CIRCLE SEAL CONTROLS, INC.

GD67A Series

High Pressure Dome-loaded Regulator
Inlet & Outlet to 6,000 psig

Features

- Reliable
- Accurate
- Positive shutoff for zero-leak
- Remote operated
- Rapid response
- High pressure, medium flow
- Internal pressure load or external dome loading
- Panel mount option

Applications

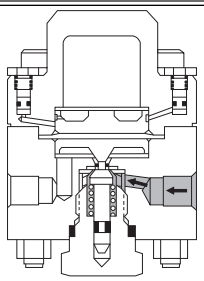
High pressure testing
Facility gas systems
Industrial gas plants
Process gas controls
Chemical/petroleum plants

Technical Data

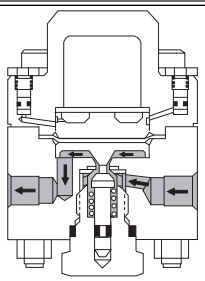
Body Construction Materials	Bronze or 303 stainless steel
Seal Materials	Neoprene, butyl, Viton® or Buna N
Seat Material	Polyimide or Kel-F®
Diaphragm Materials	Neoprene, butyl, Viton® or Buna N
Trim Material	Stainless steel
Port Size	¼″ NPT female
Pressure Ratings	Inlet/Outlet: 0 to 6,000 psig (0 to 414 BAR)
Temperature Range	–65° F to +160° F (–54° C to +71° C)
Flow Capacity	Cv = 0.37 Orifice diameter = 0.145″
Weight	• Bronze = 5.50 lbs • Stainless steel = 5.00 lbs

Note: Proper filtration is recommended to prevent damage to sealing surfaces.

How it Works



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



Regulating
Dome-loading may be accomplished by the built-in load and bleed valve combination or by an externally located pressure regulator. As the downstream process demands flow, the decreasing pressure (acting on the outlet side of the diaphragm) allows the dome pressure force to push the diaphragm and lower plate down which, in turn, unseats the poppet. This action permits flow to start and the pressure under the piston to gradually increase until balance is achieved between dome pressure forces and opposing downstream pressure forces. The modulation of the poppet position continues in this manner until process flow demand ceases. The diaphragm is then moved in an upward direction, thus allowing the spring-loaded poppet to close off flow from the upstream side of the regulator.

Circle Seal Controls
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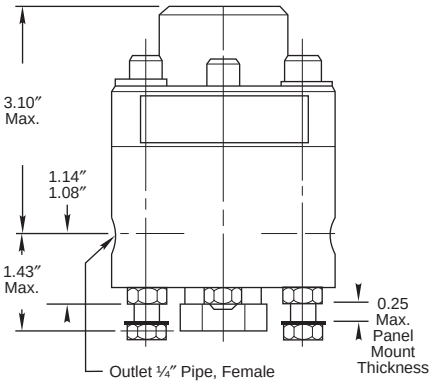
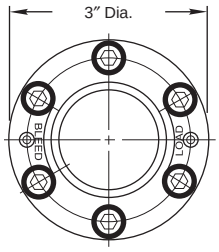
pressure regulators

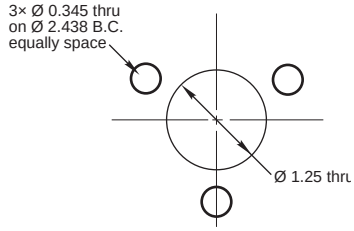
GD67A Series

Dimensions





Panel Mount Detail



How to Order

K/ GD67A E B 4 1 5 2 P

REPAIR KIT — **K/**

DOME-LOADING
- **E** External
- **I** Internal

INLET PORT
- **B** Bronze
- **T** 303 stainless steel

INLET/OUTLET PORT
- **4** ¼″ NPT female

SPECIAL FEATURES
- **P** Panel mounting (see below)

CLEANING LEVELS
- **1** For general oxygen service
- **2** For general pneumatic service
- **3** To customer specifications

SEAT MATERIAL
- **2** Kel-F®
- **5** Polyimide (Vespel® SP-21)

DIAPHRAGM & SEAL MATERIAL
- **1** Neoprene (standard)
- **2** Butyl
- **3** Viton®
- **4** Buna N

* *Adapter can be used to accommodate other port configurations*

** *For oxygen service, use Vespel® SP-21 seat, diaphragm and seals to be Viton® only. Temperature range: –20° F to +250° F.*

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

For Your Safety

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.