

GSRPV Series Residual Pressure Valves

Residual pressure valve designed to protect cylinder and remaining cylinder gas 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 domestic and international valve performance standards
- Innovative design and quality construction offer protection of cylinder contents without the expense of a time-consuming
- Retains approximately 55 to 85 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
- Exclusive “webbed washer” design protects burst disc during handling and bulk shipment
- Inlets tapped (1/4" NPT) for dip tube as required

SHERWOOD VALVE COMPRESSED GAS PRODUCTS
Industrial Gas Valves

GSRPV Series
Residual Pressure Valves

Sherwood Part	Gas Service @ 70° F	CGA Outlet	Outlet Thread Size	Inlet Thread Size
Air				
GSRPV346R61-XX	0 PSI-3000 PSI	346R 346R	.825-14 NGO RH Ext.	3/4" NGT
GSRPV346R25E1-XX	0 PSI-3000 PSI		.825-14 NGO RH Ext.	25E
Argon				
GSRPV580R41-XX	0 PSI-3000 PSI	580R	.965-14 NGO RH Int.	1/2" NGT
GSRPV580R61-XX	0 PSI-3000 PSI	580R	.965-14 NGO RH Int.	3/4" NGT
GSRPV580R25E1-XX	0 PSI-3000 PSI	580R	.965-14 NGO RH Int.	25E
Carbon Dioxide				
GSRPV320R41-XX	0 PSI-3000 PSI	320R	.825-14 NGO RH Ext.	1/2" NGT
GSRPV320R61-XX	0 PSI-3000 PSI	320R	.825-14 NGO RH Ext.	3/4" NGT
GSRPV320R51-XX	0 PSI-3000 PSI	320R	.825-14 NGO RH Ext.	1.125"-12 UNF
GSRPV320R25E1-XX	0 PSI-3000 PSI	320R	.825-14 NGO RH Ext.	25E
Helium				
GSRPV580R41-XX	0 PSI-3000 PSI	580R	.965-14 NGO RH Int.	1/2" NGT
GSRPV580R61-XX	0 PSI-3000 PSI	580R	.965-14 NGO RH Int.	3/4" NGT
GSRPV580R25E1-XX	0 PSI-3000 PSI	580R	.965-14 NGO RH Int.	25E
Hydrogen				
GSRPV350R45-XX	0 PSI-3000 PSI	350R	.825-14 NGO LH Ext.	1/2" NGT
GSRPV350R65-XX	0 PSI-3000 PSI	350R	.825-14 NGO LH Ext.	3/4" NGT
GSRPV350R25E5-XX	0 PSI-3000 PSI	350R	.825-14 NGO LH Ext.	25E
Nitrogen				
GSRPV580R41-XX	0 PSI-3000 PSI	580	.965-14 NGO RH Int.	1/2" NGT
GSRPV580R61-XX	0 PSI-3000 PSI	580	.965-14 NGO RH Int.	3/4" NGT
GSRPV580R25E1-XX	0 PSI-3000 PSI	580	.965-14 NGO RH Int.	25E
Oxygen				
GSRPV540R41-XX	0 PSI-3000 PSI	540R	.903-14 NGO RH Ext.	1/2" NGT
GSRPV540R61-XX	0 PSI-3000 PSI	540R	.903-14 NGO RH Ext.	3/4" NGT
GSRPV540R25E1-XX	0 PSI-3000 PSI	540R	.903-14 NGO RH Ext.	25E
Sulfur Hexafluoride				
GSRPV590R41-XX	0 PSI-3000 PSI	590	.965-14 NGO LH Int.	1/2" NGT
GSRPV590R61-XX	0 PSI-3000 PSI	590	.965-14 NGO LH Int.	3/4" NGT

Oversize Inlets

4 & 7 and 24 thread oversize inlets: To order add -4, -7 or -24 to the end of the part number. For example, GSRPV58061-XX becomes GSRPV58061-XX-7.

Chrome Plating

To order, add letter "A" after the letters GSRPV in the part number. For example, GSRPV58061-XX becomes GSRPVA58061-XX.

Fusible Back Pressure Relief Devices

For 165° F or 212° F nominal melting temperatures, change 1 in the part number to 4 (165° F) or 5 (212° F). For example, GSRPV35061-XX becomes GSRPV35064-XX for 165° F, or GSRPV35065-XX for 212° F.

GSRPV valves are not approved for CNG service. For CNG Service, see NGSRPV Series. Not all valves are available in all configurations. Contact factory for availability. Orders may be subject to minimum quantities.

GSRPV Series Residual Pressure Valves

Design Specifications		
	English	Metric
Max Working Pressure		
Burst Pressure	3500 PSI	413 Bar
Operating Temp Range	10,000 PSI	1035 Bar
Storage Temp Range	-50° F to +149° F	-45° C to +65° C
Leak Rate Internal/ External	-65° F to +155° F	-54° C to +68° C
Minimum Cycle Life	1x10 ⁻³ atm cc/sec.	1x10 ⁻³ Bar mL/sec.
Cv Flow Factor	2000 Cycles	
Closing Torque	Standard: .26	
Operating Torque	20-30 in.-lbs.	2.2-3.3 N-m
Bonnet Installation Torque	10-20 in.-lbs.	1.1-2.2 N-m
Handwheel Nut Installation Torque	50-60 ft.-lbs.	68-81 N-m
PRD Installation Torque	25-45 in.-lbs.	2.8-5.2 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

Inlet O-Ring for Straight Threaded GRPV Series Residual

Sherwood Part	Size	Material	Quantity
G216APK	1.125 UNF	Buna-N	100

Materials of Construction

Part Description	Materials of Construction
Body	Brass C37700/Chrome Plating When Applicable
Bonnet	Brass C36000/Chrome Plating When Applicable
Handwheel	Aluminum A380
Handwheel Nut	Steel Class 8, Zinc Plating
Lower Plug	Brass C48500
Lower Plug Seat	Nylon Zytel 101
Pressure Relief Device Plug Rupture Disc Seal Gasket	Brass C36000; Chrome Plating When Applicable Nickel Alloy 201; Copper C22000 Copper C11000
Stem	Brass C36000
O-Ring	Ethylene Propylene (EPDM)
Back-Up O-Ring	Ethylene Propylene (EPDM)
Thrust Washer	Delrin® 500 AF
RPV Piston	Brass C37700
RPV Plug	Brass C36000/Chrome Plating When Applicable
RPV Spring	Beryllium Copper
Piston O-Ring	Ethylene Propylene (EPDM)
Piston O-Ring	Ethylene Propylene (EPDM)
RPV Plug O-Ring	Ethylene Propylene (EPDM)

GSRPV Series

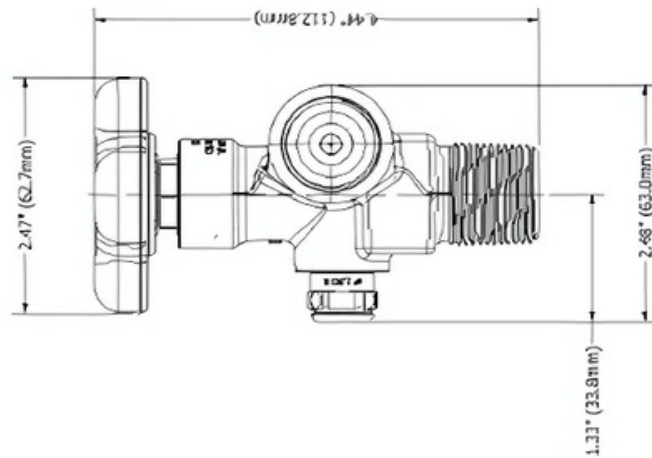
Residual Pressure Valves

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
A-A-59860	U.S. General Services Administration Standards for Gas Cylinder Valves

Replacement Parts		
Sherwood Part	Description	Quantity
1251-6PK	Handwheel Nut	100
1919APK	Handwheel	200
1919LPK	Lexan Handwheel	50
1500-30-101KIT	Stem & Bonnet Subassembly	25
1500-40PK	Plug & Small Valve Seat	50
1500-40APK	Plug & Large Valve Seat for CO₂, Manifold Valves	50
1500-3SKT	Socket for Bonnet	1
P625-19X9-XXPK	Pressure Relief Device Unitized Assembly Includes Plug, Rupture Disc, and Webbed Seal Washer	50

NOTE: GSV Series valves are not for use with CNG applications. For CNG Service, see NGV and NGVHM Series. No mechanical addition of force is to be used with handwheel-style valves without the use of controlled torque.

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