

PRESSURE REGULATORS

High-Purity



Stainless Steel Positive-Seal Models

These single- and two-stage positive-seal regulators feature convoluted, Hastelloy C-22 diaphragms that provide maximum sensitivity, minimum droop and a leak-tight bonnet seal. Type 316 stainless steel internal components are ultra-sonically cleaned and electropolished to a 32-Ra surface finish for applications where a contamination-free flow stream is critical. Optional 15 Ra electropolished with facesal.

A rugged, mechanical linkage connecting the diaphragm and valve stem significantly reduces the possibility of pressure creep. A PCTFE seat provides positive closure and is compatible with a wide range of mildly corrosive or corrosive gases.

Each single-stage positive-seal regulator is designed with two 10 x 32 UNF-threaded body holes for bracket or panel mounting.

Specifications

Maximum Rated Inlet Pressure	3,500 psig
Outlet Pressure Ranges	0-30, 0-60, 0-100, 0-150 psig
Flow Capacity	Cv=0.04
Ambient Operating Temperature	-40° F to +165° F
Designed Leak Rate	2 x 10 ⁻⁸ ccs (helium)
Weight	4 lbs
Ports (4)	1/4" FNPT
Inlet	1/4" FNPT
Outlet	1/4" Compression
Decay Inlet Characteristic	1.17/100 psi

Materials

Body	316 Stainless Steel
Friction Sleeve	PTFE
Seat	PCTFE
Diaphragm	Hastelloy C-22
Gauges	2 1/2" Stainless Steel
Filter	316 Stainless Steel Continuous Wire
Outlet Valve	316 Stainless Steel
Trim	316 Stainless Steel

Design Features

Tied, Convoluted Diaphragm Design

provides positive shutoff and minimizes creep.

Ultrasonic Cleansing and Electropolishing to a 32-Ra Surface Finish

allows high-purity integrity and contamination-free flow stream. (15 Ra electropolished surface is optional with facesal connections - not available with NPT or compression)

Large, Hastelloy C22 Convoluted Diaphragm

provides maximum sensitivity, minimum droop, and a leak-tight bonnet seal without the use of a contaminating soft seal.

PCTFE Seat

permits positive seat closure and provides wide media compatibility range.

Diaphragm Packless Valve (with standard 1/4" Compression fitting)

permits positive shutoff and flow control.

Optional Porting (consult Airgas)

for special port configurations: butt-welded, zero-clearance fittings (VCR®, Vaculok®, UltraSeal®, etc.) or space saving, internally machined, high-purity porting compatible with fitting styles mentioned above.

Single-Stage 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-E444A(CGA)	316 SS	3,500	0-30	875	0-4,000	30"-0-30
Y11-E444B(CGA)	316 SS	3,500	0-60	1,860	0-4,000	0-100
Y11-E444C(CGA)	316 SS	3,500	0-100	2,880	0-4,000	0-200
Y11-E444D(CGA)	316 SS	3,500	0-150	3,000	0-4,000	0-200
*Y11-E464A(CGA)	316 SS	3,500	0-30	875	0-4,000	30"-0-30
*Y11-E464B(CGA)	316 SS	3,500	0-60	1,860	0-4,000	0-60
*Y11-E464C(CGA)	316 SS	3,500	0-100	2,880	0-4,000	0-200
*Y11-E464E(CGA)	316 SS	3,500	0-150	3,000	0-4,000	0-200

* This unit incorporates a Hastelloy® C-22 stem and seat retainer and an Inconel® spring and Hastelloy C-22 diaphragm.

PRESSURE REGULATORS

High-Purity

Stainless Steel Positive-Seal Models Cont.

Two-Stage 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-E444A(CGA)	316 SS	3,500	0-30	200	0-4,000	30"-0-30
Y12-E444B(CGA)	316 SS	3,500	0-60	250	0-4,000	0-100
Y12-E444D(CGA)	316 SS	3,500	0-100	300	0-4,000	0-200

Available Options

Product Number	Description
Y15-QMS1	Quick Mounting Option for 1 Cylinder
Y15-QMS2	Quick Mounting Option for 2 Cylinders