Point-of-Use System (SPU)

Swagelok's Point-of-Use Gas Control System (SPU) is the last point of control prior to the gas being used. Used at the end of a gas distribution system, point-of-use systems supply gas to lab benches, vent hoods, and single or small collections of equipment. Gas is fed to point-of-use systems either from a site supply header or from individual gas bottles after having the pressure reduced through a primary gas control system (SGP). Swagelok's SPU systems are available with several bracket options to enable wall, benchtop, or underdesk mounting. They also can be ordered with top-to-bottom or bottom-to-top flow path configurations to accommodate installations that can vary widely between sites, buildings, or even within the same system.

SPU features include:

- Compact mounting brackets to ensure easy installation even within laboratories where wall space can be at a premium
- Easy serviceability, minimizing downtime if maintenance is needed

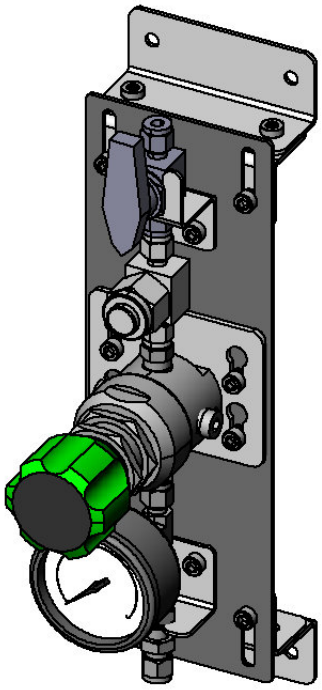

Fig. 12 SPU with Top-to-Bottom Flow

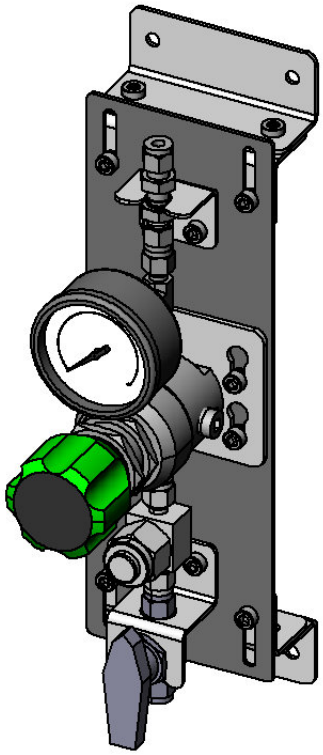

Fig. 13 SPU with Bottom-to-Top Flow

System may include:

- KPR series pressure regulator
- 40 series ball valve
- Swagelok tube fittings
- Seamless tubing
- PGI series gauges (63C)
- TF series filter
- Panel
- Bracket/misc hardware

SPU continued

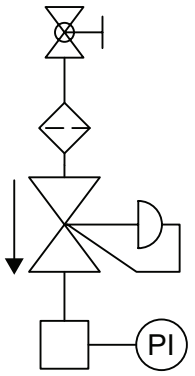

Fig. 14 Standard SPU P&ID

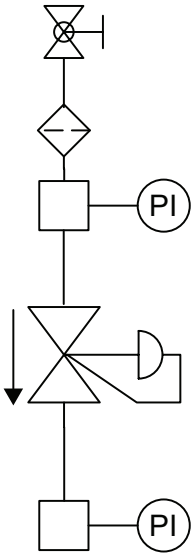

Fig. 15 SPU with Filter and Gauge P&ID

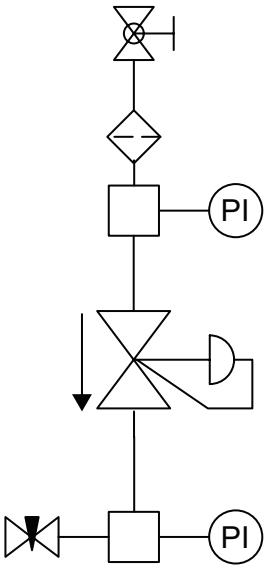

Fig. 16 SPU with Filter, Gauge, and Low-Pressure Vent P&ID

SPU 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	12
SPU	N	T	O	E	S4	S4	4	0	X	0	5	E

1 Gas Type
- **N** = Inert
- **H** = Hydrogen
- **O** = Oxygen①

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

2 Flow Direction
- **T** = Top-to-Bottom
- **B** = Bottom-to-Top

3 Gauges
- **O** = Outlet only
- **B** = Inlet and Outlet

4 Pressure Control Range
- **D** = 0 to 25 psig (0 to 1.7 bar)
- **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)

5 Inlet 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

6 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

7 Inlet Isolation Valve
- **0** = No valve
- **4** = 1/4-turn valve
- **L** = Lockable 40 series ball valve
- **X** = 3-way ball valve
- **T** = Lockable 3-way ball valve
- **D** = Multiturn needle valve

8 Vent
- **0** = No vent
- **D** = Multiturn downstream vent

9 Inlet Filter (7 micron)
- **X** = None
- **7** = Filter

10 Mounting
- **0** = Flat plate
- **W** = Wall-mount wings
- **T** = Top (L plate)
- **B** = Bottom (L plate)

11 Regulator C_v (Flow Coefficient)
- **1** = 0.02
- **2** = 0.06
- **5** = 0.2
- **7** = 0.5

12 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.

SPU continued

Dimensions

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