

# JSRHULP Series

## High Flow Bio-Pharma Clean Gas Pressure Reducing Valves

The JSRHULP Series high purity, gas, ultra low 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 JSRHULP. It's been designed specifically to eliminate 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.

The durable valve body and metal trim components are machined from ASTM A479 316L SST barstock and the internal components are finished to ASME BPE SF5 20Ra  $\mu\text{m}$  (0.5 Ra  $\mu\text{m}$ ), electropolished standard. The valve is outfitted with the rugged Jorlon diaphragm and EPDM seats and seals that are all FDA approved, USP Class VI compliant materials.

### FEATURES

- No exposed threaded connections
- Integral outlet pressure sensing line. No need to connect sensing line directly to vessel.
- 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
- \* Panel Mount feature available

### DOCUMENTATION

The following documentation is shipped at no charge:

- Steriflow Unicert, a QC signed Certificate of Compliance for:
  - Material, listing heat numbers with attached MTR's
  - Surface Finish
  - FDA/USP Class VI - for all thermoplastic and elastomers
- Traceability:
  - Each individual product serial number is traceable to the Unicert serial number, heat numbers and attached MTR's

Other documents must be requested at time of RFQ, or order:

- ADI/TSE Free, Certified Test reports, Certificate of Origin.



### APPLICATIONS

Ideal for clean, compressed air and gas typically used in bio-pharmaceutical stainless or Single Use Vessels and Process Systems

- Clean Process Air
- Nitrogen
- Carbon Dioxide
- Argon
- Oxygen
- Custom sparge, purge or blanket gas

**SPECIFICATIONS**

**Sizes:** 1/2" (DN15), 3/4" (DN20) & 1" (DN25)

**End Connections:** Tri-clamp, consult factory for others

**Gauge Ports:** 1/4" FNPT is standard. Consult factory for others

**Lower Diaphragm Plate/ Body and Diffuser**

**Material:** ASME SA479 316L (UNS 31603) is standard. EN 10272:2000 GR 1.4435, AL-6XN®, Hastelloy®C-22 and others are optional.

**Trim Material:**

- Stem: S21800 Nitronic® 60 Stainless Steel
- Wetted Spring: 316SS

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

**Soft Seat Materials for ANSI Class VI Shut-Off:**

- EPDM to +275°F (135°C) FDA, USP Class VI\*

**Shutoff:** Class VI

**Spring Range:**

- 4-18" H<sub>2</sub>O (0.14 - 0.65 PSI)

**Sizing:** Use SVCV Steriflow software sizing module, Size at 60% capacity

Note: For a complete ancillary list of all wetted and non-wetted material specifications, please contact Steriflow Valve.

**Maximum Operating Pressure:** 230 psi max inlet @ 100°F / psi max ΔP (15,8 bar @ 37,7°C)

**Maximum Operating Temperature:** 150 psi max inlet @ 275°F (10,3 bar @ 135°C)

**Optional Cleaning Specifications**

- Clean for Oil-Free
- O2 Cleaning complying with ASTM G93-03 2011 and CGA G-4.1-2009

**Flow Capacity - Cv (Kv)**

- 1/2": Cv 1.5 (Kv 1,3)
- 3/4" & 1": Cv 1.9 (Kv 1,64)

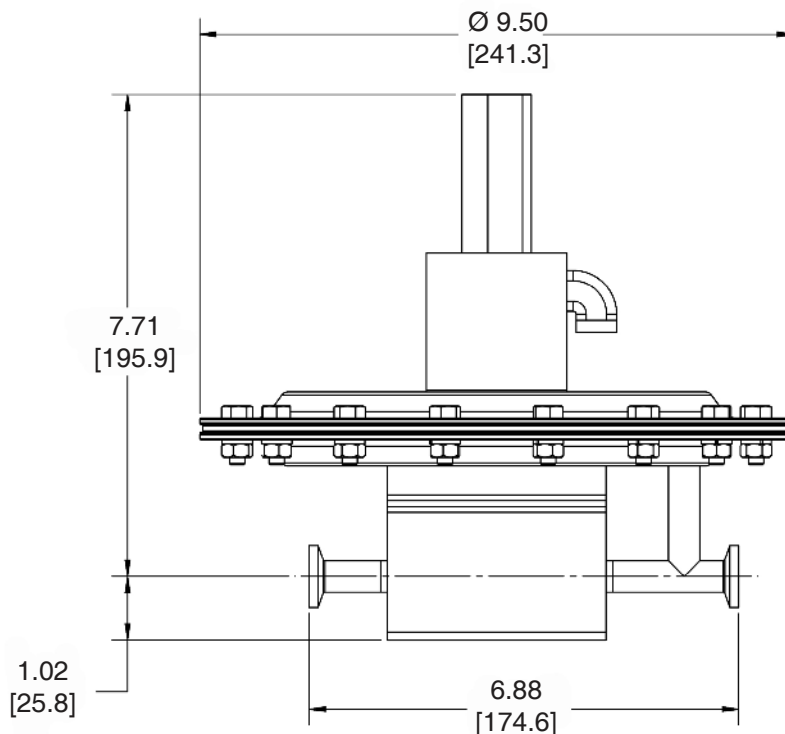
**Failure - Cv (Kv)**

- 1/2": Cv 1.8 (Kv 1,56)
- 3/4" & 1": Cv 2.28 (Kv 1,97)

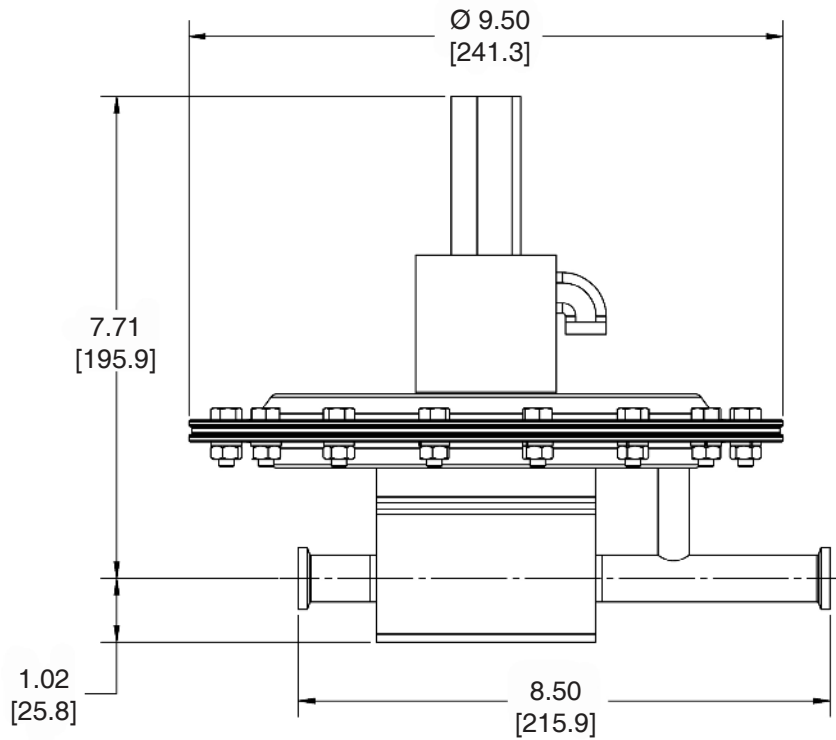
**Surface Finish:**

- 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

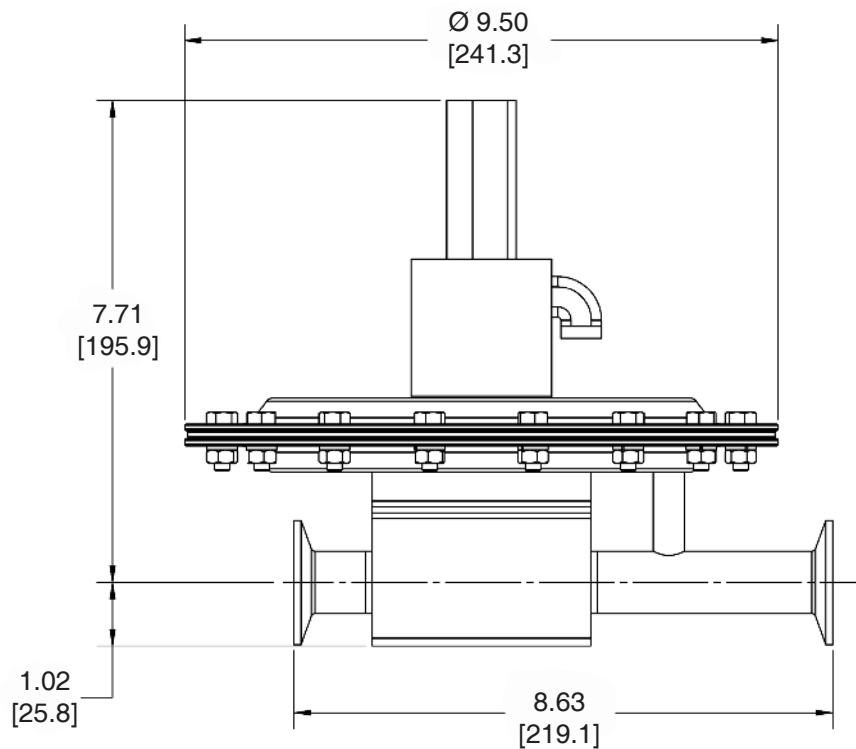
**DIMENSIONS 1/2" JSRHULP SANITARY PRESSURE REDUCING VALVE F/ ULTRA LOW PRESSURE. 1/2" ASME BPE TRI-CLAMP ENDS**



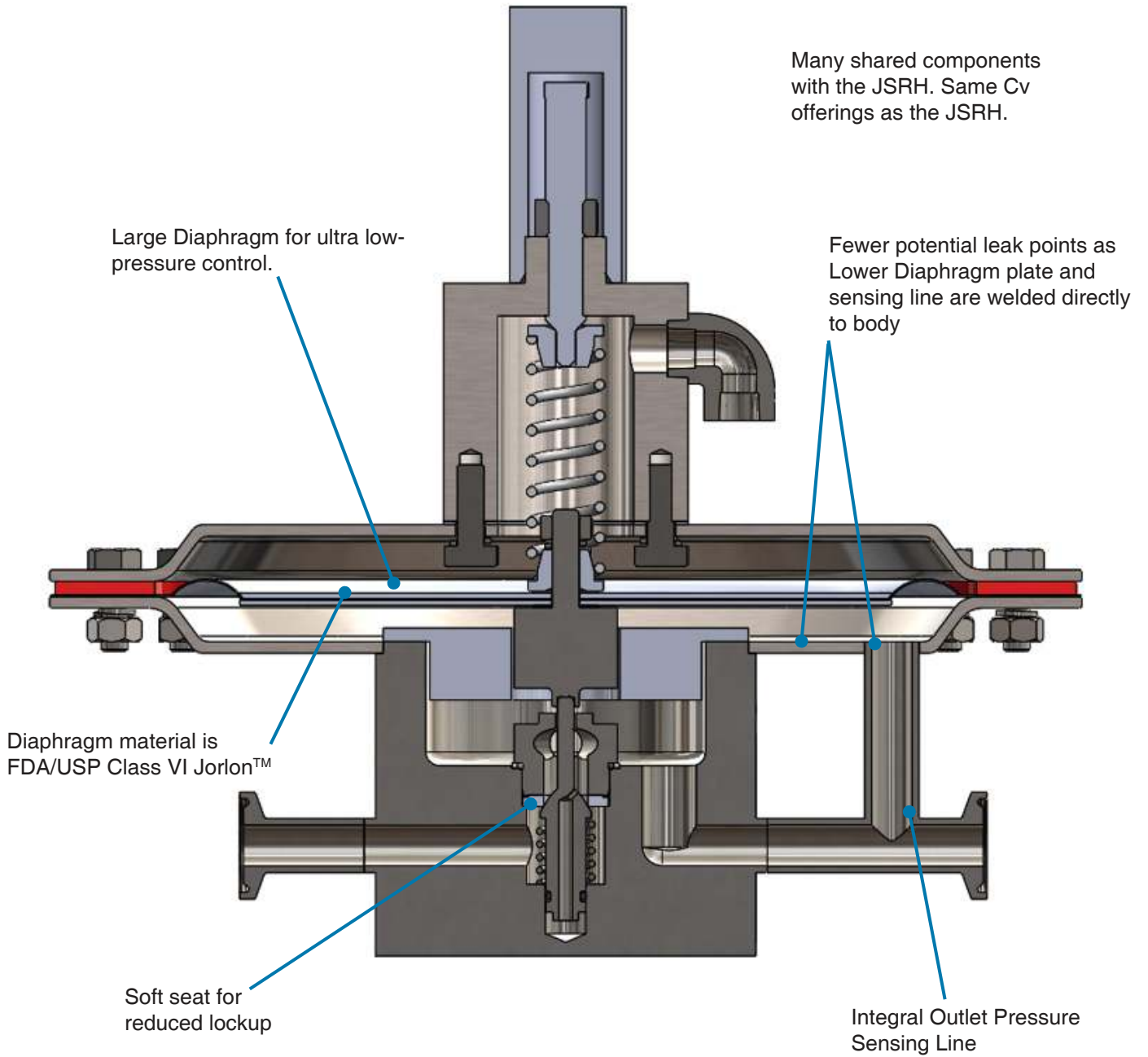
**DIMENSIONS 3/4" JSRHULP SANITARY PRESSURE REDUCING VALVE  
F/ ULTRA LOW PRESSURE. 3/4" ASME BPE TRI-CLAMP ENDS**



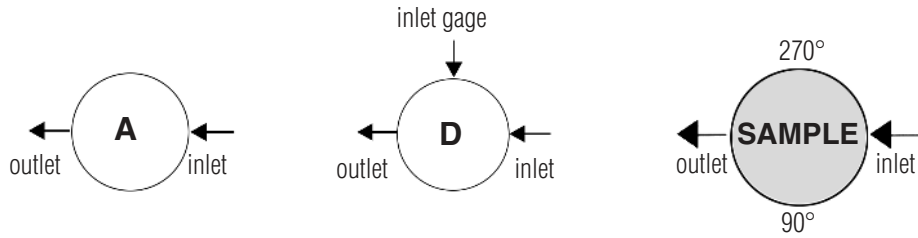
**DIMENSIONS 1" JSRHULP SANITARY PRESSURE REDUCING VALVE  
F/ ULTRA LOW PRESSURE. 1" ASME BPE TRI-CLAMP ENDS**



FEATURES & BENEFITS



### FLOW CONFIGURATIONS/ GAUGE PORTS

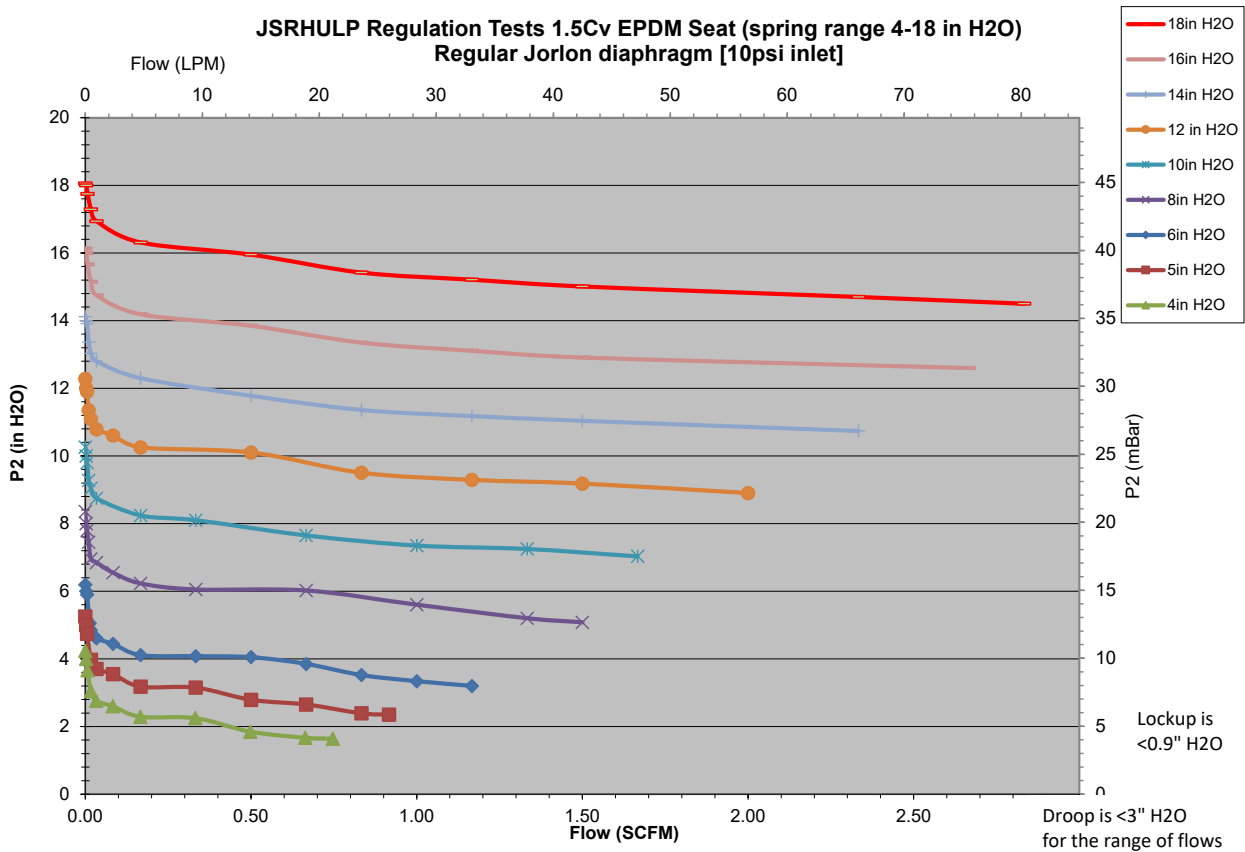


\* Gage ports are 1/4" FNPT. Consult factory for Tri-Clamp, VCR, or other connections or porting options.

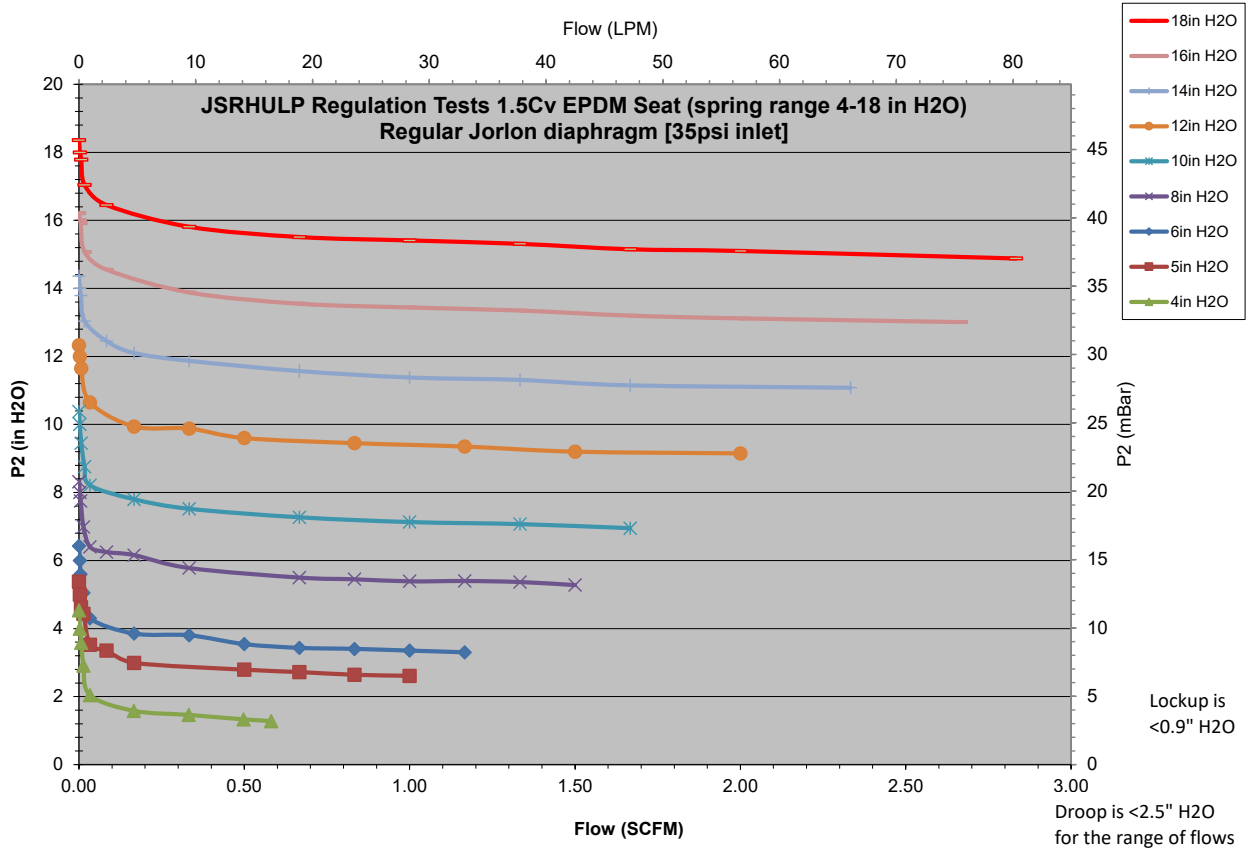
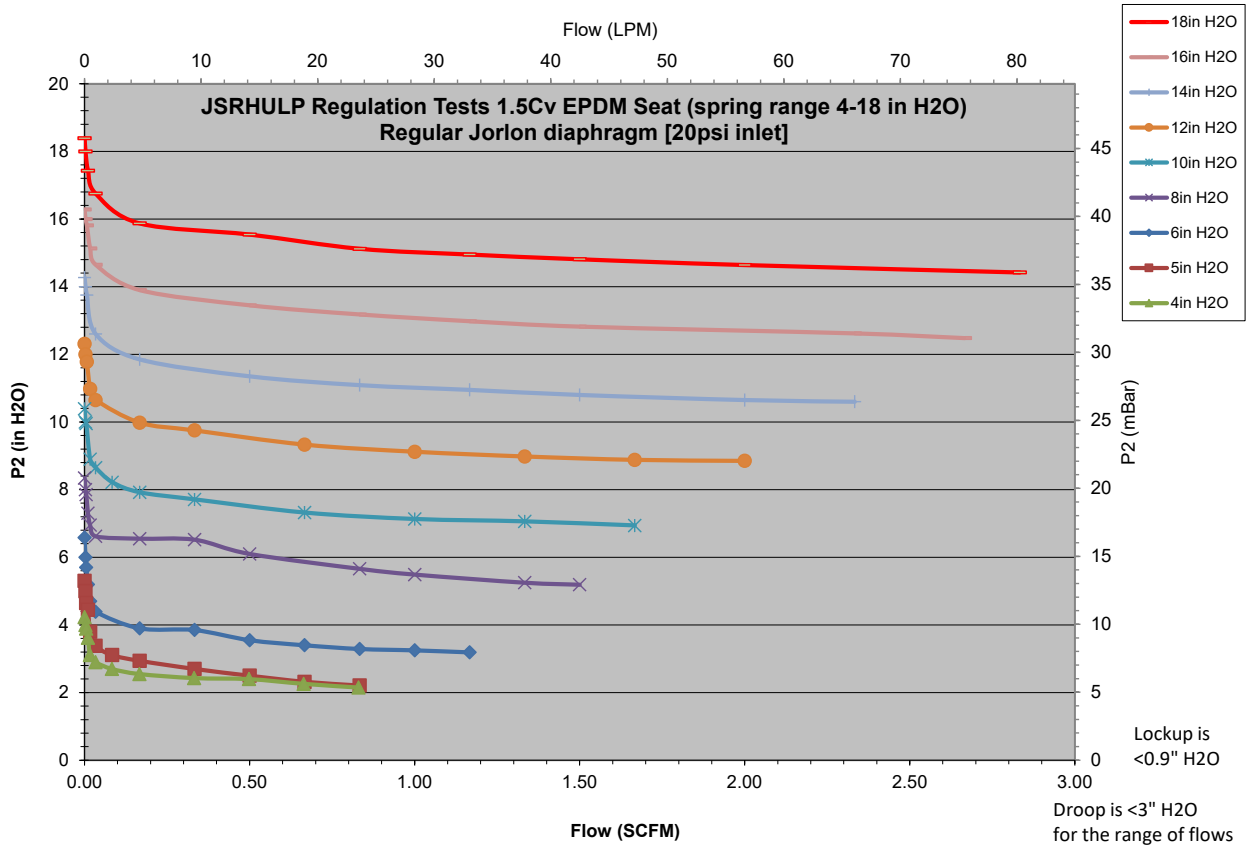
### SAMPLE SPECIFICATIONS

Stainless Steel pressure regulator shall be made from ASTM A479 barstock material, which includes body and all wetted metal parts. Regulator shall have integral outlet pressure sensing line and be free of exposed threads within wetted process area. Regulator shall have one piece diaphragm subassembly, and trim that can be replaced inline after removing upstream and downstream system pressure.

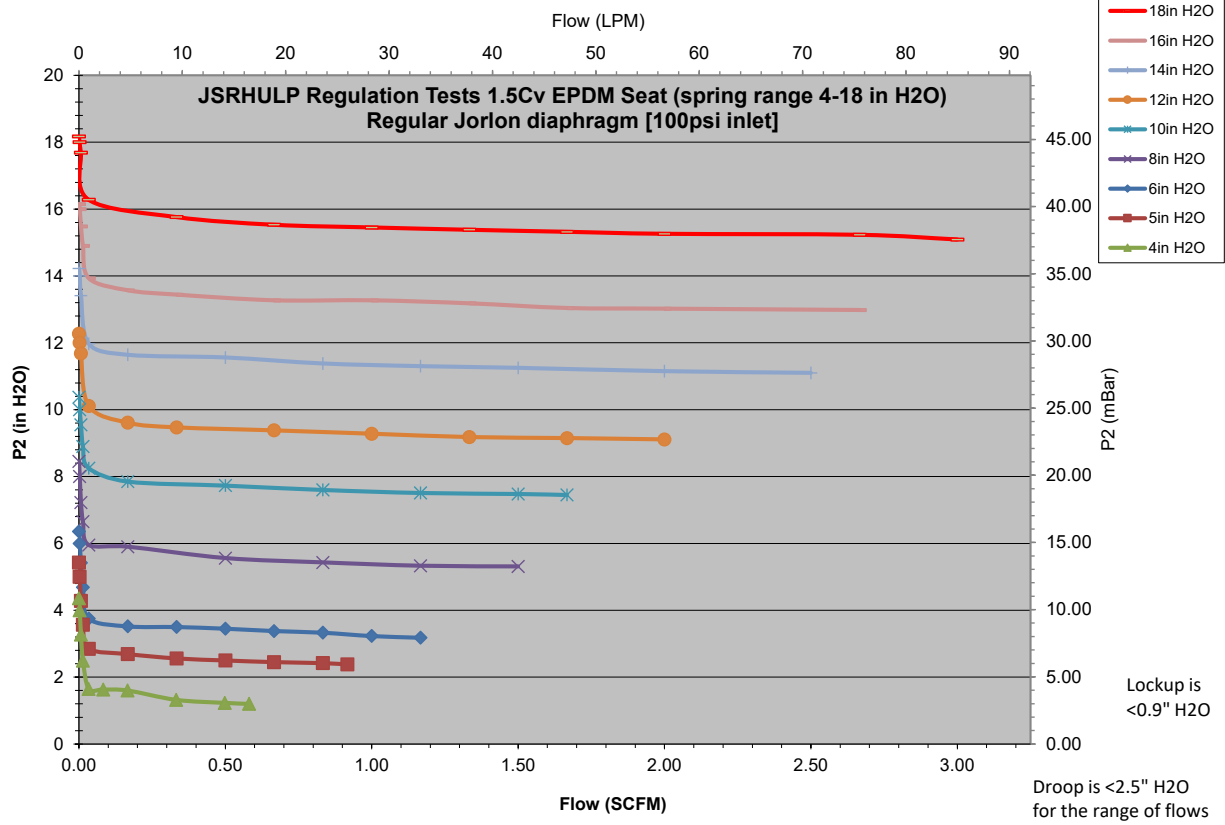
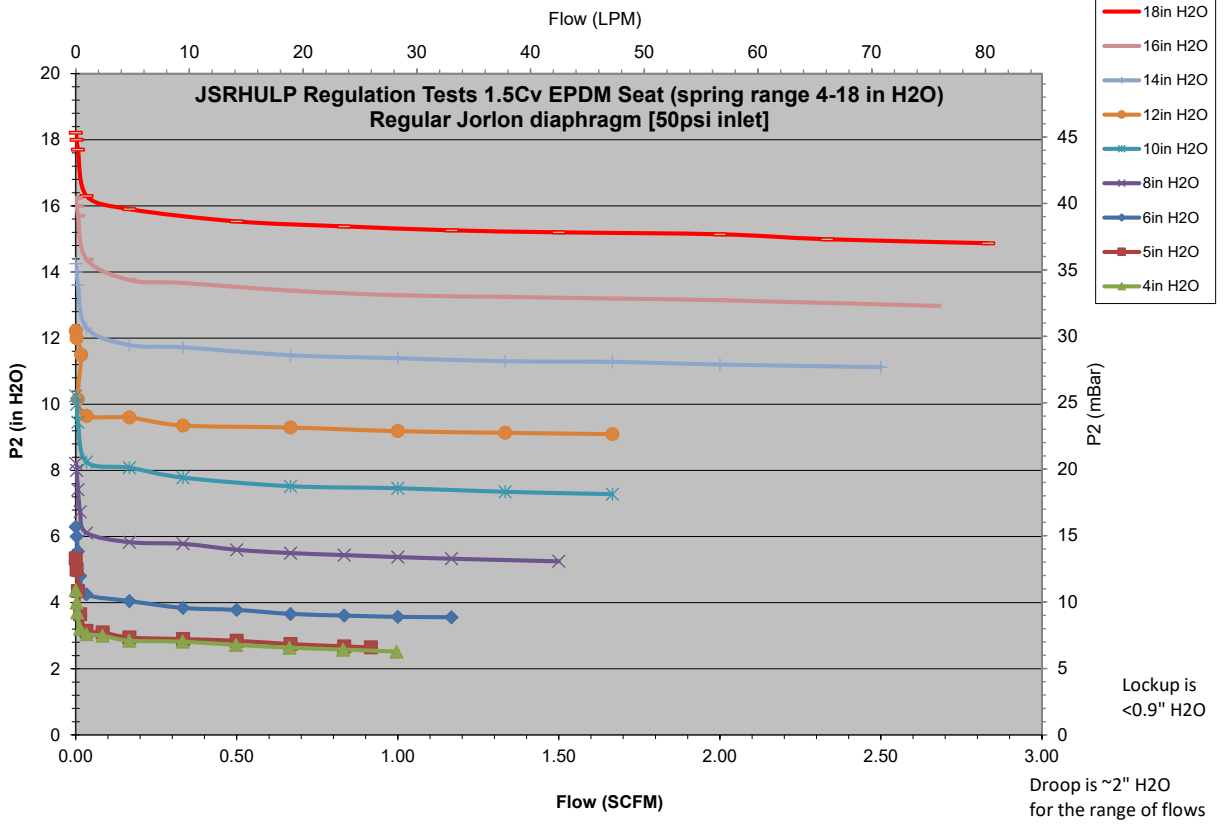
### JSRHULP REGULATION TESTS



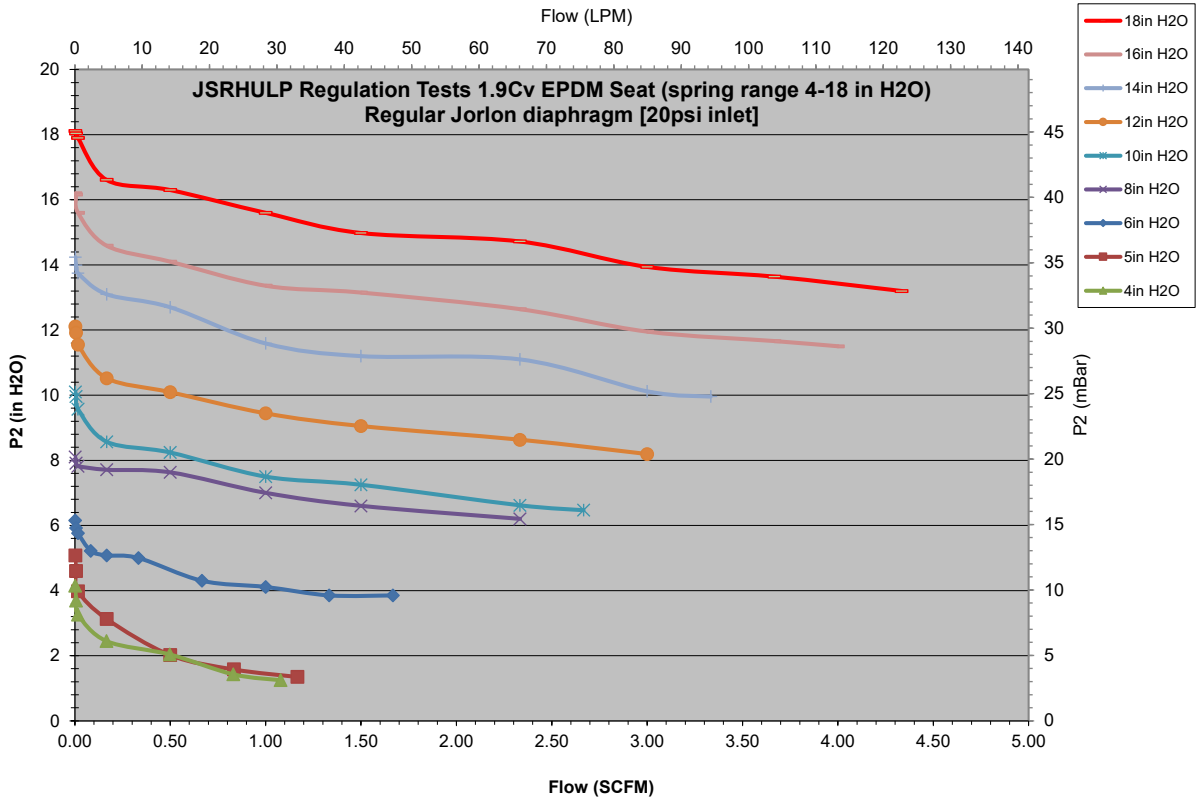
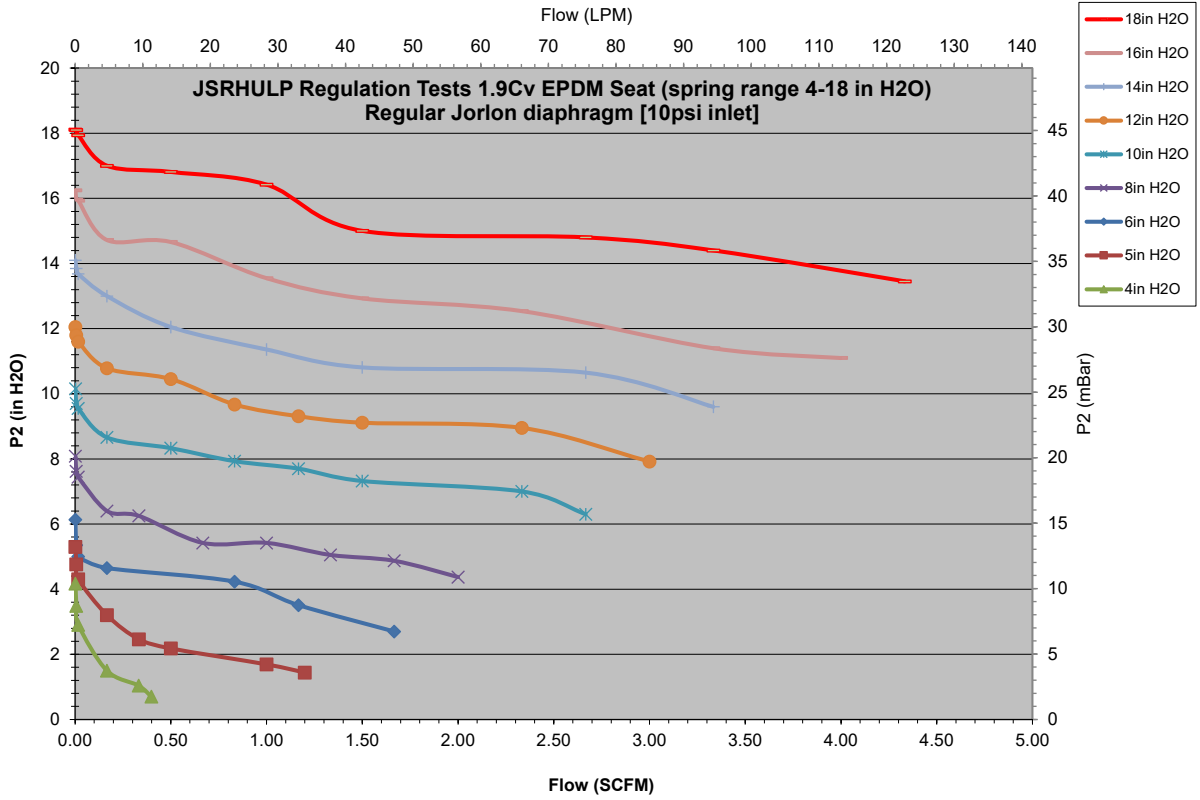
JSRHULP REGULATION TESTS



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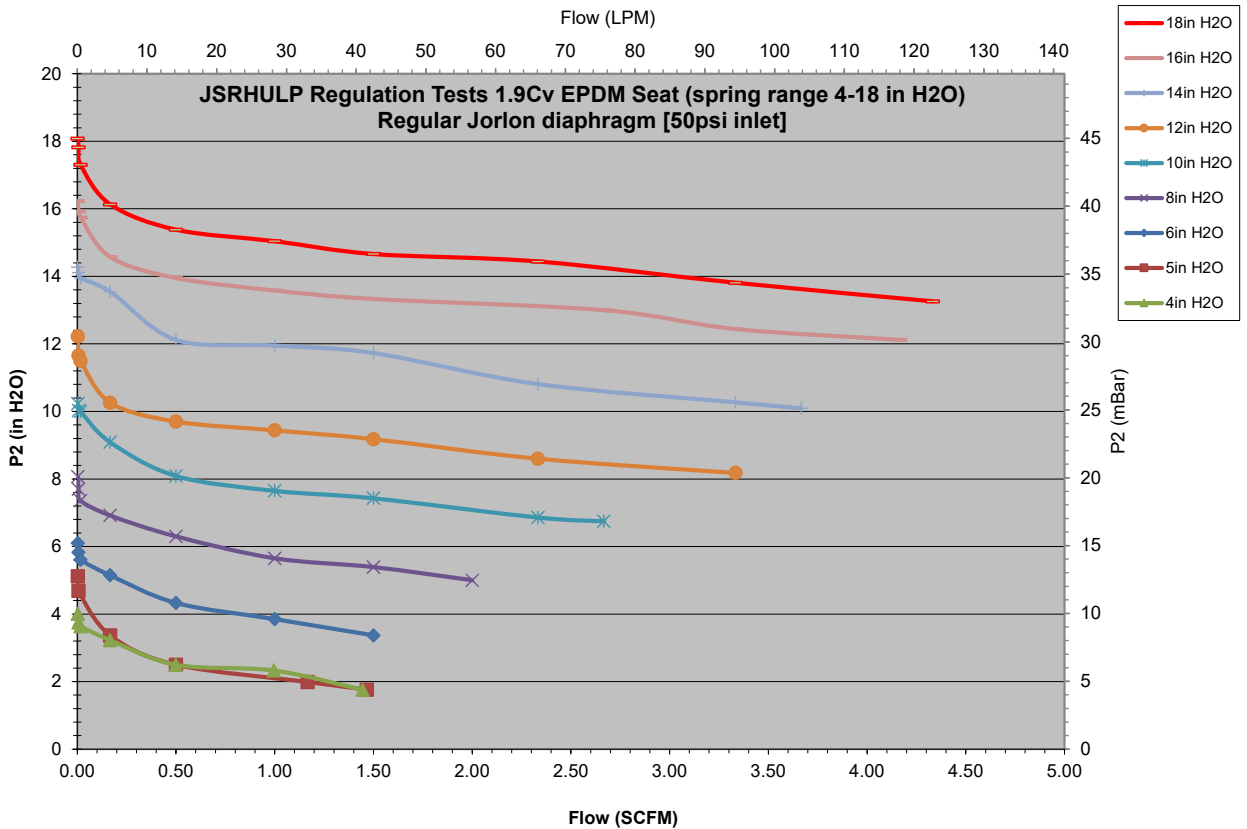
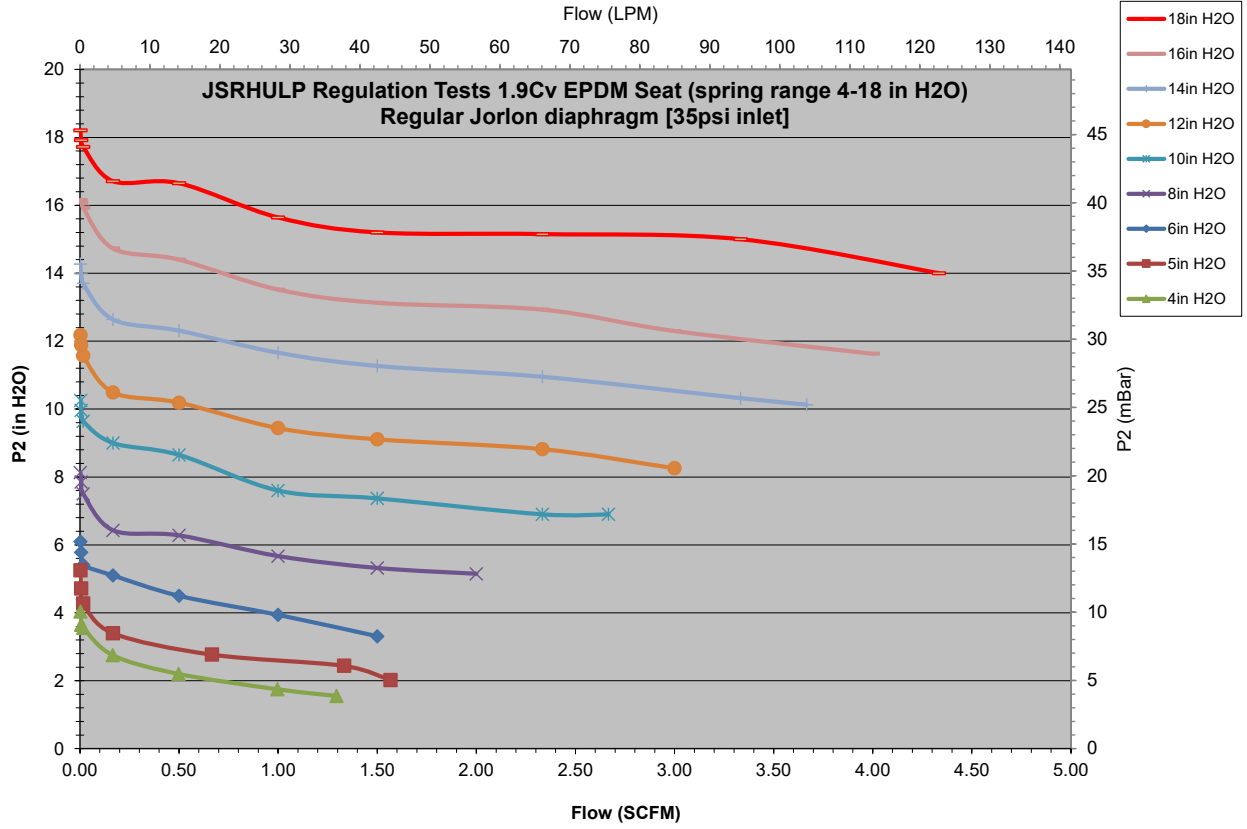


JSRHULP REGULATION TESTS

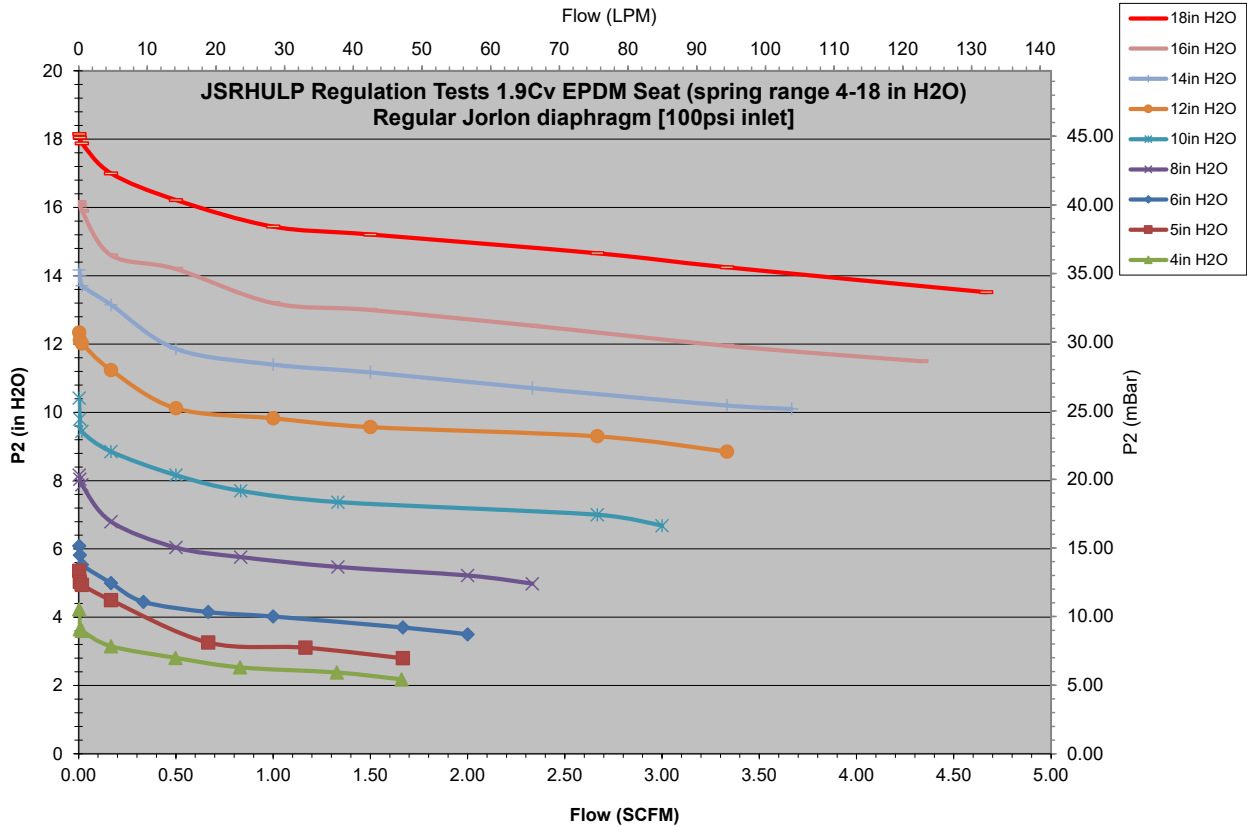




JSRHULP REGULATION TESTS



JSRHULP REGULATION TESTS



OPTION DEFINITION

Gauge Ports - Pressure Gauge

Inlet pressure gauges (and the gauges) are available as standard options.

ORDERING SCHEMATIC

| Model | Size | Material | 1 & 2 | 3 & 4 | 5 & 6 | 7 & 8 | 9 & 10 | 11 & 12 | 13 & 14 | 15 | 16 | 17 |
|-------|------|----------|-------|-------|-------|-------|--------|---------|---------|----|----|----|
|       |      |          |       |       |       |       |        |         |         |    |    |    |

| Model   |                                       |
|---------|---------------------------------------|
| JSRHULP | High Flow Gas Pressure Reducing Valve |

| Size |             |
|------|-------------|
| 050  | 1/2" (DN15) |
| 075  | 3/4" (DN20) |
| 100  | 1" (DN25)   |

| Material |                      |
|----------|----------------------|
| 6L       | Stainless Steel 316L |

| 1 & 2                      | Body Feature       |            |
|----------------------------|--------------------|------------|
| End Connection/Int. Finish | Port Configuration |            |
| C                          | Tri-Clamp 20Ra INT | A Port "A" |

| 3 & 4 | O-Ring & Trim - FDA & USP Class VI |
|-------|------------------------------------|
| 1E    | USP - EPDM & 6L                    |
| 1V    | USP - Viton & 6L                   |
| 1K    | USP - KLRZ & 6L                    |
| 1L    | USP - Silicone & 6L                |
| ZZ    | Non-Standard                       |

| 5 & 6 | Seat - FDA & USP Class VI            |
|-------|--------------------------------------|
| EP    | EPDM (1/2" 1.5 Cv, 3/4" & 1" 1.9 Cv) |
| ZZ    | Non-Standard                         |

| 7 & 8 | Range Spring |
|-------|--------------|
| A8    | 4 - 18" WC   |
| ZZ    | Non-Standard |

| 9 & 10 | Diaphragm Material |
|--------|--------------------|
| GL     | Jorlon             |
| ZZ     | Non-Standard       |

| 11 & 12 | Actuator          |
|---------|-------------------|
| SK      | Standard Actuator |
| ZZ      | Non-Standard      |

| 13 & 14 | Inlet Gauge             |
|---------|-------------------------|
| 0N      | None                    |
| 0B      | 0 - 30 PSIG/Bar (Dual)  |
| 0C      | 0 - 60 PSIG/Bar (Dual)  |
| 0D      | 0 - 100 PSIG/Bar (Dual) |
| 0E      | 0 - 160 PSIG/Bar (Dual) |
| ZZ      | Non-Standard            |

| 15 | Outlet Gauge |
|----|--------------|
| 0N | None         |
| ZZ | Non-Standard |

| 16 | SEP Compliance |
|----|----------------|
| G  | SEP Compliant  |
| 0  | None           |
| ZZ | Non-Standard   |

| 17 | Accessories              |
|----|--------------------------|
| S  | Clean for Oil Free       |
| X  | Clean for Oxygen         |
| A  | EN10204 3.1 Cert All Wet |
| 0  | None                     |
| ZZ | Non-Standard             |

## ORDERING SCHEMATIC FOR JSRHULP REPAIR KIT

| Model | Size | Material | Kit |   | 1 & 2 | 3 & 4 | 5 & 6 | 7 |
|-------|------|----------|-----|---|-------|-------|-------|---|
|       |      |          |     | / |       |       |       |   |

| Model   |                                       |
|---------|---------------------------------------|
| JSRHULP | High Flow Gas Pressure Reducing Valve |

| 3 & 4 | Seat Material           |
|-------|-------------------------|
| EP    | EPDM (1/2" 1.5Cv) 1.9Cv |
| ZZ    | Non-Standard            |

| Size |             |
|------|-------------|
| 050  | 1/2" (DN15) |
| 075  | 3/4" (DN20) |
| 100  | 1" (DN25)   |

| 5 & 6 | Diaphragm Material |
|-------|--------------------|
| SJ    | Standard Jorlon    |
| ZZ    | Non-Standard       |

| Material |                      |
|----------|----------------------|
| 6L       | Stainless Steel 316L |

| 7 | Accessories        |
|---|--------------------|
| S | Clean For Oil Free |
| X | Clean for Oxygen   |
| 0 | None               |
| Z | Non-Standard       |

| 1 & 2 | Trim          |
|-------|---------------|
| 1E    | USP-EPDM & 6L |
| 1V    | USP-VIT & 6L  |
| 1K    | USP-KLRZ & 6L |
| 1L    | USP-SIL & 6L  |
| ZZ    | Non-Standard  |