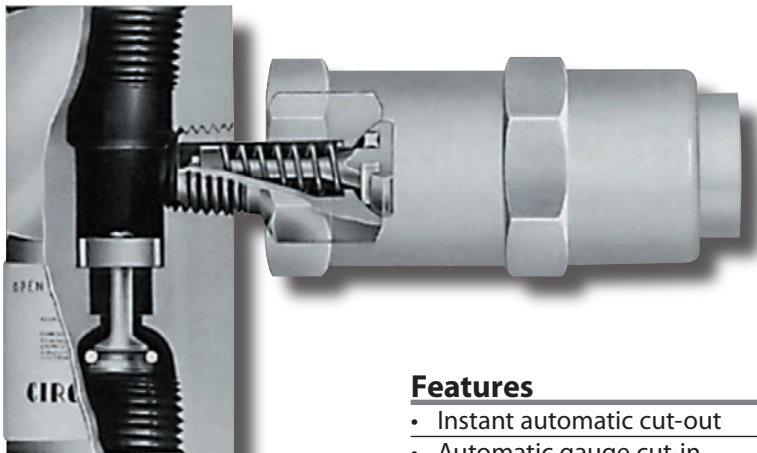


# 1100 Series

4 to 2400 Cut-out Pressure Gauge Protectors



## Features

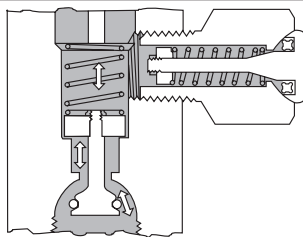
- Instant automatic cut-out
- Automatic gauge cut-in
- Protection against surge or shockwaves
- Snubbing action to reduce shock to gauge
- Contact seals to ensure precise, unfailing operation

## Technical Data

<b>BODY CONSTRUCTION MATERIALS</b>	Aluminum, brass, steel, 303 stainless steel
<b>O-RING MATERIALS</b>	Buna N, neoprene, Teflon® and Viton®
<b>OPERATING PRESSURE</b>	0 to 6000 psig (414 bar)
<b>PROOF PRESSURE</b>	10,000 psig (690 bar)
<b>RATED BURST PRESSURE</b>	20,000 psig (1,379 bar) minimum
<b>TEMPERATURE RANGE</b>	-100° F to +450° F (-73° C to +232° F) <i>Based on o-ring &amp; body material, see "How to Order"</i>
<b>LEAKAGE</b>	None

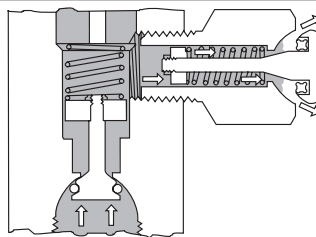
*Note: Proper filtration is recommended to prevent damage to sealing surfaces.*

## How it Works



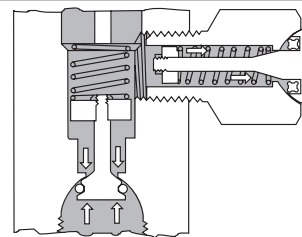
### Open

Relief unit, set at maximum gauge pressure, is closed. Check valve unit is open, allowing system pressure to pass into gauge.



### Closing

When maximum pressure of gauge is reached, relief valve opens, preventing any further pressure increase. Check valve immediately closes.



### Closed

Check valve isolates gauge from system. Relief valve closes, trapping pressure in gauge. Check valve reopens when system pressure is reduced.

## Circle Seal Controls

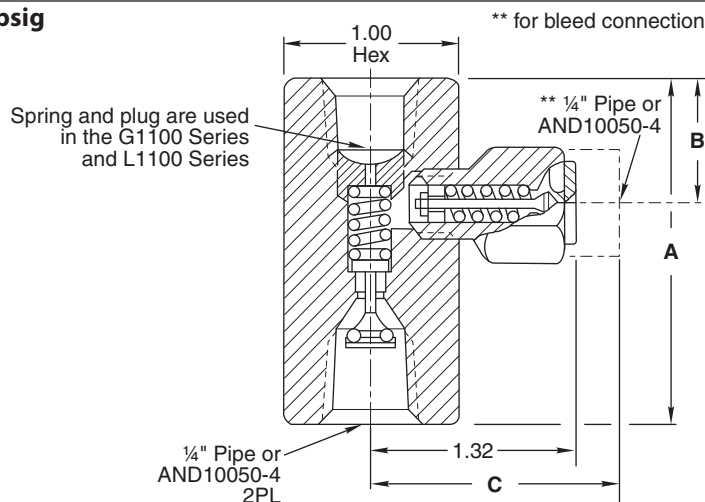
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gauge protectors

# 1100 Series

## Dimensions

### Cut-out Pressures Under 140 psig



### Dimensions (inches)

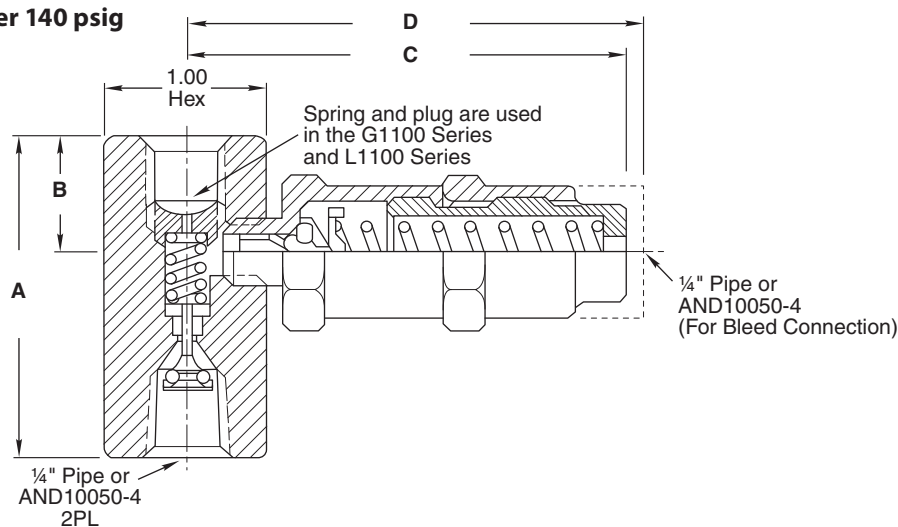
CUT-OUT PRESSURE	1100-2PP			1100-4BB		
	A	B	C	A	B	C
4-140 psi	2.12	0.82	1.86	2.37	0.91	2.11

### Gauge Pressure & Relief Valve Adjustment Ranges

CUT-OUT PRESSURE (PSI)	5	10	20	30	40	60	90	120
GAUGE PRESSURE RANGE (PSI)	0-5	0-10	0-20	0-30	0-40	0-60	0-100	0-140
RELIEF VALVE ADJ. RANGE (PSI)	2.4-5.5	5.6-13.9	14.0-27.9	28.0-34.9	35.0-49.9	50.0-74.9	75.0-104.9	105.0-140.0

Note: Teflon® (1120 Series) is not recommended for cracking pressures under 160 psi. Use Viton® (1132 Series) for service where cut-out pressures of less than 160 psi are required.

### Cut-out Pressures Over 140 psig



### Dimensions (inches)

CUT-OUT PRESSURE	1100-2PP				1100-4BB			
	A	B	C	D	A	B	C	D
140-450 psi	2.12	0.82	2.80	3.23	2.37	0.91	2.80	3.39
451-1200 psi	2.12	0.82	3.40	3.83	2.37	0.91	3.40	3.99
1201-2400 psi	2.12	0.82	3.79	4.26	2.37	0.91	3.79	4.42

### Gauge Pressure & Relief Valve Adjustment Ranges

CUT-OUT PRESSURE (PSI)	140	200	250	300	400	500	625
GAUGE PRESSURE RANGE (PSI)	0-140	0-200	0-250	0-300	0-400	0-500	0-600
RELIEF VALVE ADJ. RANGE (PSI)	141-162	163-230	231-285	286-345	346-450	451-575	576-710

CUT-OUT PRESSURE (PSI)	850	1200	1250	1500	1800	2000
GAUGE PRESSURE RANGE (PSI)	0-850	0-1200	0-1250	0-1500	0-1800	0-2000
RELIEF VALVE ADJ. RANGE (PSI)	711-999	1000-1200	1201-1400	1401-1900	1401-1900	1901-2400

Note: Teflon® (1120 Series) is not recommended for cracking pressures under 160 psi. Use Viton® (1132 Series) for service where cut-out pressures of less than 160 psi are required.

# 1100 Series

## Closing and Reopening Pressure

### Total Closing Pressure Maximum % Above Nominal Cracking Pressure

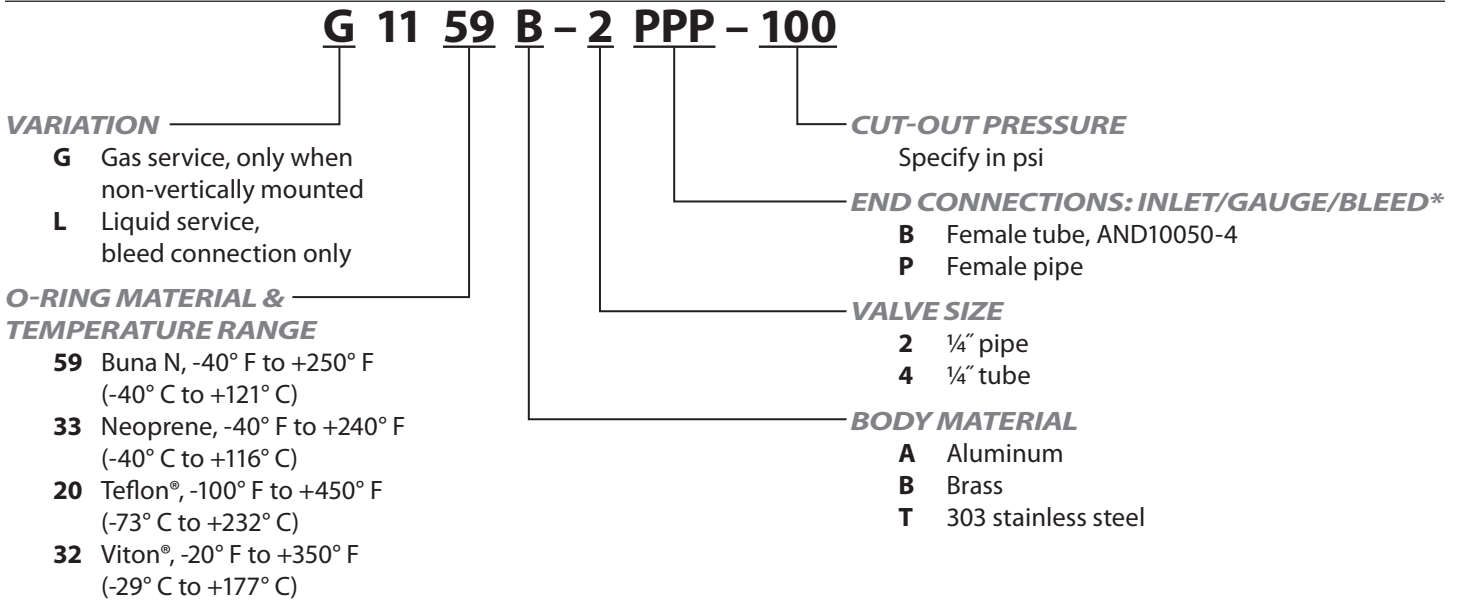
PRESSURE RANGE	1100 SERIES W/AIR	G1100 SERIES W/AIR	L1100 SERIES W/OIL
4 to 9.9 psi*	25%	—	—
10 to 19.9 psi	20%	30%	15%
20 to 140 psi	15%	20%	15%
141 to 2400 psi	10%	15%	10%

### Reopening Pressure Maximum % Below Nominal Cracking Pressure

PRESSURE RANGE	ALL OTHER SEALS	TEFLON® SEALS
4 to 9.9 psi*	25%	—
10 to 19.9 psi	20%	35%
20 to 140 psi	10%	35%
141 to 2400 psi	10%	25%

\* Where close control of over-range pressure is required, use a Circle Seal Controls 1200 Series gauge protector.

## How to Order



\* If bleed connection is desired, add letter "P" for female pipe or "B" for female tube.  
Example: 1159B-2PPP-100 or 1159A-4BBB-100

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

### Mounting Limitations

If used in gas service, mount vertically directly to gauge. If mounted horizontally, use G1100 Series. In liquid service, user L1100 Series.

### Operating Limitations

When using a hydraulic hand pump which causes sporadic or erratic flow, special modifications are necessary.

## 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.

Teflon® is a registered trademark of the DuPont Company.  
Viton® is a registered trademark of DuPont Dow Elastomers.



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