 lbs. (1.4 kg)

Materials of Construction

Body: Brass
Diaphragm: Neoprene
Seats and Seals: PTFE
Bonnet: Painted zinc
Filter: Nickel-plated sintered bronze
Gauge: Brass

Model 2720	Delivery Pressure Range		Delivery Pressure Gauge (dual scale)	
	psig	bar	psig	bar
Brass				
Q1-2720B	2 – 15	0.1 – 1	0 – 30	0 – 2
Q1-2721B	4 – 50	0.3 – 4	0 – 60	0 – 4
Q1-2722B	10 – 125	0.7 – 9	0 – 150	0 – 10
Q1-2723B	20 – 250	1 – 17	0 – 400	0 – 27

Options: Model 65-44M Pressure Relief Valve protects regulator components from over-pressurization.