JSRHF Series

High Flow Bioprocess Clean Gas Pressure Reducing Valves

The JSRHF Series high purity gas pressure regulator was designed and built specifically for Bio-Pharma gas applications.

Traditionally, manufacturers adapted their industrial gas regulators for use in biopharm by simply changing the construction materials and surface finish. Not so with the JSRHF. It's been designed specifically to minimize the exposed threaded connections associated with those traditional designs. And, it features an in-line removable trim set to facilitate quick trim change out and cleaning without valve removal or disassembly.

The durable valve body and metal trim components are machined from ASTMA479 316L SST barstock and the internal components are finished to ASME BPE SF5 20Ra µin (0.5 Ra µm), electropolished standard. The valve is outfitted with the rugged Jorlon diaphragm and Teflon seats and seals that are all FDA approved, USP Class VI compliant materials. These materials of construction enable JSRHF to withstand the rigors of SIP and CIP processes (if required for valves used on liquid applications).

Features

- In-line removable seat and trim facilitate cleaning and maintenance
- Barstock construction guarantees material integrity and surface finish
- Minimized internal volume
- Proprietary Jorlon diaphragm material provides exceptionally long life, CIP/SIP capability, and FDA and USP Class VI compliance
- Soft seat material for ANSI Class VI shutoff
- Can be used on continuous clean steam, and on non-cavitating fluids

Documentation

The following documentation is shipped with each order:

- Steriflow Unicert
  - — Certificate of Material Compliance with MTR's and Traceable Material Heat Number for body, ferrules and wetted trim
  - — Certificate of Compliance to FDA and USP Class VI
  - — Certificate of Surface Finish
- Final Test Reports and Certificate of Origin available upon request at time of order

Surface finish

- ASME BPE SF5, 20 Ra µin (0.5 Ra µm), electropolished – standard for all internal and wetted metal parts. External standard finish is 40 Ra µin (1 Ra µm) electropolish
- Other finishes optional
- O_2 cleaning - optional

Applications

Ideal for clean gases typically found in bio-pharmaceutical, pharmaceutical and food & beverage processes including:

- Clean Filter Air
- Nitrogen
- Carbon Dioxide
- Argon
- Oxygen
- Custom purge or blanket gas

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Specifications

Sizes: 3/4" - 2" (DN20 - DN50)

Connection and gauge port ends: Tri-clamp, Tube weld end and NPT Standard. VCR® on Tri-clamp connections optional, contact factory

Body Material: All wetted parts - ASTM A479 316L Stainless Steel; others on application

Body Seals: Elastomer o-rings (EPDM, Viton, Silicon, Kalrez) - All FDA and USP Class VI compliant

Soft Seat: PTFE to +252°F (122°C) continuous or 275°F (135°C) intermittent [not to exceed 15 min. in a one hour period] FDA, USP Class VI

Shutoff: Class VI

Spring Range:

- 25 - 250 psi (1,7 - 17,2 bar)
- 10 - 150 psi (0,7 - 10,3 bar)
- 5 - 100 psi (0,3 - 6,9 bar)
- 5 - 50 psi (0,3 - 3,4 bar)
- 0 - 20 psi (0 - 1,4 bar) (2.5 & 3.5 Cv only)

Sizing: Use SVCV Steriflow software sizing module, Size at 60% capacity for 2.5 & 3.5 Cv models, and size at 70% capacity on 10 Cv model

Maximum Operating Pressure: 300 psi max inlet @ 100°F / psi max ΔP

Maximum Operating Temperature: 250 psi max inlet @ 275°F

Flow Capacity:

- 3/4": Cv 2.5 (Kv 2,16)
- 1" & 1-1/2": Cv 3.5 (Kv 3,03), Cv 10 (Kv 8,65)
- 2": Cv 10 (Kv 8,65)

Surface Finish:

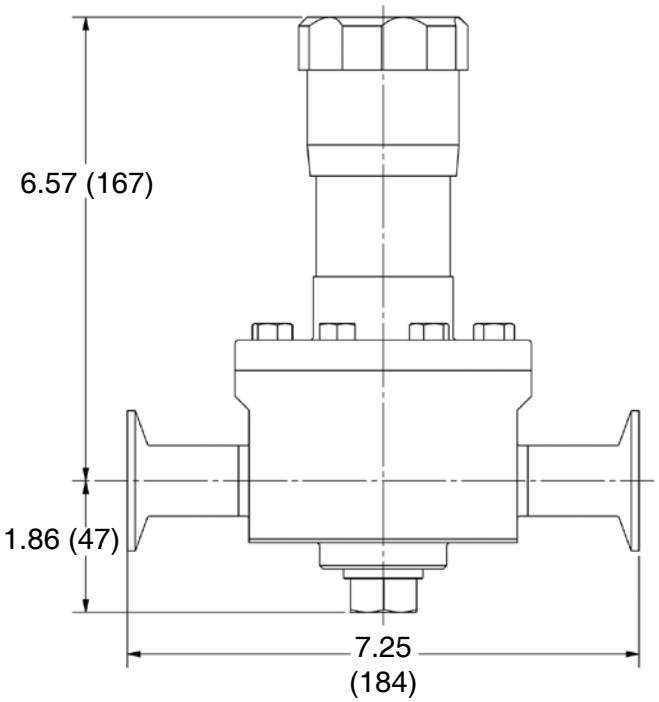
- Wetted Internal surface finish: Mechanically polished, and electropolished to ASME BPE SF5, 20 Ra µin (0.5 Ra µm) as standard
- Exterior surface finish: Mechanically polished, and electropolished to 40 Ra µin (1.0 Ra µm) as standard
- Other finishes available upon request.

Options:

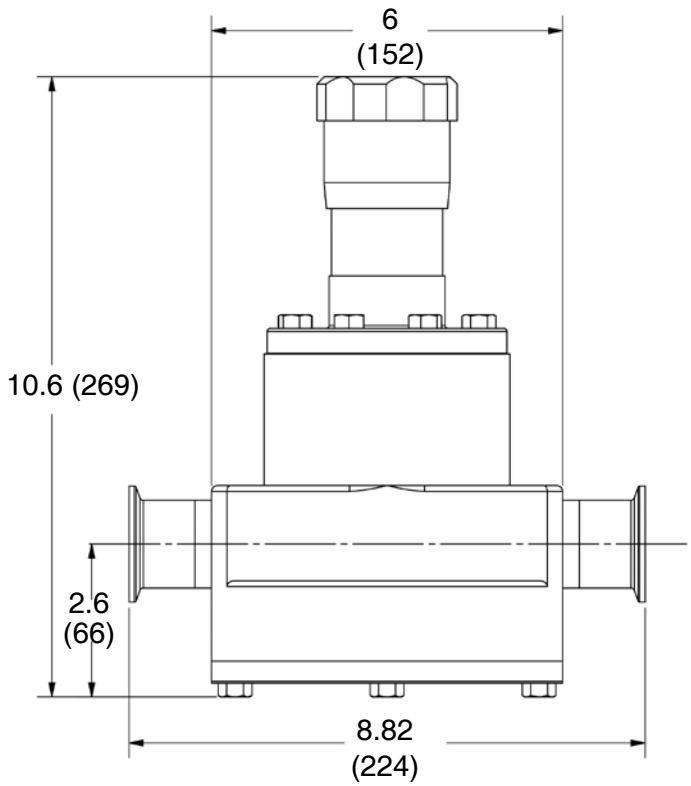
- Panel Mount

Dimensions

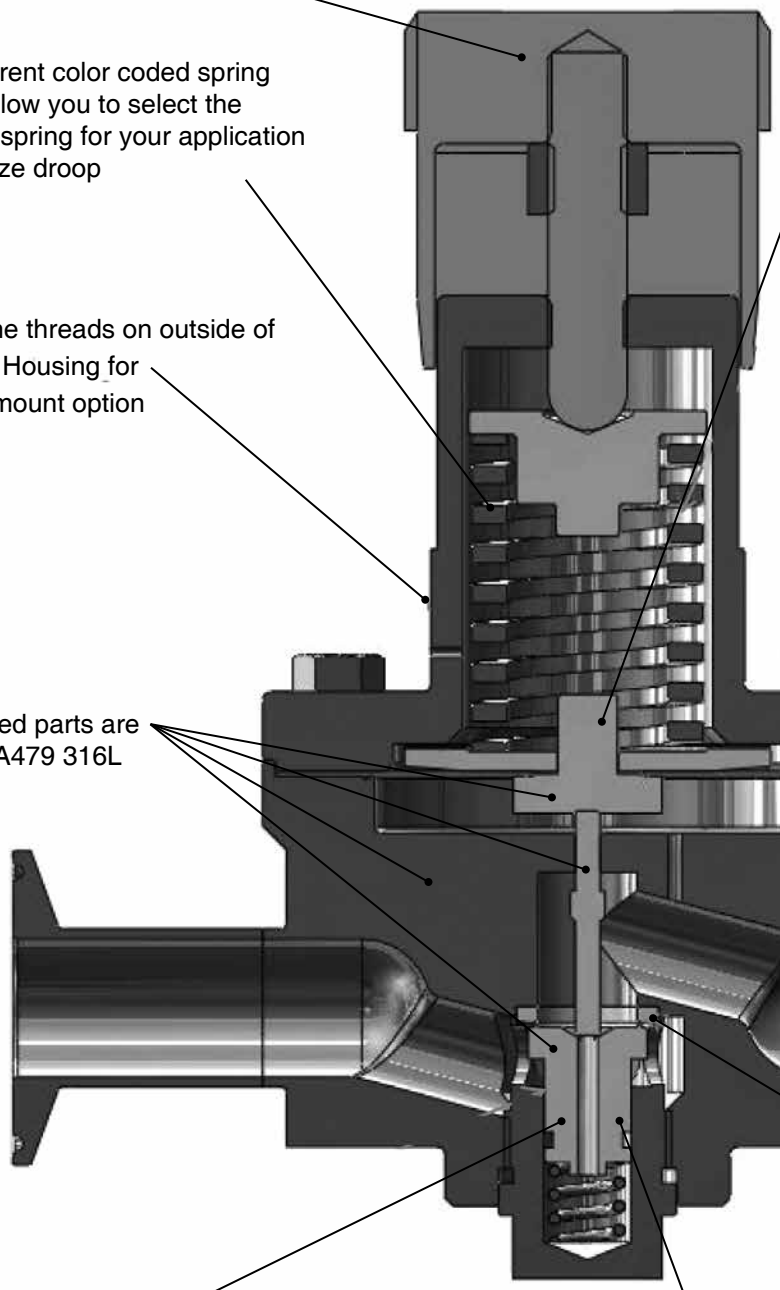
2.5 & 3.5 Cv Model



10 Cv Model



Features & Benefits - Model JSRHF: 2.5 and 3.5 Cv



Autoclavable anodized aluminum knob available as cataloged option

Five different color coded spring ranges allow you to select the optimum spring for your application to minimize droop

Machine threads on outside of Spring Housing for panel mount option

All wetted parts are ASTM A479 316L

One piece diaphragm sub assembly promotes quick, inline maintenance and fewer spare parts

Rugged bolted spring housing eliminates potential bonnet compression failures due to inline vibration

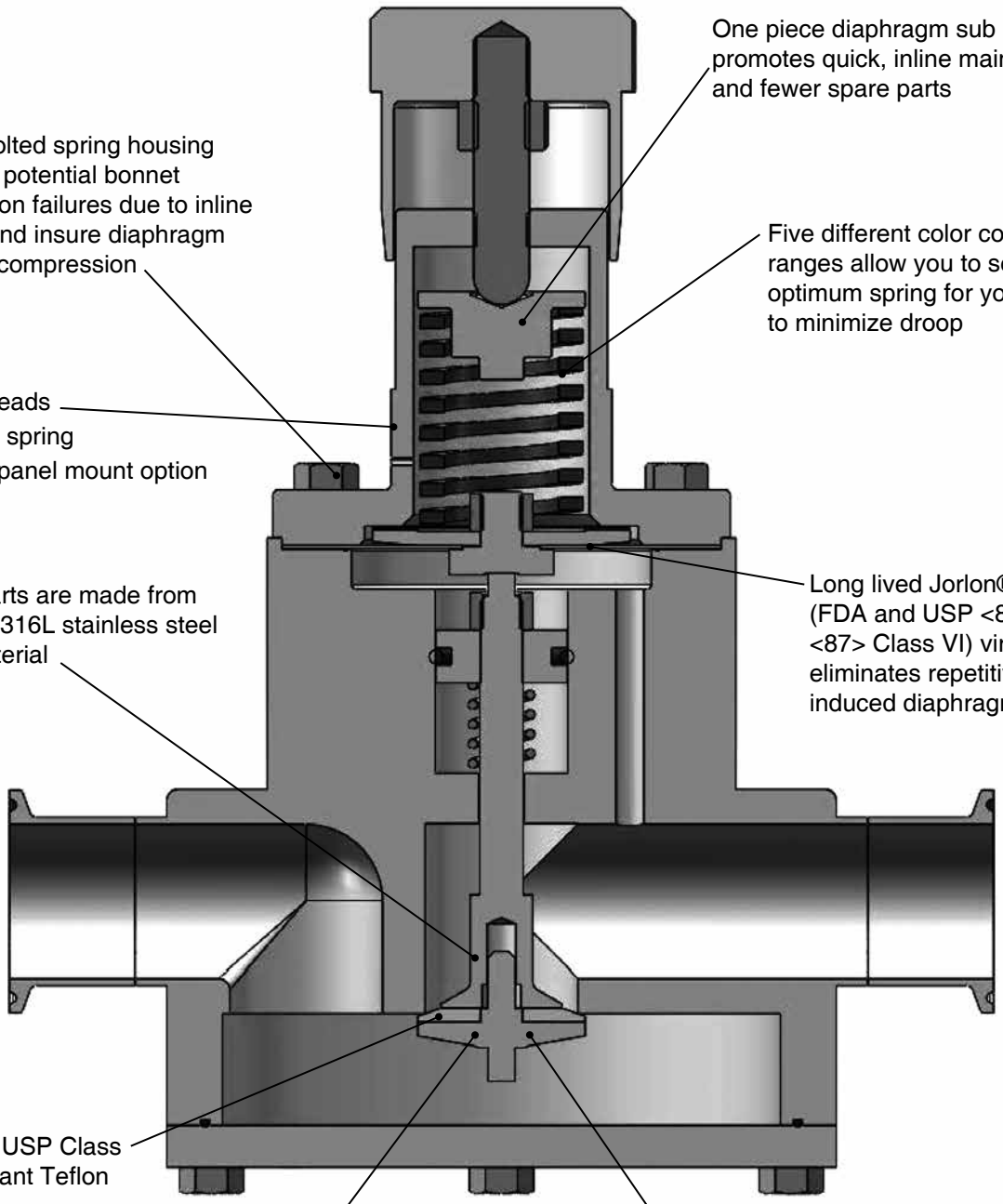
Long lived Jorlon® diaphragm (FDA and USP <88>, and <87> Class VI) virtually eliminates repetitive cycle induced diaphragm failures

PTFE seat for ANSI Class VI shutoff. Seat is also made of FDA and USP Class VI compliant material

Balanced port design minimizes DP forces on the plug, maximizing stability in spite of supply pressure variations

In-line removable seat and plug subassembly facilitates cleaning and maintenance in less than 10 minutes

Features & Benefits - MODEL JSRHF: 10 Cv



One piece diaphragm sub assembly promotes quick, inline maintenance and fewer spare parts

Rugged bolted spring housing eliminates potential bonnet compression failures due to inline vibration and insure diaphragm perimeter compression

Five different color coded spring ranges allow you to select the optimum spring for your application to minimize droop

Machine threads available on spring housing for panel mount option

All wetted parts are made from ASTM A479 316L stainless steel barstock material

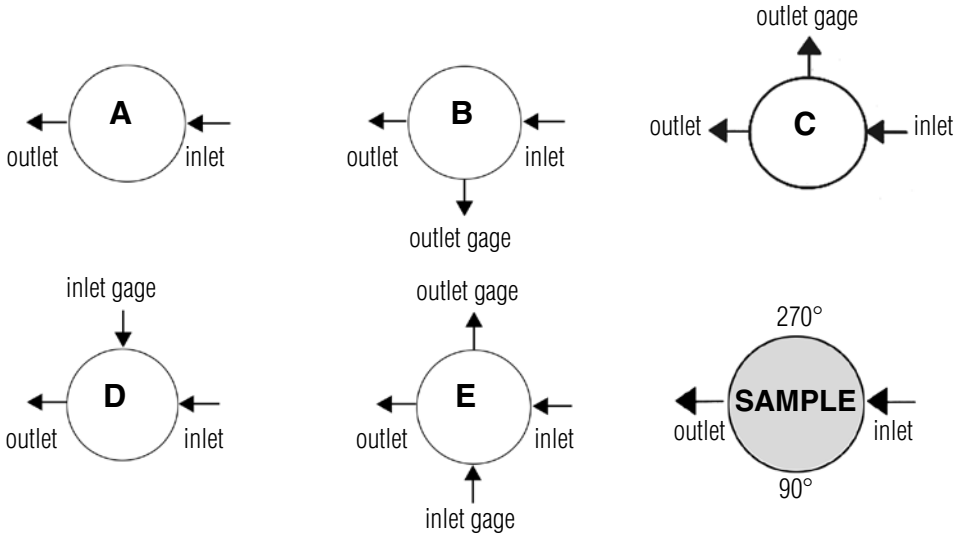
Long lived Jorlon® diaphragm (FDA and USP <88>, and <87> Class VI) virtually eliminates repetitive cycle induced diaphragm failures

FDA and USP Class VI compliant Teflon Seat

Captured seat is same proven technology that's been employed in the MK96 PRV series for 25 years

Inline replaceable seat and lower stem

Flow Configurations



* Gage ports are 1/4" FNPT (consult factory for required Tri-clamp, VCR, or other alternative)
Consult factory for other porting options

Sample Specifications

Stainless Steel pressure regulator shall be made from ASTM A479 barstock material, which includes body and all wetted metal parts. Regulator shall be activated by an un-tied, FDA approved, USP Class VI certified Jorlon™ diaphragm. Regulator internal to hold minimal media volume. Regulator shall have one piece diaphragm subassembly, and trim that can be replaced inline without dome/spring chamber disassembly.

Ordering Schematic

Model		Size		Material	/	1 & 2	3 & 4	5 & 6	7 & 8	9 & 10	11 & 12	13 & 14	15	16	17
JSRHF	—	075	—	6C											

Model	
JSRHF	High Flow Gas Pressure Reducing Valve

Size	
075	3/4" (DN20)
100	1" (DN25)
150	1-1/2" (DN40)
200	2" (DN50)

Material / Connection Type	
6C	316L / Tri-Clamp
6N	316L / NPT
6T	316L / BWE

1 & 2	Body Feature		
Cv / Connection Size		Port Configuration	
A	2.5 Cv (3/4")	A	Port "A"
B	3.5 Cv (1" - 1-1/2")	B	Port "B"
E	10 Cv (1" - 2")	C	Port "C"
		D	Port "D"
		E	Port "E"
ZZ	Non-Standard		

3 & 4	O-Ring - FDA & USP Class V
1E	EPDM (2.5 & 3.5 Cv)
1V	Viton (2.5 & 3.5 Cv)
1K	KLRZ (2.5 & 3.5 Cv)
1L	Silicone (2.5 & 3.5 Cv)
2E	EPDM (10 Cv)
2V	Viton (10 Cv)
2K	KLRZ (10 Cv)
2L	Silicone (10 Cv)

5 & 6	Trim/Seat Material - FDA & USP Class V
T1	6L/PTFE (2.5 & 3.5 Cv)
T4	6L/PTFE (10 Cv)
ZZ	Non-Standard

7 & 8	Range Spring/Outlet Pressure
02	0 - 20 PSI (0 - 1,4 bar) (2.5 & 3.5 Cv only)
05	5 - 50 PSI (0,3 - 3,4 bar)
10	5 - 100 PSI (0,3 - 6,9 bar)
15	10 - 150 (0,7 - 10,3 bar)
25	25 - 250 (1,7- 17,2 bar)

9 & 10	Diaphragm Material
J1	Jorlon PTFE - FDA & USP Class VI (2.5 & 3.5 Cv)
J2	Jorlon PTFE - FDA & USP Class VI (10Cv)
ZZ	Non-Standard

11 & 12	Actuator
SK	Standard Actuator / Nylon Knob
AK	Standard Actuator / Autoclavable Anod. Aluminum Knob
PM	Panel Mount
ZZ	Non-Standard

13 & 14	Inlet Gauge*
ØN	None
ØB	0 - 30 PSIG/Bar (Dual)
ØC	0 - 60 PSIG/Bar (Dual)
ØD	0 - 100 PSIG/Bar (Dual)
ØE	0 - 160 PSIG/Bar (Dual)
ØF	0 - 200 PSIG/Bar (Dual)
ØG	0 - 400 PSIG/Bar (Dual)
ZZ	Non-Standard

* Gauges are Oil Free and O2 clean as standard.

15	Outlet Gauge*
0	None
B	0 - 30 PSIG/Bar (Dual)
C	0 - 60 PSIG/Bar (Dual)
D	0 - 100 PSIG/Bar (Dual)
E	0-160 PSIG/Bar (Dual)
F	0 - 200 PSIG/Bar (Dual)
G	0 - 300 PSIG/Bar (Dual)
ZZ	Non-Standard

* Gauges are Oil Free and O2 clean as standard.

16	SEP Compliance
0	None Required
G	SEP Compliant
Z	Non-Standard

17	Accessories
S	Clean For Oil Free
X	Clean for Oxygen
Z	Non-Standard

Steriflow Valve reserves the right to make revisions to its products, specifications, literature, and related information without notice. Please visit our website at www.steriflowvalve.com for the latest information on our products.