

GSRPV Series

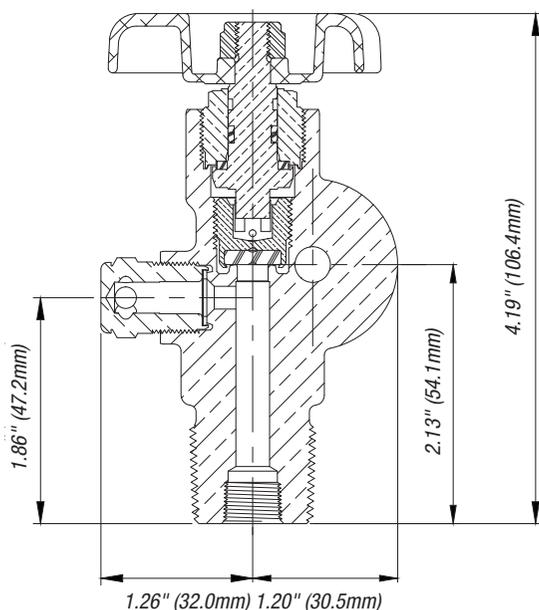
Residual Pressure Valves



Residual pressure valve designed to protect cylinder and contents.

Key Features & Benefits

- Prevents backflow of impurities and foreign substances
- Automated assembly and testing processes ensure exceptional quality
- 100% helium leak tested
- Durable forged brass body, precisely machined internal components and design elements meet the most stringent international valve performance standards
- Innovative design and quality construction offer protection of cylinder contents without the expense of a time-consuming purge-and-clean cycle
- Retains approximately 30 to 50 PSI pressure, maintaining the integrity of the cylinder contents against contaminants, even if the valve is left open
- Protects and extends life of cylinder by preventing ingress of moisture
- Pressure Relief Device (PRD) unitized plug design provides excellent flow characteristics
- Dynamic front piston seal design is not in direct contact with the flow passage during filling
- Inlet and outlet thread configurations are available for a broad spectrum of customer, country and code specifications
- Optical Character Recognition technology utilized to verify appropriate burst disc pressure rating
- Exclusive "webbed washer" design protects burst disc during handling and bulk shipment
- Maximizes optimum fill flow rate and provides high flow for delivery of product with Cv factor of .43



GSRPV

Industrial Gas Valves

GRPV Series Residual Pressure Valves

Design Specifications

	English	Metric
Maximum Working Pressure	3500 PSI	413 Bar
Burst Pressure	10,000 PSI	1035 Bar
Operating Temperature Range	-50° F → +149° F	-45° C → +65° C
Storage Temperature Range	-65° F → +155° F	-54° C → +68° C
Leak Rate Internal/External	1x10 ⁻³ atm cc/sec.	1x10 ⁻³ Bar mL/sec.
Minimum Cycle Life	2000 Cycles	
Cv Flow Factor	Standard: .28 CO ₂ /Manifold: .50	
Closing Torque	20–30 in.-lbs.	2.2–3.3 N-m
Operating Torque	10–20 in.-lbs.	1.1–2.2 N-m
Bonnet Installation Torque	50–60 ft.-lbs.	68–81 N-m
Handwheel Nut Installation Torque	15–35 in.-lbs.	1.7–3.9 N-m
PRD Installation Torque	25–35 ft.-lbs.	34–47 N-m
PRD Flow Capacity	60 cfm @ 100 PSI	1700 L/min. @ 6.9 Bar

Standards Conformance

CGA V-9	Standard for Gas Cylinder Valves
CGA S1.1	Standard for Pressure Relief Devices
CGA V-1	Compressed Gas Cylinder Valve Outlet and Inlet Specifications
ISO 10297	International Standard for Cylinder Valves Design Specifications
ISO 11363-1	25E Inlet Thread Specifications
ISO 15996	International Standard for Residual Pressure Valves Design Specifications
AS2473	Australian Standard for Compressed Gas Cylinder Valves
TPED/ADR	Transportable Pressure Equipment Directive
A-A-59860	U.S. General Services Administration Standards for Gas Cylinder Valves

Materials of Construction

Sherwood Part Number	Part Description	Materials of Construction
N/A	Body	Brass C37700/Chrome Plating When Applicable
N/A	Bonnet	Brass C36000/Chrome Plating When Applicable
1919A	Handwheel	Aluminum A380
1251-6	Handwheel Nut	Steel Class 8, Zinc Plating
N/A	Lower Plug	Brass C48500
N/A	Lower Plug Seat	Nylon Zytel 101
See Chart on Page 62	PRD	Plug: Brass C36000/Chrome Plating When Applicable
		Rupture Disc: Nickel Alloy 201; Copper C22000
		Webbed Seal Gasket: Copper Dead Soft C11000
N/A	Stem	Brass C36000
G011EP	O-Ring	Ethylene Propylene (EPDM)
N/A	Back-up O-Ring	Ethylene Propylene (EPDM)
N/A	Thrust Washer	Delrin® 500 AF
N/A	RPV Piston	Brass C37700
N/A	RPV Plug	Brass C36000/Chrome Plating When Applicable
N/A	RPV Spring	Beryllium Copper
N/A	Piston O-Ring	Ethylene Propylene (EPDM)
N/A	Piston O-Ring	Ethylene Propylene (EPDM)
N/A	RPV Plug O-Ring	Ethylene Propylene (EPDM)

Inlet O-Ring for Straight Threaded GRPV Series Residual Pressure Valves

Sherwood Part Number	Size	Material
G216A	1.125 UNF	Buna-N

Lubricants

Christo-Lube	Used in Valves for All Industrial Gas Applications
Turmoxygen	Used in Valves for Oxygen Service

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Residual Pressure Valves

Parts Breakdown for GSRPV Series Residual Pressure Valves

A. Handwheel Nut

B. Handwheel

C. Bonnet and Stem Assembly
Includes: Bonnet, Back-Up O-Ring, O-Ring, Thrust Washer and Stem

D. Lower Plug and Seat Assembly
Includes: Lower Plug and Seat

E. Pressure Relief Device
Includes: Plug, Rupture Disc and Webbed Seal Washer

F. Includes RPV Assembly, Plug, O-Rings, Spring and Piston

G. Includes O-Rings and Piston Assembly

1251-6

1919A

1400-30-100 (Oxygen)

1400-30-101 (All others)

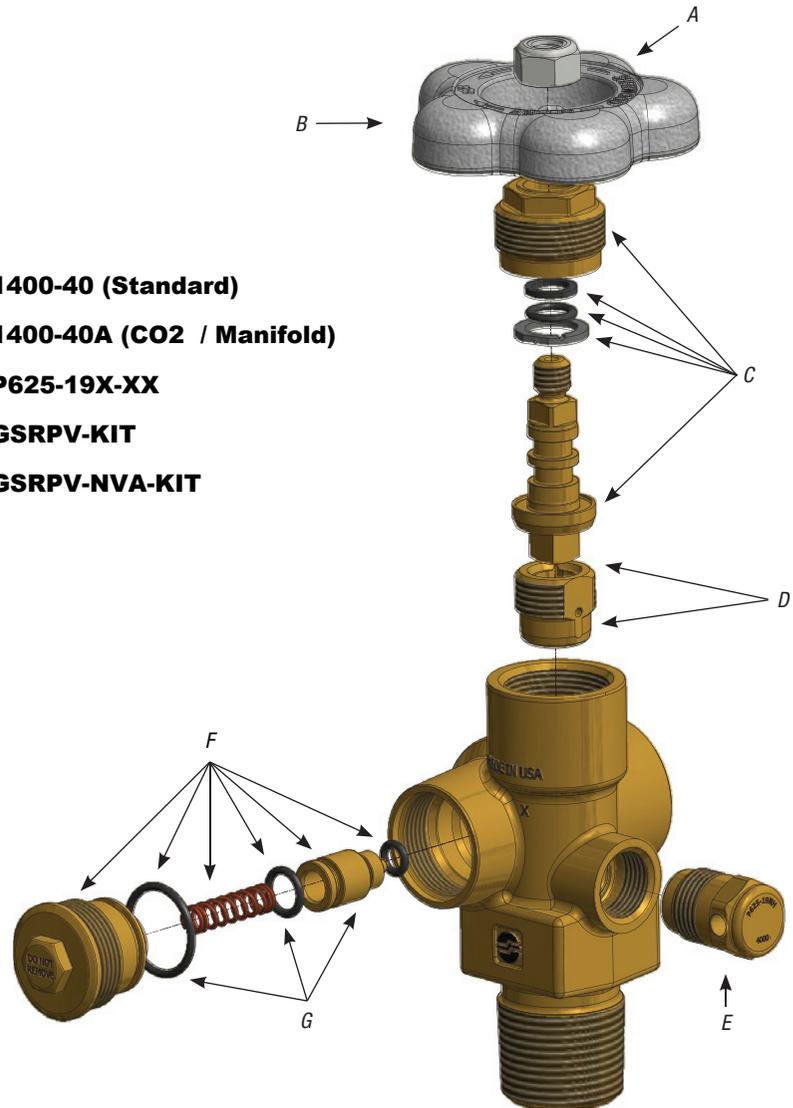
1400-40 (Standard)

1400-40A (CO2 / Manifold)

P625-19X-XX

GSRPV-KIT

GSRPV-NVA-KIT



GSRPV Key Replacement Parts

Sherwood Part	Description
GSRPV-KIT	Total RPV Assembly Kit, 50 ea
GSRPV-NVA-KIT	Piston Assembly Kit Only, 25 ea