

Primary Gas Control System (SGP) – Single- and Dual-Stage

Swagelok's Primary Gas Control System (SGP) is used predominately to reduce gas pressure at or near the source prior to a larger gas distribution network. With many variations possible within a standard footprint, each system can be configured to meet specific needs while being easily integrated into the overall installation.

Being the first point of gas control, these systems can be built with either single- or dual-stage pressure regulation to accurately deliver gas while minimizing the supply-pressure effect and providing ease of use, depending on system needs. Additionally, several vent, purge, and relief options can be incorporated to enhance safety.

SGP features include:

- A standardized backplate sized to match the width of standard gas bottles so that on-site installation is quick and easy without needing to stagger system placement
- Easy serviceability, minimizing downtime if maintenance is needed
- Upstream and downstream pressure indicators
- Long service life, which is further improved when paired with Swagelok's Source Inlet Connection system (SSI)

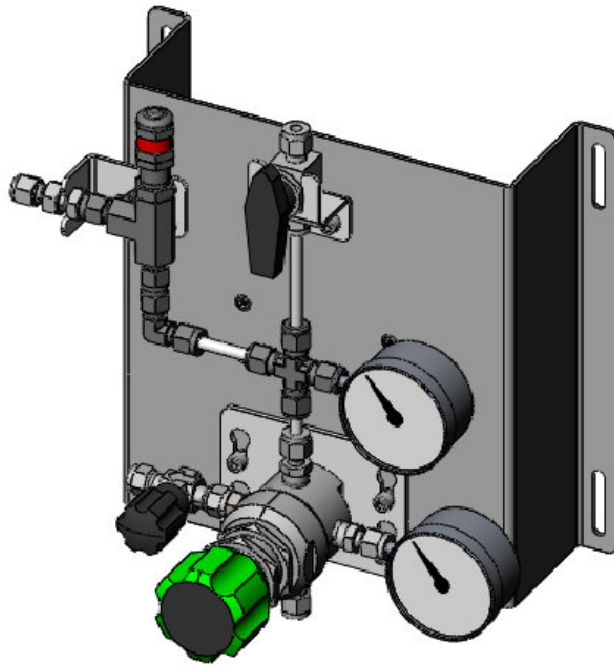


Fig. 8 SGP Single Stage

System may include:

- KPR series pressure regulator
- R3A series relief valve
- 40 series ball valve
- Swagelok tube fittings
- D series nonrotating-stem needle valve
- PGI series gauges (63C)
- Seamless tubing
- Panel
- Bracket/misc hardware

SGP continued

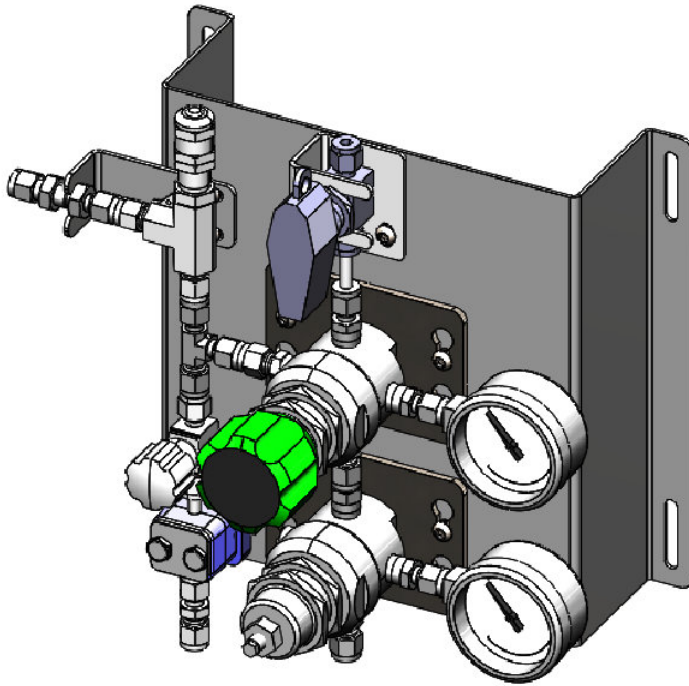


Fig. 9 SGP Dual Stage

System may include:

- KPR series pressure regulator
- R3A series relief valve
- 40 series ball valve
- Swagelok tube fittings
- D series nonrotating-stem needle valve
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SGP continued

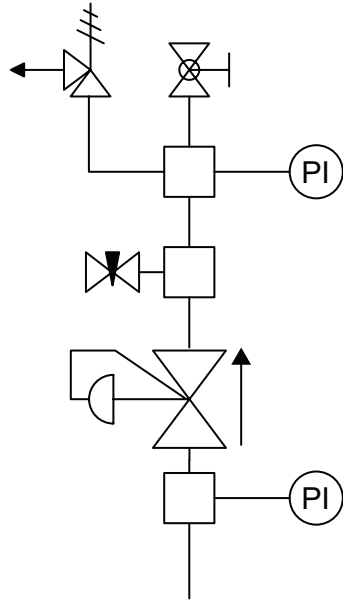


Fig. 10 Single-Stage SGP P&ID

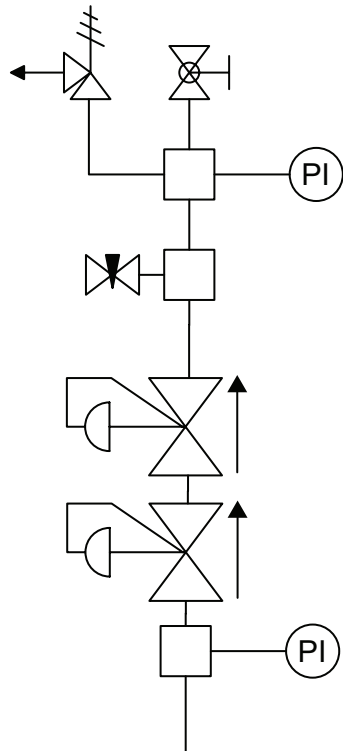


Fig. 11 Dual-Stage SGP P&ID

SGP continued

Ordering Information

Build an ordering number by combining the designators in the sequence shown below.

1 2 3 4 5 6 7 8 9 10 11
 SGP **2 H R G 5 4 1 S4 S4 S4 E**

1 Panel Type

- 1 = Single-stage
- 2 = Dual-stage
- 3 = Dual-stage single body^①

① A Cv of 0.02 and the captured pressure regulator vent option are not available with this panel type.

2 Gas Type

- N = Inert
- H = Hydrogen
- O = Oxygen^①

① A gas type of oxygen may limit selections available for other components.

3 Max Inlet Pressure

- L = 1000 psig (68.9 bar)
- R = 3600 psig (248 bar)
- T = 4351 psig (300 bar)

4 Outlet Control Range

- E = 0 to 50 psig (0 to 3.4 bar)
- F = 0 to 100 psig (0 to 6.8 bar)
- G = 0 to 250 psig (0 to 17.2 bar)
- J = 0 to 500 psig (0 to 34.4 bar)

5 C_v (Flow Coefficient)

- 1 = 0.02
- 2 = 0.06
- 5 = 0.2
- 7 = 0.5

6 Outlet Valve

- 0 = No valve
- 4 = 1/4-turn outlet isolation valve
- L = Lockable 1/4-turn ball valve
- X = 3-way ball valve (vent/isolation)
- T = Lockable 3-way ball valve
- D = Multiturn needle valve

7 Pressure Relief Valve

- 0 = None
- 1 = 4R3A series relief valve
- 2 = Country/regional standard

8 Inlet Connection

- S4 = 1/4 in. Swagelok tube fitting
- S8 = 1/2 in. Swagelok tube fitting
- M6 = 6 mm Swagelok tube fitting
- M2 = 12 mm Swagelok tube fitting
- F4 = 1/4 in. Female NPT
- M1 = 10 mm Swagelok tube fitting

9 Outlet Connection

- S4 = 1/4 in. Swagelok tube fitting
- S6 = 3/8 in. Swagelok tube fitting
- S8 = 1/2 in. Swagelok tube fitting
- M6 = 6 mm Swagelok tube fitting
- M1 = 10 mm Swagelok tube fitting
- M2 = 12 mm Swagelok tube fitting
- N4 = 1/4 in. Male NPT
- F4 = 1/4 in. Female NPT

10 Vent Connection

- S4 = 1/4 in. Swagelok tube fitting
- S6 = 3/8 in. Swagelok tube fitting
- S8 = 1/2 in. Swagelok tube fitting
- M6 = 6 mm Swagelok tube fitting
- M1 = 10 mm Swagelok tube fitting
- M2 = 12 mm Swagelok tube fitting
- N4 = 1/4 in. Male NPT
- F4 = 1/4 in. Female NPT

11 Options

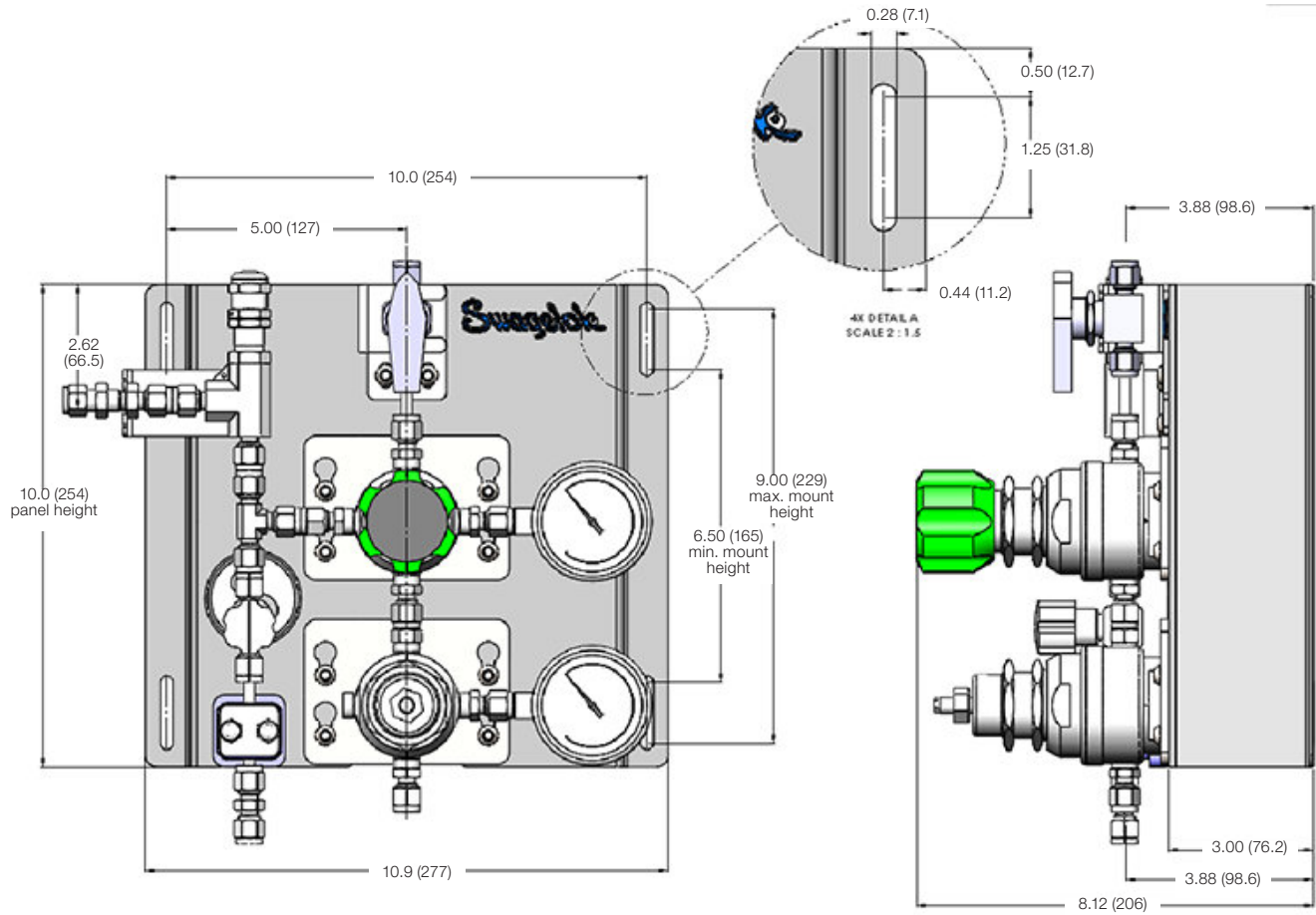
- C = Captured pressure regulator vent
- H = Helium leak test
- E = ASME 3.1 material certification

Note: Multiple options can be added to the end of an ordering number.

SGP continued

Dimensions

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



Dual-stage SGP shown. Dimensions are the same for single-stage systems.