

# Positionable Pressure Gauges

## PPG Series, Models B, P, and S

- Eliminate alignment problems.
- Available with 63, 100, and 115 mm (2 1/2, 4, and 4 1/2 in.) dial sizes.
- Monitor vacuum and positive system pressures up to 10 000 psi, 600 bar, or 60 MPa.
- Available with a variety of end connections.

### Gauge Model Description

**B model:** General Purpose, Stainless Steel Gauge with Adjustable Pointer

**S model:** Solid-Front, Stainless Steel Safety Gauge

**P model:** Reinforced Thermoplastic, Industrial Process Gauge

### Technical Data

#### Dial Ranges

##### Compound Gauges

###### B and S models

- Vacuum to 0 psi through vacuum to 200 psi
- Vacuum to 0 bar through vacuum to 9 bar
- Vacuum to 0 MPa through vacuum to 1.5 MPa

###### P model

- Vacuum to 0 psi through vacuum to 200 psi

##### Positive-Pressure Gauges

###### B and S models

- 0 to 15 psi through 0 to 10 000 psi
- 0 to 1 bar through 0 to 600 bar
- 0 to 0.1 MPa through 0 to 60 MPa

###### P model

- 0 to 15 psi through 0 to 10 000 psi

### Accuracy

#### B and S models

- 63 mm (2 1/2 in.) :  $\pm 1.5$  % of span (ASME B40.1 Grade B, EN 837-1 Class 1.6, JIS B7505 Class 1.6)
- 100 mm (4 in.) :  $\pm 1.0$  % of span (ASME B40.1 Grade 1A, EN 837-1 Class 1.0, JIS B7505 Class 1.0)

#### P model

- 115 mm (4 1/2 in.) :  $\pm 0.5$  % of span (ASME B40.1 Grade 2A)

### End Connections

- 1/4 and 1/2 in. male NPT
- R1/4 and R1/2
- G1/4 and G1/2

### Operating Temperature

#### Ambient

- Unfilled:  $-40$  to  $140^{\circ}\text{F}$  ( $-40$  to  $60^{\circ}\text{C}$ )
- Glycerin-filled:  $-4$  to  $140^{\circ}\text{F}$  ( $-20$  to  $60^{\circ}\text{C}$ )
- Low-temperature glycerin-filled:  $-29$  to  $140^{\circ}\text{F}$  ( $-34$  to  $60^{\circ}\text{C}$ )
- Silicone-filled:  $-40$  to  $140^{\circ}\text{F}$  ( $-40$  to  $60^{\circ}\text{C}$ )

#### Media

##### B and S models

- $392^{\circ}\text{F}$  ( $200^{\circ}\text{C}$ ) maximum

##### P model

- $212^{\circ}\text{F}$  ( $100^{\circ}\text{C}$ ) maximum

### Temperature Error

$\pm 0.4$  % for every  $18^{\circ}\text{F}$  ( $10^{\circ}\text{C}$ ) temperature change from  $68^{\circ}\text{F}$  ( $20^{\circ}\text{C}$ )



### Materials of Construction

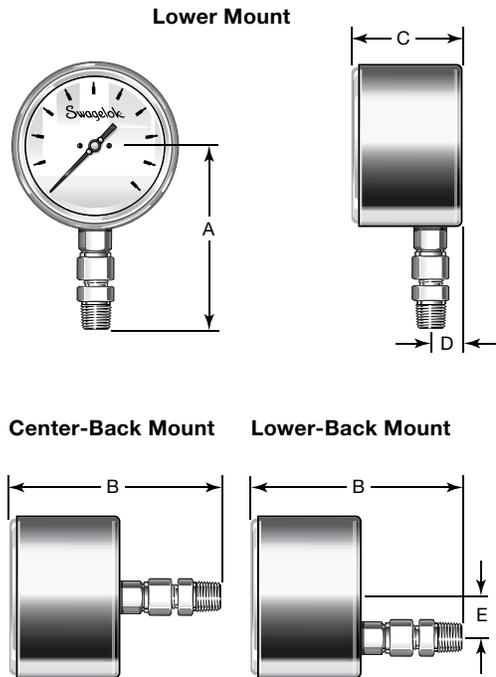
The positionable pressure gauge is composed of a stainless steel Swagelok® PGI series pressure gauge and stainless steel end connection. For complete materials of construction, see the Swagelok *Industrial and Process Pressure Gauges* catalog, MS-02-170, and Swagelok *Gaugeable Tube Fittings and Adapter Fittings* catalog, MS-01-140.

### Testing and Calibration

Every Swagelok PPG series pressure gauge is factory calibrated and pressure tested.

## Dimensions

Dimensions are for reference only and are subject to change.



Gauge Model	Dial Size mm (in.)	End Connection		Dimensions, in. (mm)				
		Size in.	Type	A	B	C	D	E
B	63 (2 1/2)	1/4	Male NPT	3.15 (80.0)	3.28 (83.3)	1.30 (33.0)	0.39 (10.0)	—
			G1/4B (EN)	3.25 (82.6)	3.38 (85.9)			
		R1/4 (PT)	3.15 (80.0)	3.28 (83.3)				
	100 (4)	1/4	Male NPT	3.42 (86.9)	3.55 (90.2)	1.97 (50.0)	0.63 (16.0)	1.18 (30.0)
			Male NPT	3.96 (101)	4.08 (104)			
		1/2	G1/2B (EN)	4.12 (105)	4.24 (108)			
P	115 (4 1/2)	1/4	Male NPT	5.08 (129)	5.76 (146)	3.31 (84.0)	1.57 (40.0)	1.12 (28.5)
			Male NPT	5.30 (135)	5.98 (152)			
		1/2	G1/2B (EN)	5.24 (133)	5.92 (150)			
S	63 (2 1/2)	1/4	Male NPT	3.15 (80.0)	3.48 (88.4)	1.65 (42.0)	0.71 (18.0)	0.71 (18.0)
			G1/4B (EN)	3.25 (82.6)	3.58 (90.9)			
		R1/4 (PT)	3.15 (80.0)	3.48 (88.4)				
	100 (4)	1/4	Male NPT	3.42 (86.9)	3.75 (95.3)	2.28 (58.0)	0.94 (24.0)	1.18 (30.0)
			Male NPT	3.96 (101)	4.20 (107)			
		1/2	G1/2B (EN)	4.12 (105)	4.36 (111)			
1/2	R1/2 (PT)	4.18 (106)	4.42 (112)					

## Ordering Information

Build a PPG series gauge ordering number by combining the designators as shown below.

1
2
3
4
5
6  
**PPG - 100S - PG100 - L AO X**

### 1 Series

PPG = Positionable pressure gauge

### 2 Dial Size and Model

**63B** = 63 mm (2 1/2 in.) dial, B model

**63S** = 63 mm (2 1/2 in.) dial, S model

**100B** = 100 mm (4 in.) dial, B model

**100S** = 100 mm (4 in.) dial, S model

**115P** = 115 mm (4 1/2 in.) dial, P model

### 3 Dial Range

See page 3.

### 4 Process Connection Location

**L** = Lower mount (all dial sizes and models)

**B** = Lower-back mount (not available on B model with 63 mm dial)

**C** = Center-back mount (B model with 63 mm dial only)

### 5 Fitting Size and Type

**63 mm (2 1/2 in.) Dial Size**

**AO** = 1/4 in. male NPT

**AP** = 1/2 in. male NPT

**AV** = G1/4B (EN)

**BD** = R1/4 (PT)

**100 mm (4 in.) Dial Size**

**AO** = 1/4 in. male NPT

**AP** = 1/2 in. male NPT

**AW** = G1/2B (EN)

**BE** = R1/2 (PT)

**115 mm (4 1/2 in.) Dial Size**

**AO** = 1/4 in. male NPT

**AP** = 1/2 in. male NPT

**AW** = G1/2B (EN)

**BE** = R1/2 (PT)

### 6 Liquid Fill Fluid

(Not available on lower-back S model)

**X** = Unfilled

**1** = Glycerin

**2** = Low-temperature glycerin

**3** = Silicone



**Glycerin- and silicone-filled gauges cannot be used where strong oxidizing agents are present.**

## Dial Range Designators

The selected dial range should be approximately two times the system working pressure, and the system working pressure should be in the middle half (25 to 75 %) of the dial range. Contact your authorized Swagelok representative if the system working pressure will exceed 75 % of the dial range.

Maximum pressure may be limited by the end connection.

Not all dial ranges and end connections are available on all models.

### All Models

Dial Range, psi (primary scale: psi; secondary scale: bar)		
Minimum	Maximum	Designator
Vacuum -30 in. Hg	0	PC0
	15	PC15
	30	PC30
	60	PC60
	100	PC100
	160	PC160
	200	PC200
0	15	PG15
	30	PG30
	60	PG60
	100	PG100
	160	PG160
	200	PG200
	300	PG300
	400	PG400
	600	PG600
	800	PG800
	1 000	PG1000
	1 500	PG1500
	2 000	PG2000
	3 000	PG3000 <sup>①</sup>
5 000	PG5000 <sup>①</sup>	
6 000	PG6000 <sup>①</sup>	
10 000	PG10K <sup>①</sup>	

<sup>①</sup> Pressure range may be limited by materials of construction of the wetted components.

### B and S Models

Dial Range, MPa (primary scale: MPa; no secondary scale)		
Minimum	Maximum	Designator
Vacuum -0.1 MPa	0	MC0
	0.06	MC.06
	0.15	MC.15
	0.30	MC.3
	0.50	MC.5
	0.90	MC.9
	1.5	MC1.5
	0.1	MG.1
0	0.16	MG.16
	0.25	MG.25
	0.40	MG.4
	0.60	MG.6
	1	MG1
	1.6	MG1.6
	2.5	MG2.5
	4	MG4
	6	MG6
	10	MG10
	16	MG16
	25	MG25
	40	MG40
	60	MG60

### B and S Models

Dial Range, bar (primary scale: bar; secondary scale: psi)		
Minimum	Maximum	Designator
Vacuum -1 bar	0	BC0
	0.6	BC.6
	1.5	BC1.5
	3	BC3
	9	BC9
0	1	BG1
	1.6	BG1.6
	2.5	BG2.5
	4	BG4
	6	BG6
	10	BG10
	16	BG16
	25	BG25
	40	BG40
	60	BG60
	100	BG100
	160	BG160
	250	BG250
400	BG400	
600	BG600	

#### Safe Product Selection

**When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.**

**Caution: Do not mix or interchange parts with those of other manufacturers.**

#### Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit [swagelok.com](http://swagelok.com) or contact your authorized Swagelok representative.