

RG1 SERIES



ULTRA HIGH PURITY REGULATOR

- Designed for point-of-use medium flow to be used in process gas cabinets for gas companies, equipment manufactures and semiconductor manufacturers.
- Precise control of gas pressure at or near the process tool for flow rates of up to 250 SLPM at 300 PSIG inlet.
- All internal surfaces are finished with 10Ra or 5Ra to ensure minimal particle generation and entrapment. Metal-to-metal diaphragm seals provide enhanced leak tight integrity.
- Every step of assembly, welding, testing and final cleaning finished in Class 100 Cleanrooms.

SPECIFICATIONS

Fluid Media

All gases corrosive or non-corrosive or those requiring high purity regulation compatible with materials of construction. For other media, consult with factory.

Pressure Rating (Per criteria of ANSI / ASME B31.3.)

Max. rated inlet pressure	3500 or 600 PSIG (241 or 41 bar)
Outlet pressure ranges	1-30, 1-60, 1-100, 1-150 or 1-250 PSIG (.1-2.1, .1-4.1, .1-6.9, .1-10.3 or .1-17.3bar)
Design proof pressure	150% of Maximum rated pressure

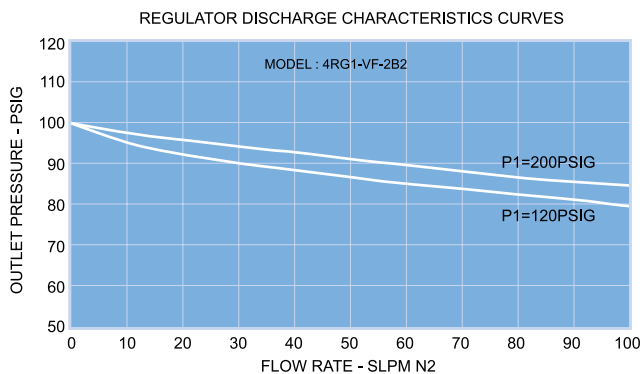
Materials in Contact with Media

Body	316L Stainless Steel with BA, Electropolish
Seat	PCTFE (PI optional for 3500 PSIG model only)
Diaphragm	Hastelloy C-22
Gas contact parts	316L Stainless Steel / Hastelloy C-22 / Inconel 750

Other Parameters

Flow coefficient	Cv = 0.06 (3500 PSIG model), Cv = 0.2 (600 PSIG model)	
Certified maximum inboard leak rate	1 x 10 ⁻⁹ atm cc / sec He	
Internal surface finish	10Ra or 5Ra microinch (.25 or .13 micrometer)	
Operating temperature	PCTFE seat	-15°F to +176°F (-26°C to +80°C)
	PI seat	-15°F to +350°F (-26°C to +177°C)
Weight (w/o gauges)	2.0lbs. (0.9kg)	

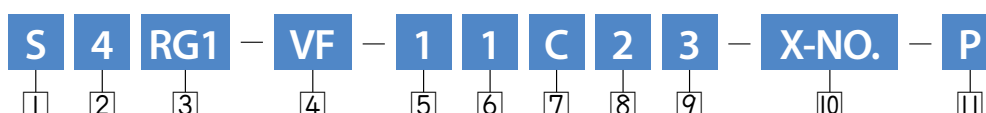
FLOW CURVES



MATERIAL

Wetted Parts	RG1 Series
Body	316L Stainless Steel
Seat Holder	316L Stainless Steel Hastelloy C-22
Main Valve	316L Stainless Steel Hastelloy C-22
Valve Spring	316 Stainless Steel Inconel 750
Valve Bush	316L Stainless Steel Hastelloy C-22
Seat	PCTFE (Option : PI)
Diaphragm	Hastelloy C-22

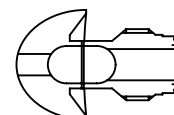
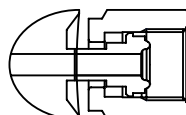
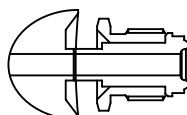
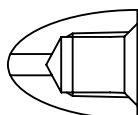
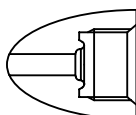
ORDERING INFORMATION



1 Material	S = 316L Stainless steel	SH = 316L Stainless steel with Hastelloy internals DH = 316L Stainless steel VAR with Hastelloy internals
2 Connection Size	4 = 1/4"	
3 Product	RG1 Series	
4 Connection Type	NF = Female NPT Thread SW = Compression Lok Fitting TW = Tube Butt Weld	VF = Female Type Face Seal VM = Male Type Face Seal VMF = Fixed Male Type Face Seal
5 Maximum Inlet Pressure	1 = 3500 PSIG	2 = 600 PSIG
6 Maximum Range of Inlet Gauge	1 = 600 PSIG 2 = 1000 PSIG 3 = 3500 PSIG	4 = 4000 PSIG Blank = No Gauge
7 Gauge Port Configuration	A = No Gauge Port (Fig. A) B = 1/4" Internal Face Seal (Fig. C) C = 1/4" Internal Face Seal (Fig. B) D = 1/4" Internal Face Seal (Fig. D) E = 1/4" Male Face Seal (Fig. D) F = 1/4" Male Face Seal (Fig. C) G = 1/4" Male Face Seal (Fig. B) H = 1/4" Female Face Seal (Fig. D)	I = 1/4" Female Face Seal (Fig. C) J = 1/4" Female Face Seal (Fig. B) K = 1/4" Fixed Male Face Seal (Fig. B) L = 1/4" Fixed Male Face Seal (Fig. C) M = 1/4" Fixed Male Face Seal (Fig. D) N = 1/4" Female NPT Thread (Fig. B) O = 1/4" Female NPT Thread (Fig. C) P = 1/4" Female NPT Thread (Fig. D)
8 Outlet Pressure Range	0 = 1 ~ 30 PSIG 1 = 1 ~ 60 PSIG 2 = 1 ~ 100 PSIG	3 = 1 ~ 250 PSIG 4 = 1 ~ 150 PSIG
9 Maximum Range of Outlet Gauge	0 = 30 PSIG 1 = 60 PSIG 2 = 100 PSIG 3 = 160 PSIG	4 = 200 PSIG 5 = 300 PSIG Blank = No Gauge
10 User Option	Customization (※Standard : Blank)	
11 Grade	Blank = BA Standard (10 Ra μinch) P = Electropolishing (5 Ra μinch) PX = Electropolishing (5 Ra μinch)	

GAUGE PORT INFORMATION

1/4" INTERNAL FACE SEAL 1/4" FEMALE NPT THREAD 1/4" MALE FACE SEAL 1/4" FEMALE FACE SEAL 1/4" FIXED MALE FACE SEAL



PORT CONFIGURATION

