

# CRR50 SERIES

Inlet to 3,000 PSIG & Outlet to 200 PSIG



## HIGH FLOW PRESSURE REGULATOR

### Features

- Corrosion & Diffusion Resistant
- Accurate & Sensitive
- Adjustable Outlet Ranges
- Full Range Capability
- Panel Mount & Self Venting Option

### Applications

- Inerting
- Process Systems
- Corrosive Atmosphere
- Control of Corrosive Gases & Liquids, Doping Gas Mixtures, Chromatograph Carrier Gases, and High Purity Gases for Crystal Growing Purge Gases
- High Flow Line Regulator for Manifold Systems

### Technical Data

#### Materials of Construction

Body	– 316 Stainless Steel
Seat	– Kel F & Stainless Steel
Seals	– Teflon® & St. Steel
Diaphragm	– 17-7 Stainless Steel
Other Metal Parts Exposed to Fluid are 316 St. Steel & Nickel Plated 302 St. Steel	
Gauges	– 316SS Bourdon Tubes/Cases
Inlet Fitting (if specified)	– 316 St. Steel

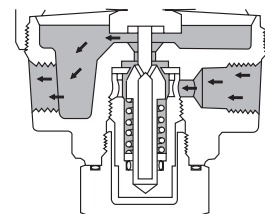
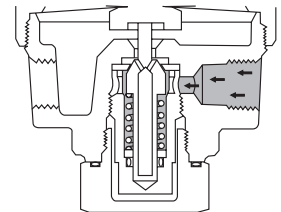
#### Temperature Range

-65°F to +180°F; -54°C to +82°C

### How It Works

#### CLOSED

The balanced poppet is spring loaded against the seat. When full upstream pressure is applied, a slightly unbalanced force is developed which enhances sealing.



#### REGULATING

As the downstream process demands flow, the downstream pressure acting on the bottom of the diaphragm decays, allowing the adjusting spring force to push the poppet down. This in turn unseats the poppet, allowing flow to begin

and the pressure under the diaphragm to increase until balance is achieved between adjusting spring force and downstream pressure. This condition continues until process demand ceases. At this point, increasing pressure overcomes the spring force, moving the diaphragm up and allowing the poppet to close.

#### Sizes & Connections

Inlet 1/4" NPT(F) or Specified CGA Fitting  
Fitting Outlet & Gauges – 1/4" NPT(F)

#### Pressure Ratings

Inlet – To 3,000 PSIG (207 BAR)  
Outlet – To 200 PSIG (14 BAR)

#### Flow Capacity

$C_v = 0.30$   
ESEOD = 0.129"

#### Weight

3.5 lbs. (with gauges)



**CIRCLE SEAL CONTROLS, INC.**

A Subsidiary of Watts Industries, Inc. • World Class Valves  
Certified to ISO 9001

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## How To Order

### CRR50 250 GPR

#### BASIC MODEL NUMBER & OUTLET PRESSURE RANGE

- CRR50 - 4 to 40 PSIG (0-3 BAR)
- CRR51 - 13 to 125 PSIG (0-9 BAR)
- CRR52 - 25 to 200 PSIG (2-14 BAR)

#### INLET PORT

- 250 - 1/4" Pipe Thread
- 580 - Typical CGA Fitting  
(Outlet Port is 1/4" Pipe Thread)

#### OUTLET CONNECTION

- G - Gauges, 316 Stainless Steel
- R - Relief Valves
- P - Panel Mount

Series Number	Inlet Gauge Range	Outlet Gauge Range	Relief Valve Set Pressure
CRR50	0-4000 PSI	Vac-100 PSI	50 PSI
CRR51	0-4000 PSI	0-200 PSI	140 PSI
CRR52	0-4000 PSI	0-400 PSI	225 PSI

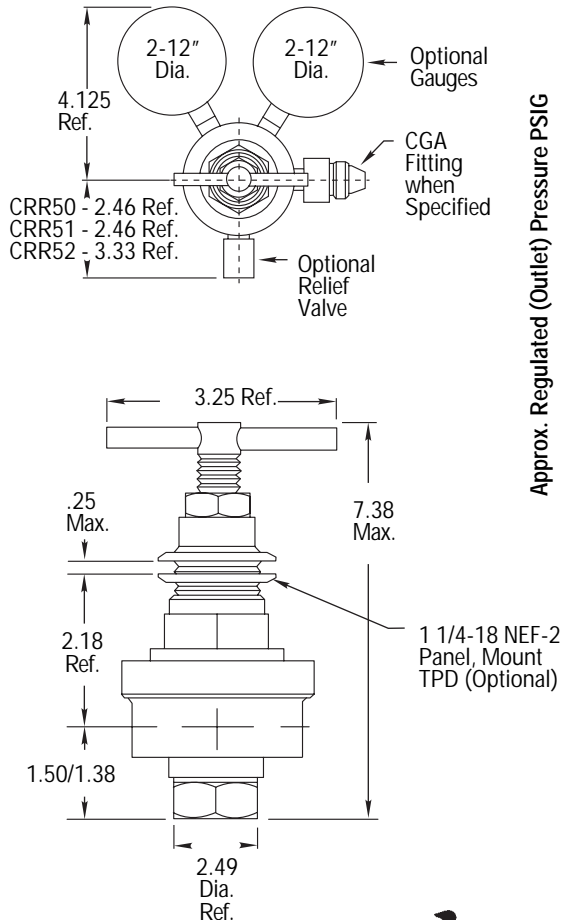
Note:

\*If this regulator is to be used in oxygen service, specify "GENERAL OXYGEN SERVICE" when ordering or furnish the factory a copy of the special requirements.

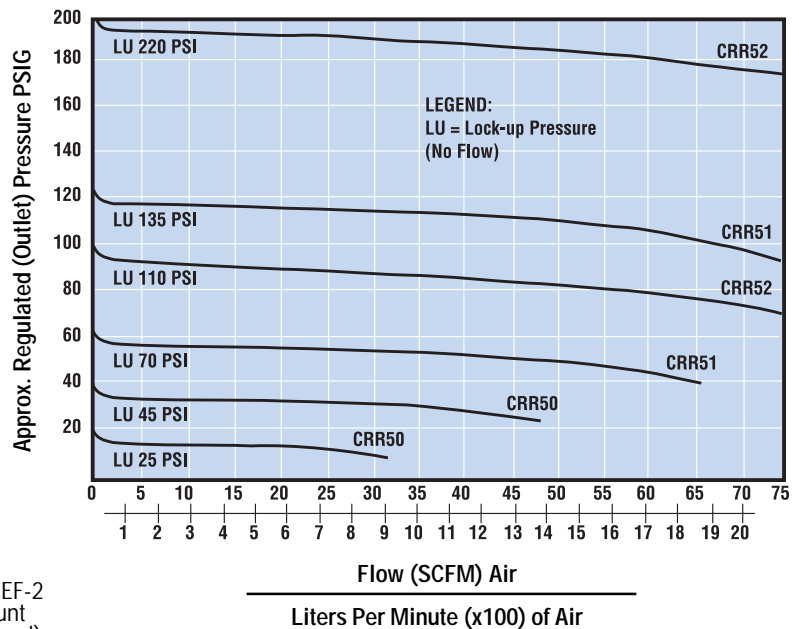
Please consult your Circle Seal Controls Distributor, Representative or the factory for information on special connections, operating pressures and temperature ranges.

Teflon® is a registered trademark of DuPont.

## Dimensions & Flow Curves



### TYPICAL FLOW CURVE



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