GO REGULATOR, INC.
A division of CIRCOR International, Inc.

DL-50

Dome Loaded Pressure Regulator

The DL-50 is a compact and robust design which employs a unique “Dual Piston” set up that enables the users to control pressures up to 6,000 psig with as little as 100 psig of dome pressure. All of this is accomplished within the smallest envelope the industry has to offer.

The regulator portion of this unit was patterned after the time tested PR-50 Series, which is widely recognized as a benchmark of performance and quality. Offering the utmost in economy and safety, this unit is constructed from 316L stainless steel. A carefully engineered diaphragm/ piston sensor unit offers good sensitivity and repeatability.

Completing this design is the addition of an anodized aluminum (316 stainless steel optional) dome unit. The inlet ring to the dome is freely rotating and captured by a high tensile snap ring. This feature allows easy positioning and alignment of the dome gas line within a customer’s system while maintaining excellent leak integrity.

Features & Specifications

- Gas or liquid service
- 316L stainless steel construction; brass and Monel optional
- Better than 25 Ra finish in diaphragm cavity
- 20 micron inlet filter
- Bubble tight shutoff
- Dome ratios 11.5:1, 20:1
- Inlet/outlet ports 1/4” FNPT (Standard)
- Diaphragm type sensing
- Remote dome loading
- C_V flow coefficients: 0.025, 0.06, 0.2
- Outlet pressures upto 2000 psig

Applications

- Pilot plant
- Off-shore oil and gas rigs
- Pneumatic test benches
- Component testing
- R and D systems
- High pressure booster systems

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DL-50
Dome Loaded Pressure Regulator

How to Order
See page 3 for standard configurations. For additional configurations, consult factory.
See page 4 for port locations.

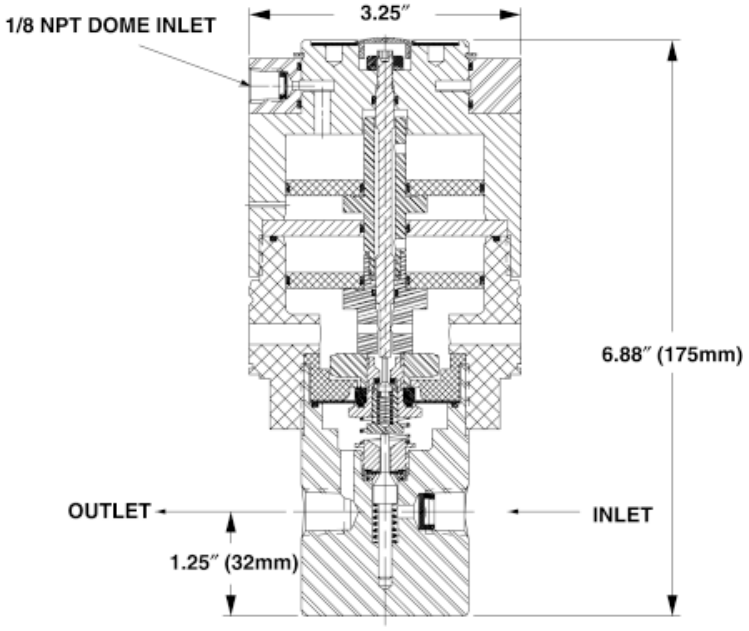
Maximum Temperature & Operating Inlet Pressures

Nylon Diaphragm Backing			
Seat Material	**Maximum Temperature**	**@**	**Maximum Operating Inlet Pressure**
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High Density Teflon®	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (Formerly Kel-F-81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK	175° F (80° C)	@	6000 psig (41.37 MPa)

Teflon Diaphragm Backing			
Seat Material	**Maximum Temperature**	**@**	**Maximum Operating Inlet Pressure**
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High Density Teflon®	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (Formerly Kel-F-81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	350° F (177° C)	@	6000 psig (41.37 MPa)
PEEK	350° F (177° C)	@	6000 psig (41.37 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions



Weight - 5.1 lbs (2.31 kg)

DL-50 Series - Pressure Reducing Regulator

Material of Body

1	SS 316L
2	Brass
4	Monel

Port Configuration (see page 13)

STANDARD BODY "A" (ONE INLET PORT AND ONE OUTLET PORT)

A	

Process port types (gauge port type, if specified)

1	1/4" FNPT (1/4" FNPT Gauge Ports)
2	1/4" Tube (1/4" Tube Gauge Ports)
4	3/8" FNPT (1/4" FNPT Gauge Ports)
7	AN 10050-4 (1/4" FNPT Gauge Ports)
8	SAE J514 (1/4" FNPT Gauge Ports)
9	M/S 33649 (1/4" FNPT Gauge Ports)
F	1/4" Aminco (1/4" FNPT Gauge Ports)
K	1/4" Sch 40 Pipe (1/4" FNPT Gauge Ports)

Surface Finish of Diaphragm Cavity

1	<25 Ra
5	<25 Ra with 10-32 Mounting Holes

Seat Material

A	Tefzel
C	Polyimide
H	PCTFE (formerly Kel-F 81)
I	High Density Teflon
Q	PEEK

Flow Coefficient (Cv)

3	0.06
5	0.2
C	0.025

Dome Ratio

1	11.5 : 1
2	20 : 1

Diaphragm Type

1	Non Self Relieving
3	Self Relieving

Diaphragm Facing / Backing

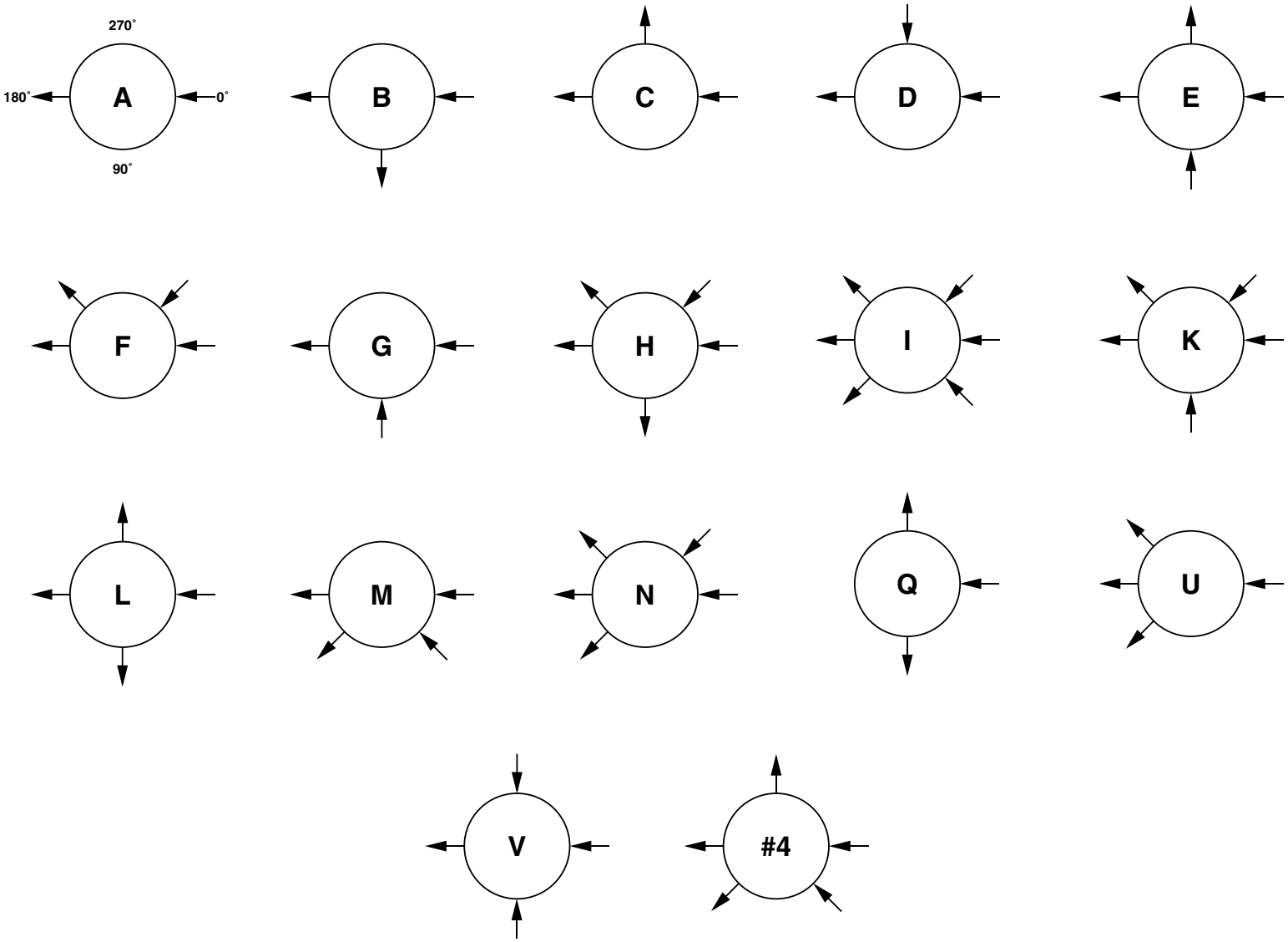
	Facing	Backing	O-Rings	Actuator
1	SS	Nylon	Viton	SS
2	None	Nylon	Teflon	SS
3	Polyimide	Nylon	Viton	SS
4	SS	Nylon	Viton	SS
5	None	Nylon	Teflon	Monel
6	Polyimide	Nylon	Teflon	SS
7	Inconel	Nylon	Viton	Monel
8	Inconel	Nylon	Teflon	Monel
B	None	Nylon	Viton	Monel
H	None	Nylon	Viton	SS
Q	SS	Teflon	Teflon	SS
V	Inconel	Teflon	Teflon	Monel

Dome Style

1	Standard, Aluminum
2	Captured Vent, Aluminum
3	S.S.
4	Captured Vent, S.S.

D L 5 0 -										
	Material	Port Config.	Port Style	Cavity Finish	Seat Material	Flow (Cv)	Control Range	Diaphragm Type	Diaphragm Material	Cap Assembly

SINGLE STAGE
PRESSURE REDUCING & BACK PRESSURE
PORTING CONFIGURATIONS



ARROW POINTING TOWARD BODY IS INLET
ARROW POINTING AWAY FROM BODY IS OUTLET