

PRESSURE REGULATORS

Ultra High-Purity

Ultra High Purity Stainless Steel Single-Stage Models (Threadless Seat)



Description: This series of stainless steel single-stage regulators are designed to have minimal gas paths in the regulators and prevent contaminants from entering during cylinder change out. These regulators have a check valve cylinder connection, packless diaphragm valve built into the regulator, and a 1/8" stainless steel compression fitting on the outlet. The regulator also has a unique design that causes the gas to continuously sweep the diaphragm chamber ensuring that there is no air or other contaminants in the regulator body. The diaphragm valve built into the body shortens the gas path allowing the gas to enter the process faster and without contamination. This is an excellent regulator for EPA protocol gas mixtures, as well as other mixes used in high purity applications.

Convuluted 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.

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

- Packless diaphragm valve built into the body**
- Unique internal design sweeps diaphragm cavity**
- Check valve CGA**
- Convuluted 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 1/8" Compression fitting)
promotes system purity.
- Threadless Seat Design**
provides longer regulator life.

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

Specifications	
Maximum Rated Inlet Pressure	4,000 psig
Outlet Pressure Ranges	0-30, 0-60, 0-100, 0-250, 0-500 psig
Flow Capacity	Cv=0.06
Ambient Operating Temperature	-40° F to +150° F
Designed Leak Rate	bubble tight
Weight	3 lbs
Ports (5)	1/4" FNPT
Inlet	1/4" FNPT
Outlet	1/8" Compression
Decay Inlet Characteristic	0.23/100 psi

Ultra High Purity Stainless Steel Single-Stage Models (Threadless Seat) Cont.

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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)
Y11-CHP444A(CGA)	316 SS	4,000	30	190	0 - 4,000	30Hg - 0 - 30
Y11-CHP444B(CGA)	316 SS	4,000	60	270	0 - 4,000	0 - 100
Y11-CHP444D(CGA)	316 SS	4,000	100	380	0 - 4,000	0 - 200
Y11-CHP444F(CGA)	316 SS	4,000	250	850	0 - 4,000	0 - 400
Y11-CHP444G(CGA)	316 SS	4,000	500	985	0 - 4,000	0 - 1,000

Available Options	
Product Number	Description
Y99-CHR0MNUUT	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