

Stainless Steel Two-Stage Models (Threadless Seat)

High-Purity

PRESSURE REGULATORS

Description: This series of stainless steel two-stage high-purity regulators is designed for non-corrosive analytical, mildly corrosive and process applications requiring precise, stable delivery pressure control. The two-stage design yields a delivery pressure change of less than 0.01/100 psi inlet change.

Convolute Hastelloy C-22 diaphragms provide excellent regulating characteristics and allow for internal vacuum purging. The metal-to-metal diaphragm seal prevents contamination by eliminating the need for a soft seal and provides a leak-rate design of less than 2×10^{-8} ccs helium. This minimizes cleanup time in vacuum purging and yields lower residual contaminant levels.

A diaphragm packless outlet valve with a 1/4" compression-tube fitting is provided for flow control and to maintain system purity. Captured bonnet ports with optional vent adaptors are standard on both stages and allow the venting of hazardous gases in the event of diaphragm failure. These regulators are ultrasonically cleaned for the most demanding high-purity service.



Design Features

- Convolute Hastelloy® C-22 Diaphragms** provide superior leak integrity without contamination from a non-metallic liner or seal.
- Bonnet Vent Ports** (with optional bonnet vent adaptors) allow venting of hazardous gases in the event of diaphragm failure.
- Standard Threaded Bonnet** (with optional collar-mount nuts) for easy panel mounting.
- Diaphragm Packless Valve** (with 1/4" Compression fitting) promotes system purity.
- Threadless Seat Design** provides longer regulator life.

Specifications	
Maximum Rated Inlet Pressure	4,000 psig
Outlet Pressure Ranges	0-10, 0-30, 0-60, 0-100, 0-250 psig
Flow Capacity	Cv=0.06
Ambient Operating Temperature	-40° F to +150° F
Designed Leak Rate	bubble tight
Weight	4 lbs
Ports (6)	1/4" FNPT
Inlet	1/4" FNPT
Outlet	1/4" Compression
Decay Inlet Characteristic	0.01/100 psi

Materials	
Body	316 Stainless Steel
Bonnet	Nickel-Plated Brass
Seat	PCTFE
Diaphragm	Hastelloy C-22
Gauges	2 1/2" Stainless Steel
Filter	316 Stainless Steel
Outlet Valve	316 Stainless Steel
Trim	316 Stainless Steel
Poppet Spring	Inconel

Ordering Information

Product Number	Material	Max Inlet Pressure (psig)	Max Outlet Pressure (psig)	Capacity (scfh @ Max Del. Pressure)	Inlet Gauge Range (psig)	Delivery Gauge Range (psig)
Y12-C445AA (CGA)	316 SS	4,000	10	165	0-4,000	30" Hg-0-30
Y12-C445A (CGA)	316 SS	4,000	30	190	0-4,000	30" Hg-0-30
Y12-C445B (CGA)	316 SS	4,000	60	270	0-4,000	0-100
Y12-C445D (CGA)	316 SS	4,000	100	380	0-4,000	0-200
Y12-C445F (CGA)	316 SS	4,000	250	525	0-4,000	0-400

Available Options

Product Number	Description
Y99-CHROMNUT	Panel Mounting Nut
Y99-BONNETADP	Bonnet Vent Adaptor
Y99-4VCR	1/4" VCR® connection on Inlet/Outlet (VCR x 1/4" MNPT)
Y15-QMS1	Quick Mounting Option for 1 Cylinder
Y15-QMS2	Quick Mounting Option for 2 Cylinders