

GD720 Series

*High Pressure, Manually Controlled Pressure Reducing 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

Applications

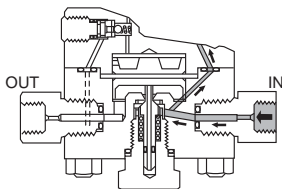
- Air compressor systems
- Oxygen system charging
- Aircraft tire struts
- Aircraft component pressure testing

Technical Data

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

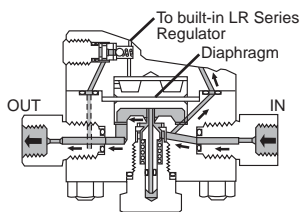
Note: Proper filtration is recommended to prevent damage to sealing surfaces.

How it Works



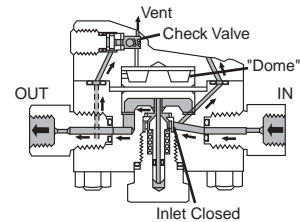
Closed

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

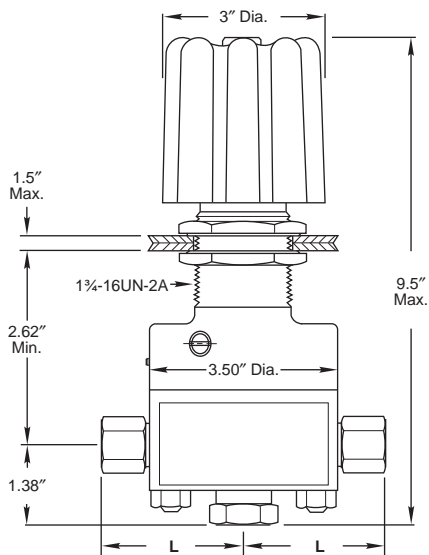
If the downstream pressure should increase beyond regulation set point, or handle is backed off to decrease regulated pressure level, downstream and dome pressure will vent through check valve and through the built-in LR Series regulator.

Circle Seal Controls

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

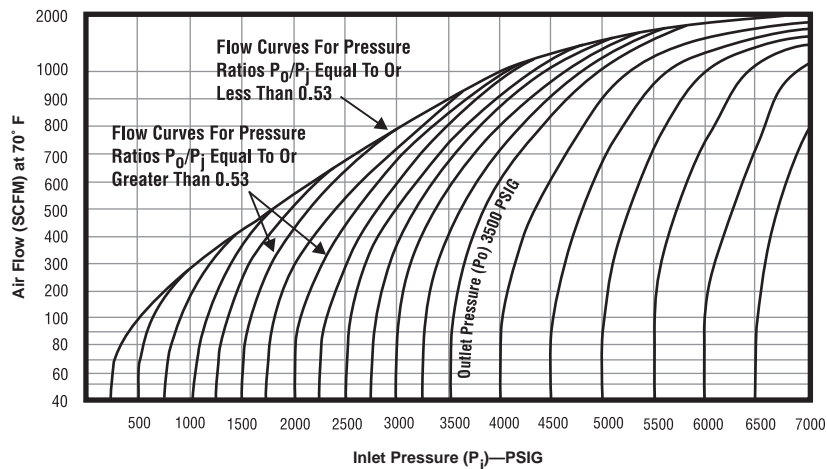
GD720 Series

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
5/16" 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** 5/16" 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** 5/16" 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.