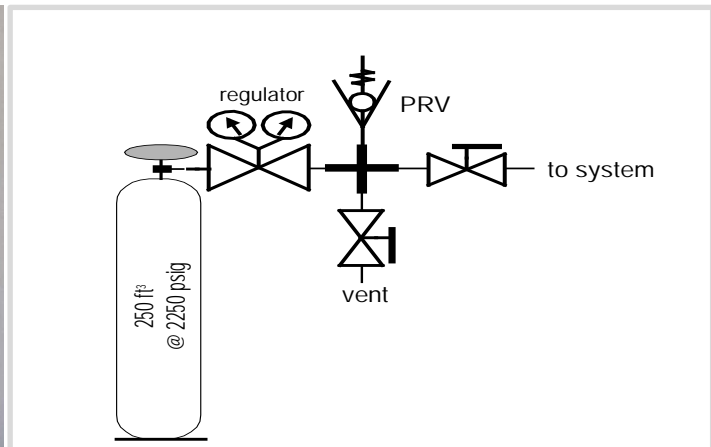


Regulator Manifold



The Swagelok Southwest Regulator Manifold is an assembly of high quality, precision components that allows the end user to transition from a high pressure gas source to a point of use pressure. The most common configuration is shown above and includes: CGA fitting, RFO (Restrictive Flow Orifice), regulator, inlet gauge, outlet gauge, cross, relief valve, isolation valve, and vent valve. The design layout follows LANL Pressure Safety Recommendations. We have a large local stock of components to serve your immediate needs.

Safety Attributes:

- Swagelok components offer the highest quality in the industry.
- Assembly is done by Swagelok trained and certified technicians.
- Every Regulator Manifold is 100% tested.
- Each order is carefully reviewed by a trained technical representative for accuracy.
- Technical support on individual components is readily available.

Design Attributes:

- Relief Valve – Provides overpressure protection to the downstream components to prevent catastrophic failure.
- RFO - Serves to limit gas flow to prevent issues associated with accumulated pressure.
- Isolation Valve - Provides the ability to isolate or shutoff pressure to the downstream system. It is important for this valve to be placed downstream of the relief valve to protect the outlet gauge in the event of regulator creep.
- Vent Valve - Used to safely vent system pressure and ensures fittings are not used to release pressure. End user can plumb vent valve port to a safe location if venting to atmosphere is not ideal.

End User Considerations

The end users have the responsibility to select components and designs that are safe and functional for their systems.

Choices include:

- Regulator inlet and control pressures ranges
- Single or dual stage regulator
- Evaluation of flow rate and RFO/Relief sizing to protect in the event of overpressure
- Materials of construction: Regulator, Relief Valves, Isolation Valves, and Vent Valves must be considered based on application and compatibility.
- LANL Pressure Safety requires that a flow calculation be done by LANL to ensure that the relief valve has enough capacity to keep up with the flow in the event of regulator failure.

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. The complete catalog contents must be reviewed to ensure that the system designer and user make a safe product selection.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit www.swagelok.com.

Swagelok

Swagelok Southwest

4926 E. Beverly Road
Phoenix, AZ 85044
(602) 268-4848
ssw@swagelok.com

Ordering Information

SS-580-KC-100 -1 -CD500- 4 -030-PS

Regulator Material

SS-Stainless Steel
B-Brass CW721R

Regulator Model

KP-KPR Single Stage
KC-KCY Dual Stage

RFO Size

0- No RFO
1- .010 orifice
2- .020 orifice
3- .030 orifice

Relief Cracking Pressure

Relief Valve Size

4- 1/4" MNPT
8- 1/2" MNPT

CGA

000-No CGA
320-Carbon Dioxide (3000 psig inlet gauge)
350-Hydrogen, Carbon Monoxide, Ethane, Ethylene (3000 psig inlet gauge)
580-Argon, Helium, Nitrogen (3000 psig inlet gauge)
590- Industrial Air (3000 psig inlet gauge)
660-Nitrogen Dioxide, Ammonia, Chlorine, Nitric Oxide (3000 psig inlet gauge)

Pressure Control Range

010- (0-10, 0-15 psig outlet gauge)
025- (0-25, 0-30 psig outlet gauge)
050-(0-50, 0-60 psig outlet gauge)
100- (0-100, 0-160 psig outlet gauge)
250- (0-250, 0-300 psig outlet gauge)
500- (0-500, 0-600 psig outlet gauge)

Relief Valve

SWRL-Swagelok RL
SWR-Swagelok R3A or R4
KU541-Kunkle 541 Series (Buna ball)
KU542-Kunkle 542 Series (Viton ball)
KU548-Kunkle 548 Series (SS ball)
CD500-Circle Seal D500 Series
CD5100-Circle Seal 5100 Series
CNR250-Conrader SRV250 Series
CNR390-Conrader SRV390 Series
CNR187-Conrader SRV187 Series

**Please note that the RFO, gauges, and Swagelok relief valve are only available in SS,
**Swagelok warranty does not apply for non-swagelok products, supplier warranty applies

Upstream Components Pressure Ratings

-Western CGAs listed: 3000 PSI
-Swagelok RFOs listed: 6600 PSI
-Standard cylinder regulators are rated to 3600 PSI on the inlet, however other inlet pressures are available upon request (Rating can be verified as 3600 PSI if the 6th character in the actual stand alone regulator part number is "R")

How to order:

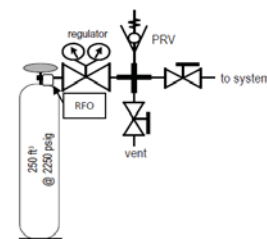
- Email or call Swagelok Southwest with part number and answer to below additional needed questions
- They will fill out a checklist with your information and create a bill of materials
- They will send you the checklist for your approval and verification of assembly
- A quote will be started and an official quote will be sent to you for purchase

Additional Needed Questions

1. What is the relief valve part number?
2. What is the maximum pressure and temperature of the system?
3. Standard testing will be bubble testing, is any other testing required?
4. A certification for the testing of the assembly will be included, is any other certification required?
5. What is the design pressure of the assembly downstream of the regulator (what pressure will you be working at)?

Valving & End Connections (Relief Valve End Connection Will Match if applicable)

PS- Plug Valve 1/4" Swagelok
PF-Plug Valve 1/4" Female NPT
BS- 40/40G Series Ball Valve 1/4" Swagelok
BF- 40/40G Series Ball Valve 1/4" Female NPT
NS- 1 Series Needle Valve 1/4" Swagelok
NF- 1 Series Needle Valve 1/4" Female NPT
HMRM-H Bellows 1/4 MNPT Isolation, Purge Valve 1/4 MNPT Vent



**The standard regulator manifold will have PCTFE seats, .06 Cv, green knob handle (red handle for flammables), right to left flow, and two C model pressure gauges with a 3000 PSI inlet gauge. Contact Swagelok Southwest if you would like to customize these options.

Please refer to the full Catalogs which are available online at www.swagelok.com for more information and choices

Regulators: MS-02-230
Gauges: MS-02-170

Plug Valves: MS-01-59
40 and 40G Ball Valves: MS-02-331

1 Series Needle Valves: MS-01-164
Relief Valves: MS-01-141

Swagelok Southwest
Account Manager-Randy Huggard

Office (505) 842-0213
Mobile (505) 379-7300

Fax (505) 843-6078
randy.huggard@swagelok.com