

## ACTUATED BALL VALVES

Ball Valves are used in a wide variety of high pressure applications. A full unrestricted flow allows no product restrictions through the valve. Thus, allowing easy diversion.

VNE offers 2-way and 3-way ball valves made of T316 (CF8M) stainless steel. Ball Valves are available in Manual, Pneumatically Actuated, and Electrically Actuated versions. We also offer a full line of control options. Limit switches, Solenoids, and Positioners can be included with your automated valve assembly. VNE Ball Valves feature PTFE seats that are easily removed. Clamp and Weld ends are standard. Other connections are available upon request.

VNE offers many options on automated valves.

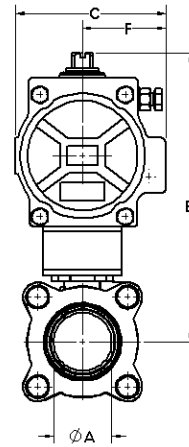
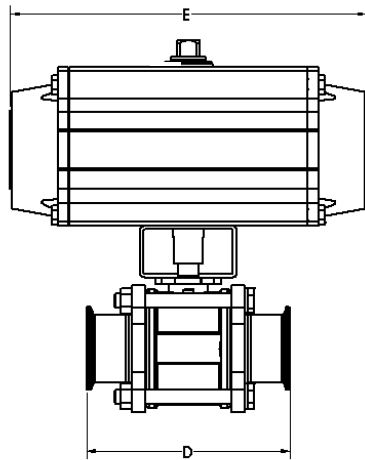


### BALL VALVES SPECIFICATIONS....

|                            |   |
|----------------------------|---|
| <b>Size:</b>               | 1/2" through 4" sizes available   |
| <b>Materials:</b>          | Passivated 316 Stainless Steel (ASTM A351, CF8M)                        |
| <b>Finish:</b>             | 20 Ra $\mu$ -in. ID   |
| <b>Connections:</b>        | Clamp, Buttweld, Orbital Weld, other connections available upon request |
| <b>Seat / Seals:</b>       | Dyneon TF 1641 PTFE<br>Cavity filler, fully encapsulated                |
| <b>Pressure:</b>           | Reference applicable manual valve specifications                        |
| <b>Temperature Rating:</b> | Reference applicable manual valve specifications                        |

### ORDERING SPECIFICATIONS....

|                            |   |
|----------------------------|---|
| <b>Specify:</b>            | <ul style="list-style-type: none"> <li>• Quantity</li> <li>• Product Description or Part number</li> <li>• Size</li> <li>• Material Type</li> </ul>   |
| <b>Important Features:</b> | <p>100% Tested</p> <p>Available with pneumatic and electric actuators</p> <p>Conform to 3A sanitary standards for Ball-Type valves. Standard number 68-00. Certificate authorization number 3511. Seat and seals are FDA approved</p> <p>Valves marked with heat numbers for full identification and traceability. MTR'S are available upon request</p> |



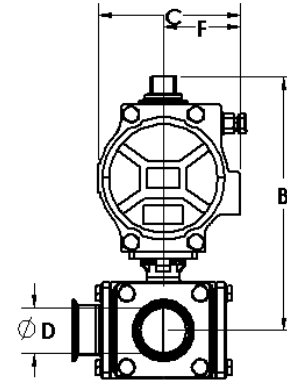
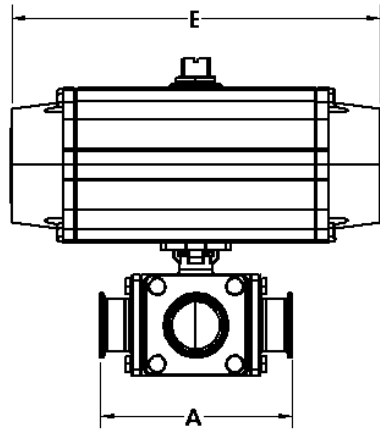
## DIMENSIONS 2-WAY SPRING RETURN ACTUATED VALVE

| Valve Part Number<br>Clamp End Valve | Size  | A     | B      | C     | D     | E      | F     | Weight | Cv Value |
|--------------------------------------|-------|-------|--------|-------|-------|--------|-------|--------|----------|
| 90C.5C/52-5SC-XX                     | 1/2   | 0.370 | 6.177  | 2.790 | 3.504 | 5.490  | 1.610 | 4.16   | 9        |
| 90C.75C/52-5SC-XX                    | 3/4   | 0.620 | 6.355  | 2.790 | 3.976 | 5.490  | 1.610 | 4.46   | 26       |
| 90C1.0C/63-5SC-XX                    | 1     | 0.870 | 6.814  | 3.170 | 4.488 | 6.380  | 1.770 | 6.75   | 61       |
| 90C1.5C/75-5SC-XX                    | 1 1/2 | 1.370 | 8.075  | 3.720 | 5.512 | 8.150  | 2.070 | 12.70  | 193      |
| 90C2.0C/100-5SC-XX                   | 2     | 1.870 | 9.227  | 4.850 | 6.142 | 10.690 | 2.680 | 22.80  | 432      |
| 90C2.5C/115-5SC-XX                   | 2 1/2 | 2.370 | 12.490 | 5.390 | 7.756 | 12.910 | 2.870 | 41.88  | 728      |
| 90C3.0C/125-5SC-XX                   | 3     | 2.870 | 13.303 | 5.830 | 9.016 | 14.410 | 3.150 | 51.40  | 1125     |
| 90C4.0C/161-5SC-XX                   | 4     | 3.834 | 15.630 | 7.350 | 9.567 | 16.930 | 3.940 | 111.20 | 1986     |

## DIMENSIONS 2-WAY AIR TO AIR ACTUATED VALVE

| Valve Part Number<br>Clamp End Valve | Size  | A     | B      | C     | D     | E      | F     | Weight | Cv Value |
|--------------------------------------|-------|-------|--------|-------|-------|--------|-------|--------|----------|
| 90C.5C/32DC-XX                       | 1/2   | 0.370 | 5.214  | 1.770 | 3.504 | 4.650  | 0.890 | 2.62   | 9        |
| 90C.75C/52DC-XX                      | 3/4   | 0.620 | 6.355  | 1.770 | 3.976 | 4.650  | 0.890 | 2.92   | 26       |
| 90C1.0C/52DC-XX                      | 1     | 0.870 | 6.374  | 2.790 | 4.488 | 5.490  | 1.610 | 5.03   | 61       |
| 90C1.5C/63DC-XX                      | 1 1/2 | 1.370 | 7.425  | 3.170 | 5.512 | 6.380  | 1.770 | 9.02   | 193      |
| 90C2.0C/75DC-XX                      | 2     | 1.870 | 8.267  | 3.720 | 6.142 | 8.150  | 2.070 | 11.66  | 432      |
| 90C2.5C/85DC-XX                      | 2 1/2 | 2.370 | 11.070 | 4.170 | 7.756 | 9.350  | 2.300 | 25.35  | 728      |
| 90C3.0C/85DC-XX                      | 3     | 2.870 | 11.413 | 4.170 | 9.016 | 9.350  | 2.300 | 32.03  | 1125     |
| 90C4.0C/115DC-XX                     | 4     | 3.834 | 13.640 | 5.390 | 9.567 | 12.910 | 2.870 | 63.91  | 1986     |

Dimensions shown are for assemblies sized for 80 PSI air supply. 1.2 Safety factor for clean liquid products. 90C part number designates a clamp end valve. -XX Designates no solenoid, control top or positioner. See part number structures on page 34 for designators for other end connections, fail positions and add on accessories.



## DIMENSIONS 3-WAY SPRING RETURN ACTUATED VALVE

| Valve Part Number Clamp End Valve | Size  | A      | B      | C     | D     | E      | F     | Weight | Cv Value    |
|-----------------------------------|-------|--------|--------|-------|-------|--------|-------|--------|-------------|
| 93C.5C/63-5S1-XX                  | 1/2   | 4.646  | 7.170  | 3.170 | 0.370 | 6.380  | 1.770 | 7.59   | L=8 T=6     |
| 93C.75C/63-5S1-XX                 | 3/4   | 5.000  | 7.290  | 3.170 | 0.620 | 6.380  | 1.770 | 8.29   | L=17 T=13   |
| 93C1.0C/75-5S1-XX                 | 1     | 6.000  | 6.920  | 3.720 | 0.870 | 8.150  | 2.070 | 13.70  | L=25 T=19   |
| 93C1.5C/100-5S1-XX                | 1 1/2 | 6.890  | 8.380  | 4.850 | 1.370 | 10.690 | 2.680 | 27.40  | L=62 T= 46  |
| 93C2.0C/125-5S1-XX                | 2     | 7.480  | 10.080 | 4.290 | 1.870 | 9.650  | 2.360 | 47.01  | L=148 T=92  |
| 93C2.5C/161-5S1-XX                | 2 1/2 | 8.976  | 12.680 | 7.350 | 2.370 | 16.930 | 3.940 | 93.04  | L=247 T=156 |
| 93C3.0C/161-6S1-XX                | 3     | 10.236 | 13.740 | 7.350 | 2.870 | 16.930 | 3.940 | 110.04 | L=351 T=230 |
| 93C4.0C/181-6S1-XX                | 4     | 11.417 | 15.350 | 8.040 | 3.834 | 18.980 | 4.020 | 133.10 | Contact VNE |

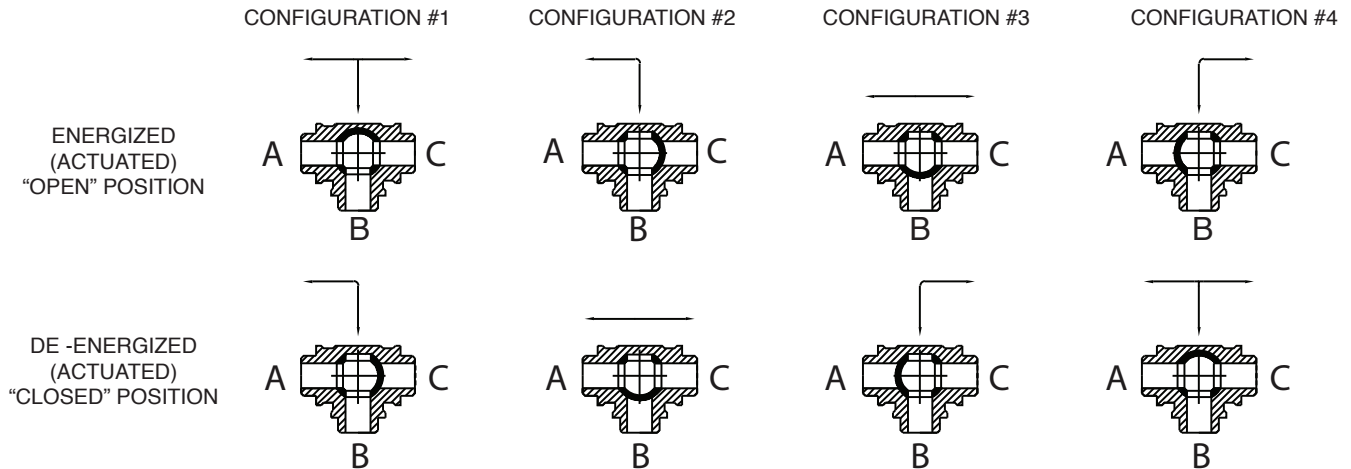
## DIMENSIONS 3-WAY AIR TO AIR ACTUATED VALVE

| Valve Part Number Clamp End Valve | Size  | A      | B      | C     | D     | E      | F     | Weight | Cv Value    |
|-----------------------------------|-------|--------|--------|-------|-------|--------|-------|--------|-------------|
| 93C.5C/52D1-XX                    | 1/2   | 4.646  | 5.280  | 2.790 | 0.370 | 5.490  | 1.610 | 6.25   | L=8 T=6     |
| 93C.75C/52D1-XX                   | 3/4   | 5.000  | 5.400  | 2.790 | 0.620 | 5.490  | 1.610 | 7.25   | L=17 T=13   |
| 93C1.0C/52D1-XX                   | 1     | 6.000  | 5.850  | 2.790 | 0.870 | 5.490  | 1.610 | 9.25   | L=25 T=19   |
| 93C1.5C/75D1-XX                   | 1 1/2 | 6.890  | 7.420  | 3.720 | 1.370 | 8.150  | 2.070 | 19.51  | L=62 T= 46  |
| 93C2.0C/85D1-XX                   | 2     | 7.480  | 10.080 | 4.290 | 1.870 | 9.650  | 2.360 | 21.39  | L=148 T=92  |
| 93C2.5C/115D1-XX                  | 2 1/2 | 8.976  | 10.290 | 5.390 | 2.370 | 12.910 | 2.870 | 45.75  | L=247 T=156 |
| 93C3.0C/115D1-XX                  | 3     | 10.236 | 11.360 | 5.390 | 2.870 | 12.910 | 2.870 | 62.75  | L=351 T=230 |
| 93C4.0C/140D1-XX                  | 4     | 11.417 | 13.660 | 6.630 | 3.834 | 15.790 | 3.540 | 96.46  | Contact VNE |

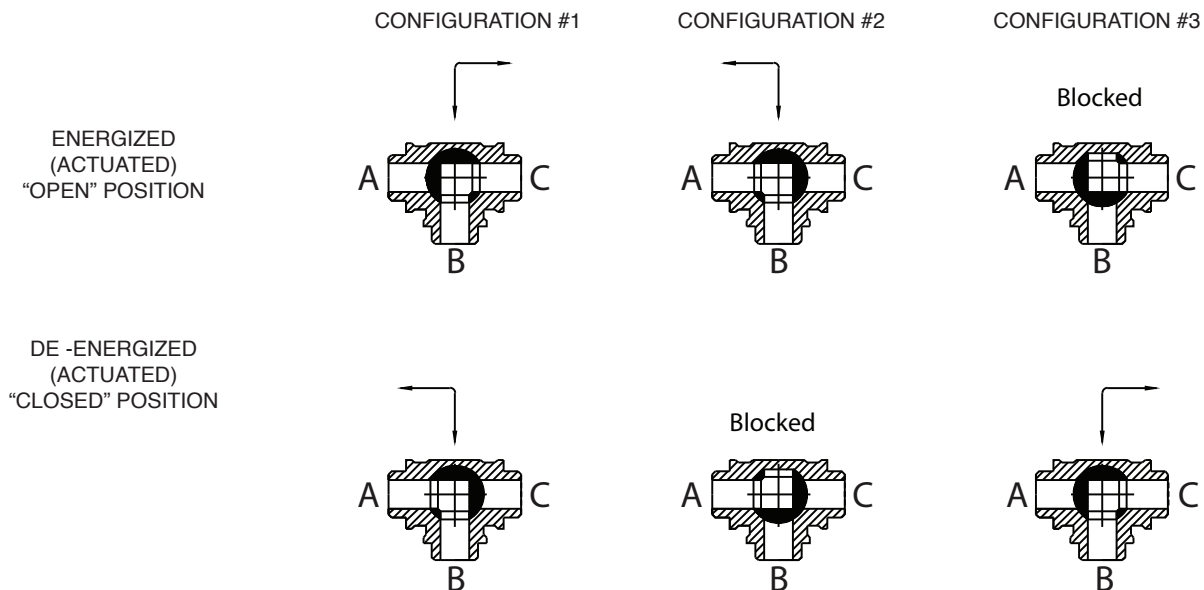
Dimensions shown are for assemblies sized for 80 PSI air supply. 1.2 Safety factor for clean liquid products. 93C part number designates a clamp end valve. -XX Designates no solenoid, control top or positioner. See part number structures on page 34 for designators for other end connections, flow configurations and add on accessories.

## 3-WAY BALL VALVE CONFIGURATION OPTIONS Standard Actuator (CW to Close, CCW to Open)

### T-Port Design



### L-Port Design

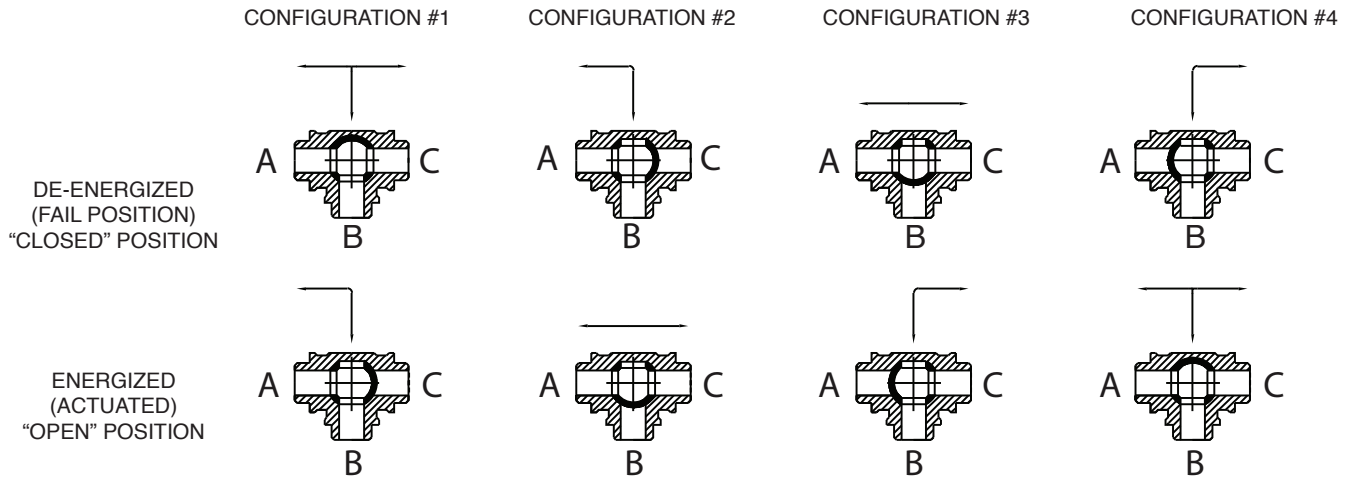


180° rotation actuators allowing for 2 or 3 position control are available upon request

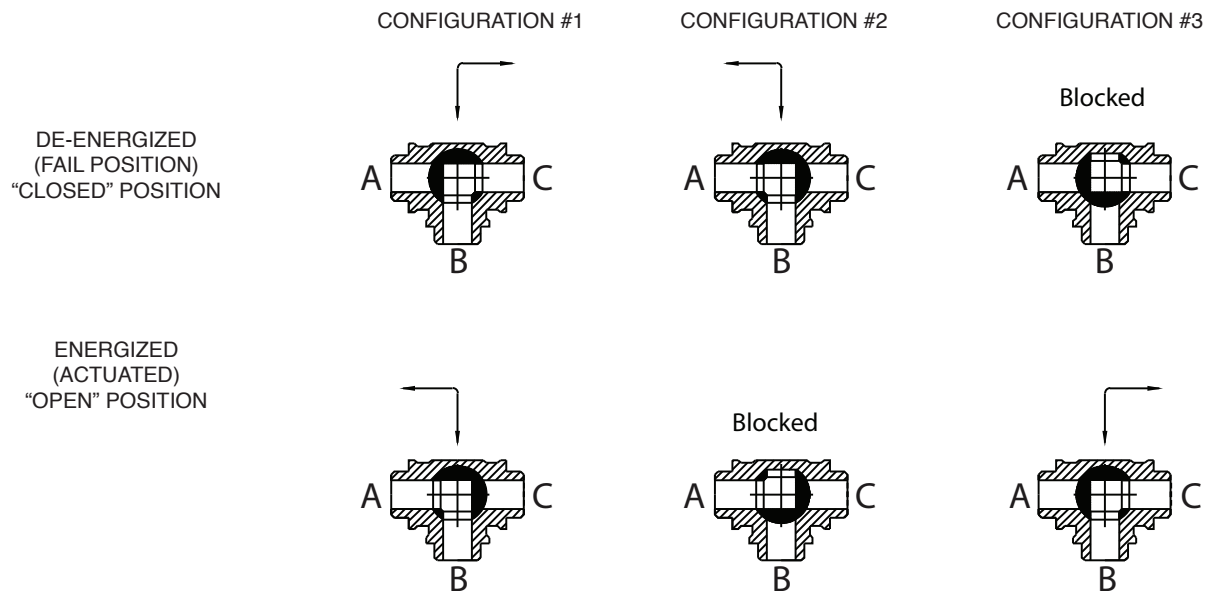
## 3-WAY BALL VALVE CONFIGURATION OPTIONS

### Reverse Actuator (CCW to Close, CW to Open)

#### T-Port Design



#### L-Port Design



180° rotation actuators allowing for 2 or 3 position control are available upon request

## ACTUATED BALL VALVE PART NUMBERING

| Example:  |   | 90C | 1.0 | C | / | * | S | C | - | X | X |
|---|---|-----|-----|---|---|---|---|---|---|---|---|
| <b>Valve Body</b>   |   |     |     |   |   |   |   |   |   |   |   |
| 90C   | Clamp 2-Way                                   |     |     |   |   |   |   |   |   |   |   |
| 90W   | Weld 2-Way                                    |     |     |   |   |   |   |   |   |   |   |
| 93C   | Clamp 3-Way                                   |     |     |   |   |   |   |   |   |   |   |
| 93W   | Weld 3-Way L Port                             |     |     |   |   |   |   |   |   |   |   |
| 93CT  | Clamp 3-Way T port                            |     |     |   |   |   |   |   |   |   |   |
| 93WT  | Weld 3-Way T Port                             |     |     |   |   |   |   |   |   |   |   |
| 90AW  | Orbital Weld 2-Way                            |     |     |   |   |   |   |   |   |   |   |
| 93AW  | Orbital Weld 3-way                            |     |     |   |   |   |   |   |   |   |   |
| <b>Size</b>   |   |     |     |   |   |   |   |   |   |   |   |
| .5  | 1.5   | 3.0 |     |   |   |   |   |   |   |   |   |
| .75   | 2.0   | 4.0 |     |   |   |   |   |   |   |   |   |
| 1.0   | 2.5   |     |     |   |   |   |   |   |   |   |   |
| <b>Finish</b>   |   |     |     |   |   |   |   |   |   |   |   |
| C   | Standard 20 Ra ID                             |     |     |   |   |   |   |   |   |   |   |
| D   | 15 Ra EP ID                                   |     |     |   |   |   |   |   |   |   |   |
| <b>Actuator</b>   |   |     |     |   |   |   |   |   |   |   |   |
| *Standard sizing for 80 PSI air supply and 1.2 safety factor is listed on pages 30&31 |   |     |     |   |   |   |   |   |   |   |   |
| <b>Action</b>   |   |     |     |   |   |   |   |   |   |   |   |
| S   | Spring Return                                 |     |     |   |   |   |   |   |   |   |   |
| D   | Double Acting                                 |     |     |   |   |   |   |   |   |   |   |
| E   | Fully Electric                                |     |     |   |   |   |   |   |   |   |   |
| P   | Stainless Steel Spring Return                 |     |     |   |   |   |   |   |   |   |   |
| Q   | Stainless Steel Double Acting                 |     |     |   |   |   |   |   |   |   |   |
| <b>Fail Position / Flow Pattern</b>   |   |     |     |   |   |   |   |   |   |   |   |
| O   | 2-Way Fail Open                               |     |     |   |   |   |   |   |   |   |   |
| C   | 2-Way Fail Closed (Standard)                  |     |     |   |   |   |   |   |   |   |   |
| 1   | 3-Way Configuration 1 (Standard)              |     |     |   |   |   |   |   |   |   |   |
| 2   | 3-Way Configuration 2                         |     |     |   |   |   |   |   |   |   |   |
| 3   | 3-Way Configuration 3                         |     |     |   |   |   |   |   |   |   |   |
| 4   | 3-Way Configuration 4                         |     |     |   |   |   |   |   |   |   |   |
| R1  | Reverse-Acting 3-Way Configuration 1          |     |     |   |   |   |   |   |   |   |   |
| R2  | Reverse-Acting 3-Way Configuration 2          |     |     |   |   |   |   |   |   |   |   |
| R3  | Reverse-Acting 3-Way Configuration 3          |     |     |   |   |   |   |   |   |   |   |
| R4  | Reverse-Acting 3-Way Configuration 4          |     |     |   |   |   |   |   |   |   |   |
| <b>Accessory 1 (Solenoid)</b>   |   |     |     |   |   |   |   |   |   |   |   |
| X   | Ommitted                                      |     |     |   |   |   |   |   |   |   |   |
| A   | 120VAC Nema 4                                 |     |     |   |   |   |   |   |   |   |   |
| B   | 24VDC Nema 4                                  |     |     |   |   |   |   |   |   |   |   |
| <b>Accessory 2 (Limit Switch)</b>   |   |     |     |   |   |   |   |   |   |   |   |
| X   | Ommitted                                      |     |     |   |   |   |   |   |   |   |   |
| A   | 2SPDT Mech. Limit Switches / Dome Ind. Nema 4 |     |     |   |   |   |   |   |   |   |   |

Call to discuss our full line of automated valve accessories.

\*Conditions such as pressure, temperature, type of media, amount and kind of suspended material in the media, and frequency of operation all affect proper actuator sizing.