

# Mark 978 Series

## Sanitary Control Valves - JD Version

The Mark 978-JD (Jorlon Diaphragm) Series is designed to meet the rigid specifications for sterile process and clean utility control valves. This valve series is suitable for a wide variety of applications in the, bio-pharmaceutical, Parenteral, cosmetic, dairy and food and beverage industries.

The Mark 978 meets ASME BPE guidelines, and is ideally suited for a wide range of flowing media in both the clean utility and process areas of sanitary and aseptic systems.

High rangeability, true characterized trim, high capacities, superior temperature and pressure ratings, facilitated by a superior diaphragm, make the MK978 the sanitary control valve for sterile process, buffer, WFI and acid metering, and clean gas and steam services.

Whether the need is to control pressure, temperature, flow, pH, or another variable, the MK978 is the right valve for your process.

### FEATURES

- Specialized design of diaphragm seal and components allows ultra-high cycle life and lifetime diaphragm warranty
- Jorlon diaphragm – highest continuous steam pressure ratings on the market, full CIP/SIP capabilities
- FDA & USP Class VI compliance standard on all process seal and seat materials
- Self draining – **Angle Body**: when mounted in vertical (all sizes) or horizontal orientations (except 3" and E style bodies); **INLINE Body**: 1/2", 3/4", 1", 1-1/2, & 2" when mounted in horizontal line. No guiding in the wetted area – prevents particulate generation
- Mechanically polished internal components – 20Ra (0,5 µm) finish, electropolish – standard; , 8Ra optional.
- Wetted parts made of 100% ASTM A479 316L Stainless Steel barstock
- Maintenance-friendly – easy to perform sanitary maintenance with simple disassembly and reassembly
- Steel, baked corrosion resistant coated multi-spring actuators to meet a wide range of differential pressure requirements while providing excellent corrosion resistance during washdown

CRN Registration Number Available

Important design changes for 1/2" - 1":  
New: orientation for gravity draining,  
and Bi-directional flow capability



### AVAILABLE FINISHES

#### Body

- *Standard*: 20 Ra mechanical finish on internal wetted surfaces (0,5 µm); machine finish on exterior (63 RMS), and electropolished inside and out
- *Optional*: 20 Ra mechanical finish on external surfaces (0,5 µm); 8 Ra finish on internal or external surfaces (0,2 µm)

#### Stem

- *Standard*: 20 Ra mechanical finish and electropolish (0,5 µm)
- *Optional*: 8 Ra mechanical finish (0,2 µm)

### APPLICATIONS

A wide variety of applications exist for the MK978 in the pharmaceutical, biotech, health care, and food & beverage and other industries including:

#### Processes

- Fermenter
- Bioreactor
- Lyophilization
- Chromatography
- SIP/CIP Systems
- Parenteral filling

#### Media

- Bio-process
- Caustic
- Acids
- Buffer
- Clean Steam
- WFI

SPECIFICATIONS – JORLON DIAPHRAGM

**Sizes**

- Angle Body: 1/2" (DN15) through 3" (DN80)
- InLine Series: 1/2" (DN15) through 2" (DN50)

**Body/Bonnet Connection:** bolted flange

**Body/Bonnet Seal:** valve diaphragm serves as body/bonnet seal

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

**Stem Material:** ASTM A479 316L SST Barstock

**Bonnet Material:** ASTM A479 316L SST Barstock

**Diaphragm**

Jorlon (1/2" – 3")

- FDA/USP Class VI to +340°F (171°C)

**Stem Bushing:** FDA PEEK (no process contact)

**Actuators**

Pneumatic

- 1/2" – 1" (DN15 – DN25); 35M & 55M: Steel, baked corrosion resistant coating
- 1-1/2" – 2" (DN40 – DN50); 55M & 85M: Steel, baked corrosion resistant coating
- 3" (DN80); 85M: Steel, baked corrosion resistant coating

**Soft Seat Option (Cv ≥ 3.5 only)**

- PTFE FDA/USP Class VI to 250°F (121°C)
- PEEK FDA/USP Class VI to 340°F (171°C)
- For service in excess of the temperatures listed, please consult factory

**Electric**

- Contact factory

**Shutoff**

- Standard: ANSI Class III with metal seat
- Optional: ANSI Class VI with soft seat (Cv > 3.5 only)

**Ranges:** 3-15, 6-30, 3-9\*, or 9-15\* psi (0,2-1,0; 0,4-2,0; 0,2-0,6; or 0,6-1,0 bar) (\* positioner required);

**Maximum Pressure @ 100°F (38°C)**

- Jorlon (1/2" – 3"): 150 psi (10,3 bar)

**Maximum Pressure/Temperature Rating**

- Jorlon (1/2" – 3"): 100 psi @ +340°F (6,9 bar @ +171°C)

**Flow Characteristics:** Linear, equal percentage, or quick opening (consult factory for quick opening's Cvs)

**Cv (Kv) Ratings (Diaphragm)**

| Cv (Kv) Ratings |                                                    |                     |
|-----------------|----------------------------------------------------|---------------------|
| Size            | Linear                                             | Equal Percentage    |
| 1/2"            | 0.2 / 0.5 / 1.0 (0,17 / 0,43 / 0,86)               |                     |
| 3/4"            | 1.0 \ 2.0 \ 3.5 \ 5.0 (0,86 \ 1,72 \ 3,01 \ 4,30)  |                     |
| 1"              | 3.5 \ 5.0 (3,01 \ 4,30)                            |                     |
|                 | 7.5 \ 15 (6,45 \ 12,90)                            | 7.5 (6,45)          |
| 1-1/2"          | 5.0 \ 10 \ 15 \ 20.0 (4,30 \ 8,60 \ 12,90 \ 17,20) |                     |
|                 | 30 (25,80)                                         |                     |
| 2"              | 10 \ 15 \ 20 \ 30 (8,60 \ 12,90 \ 17,20 \ 25,8)    |                     |
|                 | 40, 60, 70*<br>(34,4 \ 52 \ 60,55*)                |                     |
| 3"              | 75\100 (65\86)                                     | 60\80\90 (52\69\77) |

\* Modified Linear - Contact factory for more information

**Rangeability:** Control valve rangeability is a function of installation piping, media properties, flow and differential pressure. For information regarding rangeability for your application, please contact your representative or the factory with installation and application information.

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

MAXIMUM Δ Ratings, PSI (BAR)

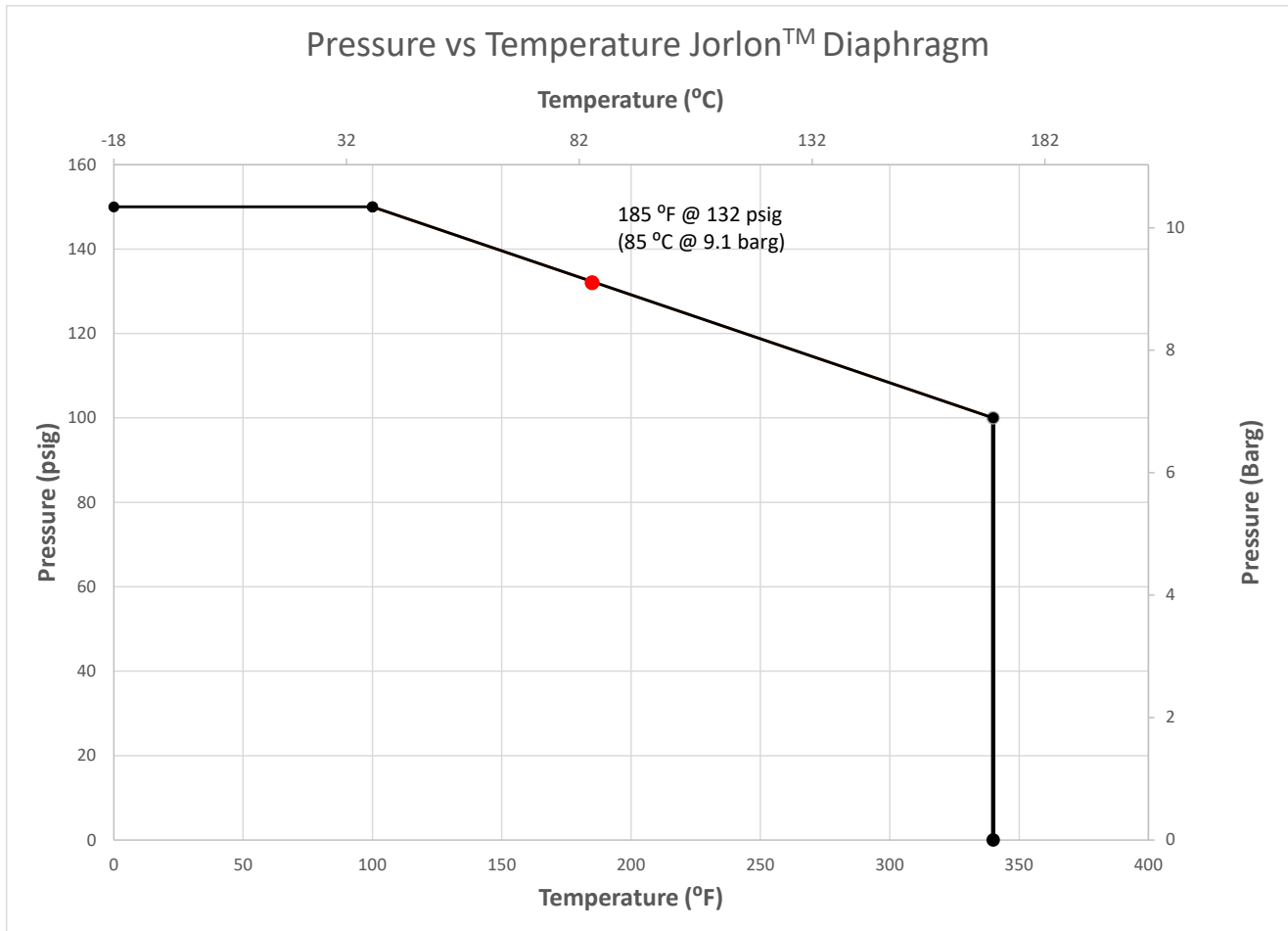
| Valve Size | Valve Cv          | Actuator Size | ATO 3-15   | ATO 6-30 or with positioner @ 40 psi | ATC 3-15 or with positioner @ 20 psi | ATC 6-30 or with positioner @ 40 psi |
|------------|-------------------|---------------|------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 1/2"*      | 0.2 / 0.5 / 1.0   | 35M/55M       | 150 (10,3) | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 3/4"*      | 1 / 2 / 3.5 / 5   | 35M/55M       | 150 (10,3) | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 1"*        | 3.5 / 5           | 35M           | 150 (10,3) | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 1"*        | 3.5 / 5           | 55M           | 150 (10,3) | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 1"*        | 7.5 / 15          | 35M           | 75 (5,2)   | 120 (8,3)                            | 75 (5,2)                             | 150 (10,3)                           |
| 1"*        | 7.5 / 15          | 55M           | 150 (10,3) | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 1-1/2"***  | 5 / 10 / 15       | 55M           | N/A        | 126 (8,7)                            | 150 (10,3)                           | 150 (10,3)                           |
| 1-1/2"***  | 5 / 10 / 15       | 85M           | N/A        | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 1-1/2"***  | 20 / 30           | 55M           | N/A        | 97 (6,7)                             | 150 (10,3)                           | 150 (10,3)                           |
| 1-1/2"***  | 20 / 30           | 85M           | N/A        | 150 (10,3)                           | 150 (10,3)                           | 150 (10,3)                           |
| 2"***      | 10/15/20/30/40/60 | 55M           | N/A        | 34 (2,3)                             | 111 (7,7)                            | 111 (7,7)                            |
| 2"***      | 10/15/20/30/40/60 | 85M           | N/A        | 111 (7,7)                            | 150 (10,3)                           | 150 (10,3)                           |
| 3"***      | 60/75/80/90/100   | 85M           | N/A        | 100 (6,9)                            | 100 (6,9)                            | 100 (6,9)                            |

Note: 1-1/2", 2" & 3" require positioner supplied by Steriflow or customer. 3" actuator is bench set @ 11 - 30 psi

\* 1/2" - 1" may be sold with I/P instead of positioners

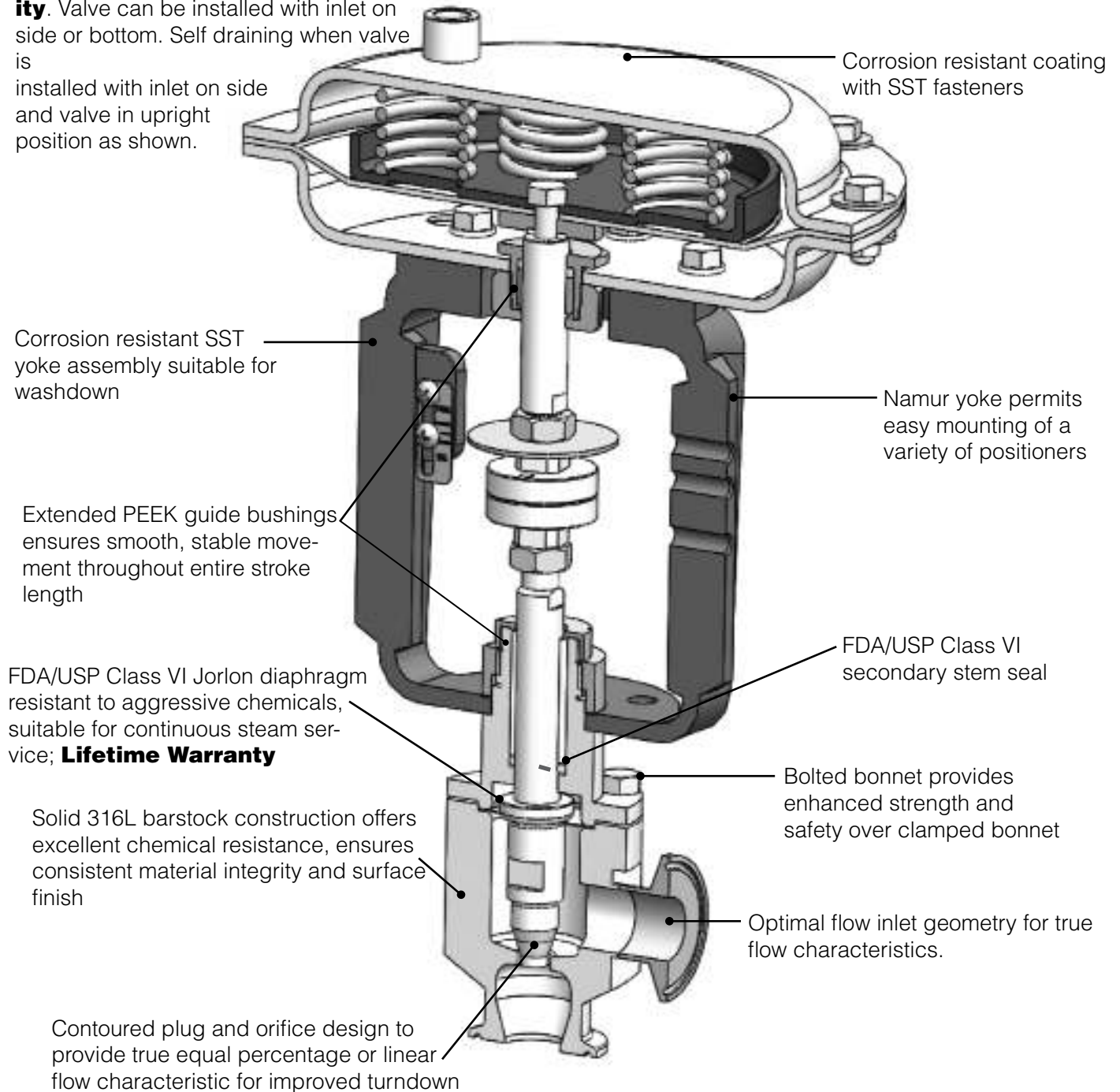
\*\* 1/2" - 2" with positioner ATO actuator is bench set @ 6-30 psi/ ATC actuator is bench set @ 3-15 psi.

JORLON DIAPHRAGM PRESSURE TEMPERATURE CHART



MARK 978E JORLON DIAPHRAGM SEAL (1/2" - 1" ANGLE STYLE)

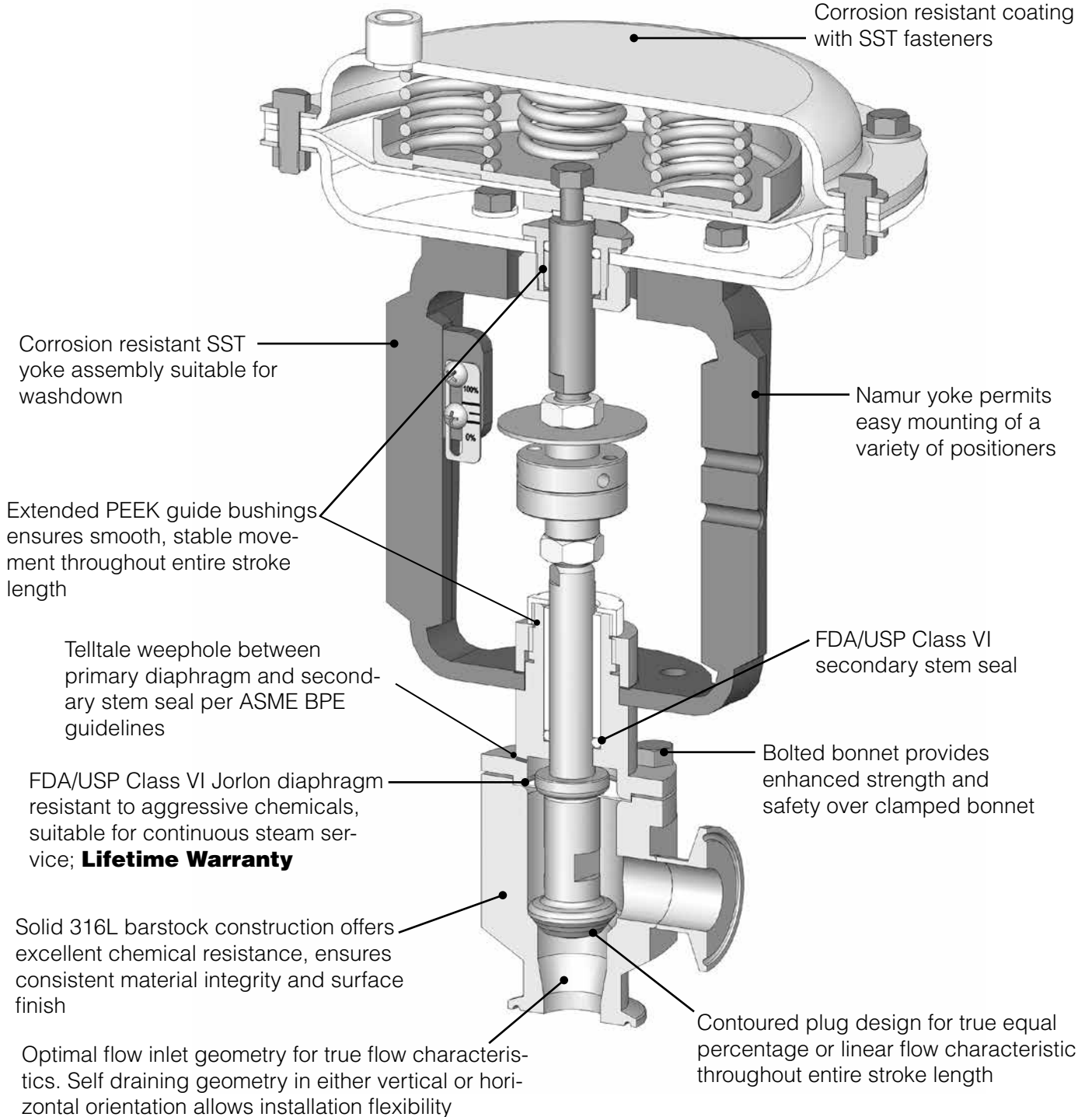
**NEW Bi-direction flow capability.** Valve can be installed with inlet on side or bottom. Self draining when valve is installed with inlet on side and valve in upright position as shown.



**SPECIFICATION**

Stainless steel sanitary control valve shall be made from ASTM A479 316L barstock material, which includes body and all wetted metal parts. Control valve with the stem sealed by FDA approved and USP Class VI certified Jorlon diaphragm with lifetime warranty. The valve stem shall be supported by a one piece, SS NAMUR Yoke with two extended PEEK™ Guide bushings to provide structural rigidity and true guiding in any installation orientation. Guiding of valve stem/plug shall be outside of the wetted process areas of valve above diaphragm. Control valve shall have secondary stem seal, and extended guide bushing to provide additional support for multiple installation orientations. Valve shall be self draining in at least one orientation.

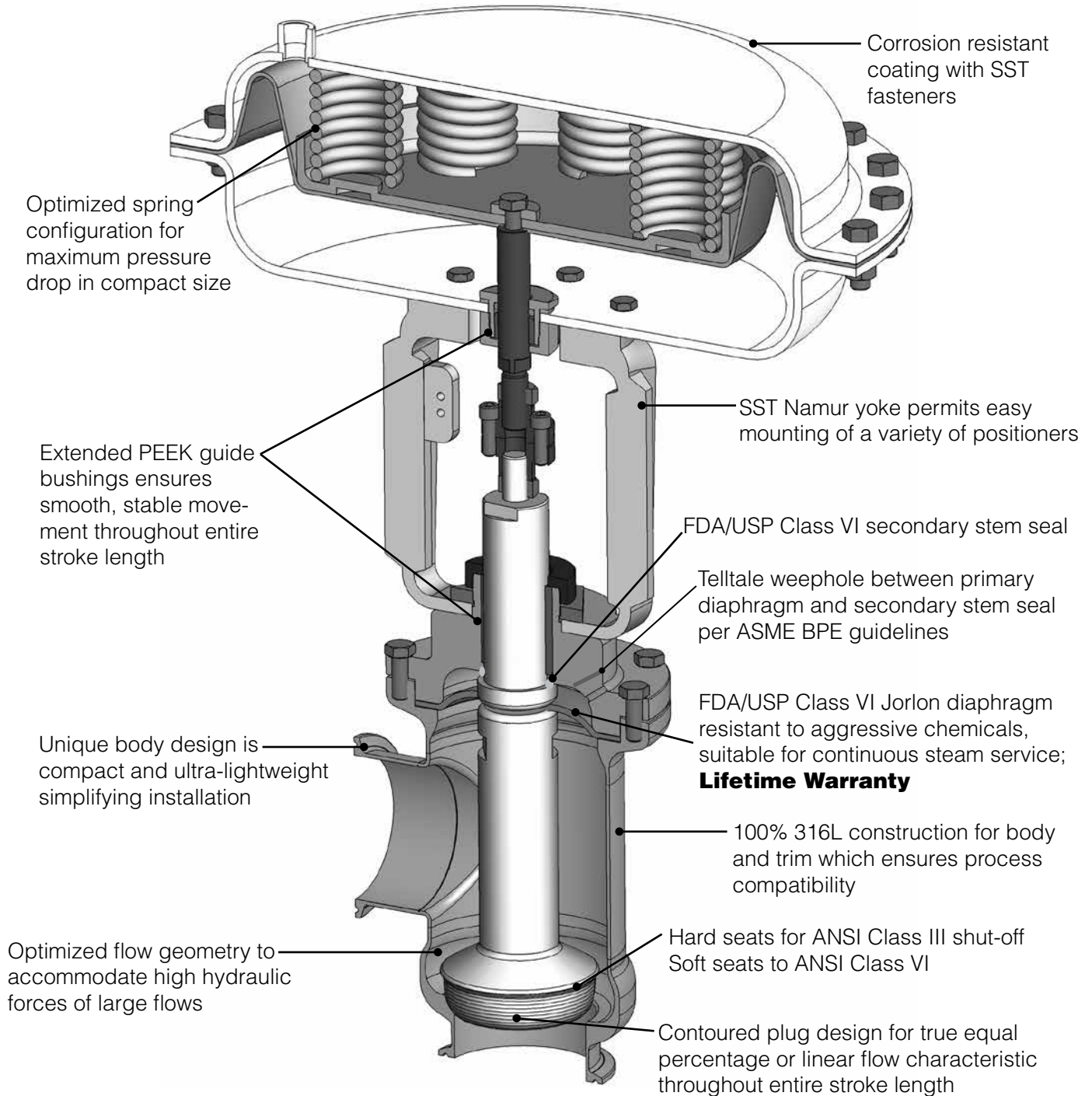
### JORLON DIAPHRAGM SEAL (1-1/2" – 2" ANGLE STYLE)



### SPECIFICATION

Stainless steel sanitary control valve shall be made from ASTM A479 316L barstock material, which includes body and all wetted metal parts. Control valve with the stem sealed by FDA approved and USP Class VI certified Jorlon diaphragm with lifetime warranty. The valve stem shall be supported by a one piece, SS NAMUR Yoke to provide structural rigidity in any installation orientation. Guiding of valve stem/plug shall be outside of the wetted process areas of valve above diaphragm. Control valve shall have secondary stem seal, and extended guide bushing to provide additional support for multiple installation orientations. Valve shall be self draining in any orientation.

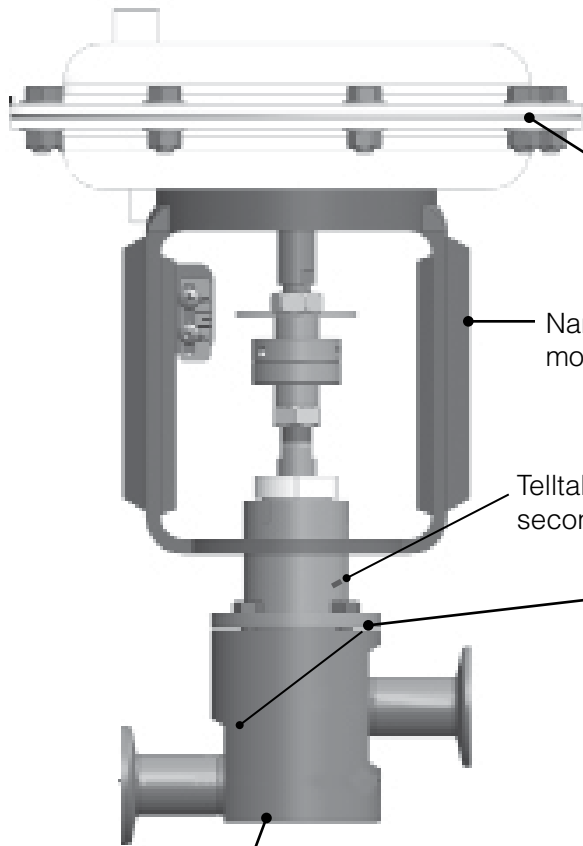
JORLON DIAPHRAGM SEAL (3" ANGLE STYLE)



SPECIFICATION

Stainless steel sanitary control valve shall be made from ASTM SA479 316L material, which includes body and all wetted metal parts. Control valve with the stem sealed by FDA approved and USP Class VI certified Jorlon diaphragm with lifetime warranty. The valve stem shall be supported by a one piece, SS NAMUR Yoke to provide structural rigidity in any installation orientation. Guiding of valve stem/plug shall be outside of the wetted process areas of valve above diaphragm. Control valve shall have secondary stem seal, and extended guide bushing to provide additional support for multiple installation orientations. Valve shall be self draining when installed with inlet vertical and below valve assembly.

### MARK 978E INLINE (1")



Corrosion resistant coating with SST fasteners

Namur yoke permits easy mounting of positioners

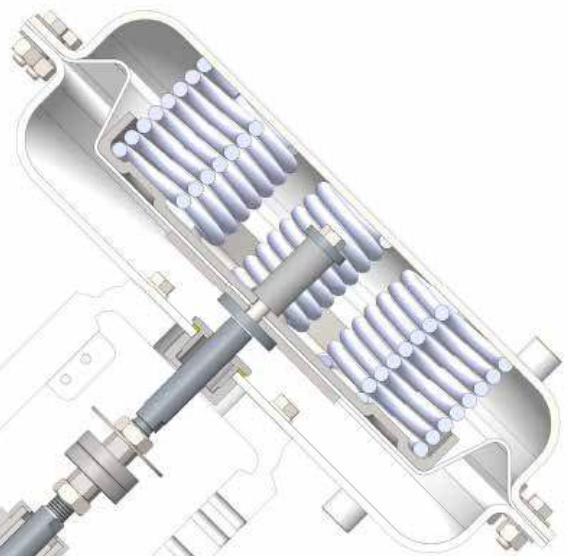
Telltale weephole between primary diaphragm and secondary stem seal per ASME BPE guidelines

Unique body design is compact and ultra-light-weight simplifying installation

100% 316L construction for body and trim which ensures process compatibility

New INLINE design allows process design flexibility. Process designers are no longer constrained by angle valve process tubing. Fully drainable, no hold up when installed as shown

### MARK 978 INLINE (1-1/2" - 2")



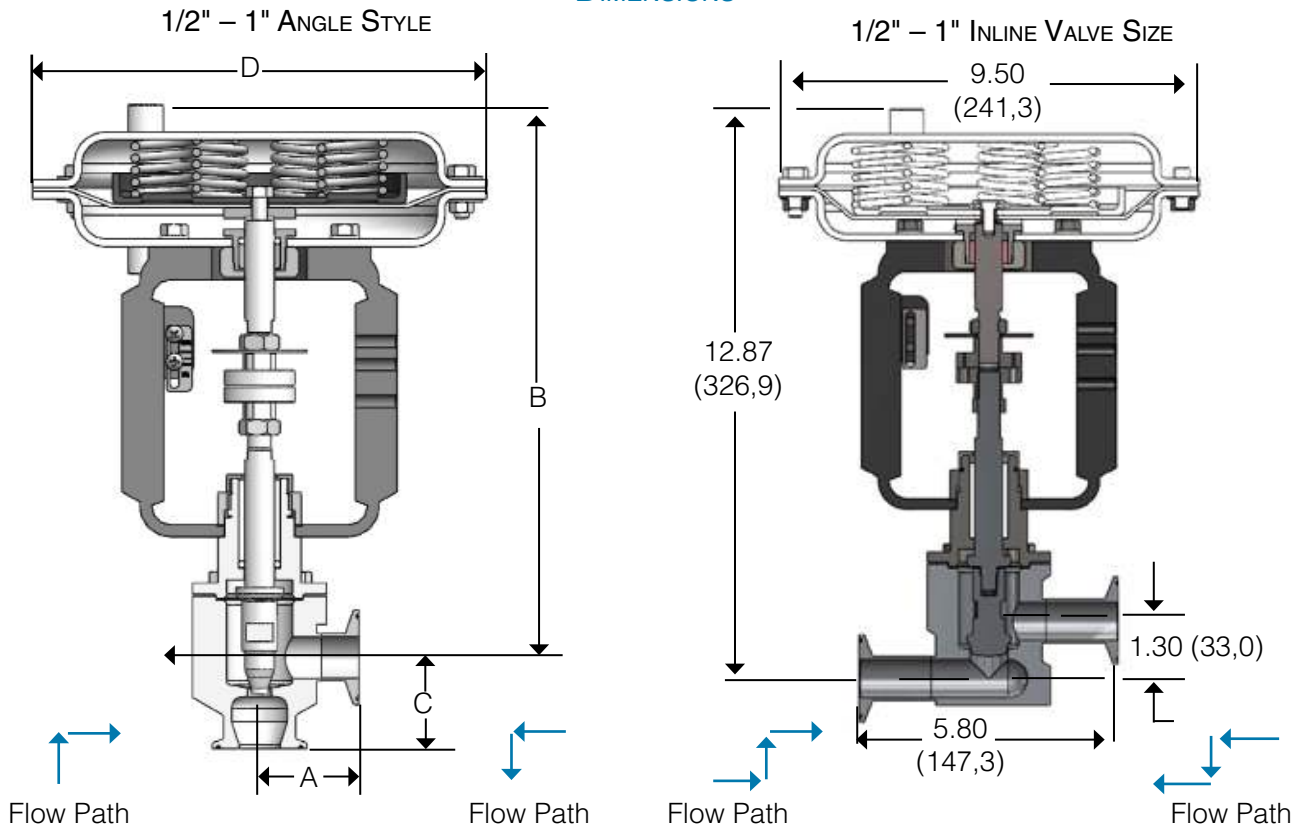
Bolted bonnet provides enhanced strength and safety over clamped bonnet

Namur yoke permits easy mounting of a variety of positioners

100% 316L construction for body and trim which ensures process compatibility

FDA/USP Class VI Jorlon diaphragm – resistant to aggressive process utilities, suitable for continuous steam service, **Lifetime Warranty**

DIMENSIONS



**Installation and Drainability (for both valves):**

- Valve can be installed with flow direction as shown above, or reverse
- For gravity drainage from inlet through outlet and no hold up when open, install upright as show above with flow entering the right side.

**IMPORTANT:**

The 1/2" - 1" MK978**E** can only be installed as shown above. If installed on it's side (90° from above orientation), it will not gravity drain.

- If you need to install a valve on it's side, order the MK978 (not the MK 978**E**). Call Steriflow or your Steriflow Representative for the MK978 data sheet, or for model number help.

DIMENSIONS 1/2" - 1" ANGLE STYLE

INCHES

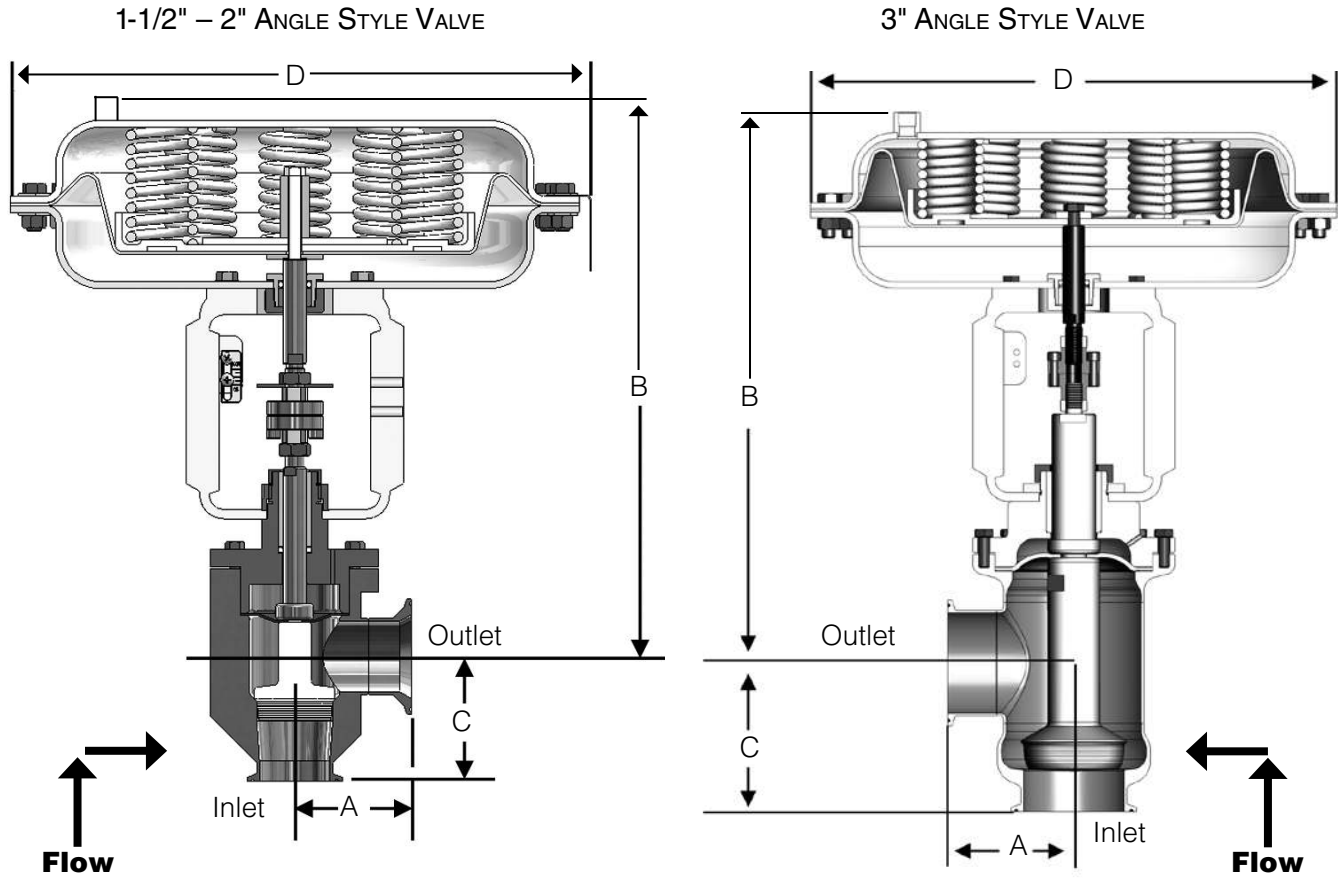
| Valve Size | Dimensions |       |      |             | Weight Lbs |
|------------|------------|-------|------|-------------|------------|
|            | A          | B     | C    | D           |            |
| 1/2"       | 2.08       | 11.94 | 1.91 | 9.50 (35M)  | 27 (35M)   |
|            |            |       |      | 12.50 (55M) | 42 (55M)   |
| 3/4"       | 2.08       | 11.94 | 1.91 | 9.50 (35M)  | 27 (35M)   |
|            |            |       |      | 12.50 (55M) | 42 (55M)   |
| 1"         | 2.08       | 11.94 | 1.91 | 9.50 (35M)  | 27 (35M)   |
|            |            |       |      | 12.50 (55M) | 42 (55M)   |

METRIC

| Valve Size | Dimensions |     |    |           | Weight Kgs |
|------------|------------|-----|----|-----------|------------|
|            | A          | B   | C  | D         |            |
| DN15       | 53         | 303 | 49 | 241 (35M) | 12 (35M)   |
|            |            |     |    | 318 (55M) | 19 (55M)   |
| DN20       | 53         | 303 | 49 | 241 (35M) | 12 (35M)   |
|            |            |     |    | 318 (55M) | 19 (55M)   |
| DN25       | 53         | 303 | 49 | 241 (35M) | 12 (35M)   |
|            |            |     |    | 318 (55M) | 19 (55M)   |

Based on US tri-clamp ends. Consult factory for DIN and ISO tri-clamp end dimensions

DIMENSIONS



**Installation Orientation and Drainability:**

INCHES

| Valve Size | Dimensions |       |      |             | Weight Lbs |
|------------|------------|-------|------|-------------|------------|
|            | A          | B     | C    | D           |            |
| 1-1/2"     | 3.08       | 13.70 | 3.30 | 12.50 (55M) | 47 (55M)   |
|            |            |       |      | 15.00 (85M) | 57 (85M)   |
| 2"         | 3.08       | 13.70 | 3.30 | 12.50 (55M) | 47 (55M)   |
|            |            |       |      | 15.00 (85M) | 57 (85M)   |
| 3"         | 3.59       | 15.1  | 4.2  | 15.00 (85M) | 59 (85M)   |

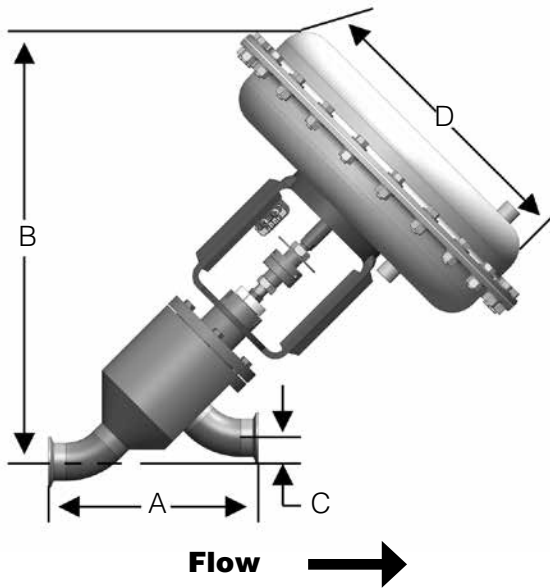
METRIC

| Valve Size | Dimensions |     |     |           | Weight Kgs |
|------------|------------|-----|-----|-----------|------------|
|            | A          | B   | C   | D         |            |
| DN40       | 78         | 348 | 84  | 318 (55M) | 21 (55M)   |
|            |            |     |     | 381 (85M) | 26 (85M)   |
| DN50       | 78         | 348 | 84  | 318 (55M) | 21 (55M)   |
|            |            |     |     | 381 (85M) | 26 (85M)   |
| DN80       | 91         | 384 | 107 | 381 (85M) | 27 (85M)   |

Based on US tri-clamp ends. Consult factory for DIN and ISO tri-clamp end dimensions

### INLINE DIMENSIONS

1-1/2" & 2" INLINE VALVE



#### INCHES

| Valve Size | Dimensions |       |      |             | Weight Lbs |
|------------|------------|-------|------|-------------|------------|
|            | A          | B     | C    | D           |            |
| 1-1/2"     | 8.31       | 17.00 | 0.96 | 12.50 (55M) | 49 (55M)   |
|            |            |       |      | 15.00 (85M) | 59 (85M)   |
| 2"         | 10.23      | 17.25 | 0.96 | 12.50 (55M) | 49 (55M)   |
|            |            |       |      | 15.00 (85M) | 59 (85M)   |

#### METRIC

| Valve Size | Dimensions |     |      |           | Weight Kgs |
|------------|------------|-----|------|-----------|------------|
|            | A          | B   | C    | D         |            |
| DN40       | 211        | 432 | 24,4 | 318 (55M) | 22 (55M)   |
|            |            |     |      | 381 (85M) | 27 (85M)   |
| DN50       | 260        | 438 | 24,4 | 318 (55M) | 22 (55M)   |
|            |            |     |      | 381 (85M) | 27 (85M)   |

Based on US tri-clamp ends. Consult factory for DIN and ISO tri-clamp end dimensions

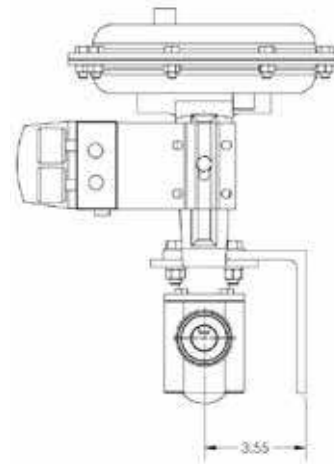
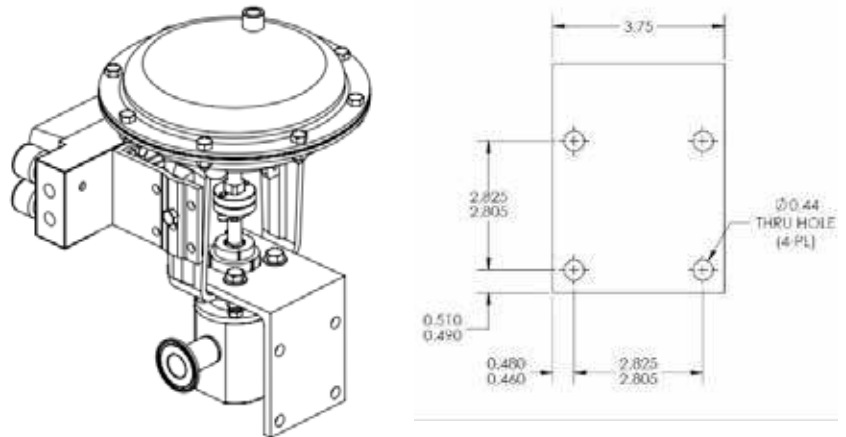
#### Installation Orientation and Drainability:

- Valve has no hold-up when installed as shown above, but must be drained below inlet.

### NEW MK978 CONTROL VALVE OPTION: MOUNTING BRACKET

We now have a Stainless Steel Bracket Kit for all of our 1/2" – 2" MK978JD and OR angle style, and our 1/2"-1" Inline style Control Valves.

- The bracket mounts to the base of the Namur Yoke (as shown to the right) and provides exceptional support for mounting to a stand (Hardware included), wall or panel.
- Specifications:**
  - Materials:**
    - Bracket, HHCS: 304SS
    - Ubolts, Nut (for mounting to pipe stand): 304SS
    - Washers: 18/8 SS
  - Surface Finish:** 316SS Angle Standard Material Finish



**Kit Model Number:** 978-BRKT-KIT

**NOTE:** the 1/2' - 1" MK978E can only be installed as shown on page 7.

**IMPORTANT:**

When ordering a replacement valve for an existing 1/2" - 1" MK978 or an identical model for a new process, the original valves serial number is required. Call Steriflow or your Steriflow Representative for assistance in specifying the MK978 (not the MK978E).

ORDERING SCHEMATIC (MK978E 1/2" — 1")

| Model No | Size | Stem Seal / Seat | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------|------|------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
|          |      |                  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |

|         | Model                         |
|---------|-------------------------------|
| 978E    | Standard                      |
| 978ESP  | Side Mounted Positioner (SMP) |
| 978ETP  | Top Mounted Positioner (TMP)  |
| 978EN   | In Line Body                  |
| 978ENSP | InLine with SMP               |
| 978ENTP | InLine with TMP               |

|     | Size |
|-----|------|
| Ø50 | 1/2" |
| Ø75 | 3/4" |
| 100 | 1"   |

|     | Stem Seal / Seat                                    |
|-----|-----------------------------------------------------|
| JD  | Jorlon Diaphragm / Hard Seat                        |
| JDP | Jorlon / PEEK (FDA/USP Class VI)<br>(Cv ≥ 3.5 only) |
| JDT | Jorlon / Teflon FDA/USP Class VI<br>(Cv ≥ 3.5 only) |

| 1,2,3,4,5,6 | 1/2" Tri-C Body, Cv, Char. Finish      |
|-------------|----------------------------------------|
| AALN1A      | 1/2" LIN Cv 0.2 20Ra int./63 RMS. ext. |
| A1LN1A      | 1/2" LIN Cv 0.2 20Ra int./20Ra ext.    |
| A2LN1Ø      | 1/2" LIN Cv 0.2 8Ra int. /20Ra ext.    |
| A3LN1Ø      | 1/2" LIN Cv 0.2 8Ra int./8Ra ext.      |
| A4LN1Ø      | 1/2" LIN Cv 0.2 8Ra int./63RMS ext.    |
| AAEPA1      | 1/2" EQP Cv 0.2 20Ra int./63 RMS ext.  |
| A1EPA1      | 1/2" EQP Cv 0.2 20Ra int./20Ra ext.    |
| A2EP11      | 1/2" EQP Cv 0.2 8Ra int./20Ra ext.     |
| A3EP11      | 1/2" EQP Cv 0.2 8Ra int./8Ra ext.      |
| A4EP11      | 1/2" EQP Cv 0.2 8Ra int./63 RMS ext.   |
| AALN2A      | 1/2" LIN Cv 0.5 20Ra int./63RMS ext.   |
| A1LN2A      | 1/2" LIN Cv 0.5 20Ra int./20Ra ext.    |
| A2LN21      | 1/2" LIN Cv 0.5 8Ra int./20Ra ext.     |
| A3LN21      | 1/2" LIN Cv 0.5 8Ra int./8Ra ext.      |
| A4LN21      | 1/2" LIN Cv 0.5 8Ra int./63 RMS ext.   |
| AAEPA2      | 1/2" EQP Cv 0.5 20Ra int./63 RMS ext.  |
| A1EPA2      | 1/2" EQP Cv 0.5 20Ra int./20Ra ext.    |
| A2EP12      | 1/2" EQP Cv 0.5 8Ra int./20Ra ext.     |
| A3EP12      | 1/2" EQP Cv 0.5 8Ra int./8Ra ext.      |
| A4EP12      | 1/2" EQP Cv 0.5 8Ra int./63 RMS ext.   |

| 1,2,3,4,5,6 | 1/2" Tri-C Body, Cv, Char. Finish     |
|-------------|---------------------------------------|
| AALN3A      | 1/2" LIN Cv 1.0 20Ra int./63 RMS ext. |
| A1LN3A      | 1/2" LIN Cv 1.0 20Ra int./20Ra ext.   |
| A2LN31      | 1/2" LIN Cv 1.0 8Ra int./20Ra ext.    |
| A3LN31      | 1/2" LIN Cv 1.0 8Ra int./8Ra ext.     |
| A4LN31      | 1/2" LIN Cv 1.0 8Ra int./63 RMS ext.  |
| AAEPA3      | 1/2" EQP Cv 1.0 20Ra int./63 RMS ext. |
| A1EPA3      | 1/2" EQP Cv 1.0 20Ra int./20Ra ext.   |
| A2EP13      | 1/2" EQP Cv 1.0 8Ra int./20Ra ext.    |
| A3EP13      | 1/2" EQP Cv 1.0 8Ra int./8Ra ext.     |
| A4EP13      | 1/2" EQP Cv 1.0 8Ra int./63 RMS ext.  |

ORDERING SCHEMATIC CONTINUED (MK978E 1/2" — 1")

| 1,2,3,4,5,6 | 3/4" Tri-C Body, Cv, Char. Finish     |
|-------------|---------------------------------------|
| BALN1A      | 3/4" LIN Cv 1.0 20Ra int./63 RMS ext. |
| B1LN1A      | 3/4" LIN Cv 1.0 20Ra int./20Ra ext.   |
| B2LN1Ø      | 3/4" LIN Cv 1.0 8Ra int./20Ra ext.    |
| B3LN1Ø      | 3/4" LIN Cv 1.0 8Ra int./8Ra ext.     |
| B4LN1Ø      | 3/4" LIN Cv 1.0 8Ra int./63 RMS ext.  |
| BAEPA1      | 3/4" EQP Cv 1.0 20Ra int./63 RMS ext. |
| B1EPA1      | 3/4" EQP Cv 1.0 20Ra int./20Ra ext.   |
| B2EP11      | 3/4" EQP Cv 1.0 8Ra int./20Ra ext.    |
| B3EP11      | 3/4" EQP Cv 1.0 8Ra int./8Ra ext.     |
| B4EP11      | 3/4" EQP Cv 1.0 8Ra int./63 RMS ext.  |
| BALN2A      | 3/4" LIN Cv 2.0 20Ra int./63 RMS ext. |
| B1LN2A      | 3/4" LIN Cv 2.0 20Ra int./20Ra ext.   |
| B2LN21      | 3/4" LIN Cv 2.0 8Ra int./20Ra ext.    |
| B3LN21      | 3/4" LIN Cv 2.0 8Ra int./8Ra ext.     |
| B4LN21      | 3/4" LIN Cv 2.0 8Ra int./63 RMS ext.  |
| BAEPA2      | 3/4" EQP Cv 2.0 20Ra int./63 RMS ext. |
| B1EPA2      | 3/4" EQP Cv 2.0 20Ra int./20Ra ext.   |
| B2EP12      | 3/4" EQP Cv 2.0 8Ra int./20Ra ext.    |
| B3EP12      | 3/4" EQP Cv 2.0 8Ra int./8Ra ext.     |
| B4EP12      | 3/4" EQP Cv 2.0 8Ra int./63 RMS ext.  |
| CALN3A      | 3/4" LIN Cv 3.5 20Ra int./63 RMS ext. |
| C1LN3A      | 3/4" LIN Cv 3.5 20Ra int./20Ra ext.   |
| C2LN31      | 3/4" LIN Cv 3.5 8Ra int./20Ra ext.    |
| C3LN31      | 3/4" LIN Cv 3.5 8Ra int./8Ra ext.     |
| C4LN31      | 3/4" LIN Cv 3.5 8Ra int./63 RMS ext.  |
| CAEPA3      | 3/4" EQP Cv 3.5 20Ra int./63 RMS ext. |
| C1EPA3      | 3/4" EQP Cv 3.5 20Ra int./20Ra ext.   |
| C2EP13      | 3/4" EQP Cv 3.5 8Ra int./20Ra ext.    |
| C3EP13      | 3/4" EQP Cv 3.5 8Ra int./8Ra ext.     |
| C4EP13      | 3/4" EQP Cv 3.5 8Ra int./63 RMS ext.  |

| 1,2,3,4,5,6 | 3/4" Tri-C Body, Cv, Char. Finish        |
|-------------|------------------------------------------|
| CALN4A      | 3/4" LIN Cv 5.0 20Ra int./63 RMS ext.    |
| C1LN4A      | 3/4" LIN Cv 5.0 20Ra int./20Ra ext.      |
| C2LN41      | 3/4" LIN Cv 5.0 8Ra int./20Ra ext.       |
| C3LN41      | 3/4" LIN Cv 5.0 8Ra int./8Ra ext.        |
| C4LN41      | 3/4" LIN Cv 5.0 8Ra int./63 RMS ext.     |
| C2LNBD      | 3/4" LIN Cv 5.0 8Ra int./20Ra ext. - TBL |
| CAEPA4      | 3/4" EQP Cv 5.0 20Ra int./63 RMS ext.    |
| C1EPA4      | 3/4" EQP Cv 5.0 20Ra int./20Ra ext.      |
| C2EP14      | 3/4" EQP Cv 5.0 8Ra int./20Ra ext.       |
| C3EP14      | 3/4" EQP Cv 5.0 8Ra int./8Ra ext.        |
| C4EP14      | 3/4" EQP Cv 5.0 8Ra int./63 RMS ext.     |

| 1,2,3,4,5,6 | 1" Tri-C Body, Cv, Char. Finish     |
|-------------|-------------------------------------|
| DALN1A      | 1" LIN Cv 3.5 20Ra int./63 RMS ext. |
| D1LN1A      | 1" LIN Cv 3.5 20Ra int./20Ra ext.   |
| D2LN1Ø      | 1" LIN Cv 3.5 8Ra int./20Ra ext.    |
| D3LN1Ø      | 1" LIN Cv 3.5 8Ra int./8Ra ext.     |
| D4LN1Ø      | 1" LIN Cv 3.5 8Ra int./63 RMS ext.  |
| DAEPA1      | 1" EQP Cv 3.5 20Ra int./63 RMS ext. |
| D1EPA1      | 1" EQP Cv 3.5 20Ra int./20Ra ext.   |
| D2EP11      | 1" EQP Cv 3.5 8Ra int./20Ra ext.    |
| D3EP11      | 1" EQP Cv 3.5 8Ra int./8Ra ext.     |
| D4EP11      | 1" EQP Cv 3.5 8Ra int./63 RMS ext.  |
| DALN2A      | 1" LIN Cv 5.0 20Ra int./63 RMS ext. |
| D1LN2A      | 1" LIN Cv 5.0 20Ra int./20Ra ext.   |
| D2LN21      | 1" LIN Cv 5.0 8Ra int./20Ra ext.    |
| D3LN21      | 1" LIN Cv 5.0 8Ra int./8Ra ext.     |
| D4LN21      | 1" LIN Cv 5.0 8Ra int./63 RMS ext.  |
| DAEPA2      | 1" EQP Cv 5.0 20Ra int./63 RMS ext. |
| D1EPA2      | 1" EQP Cv 5.0 20Ra int./20Ra ext.   |
| D2EP12      | 1" EQP Cv 5.0 8Ra int./20Ra ext.    |
| D3EP12      | 1" EQP Cv 5.0 8Ra int./8Ra ext.     |
| D4EP12      | 1" EQP Cv 5.0 8Ra int./63 RMS ext.  |
| EALN3A      | 1" LIN Cv 7.5 20Ra int./63 RMS ext. |
| E1LN3A      | 1" LIN Cv 7.5 20Ra int./20Ra ext.   |
| E2LN31      | 1" LIN Cv 7.5 8Ra int./20Ra ext.    |
| E3LN31      | 1" LIN Cv 7.5 8Ra int./8Ra ext.     |
| E4LN31      | 1" LIN Cv 7.5 8Ra int./63 RMS ext.  |
| EAEPA3      | 1" EQP Cv 7.5 20Ra int./63 RMS ext. |
| E1EPA3      | 1" EQP Cv 7.5 20Ra int./20Ra ext.   |
| E2EP13      | 1" EQP Cv 7.5 8Ra int./20Ra ext.    |
| E3EP13      | 1" EQP Cv 7.5 8Ra int./8Ra ext.     |
| E4EP13      | 1" EQP Cv 7.5 8Ra int./63 RMS ext.  |

| 1,2,3,4,5,6 | 1" Tri-C Body, Cv, Char. Finish       |
|-------------|---------------------------------------|
| EALN4A      | 1" LIN Cv 15 20Ra int./63 RMS ext.    |
| E1LN4A      | 1" LIN Cv 15 20Ra int./20Ra ext.      |
| E2LN41      | 1" LIN Cv 15 8Ra int./20Ra ext.       |
| E3LN41      | 1" LIN Cv 15 8Ra int./8Ra ext.        |
| E4LN41      | 1" LIN Cv 15 8Ra int./63 RMS ext.     |
| E2LNBD      | 1" LIN Cv 15 8Ra int./20Ra ext. - TBL |

| 7 & 8 | Stem Seal                   |
|-------|-----------------------------|
| JH    | Jorlon / FDA / USP Class VI |
| ZZ    | Non-Standard                |

ORDERING SCHEMATIC CONTINUED (MK978E 1/2" — 1")

| 9 & 10 | Actuator / Range         |
|--------|--------------------------|
|        | 978 / 978TP/978N         |
| 3D     | 35M 3-15 DIR STL/PAINTED |
| 3R     | 35M 3-15 REV STL/PAINTED |
| 4D     | 35M 6-30 DIR STL/PAINTED |
| 4R     | 35M 6-30 REV STL/PAINTED |
| 5D     | 55M 3-15 DIR STL/PAINTED |
| 5R     | 55M 3-15 REV STL/PAINTED |
| 6D     | 55M 6-30 DIR STL/PAINTED |
| 6R     | 55M 6-30 REV STL/PAINTED |
| D3     | 35M 3-15 DIR 304 SST     |
| R3     | 35M 3-15 REV 304 SST     |
| D4     | 35M 6-30 DIR 304 SST     |
| R4     | 35M 6-30 REV 304 SST     |
| D5     | 55M 3-15 DIR 304 SST     |
| R5     | 55M 3-15 REV 304 SST     |
| D6     | 55M 6-30 DIR 304 SST     |
| R6     | 55M 6-30 REV 304 SST     |
|        | 978SP                    |
| 3D     | 35M ALL DIR STL/PAINTED  |
| 3R     | 35M ALL REV STL/PAINTED  |
| 5D     | 55M ALL DIR STL/PAINTED  |
| 5R     | 55M ALL REV STL/PAINTED  |
| D3     | 35M ALL DIR 304 SST      |
| R3     | 35M ALL REV 304 SST      |
| D5     | 55M ALL DIR 304 SST      |
| R5     | 55M ALL REV 304 SST      |

| 11 & 12 | Action  |
|---------|---------|
| DD      | Direct  |
| RR      | Reverse |

| 13 & 14 | Accessories              |
|---------|--------------------------|
| ØØ      | None                     |
| 1A      | I/P Trans. 4-20M / 3-15P |
| 2A      | Air Reg. with gage       |
| 3A      | I/P Trans. 4-20M / 6-30P |

| 15 | SMP                         |
|----|-----------------------------|
| N  | None                        |
| A  | SMP DIR / REV 3-15          |
| B  | SMP DIR / REV 3-9           |
| C  | SMP DIR / REV 9-15          |
| D  | SMP / IP DIR / REV 4-20     |
| E  | SMP / IP DIR / REV 4-12     |
| F  | SMP / IP DIR / REV 12-20    |
| G  | MK16IQ-S DIR / REV 4-20     |
| H  | MK16IQ - B DIR / REV 4-20   |
| J  | MK16IQ - FF DIR / REV 4-20  |
| S  | LNZA 6200 HART5 W/DP+CFR+GA |

ORDERING SCHEMATIC (1-1/2" & 2")

| Model No | Size | Stem Seal | Seat | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------|------|-----------|------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
|          |      |           |      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |

|        | Model                         |
|--------|-------------------------------|
| 978SP  | Side Mounted Positioner (SMP) |
| 978TP  | Top Mounted Positioner (TMP)  |
| 978NSP | InLine with SMP               |
| 978NTP | InLine with TMP               |

|     | Size   |
|-----|--------|
| 150 | 1-1/2" |
| 200 | 2"     |

|    | Stem Seal        |
|----|------------------|
| JD | Jorlon Diaphragm |

|   | Seat                               |
|---|------------------------------------|
|   | Leave blank for standard Hard Seat |
| P | PEEK (FDA/USP Class VI)            |
| T | Teflon FDA/USP Class VI            |

| 1,2,3,4,5,6 | 1-1/2" Tri-C Body, Cv, Char. Finish     |
|-------------|-----------------------------------------|
| FALN1A      | 1-1/2" LIN Cv 5 20Ra int./63 RMS. ext.  |
| F1LN1A      | 1-1/2" LIN Cv 5 20Ra int./20Ra ext.     |
| F2LN1Ø      | 1-1/2" LIN Cv 5 8Ra int. /20Ra ext.     |
| F3LN1Ø      | 1-1/2" LIN Cv 5 8Ra int./8Ra ext.       |
| F4LN1Ø      | 1-1/2" LIN Cv 5 8Ra int./63RMS ext.     |
| FAEPA1      | 1-1/2" EQP Cv 5 20Ra int./63 RMS ext.   |
| F1EPA1      | 1-1/2" EQP Cv 5 20Ra int./20Ra ext.     |
| F2EP11      | 1-1/2" EQP Cv 5 8Ra int./20Ra ext.      |
| F3EP11      | 1-1/2" EQP Cv 5 8Ra int./8Ra ext.       |
| F4EP11      | 1-1/2" EQP Cv 5 8Ra int./63 RMS ext.    |
| FALN2A      | 1-1/2" LIN Cv 10 20Ra int./63 RMS. ext. |
| F1LN2A      | 1-1/2" LIN Cv 10 20Ra int./20Ra ext.    |
| F2LN21      | 1-1/2" LIN Cv 10 8Ra int. /20Ra ext.    |
| F3LN21      | 1-1/2" LIN Cv 10 8Ra int./8Ra ext.      |
| F4LN21      | 1-1/2" LIN Cv 10 8Ra int./63RMS ext.    |
| FAEPA2      | 1-1/2" EQP Cv 10 20Ra int./63 RMS. ext. |
| F1EPA2      | 1-1/2" EQP Cv 10 20Ra int./20Ra ext.    |
| F2EP12      | 1-1/2" EQP Cv 10 8Ra int. /20Ra ext.    |
| F3EP12      | 1-1/2" EQP Cv 10 8Ra int./8Ra ext.      |
| F4EP12      | 1-1/2" EQP Cv 10 8Ra int./63RMS ext.    |

Continued on next column

| 1,2,3,4,5,6 | 1-1/2" Tri-C Body, Cv, Char. Finish       |
|-------------|-------------------------------------------|
| FALN3A      | 1-1/2" LIN Cv 15 20Ra int./63 RMS. ext.   |
| F1LN3A      | 1-1/2" LIN Cv 15 20Ra int./20Ra ext.      |
| F2LN31      | 1-1/2" LIN Cv 15 8Ra int. /20Ra ext.      |
| F3LN31      | 1-1/2" LIN Cv 15 8Ra int./8Ra ext.        |
| F4LN31      | 1-1/2" LIN Cv 15 8Ra int./63RMS ext.      |
| FAEPA3      | 1-1/2" EQP Cv 15 20Ra int./63 RMS. ext.   |
| F1EPA3      | 1-1/2" EQP Cv 15 20Ra int./20Ra ext.      |
| F2EP13      | 1-1/2" EQP Cv 15 8Ra int. /20Ra ext.      |
| F3EP13      | 1-1/2" EQP Cv 15 8Ra int./8Ra ext.        |
| F4EP13      | 1-1/2" EQP Cv 15 8Ra int./63RMS ext.      |
| GALN4A      | 1-1/2" LIN Cv 20 20Ra int./63 RMS. ext.   |
| G1LN4A      | 1-1/2" LIN Cv 20 20Ra int./20Ra ext.      |
| G2LN41      | 1-1/2" LIN Cv 20 8Ra int. /20Ra ext.      |
| G3LN41      | 1-1/2" LIN Cv 20 8Ra int./8Ra ext.        |
| G4LN41      | 1-1/2" LIN Cv 20 8Ra int./63RMS ext.      |
| GAEPA4      | 1-1/2" EQP Cv 20 20Ra int./63 RMS ext.    |
| G1EPA4      | 1-1/2" EQP Cv 20 20Ra int./20Ra ext.      |
| G2EP14      | 1-1/2" EQP Cv 20 8Ra int./20Ra ext.       |
| G3EP14      | 1-1/2" EQP Cv 20 8Ra int./8Ra ext.        |
| G4EP14      | 1-1/2" EQP Cv 20 8Ra int./63 RMS ext.     |
| GALN5A      | 1-1/2" LIN Cv 30 20Ra int./63 RMS. ext.   |
| G1LN5A      | 1-1/2" LIN Cv 30 20Ra int./20Ra ext.      |
| G2LN51      | 1-1/2" LIN Cv 30 8Ra int. /20Ra ext.      |
| G3LN51      | 1-1/2" LIN Cv 30 8Ra int./8Ra ext.        |
| G4LN51      | 1-1/2" LIN Cv 30 8Ra int./63RMS ext.      |
| G2LNBB      | 1-1/2" LIN Cv 30 8Ra int./20Ra ext. - TBL |

| 1,2,3,4,5,6 | 2" Tri-C Body, Cv, Char. Finish     |
|-------------|-------------------------------------|
| HALN1A      | 2" LIN Cv 10 20Ra int./63 RMS. ext. |
| H1LN1A      | 2" LIN Cv 10 20Ra int./20Ra ext.    |
| H2LN1Ø      | 2" LIN Cv 10 8Ra int. /20Ra ext.    |
| H3LN1Ø      | 2" LIN Cv 10 8Ra int./8Ra ext.      |
| H4LN1Ø      | 2" LIN Cv 10 8Ra int./63RMS ext.    |
| HAEPA1      | 2" EQP Cv 10 20Ra int./63 RMS. ext. |
| H1EPA1      | 2" EQP Cv 10 20Ra int./20Ra ext.    |
| H2EP11      | 2" EQP Cv 10 8Ra int. /20Ra ext.    |
| H3EP11      | 2" EQP Cv 10 8Ra int./8Ra ext.      |
| H4EP11      | 2" EQP Cv 10 8Ra int./63RMS ext.    |
| HALN2A      | 2" LIN Cv 15 20Ra int./63 RMS. ext. |
| H1LN2A      | 2" LIN Cv 15 20Ra int./20Ra ext.    |
| H2LN21      | 2" LIN Cv 15 8Ra int. /20Ra ext.    |
| H3LN21      | 2" LIN Cv 15 8Ra int./8Ra ext.      |
| H4LN21      | 2" LIN Cv 15 8Ra int./63RMS ext.    |

Continued on next page

ORDERING SCHEMATIC CONTINUED (1-1/2" & 2")

| 1,2,3,4,5,6 | 2" Tri-C Body, Cv, Char. Finish          |
|-------------|------------------------------------------|
| HAEPA2      | 2" EQP Cv 15 20Ra int./63 RMS. ext.      |
| H1EPA2      | 2" EQP Cv 15 20Ra int./20Ra ext.         |
| H2EP12      | 2" EQP Cv 15 8Ra int. /20Ra ext.         |
| H3EP12      | 2" EQP Cv 15 8Ra int./8Ra ext.           |
| H4EP12      | 2" EQP Cv 15 8Ra int./63RMS ext.         |
| HALN3A      | 2" LIN Cv 20 20Ra int./63 RMS. ext.      |
| H1LN3A      | 2" LIN Cv 20 20Ra int./20Ra ext.         |
| H2LN31      | 2" LIN Cv 20 8Ra int. /20Ra ext.         |
| H3LN31      | 2" LIN Cv 20 8Ra int./8Ra ext.           |
| H4LN31      | 2" LIN Cv 20 8Ra int./63RMS ext.         |
| HAEPA3      | 2" EQP Cv 20 20Ra int./63 RMS. ext.      |
| H1EPA3      | 2" EQP Cv 20 20Ra int./20Ra ext.         |
| H2EP13      | 2" EQP Cv 20 8Ra int. /20Ra ext.         |
| H3EP13      | 2" EQP Cv 20 8Ra int./8Ra ext.           |
| H4EP13      | 2" EQP Cv 20 8Ra int./63RMS ext.         |
| HALN4A      | 2" LIN Cv 30 20Ra int./63 RMS. ext.      |
| H1LN4A      | 2" LIN Cv 30 20Ra int./20Ra ext.         |
| H2LN41      | 2" LIN Cv 30 8Ra int. /20Ra ext.         |
| H3LN41      | 2" LIN Cv 30 8Ra int./8Ra ext.           |
| H4LN41      | 2" LIN Cv 30 8Ra int./63RMS ext.         |
| HAEPA4      | 2" EQP Cv 30 20Ra int./63 RMS. ext.      |
| H1EPA4      | 2" EQP Cv 30 20Ra int./20Ra ext.         |
| H2EP14      | 2" EQP Cv 30 8Ra int. /20Ra ext.         |
| H3EP14      | 2" EQP Cv 30 8Ra int./8Ra ext.           |
| H4EP14      | 2" EQP Cv 30 8Ra int./63RMS ext.         |
| IALN5A      | 2" LIN Cv 40 20Ra int./63 RMS. ext.      |
| I1LN5A      | 2" LIN Cv 40 20Ra int./20Ra ext.         |
| I2LN51      | 2" LIN Cv 40 8Ra int. /20Ra ext.         |
| I3LN51      | 2" LIN Cv 40 8Ra int./8Ra ext.           |
| I4LN51      | 2" LIN Cv 40 8Ra int./63RMS ext.         |
| IALN6A      | 2" LIN Cv 60 20Ra int./63 RMS. ext.      |
| I1LN6A      | 2" LIN Cv 60 20Ra int./20Ra ext.         |
| I2LN61      | 2" LIN Cv 60 8Ra int. /20Ra ext.         |
| I3LN61      | 2" LIN Cv 60 8Ra int./8Ra ext.           |
| I4LN61      | 2" LIN Cv 60 8Ra int./63RMS ext.         |
| JAML7A      | 2" MOD* LIN Cv 70 20Ra int./63 RMS. ext. |
| J1ML7A      | 2" MOD* LIN Cv 70 20Ra int./20Ra ext.    |
| J2ML71      | 2" MOD* LIN Cv 70 8Ra int./20Ra ext.     |
| J3ML71      | 2" MOD* LIN Cv 70 8Ra int./8Ra RMS. ext. |
| J4ML71      | 2" MOD* LIN Cv 70 8Ra int./63 RMS. ext.  |

\* Modified Linear - contact factory for more information

| 7 & 8 | Stem Seal                   |
|-------|-----------------------------|
| JH    | Jorlon – FDA / USP Class VI |

| 9 & 10 | Actuator / Range         |
|--------|--------------------------|
|        | 978 / 978TP/978N         |
| 5D     | 55M 3-15 DIR STL/PAINTED |
| 5R     | 55M 3-15 REV STL/PAINTED |
| 6D     | 55M 6-30 DIR STL/PAINTED |
| 6R     | 55M 6-30 REV STL/PAINTED |
| 8D     | 85M 3-15 DIR STL/PAINTED |
| 8R     | 85M 3-15 REV STL/PAINTED |
| 9D     | 85M 6-30 DIR STL/PAINTED |
| 9R     | 85M 6-30 REV STL/PAINTED |
| D5     | 55M 3-15 DIR 304 SST     |
| R5     | 55M 3-15 REV 304 SST     |
| D6     | 55M 6-30 DIR 304 SST     |
| R6     | 55M 6-30 REV 304 SST     |
| D8     | 85M 3-15 DIR 304 SST     |
| R8     | 85M 3-15 REV 304 SST     |
| D9     | 85M 6-30 DIR 304 SST     |
| R9     | 85M 6-30 REV 304 SST     |
|        | 978SP                    |
| 5D     | 55M ALL DIR STL/PAINTED  |
| 5R     | 55M ALL REV STL/PAINTED  |
| 8D     | 85M ALL DIR STL/PAINTED  |
| 8R     | 85M ALL REV STL/PAINTED  |
| D5     | 55M ALL DIR 304 SST      |
| R5     | 55M ALL REV 304 SST      |
| D8     | 85M ALL DIR 304 SST      |
| R8     | 85M ALL REV 304 SST      |

| 11 & 12 | Action  |
|---------|---------|
| DD      | Direct  |
| RR      | Reverse |

| 13 & 14 | Accessories              |
|---------|--------------------------|
| 00      | None                     |
| 1A      | I/P Trans. 4-20M / 3-15P |
| 2A      | Air Reg. with gage       |
| 3A      | I/P Trans. 4-20M / 6-30P |

| 15 | SMP                         |
|----|-----------------------------|
| N  | None                        |
| A  | SMP DIR / REV 3-15          |
| B  | SMP DIR / REV 3-9           |
| C  | SMP DIR / REV 9-15          |
| D  | SMP / IP DIR / REV 4-20     |
| E  | SMP / IP DIR / REV 4-12     |
| F  | SMP / IP DIR / REV 12-20    |
| G  | MK16IQ-S DIR / REV 4-20     |
| H  | MK16IQ - B DIR / REV 4-20   |
| J  | MK16IQ - FF DIR / REV 4-20  |
| S  | LNZA 6200 HART5 W/DP+CFR+GA |

ORDERING SCHEMATIC (3")

| Model No | Size | Stem Seal | Seat | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------|------|-----------|------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
|          |      |           |      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |

|       | Model                   |
|-------|-------------------------|
| 978SP | Side Mounted Positioner |

| 7 & 8 | Stem Seal                 |
|-------|---------------------------|
| JH    | Jorlon - FDA/USP Class VI |

|     | Size |
|-----|------|
| 300 | 3"   |

| 9 & 10 | Actuator/Range |
|--------|----------------|
| 8D     | 85M Direct     |
| 8R     | 85M Reverse    |

|    | Stem Seal        |
|----|------------------|
| JD | Jorlon Diaphragm |

| 11 & 12 | Action  |
|---------|---------|
| DD      | Direct  |
| RR      | Reverse |

|   | Seat                               |
|---|------------------------------------|
|   | Leave blank for standard Hard Seat |
| P | PEEK (FDA/USP Class VI)            |
| T | Teflon FDA/USP Class VI            |

| 13 & 14 | Accessories              |
|---------|--------------------------|
| 00      | None                     |
| 1A      | I/P Trans. 4-20M / 3-15P |
| 2A      | Air Reg. with gage       |
| 3A      | I/P Trans. 4-20M / 6-30P |

| 1,2,3,4,5,6 | 3" Tri-C Body, Cv, Char. Finish     |
|-------------|-------------------------------------|
| JALN1A      | 3" LIN Cv 75 20Ra int./63 RMS. ext. |
| J4LN10      | 3" LIN Cv 75 8Ra int./63RMS ext.    |
| JAEP A1     | 3" EQP Cv 60 20Ra int. /63RMS ext.  |
| J4EP11      | 3" EQP Cv 60 8Ra int./63RMS ext.    |
| JALN2A      | 3" LIN Cv 100 20Ra 63RMS ext.       |
| J4LN21      | 3" LIN Cv 100 8Ra int./63RMS ext.   |
| JAEP A2     | 3" EQP Cv 80 20Ra int./63RMS ext.   |
| J4EP12      | 3" EQP Cv 80 8Ra int./63RMS ext.    |
| JAEP A3     | 3" EQP Cv90 20 Ra int./63RMS ext.   |
| J4EP13      | 3" EQP Cv90 8Ra int/63RMS ext.      |

| 15 | SMP                                               |
|----|---------------------------------------------------|
| N  | None                                              |
| A  | SMP DIR / REV 3-15                                |
| B  | SMP DIR / REV 3-9                                 |
| C  | SMP DIR / REV 9-15                                |
| D  | SMP / IP DIR / REV 4-20                           |
| E  | SMP / IP DIR / REV 4-12                           |
| F  | SMP / IP DIR / REV 12-20                          |
| G  | MK16IQ-S DIR / REV 4-20 (HART®)                   |
| H  | MK16IQ - B DIR / REV 4-20 (not HART®)             |
| J  | MK16IQ - FF DIR / REV 4-20 (Foundation Fieldbus™) |
| S  | LNZA 6200 HART5 W/PD+CFR+GA                       |

DOCUMENTATION

A Certificate of Compliance to material (with heat number and MTR's for body and ferule), surface finish and FDA USP Class VI is provided for each line item on all Steriflow orders at no charge. The following additional documentation is available from our factory upon request at time of ordering:

- Traceable Material Certificates for all wetted parts
- Final Test Reports
- Certificate of Compliance/Certificate of Origin



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