JSHM Series Hand Metering Valves

Hand metering valve for precise manual control of Biopharm and Pharmaceutical gas or liquids

The JSHM Series allows precision manual adjustment of pharmaceutical liquid and gas flows. These valves are most often used in bio-pharmaceutical and pharmaceutical R & D, and clinical and pilot scale production facilities to manually set precise flows of liquids and gas. They can also be used for precision fixed flow balancing of small to medium WFI or Clean Steam distribution loops in large scale manufacturing.

The JSHM is the first rising stem diaphragm valve to offer both precision metering capabilities and the long durability needed for repeated SIP, or continuous clean steam use.

Construction & Design Features

- Available in both inline and angled body variants
- 316L barstock construction guarantees material integrity and quality surface finish
- Cv ranges that assure a valve that will fit your application:
  1/2" - 3/4": 0 - 0.4; 0.2 - 0.7; 0.5 - 1.5
  1" - 1-1/2": 1.0 - 3.5
- Soft seat material for ANSI Class VI shutoff
- Minimal internal volume
- Proprietary Jorlon diaphragm material provides exceptionally long life
- Top Entry Design and Modular Trim allow for quick maintenance (5 minutes or less) for Cv, Trim or Diaphragm change out
- Zero hold up and gravity draining through the outlet with valve open in vertical down flow installation, and separately drainable inlet and outlet with valve open in horizontal installation
- All designs are CIP and SIP capable
- Can be used on continuous clean steam and on non-cavitating fluids

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.

Application

Ideal for bio-pharmaceutical and pharmaceutical research and production facilities and equipment for precise, manual clean liquid and gas flow control.

- WFI, growth media, buffer, solvent and elution mix
- Clean air, N_2, CO_2, O_2, AR

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a division of Jordan Valve

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Specifications

Sizes: 1/2" (DN15), 3/4" (DN20), 1" (DN25), 1-1/2" (DN40)

End Connections
- Tri-Clamp
- Tube weld ends
- NPT

Soft Seat Materials for ANSI Class VI Shut-off
- 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
- PEEK to +350°F (177°C), FDA & USP Class VI

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

Diaphragm Material
- Jorlon™ - FDA, USP Class VI

Maximum Inlet Pressure
- 150 psig (10,5 bar)

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

Pressure at Maximum Temperature
- Tube End and Tri-Clamp; 150 psi @ 350°F (10,3 bar @ 177°C) with PEEK seats; 150 psi @ 150°F (10,3 bar @ 66°C) with PTFE seats
- NPT: 150 psi @ 350°F(10,3 bar @177°C) with PEEK seats; 150 psi @ 150°F (10,3 bar @ 66°C) with PTFE seats

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

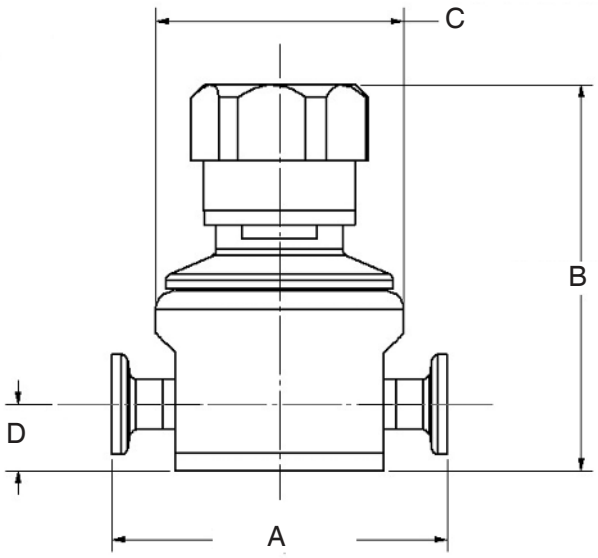
Maximum Pressure Drop
- 150 psig (10,5 bar)

Cv Ranges
- 0 - 0.4 (1/2" - 3/4")
- 0.2 - 0.7 (1/2" - 3/4")
- 0.5 - 1.5 (1/2" - 3/4")
- 1.0 - 3.5 (1" - 1-1/2")

Note: For a complete ancillary list of all wetted and non-wetted material specifications, please contact Steriflow Valve.
* NPT treaded end valves: Threads are not 20 Ra (0.5 Ra). Bottom of outlet cavities (inlet, outlet, or gauge ports) are machine finish only. They cannot be polished to spec without damaging the treads. For pure gas installations, Tri-clamp, or weld end connections recommended if specific surface finish is required at bottom of cavity ports.

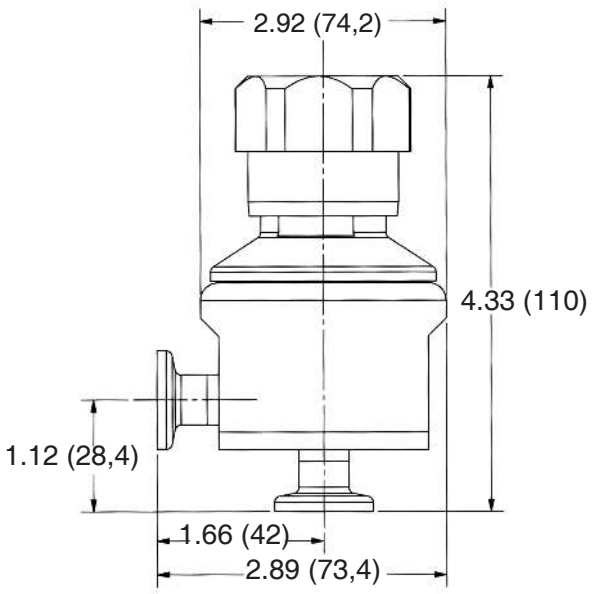
Dimensions and Weights

All Sizes

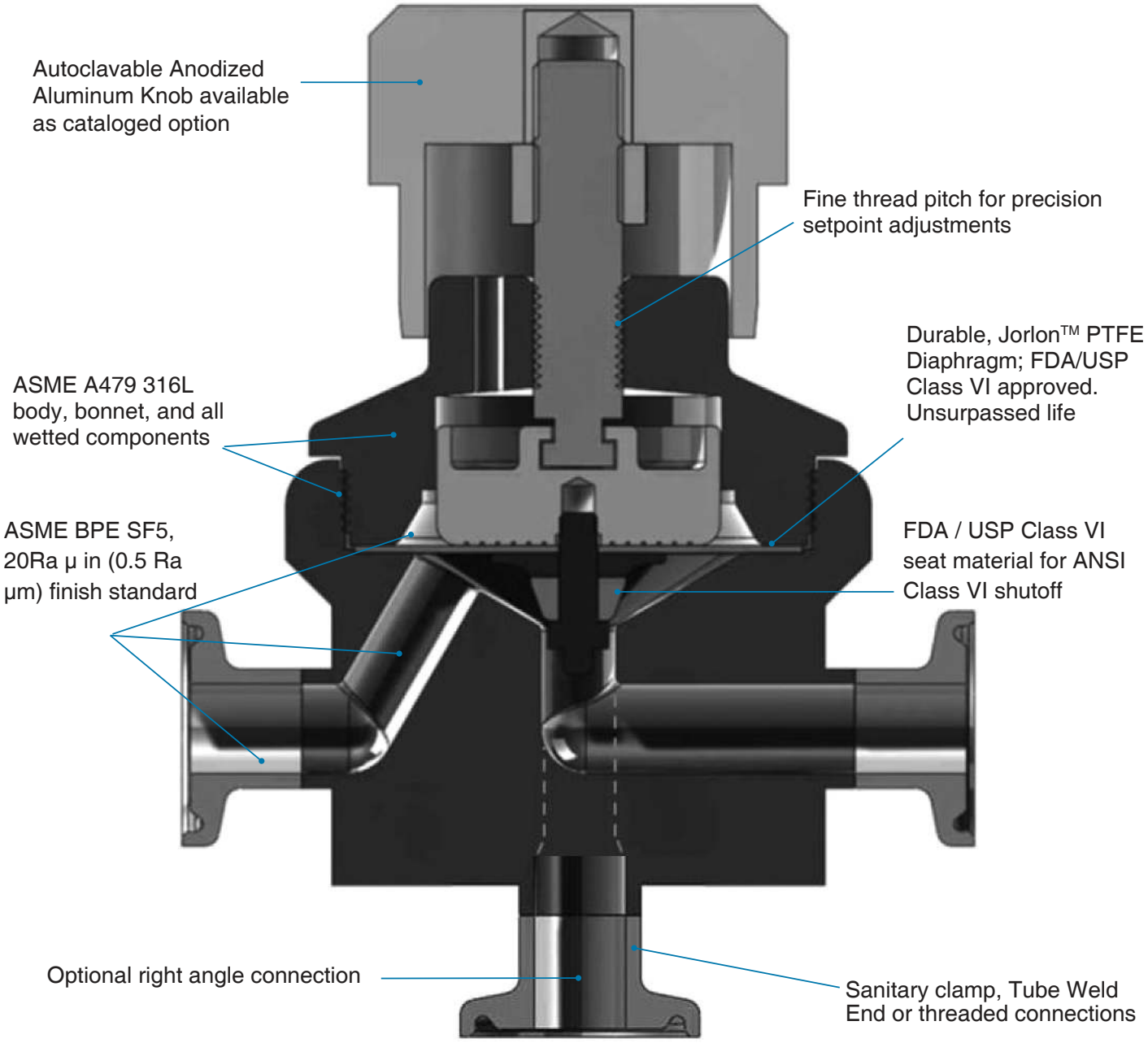


Valve Size	Dimensions, inches (mm) A	B	C	D	Weight, lbs (kgs)
1/2"	3.31	2.92	Ø2.45	0.66	2.7 (1,23)
3/4"	(84,1)	(74,2)	(62,2)	(16,6)	
1"	6.00	6.20	3.70	1.19	10.6 (4,81)
1-1/2"	(152,4)	(157,5)	(94,0)	(30,1)	10.8 (4,90)

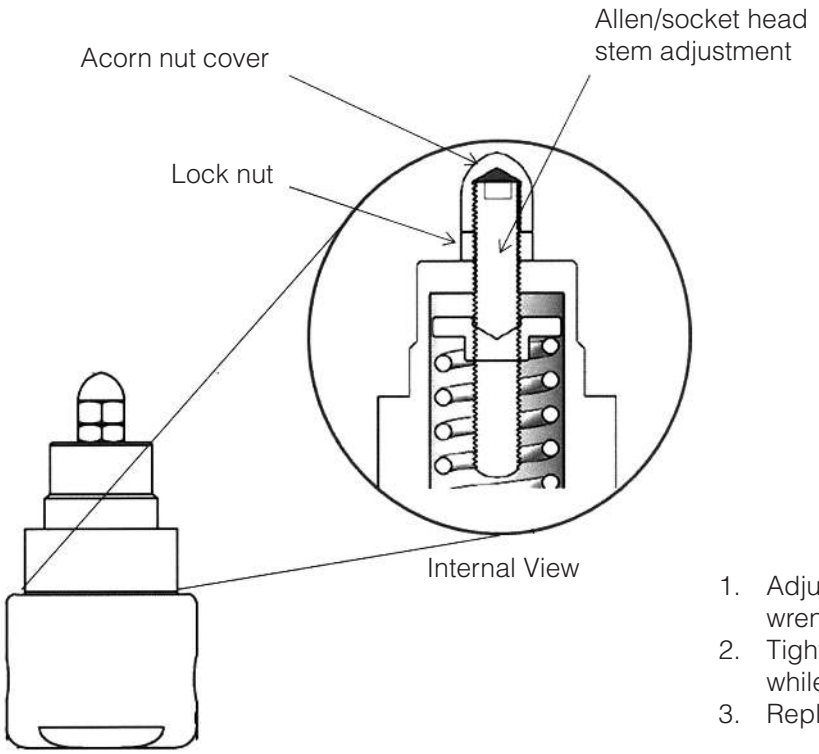
1/2" & 3/4"



Features & Benefits

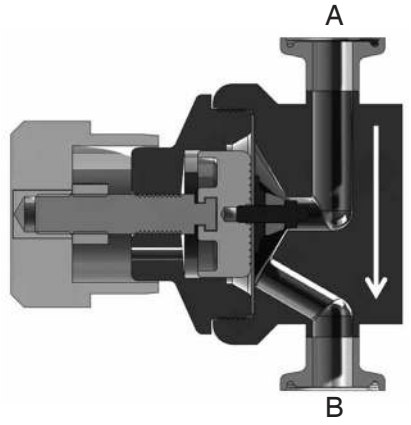


Anti-Tamper Option

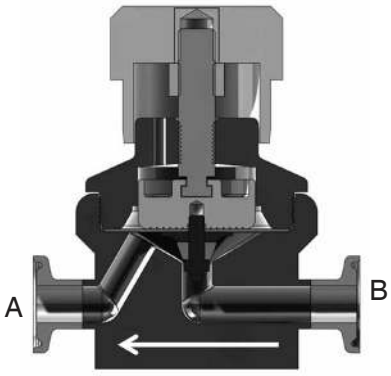


1. Adjust stem position with Allen wrench
2. Tighten lock nut against bonnet while holding stem position
3. Replace and tighten acorn nut

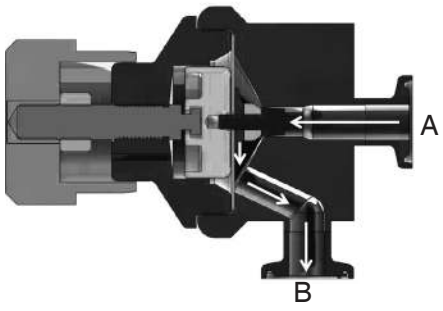
Orientation for Drainability



Vertical Down Installation
No holdup and drainable from port A through port B with valve open in vertical down orientation



Horizontal Installation
No holdup and drainable out port A, and port B with valve open in horizontal orientation



Horizontal Installation (Angle Valve Option)
Some holdup at A inlet with standard angle valve version.
Note: Contact factory for offset inlet version with full drainability from port A through port B

Ordering Schematic

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

	Model
JSHM	J Series Hand Metering Valve

	Size
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)
150	1-1/2" (DN40)

	Body Material
6L	ASTM A479, 316L

1 & 2	Body Feature
AT	Angle Body ASME BPE Tri-Clamp
AB	Angle Body ASME BPE Tube Weld
PT	FNPT
TC	ASME BPE Tri-Clamp
TE	ASME BPE Tube Weld
ZZ	Non-Standard

3 & 4	Trim - FDA & USP Class V
1S	Cv 0 - 0.4 (1/2" - 3/4" only)
2S	Cv 0.2 - 0.7 (1/2" - 3/4" only)
3S	Cv 0.5 - 1.5 (1/2" - 3/4" only)
4S	Cv 1.0 - 3.5 (1" - 1-1/2" only)
ZZ	Non-standard

5 & 6	Seat Material - FDA & USP Class VI
TF	PTFE
PK	PEEK
ZZ	Non-Standard

7 & 8	Range
00	None

9 & 10	Diaphragm Material
JL	Jorlon PTFE, FDA & USP Class VI
ZZ	Non-Standard

11 & 12	Actuator
SK	Standard Actuator
AK	Standard Actuator / Autoclavable Anod. Aluminum Knob
TP	Tamper-Proof Actuator
ZZ	Non-Standard

13 & 14	SEP Compliance
0G	SEP Compliant (1/2" - 1" ONLY)
0F	PED Compliant (1-1/2" ONLY)
00	None
ZZ	Non-Standard

15	Accessories
S	Clean For Oil Free
X	Clean For Oxygen*
J	Clean for Oxygen, Assemble Dry*[1]
0	None
Z	Non-Standard

Ordering Schematic for Repair Kit

Model	—	Size	—	Material	/	1&2	3&4	5&6	7&8

	Model
JSHM	J Series Hand Metering Valve

	Size
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)
150	1-1/2" (DN40)

	Body Material
6L	ASTM A479, 316L

	Kit
	Kit

1 & 2	Trim - FDA & USP Class V
1S	Cv 0 - 0.4 (1/2" - 3/4" only)
2S	Cv 0.2 - 0.7 (1/2" - 3/4" only)
3S	Cv 0.5 - 1.5 (1/2" - 3/4" only)
4S	Cv 1.0 - 3.5 (1" - 1-1/2" only)
ZZ	Non-standard

3 & 4	Seat Material
TF	PTFE
PK	PEEK

5 & 6	Diaphragm Material
JL	Jorlon
ZZ	Non-Standard

7 & 8	Accessories
0S	Clean for Oil Free
0X	Clean for Oxygen*
J	Clean for Oxygen, Assemble Dry*[1]
00	None
ZZ	Non-Standard

*Procedure complies with ASTM G-93 2011 and CGA G-4.1-2009

[1]Use of Oxygen safe lubricant (Krytox™ for example) can affect gas line particulate testing. Assembling all wetted components dry (without lubricant) removes that effect, however it may increase the difficulty in disassembly/reassembly of valve seat components during valve maintenance. Note that we will use O2 safe lubricant on non-wetted threaded components.