

# Compact Gauge Valves

## For Gauge Isolation and Venting

### Features

The Swagelok® compact gauge valve provides fast, convenient installation and gauge maintenance in a lightweight package and smaller footprint than conventional assemblies.

- Designed for use with Swagelok pressure gauges with tube adapter end connections, the compact gauge valve enables easy dial alignment and reduces gauge installation time and cost.
- Swagelok tube fitting end connections reduce valve installation time and cost and provide robust tube grip and vibration resistance.
- An integral purge valve eliminates a threaded connection, reducing potential leak points. The purge cap is crimped permanently to the valve body for operator safety and to prevent accidental disassembly.
- 316 stainless steel construction offers durability and corrosion resistance.

### Materials of Construction

The compact gauge valve is composed of a stainless steel Swagelok 1 series needle valve (without panel nut) and integral stainless steel Swagelok purge valve. For complete materials of construction, see the Swagelok *Integral Bonnet Needle Valves—O, 1, 18, 20, and 26 Series* catalog, MS-01-164, and the Swagelok *Bleed Valves and Purge Valves* catalog, MS-01-62.

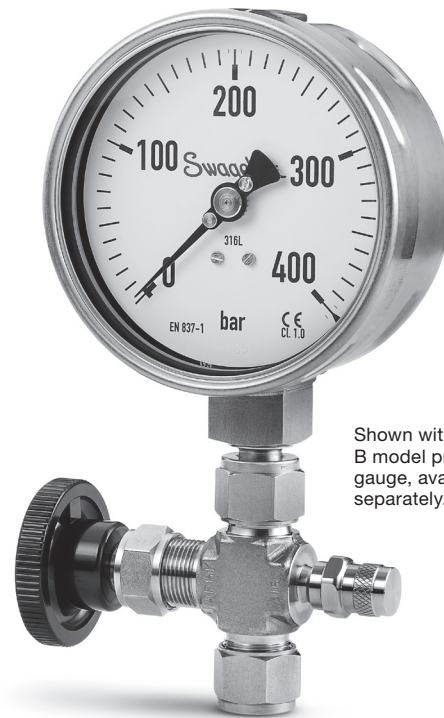
### Testing

Every Swagelok compact gauge valve is factory tested with nitrogen at 1000 psig (69 bar). Seats have a maximum allowable leak rate of 0.1 std cm<sup>3</sup>/min. Shell testing is performed to a requirement of no detectable leakage with a liquid leak detector.

### Cleaning and Packaging

Every Swagelok compact gauge valve is cleaned and packaged in accordance with Swagelok *Standard Cleaning and Packaging (SC-10)*, [MS-06-62](#).

**⚠ Always open purge valves slowly. The vent hole rotates with the cap, changing the direction of discharge as the cap is turned. These valves contain no packing, so some fluid weepage will occur when the valves are opened. Operating personnel must protect themselves from exposure to system fluids.**



Shown with Swagelok B model pressure gauge, available separately.

### Pressure-Temperature Ratings

Ratings are limited to:

- 200°F (93°C) max with soft-seat stem with PCTFE stem tip.
- 250°F (121°C) max with UHMWPE packing.
- 450°F (232°C) max with PFA packing.
- 600°F (315°C) max with PEEK packing.

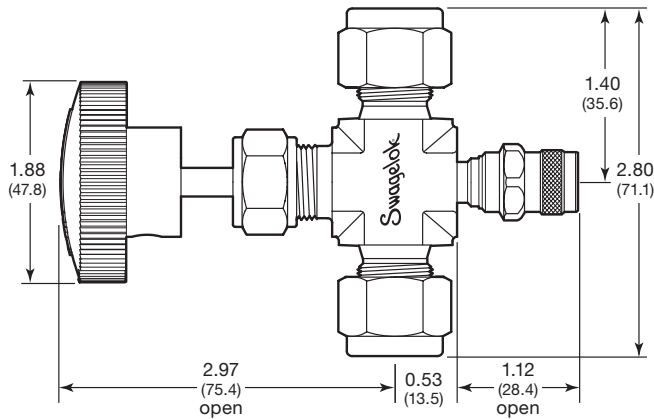
Material	316 SS
Temperature °F (°C)	Working Pressure psig (bar)
-65 (-53) to 100 (37)	4000 (275)
150 (65)	3720 (256)
200 (93)	3440 (237)
250 (121)	3265 (224)
300 (148)	3105 (213)
350 (176)	2975 (204)
400 (204)	2850 (196)
450 (232)	2750 (189)
500 (260)	2650 (182)
600 (315)	2500 (172)

Valves with O-ring stem seals are also available. See **Valves with O-Ring Stem Seals**, page 2, for materials and temperature ratings.

Swagelok®

## Ordering Information and Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.



Select an ordering number.

End Connection		Ordering Number
Type	Size	
Swagelok tube fitting	1/2 in.	SS-1RPS8
	12 mm	SS-1RPS12MM

Two-piece chevron-style PFA packing is standard. For an optional stem packing, see **Options**, at right.

### Vee and Soft-Seat Stems

A regulating stem is standard. For an optional stem, replace **R** in the ordering number with **V** for a vee stem or **K** for a soft-seat stem with PCTFE stem tip.

Examples: SS-1VPS8  
SS-1KPS12MM

### Additional Products

Swagelok pressure gauges monitor vacuum and positive system pressures up to 15 000 psi, 1000 bar, or 100 MPa, and are available with Swagelok tube adapter end connections.

For more information, see the Swagelok *Pressure Gauges, Industrial and Process—PGI Series* catalog, [MS-02-170](#).



#### 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.

#### ⚠ WARNING

Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.

## Options

### Stem Packing Materials

To order an optional stem packing material, add **-P** for UHMWPE or **-PK** for PEEK to the ordering number. See **Pressure-Temperature Ratings**, page 1, for ratings of valves with optional stem packing materials.

Examples: SS-1RPS8-**P**  
SS-1RPS12MM-**PK**

### O-Ring Stem Seals

For an optional O-ring stem seal, Add an O-ring designator to the valve ordering number.

Examples:  
SS-1RPS8-**BC**  
SS-1RPS12MM-**B**

O-Ring Material	Temperature Rating °F (°C)	Designator
Buna C	-65 to 250 (-53 to 121)	-BC
Buna N	-20 to 250 (-28 to 121)	-B
Ethylene propylene		-E
Fluorocarbon FKM	-20 to 450 (-28 to 232)	-V
Kalrez®	-20 to 250 (-28 to 121)	-KZ
Silicone		-SI

### Handles

Black phenolic round handles are standard; colored phenolic, 316 SS bar, and anodized black aluminum bar handles are optional.

Add a handle designator to the ordering number.

Examples:  
SS-1RPS8-**BL**  
SS-1RPS12MM-**SH**

Handle	Designator
Blue phenolic	-BL
Green phenolic	-GR
Orange phenolic	-OG
Red phenolic	-RD
Yellow phenolic	-YW
316 SS bar	-SH
Anodized black aluminum bar	-BKB

### Multiple Options

Add designators in *alphabetical* order.

Examples: SS-1RPS8-**BL-V**  
SS-1RPS12MM-**B-SH**

- ⚠ **A packing adjustment may be required periodically to increase service life and to prevent leakage.**
- ⚠ **Valves that have not been cycled for a period of time may have a higher initial actuation torque.**
- ⚠ **To increase service life, ensure proper valve performance, and prevent leakage, apply only as much torque as is required to achieve positive shutoff.**

### Warranty Information

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