

# GD720 Series

*High Pressure, Manually Controlled Dome Loaded Pressure Regulator  
Inlet 0 to 10,000 psig & Outlet 5 to 6,000 psig*



## Features

- Full range capability
- Single hand wheel control
- Balanced poppet insures accuracy
- Integral vent valve
- Precise Dome Control

## Applications

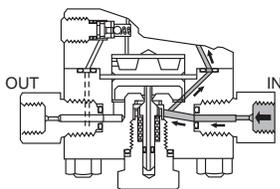
- Air compressor systems
- Oxygen system charging
- Aircraft tire struts
- Aircraft component pressure testing

## Technical Data

<b>Body Construction Materials</b>	Bronze or stainless steel
<b>Seat Material</b>	VespeI® SP-21
<b>Seals &amp; Diaphragm Material</b>	Neoprene
<b>Adjustment Spring Material</b>	Zinc chromate over black oxide high carbon steel
<b>Valve Spring Material</b>	Stainless steel
<b>Other Components</b>	Same as body material, stainless steel & PTFE
<b>Port Sizes</b>	¼", ½" NPT female; ¼", ⅝" Aminco, AND10050'4 or AND10050-8
<b>Pressure Ratings</b>	Maximum inlet pressure: • Bronze: 7,000 psig (483 BAR) • Stainless steel: 10,000 psig (690 BAR) Maximum outlet pressure: 6,000 psig (414 BAR)
<b>Temperature Range</b>	-65° F to +160° F (-54° C to +71° C)
<b>Flow Capacity</b>	Cv = 0.44 Orifice diameter = 0.155"
<b>Weight</b>	11 lbs

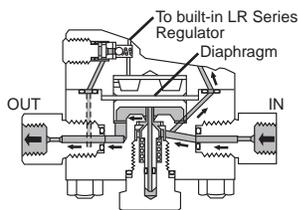
*Note: Proper filtration is recommended to prevent damage to sealing surfaces.  
Pressure rises only .2 psi per 100 psi inlet pressure decay.*

## How it Works



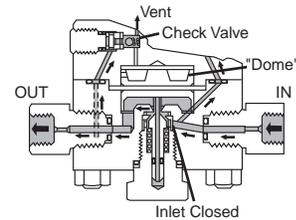
### Closed

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



### Venting

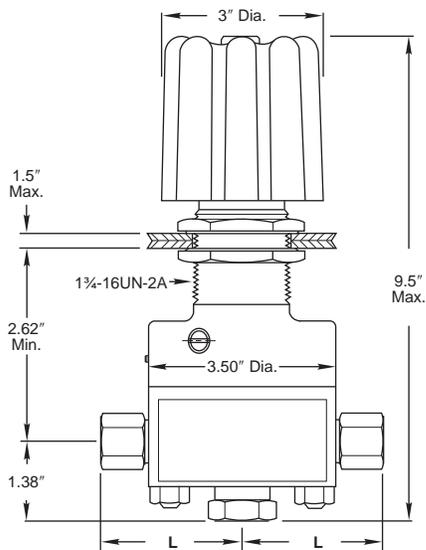
If the downstream pressure should increase beyond regulation set point, or handle is backed off to decrease regulated pressure level, downstream and dome pressure will vent through check valve and through the built-in LR Series regulator.

## Circle Seal Controls

2301 Wardlow Circle • Corona, CA 92880  
Phone (951) 270-6200 • Fax (951) 270-6201  
www.circlesealcontrols.com

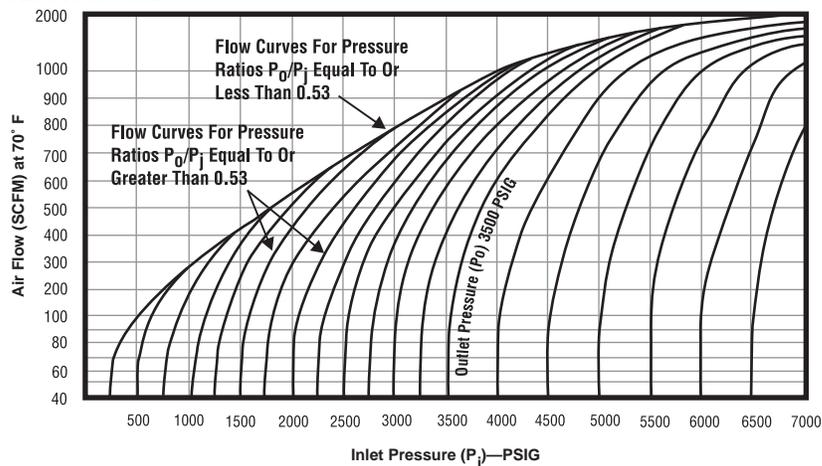
# GD720 Series

## Dimensions & Flow Curve



Port Size	L
AND10050-4	2.90
AND10050-8	3.16
1/4" NPT female	2.72
1/2" NPT female	3.16
1/4" Aminco	2.90
3/16" Aminco	3.34

### 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

## How to Order

**K/ GD72 0 B 3 3 2 D**

### REPAIR KIT

### OUTLET PRESSURE

- 0** 20 to 3,600 psig (1.40 to 248 BAR)
- 1** 15 to 2,000 psig (1.04 to 138 BAR)
- 2** 10 to 800 psig (0.69 to 55 BAR)
- 3** 5 to 200 psig (0.35 to 14 BAR)
- 4** 40 to 6,000 psig (2.76 to 414 BAR)

### BODY MATERIAL

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

### INLET PORT

- 1** AND10050-4
- 2** AND10050-8
- 3** 1/4" NPT female
- 4** 1/2" NPT female
- 5** 1/4" Aminco
- 6** 3/16" Aminco

### OPTIONS

- D** 1/8" NPT female, dome pressure tap port
- G** Gauges, 2 1/2" brass only  
1/4" NPT female gauge port

### CLEANING LEVELS

- 1** General oxygen service
- 2** General pneumatic service
- 3** Specify (define on sales order)
- 4** Precision pneumatic service

### OUTLET PORT

- 1** AND10050-4
- 2** AND10050-8
- 3** 1/4" NPT female
- 4** 1/2" NPT female
- 5** 1/4" Aminco
- 6** 3/16" Aminco

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.