

# GD62C & GD65C Series

*Internally Dome-loaded Regulator  
Inlet & Outlet to 7,000 psig*



## Features

- Bubble-tight seal
- High pressure
- Constant rapid delivery

## Applications

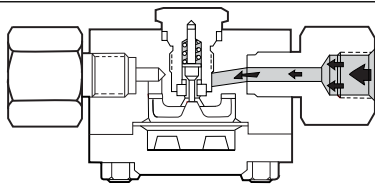
- Breathing systems
- Research laboratories
- Aircraft servicing
- Facility gas systems
- Industrial gas products
- Process gas control

## Technical Data

<b>Body Construction Material</b>	Bronze
<b>Seal &amp; Diaphragm Materials</b>	Neoprene or Viton®
<b>Seat Material</b>	Nylatron® or Vespel® SP-21
<b>Gauge Material</b>	Brass, 2½" diameter
<b>Port Sizes</b>	¼", ½" pipe, AND10050-4 or -8 or CGA fittings
<b>Pressure Ratings</b>	Inlet/Outlet: • GD62C Series: to 3,500 psig (241 BAR) • GD65C Series: to 7,000 psig (483 BAR)
<b>Temperature Range</b>	-65° F to +160° F (-54° C to +71° C)
<b>Flow Capacity</b>	Cv = 0.17 Orifice diameter = 0.095"
<b>Weight</b>	• GD62C = 7.00 lbs • GD65C = 10.25 lbs

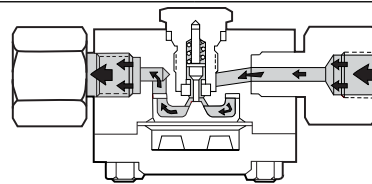
*Note: Proper filtration is recommended to prevent damage to sealing surfaces.*

## How it Works



### Closed

The unbalanced poppet is spring-loaded against the valve seat. Dead-tight sealing is ensured by a considerable force when full upstream pressure is applied over the entire effective area of the seating diameter.



### Regulating

Dome-loading may be accomplished by the built-in load and bleed valve combination. The rate of pressurization of the dome may be adjusted by the small screw-type needle valve located on the side of the unit.

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.

The described 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.

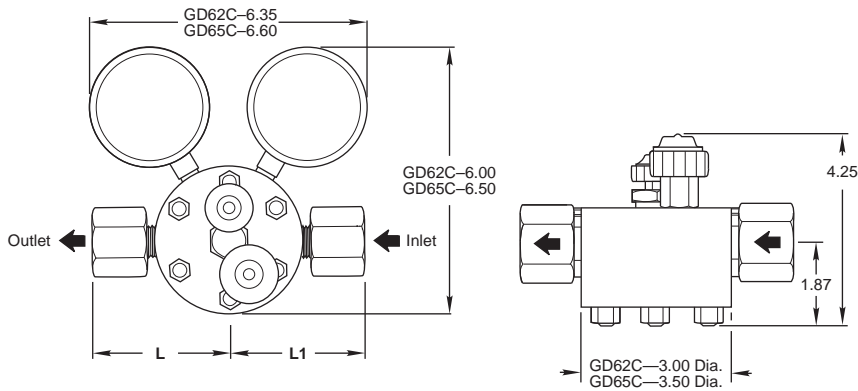
The modulation of the poppet position continues in this matter until process flow demand ceases. The diaphragm is then moved in an upward direction, thus allowing the spring-loaded poppet to close off flow from the upstream side of the regulator.

## Circle Seal Controls

2301 Wardlow Circle • Corona, CA 92880  
Phone (951) 270-6200 • Fax (951) 270-6201  
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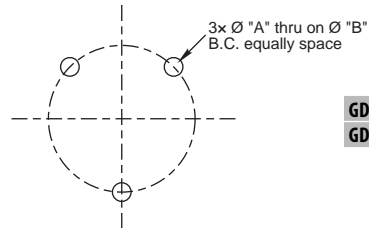
# GD62C & GD65C Series

## Dimensions & Flow Curves



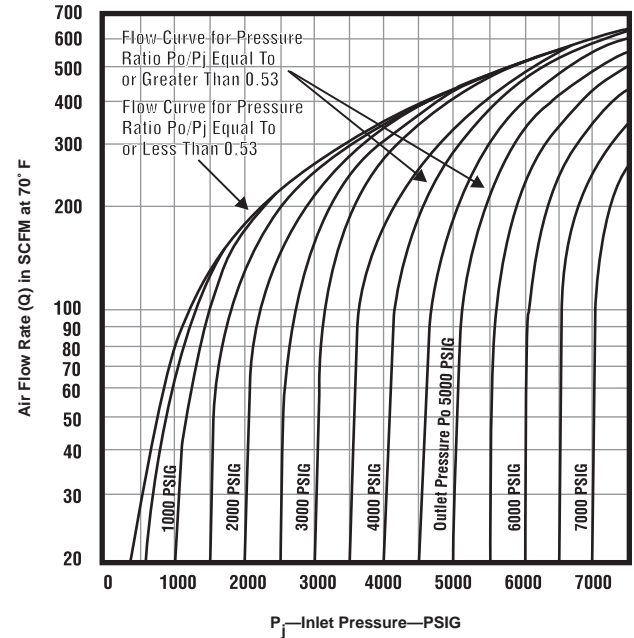
Connection	Dim	GD62C	GD65C
-1	L, L1	2.75	2.90
-2	L, L1	3.00	3.15
-3	L, L1	2.57	2.72
-4	L, L1	3.00	3.15
-7 & -8	L1	4.20	4.35

### Panel Mount Detail



	A	B
GD62C	0.328	2.437
GD65C	0.390	2.812

### Air Flow Chart



### Correction factors for gases other than air:

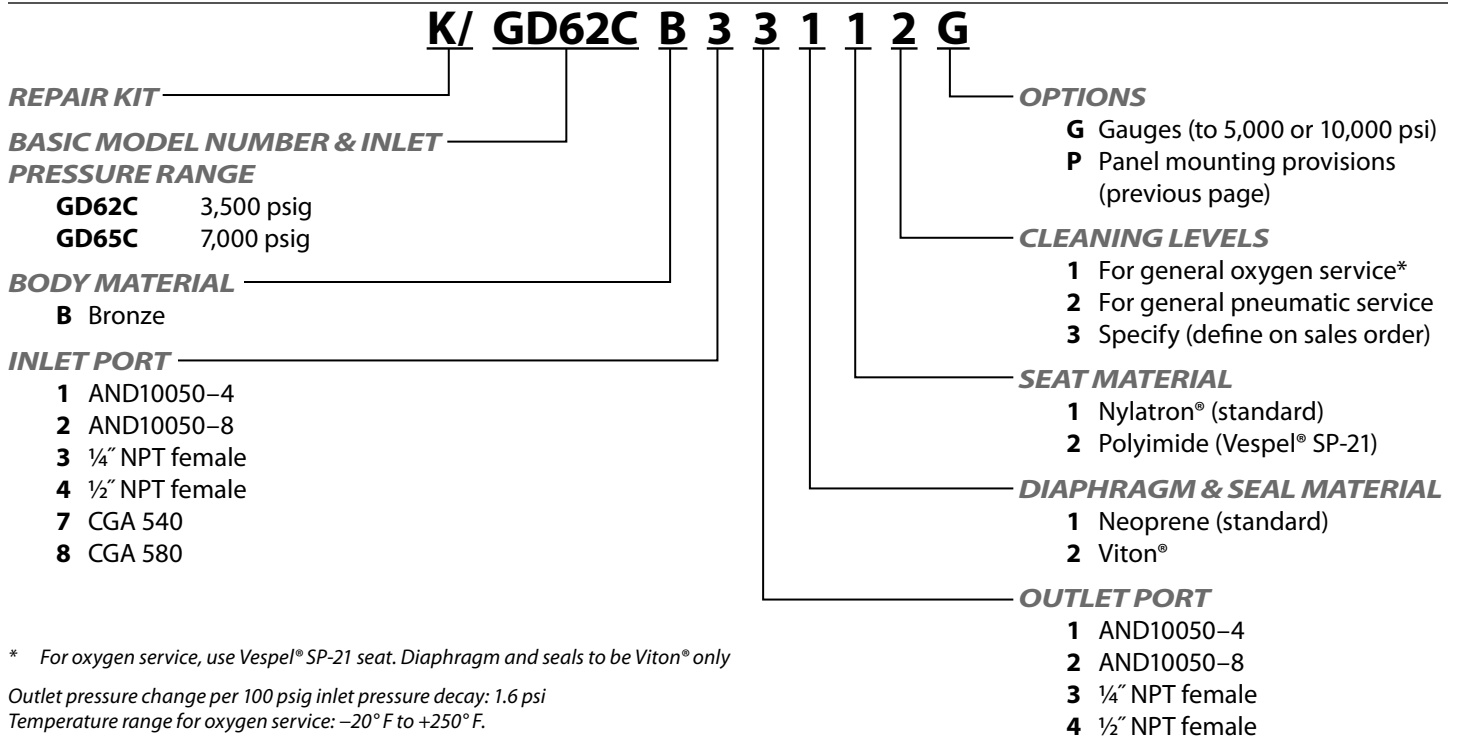
Gas	Correction Factor
Air	1.000
Helium	2.690
Hydrogen	3.795
Nitrogen	1.016
Oxygen	0.951

### Flow rates for gases other than air:

Air Flow Rate (Q) × correction factor

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## How to Order



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.

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 Nylatron® is a registered trademark of DSM Engineering Plastic Products.