

# ATKOMATIC

## 13000 Series

Stainless Steel, 3-Way, Direct Lift, Pressure 0 to 2500 psig (173 bar)  
High Pressure Valve Configurable for Variety of Fluid Applications



atkomatic solenoid

### Features

- 3-Way valve
- Direct acting valve
- Barstock construction
- Can be installed as normally closed, normally open, or as a directional valve
- Can be mounted in any orientation (except normally open version)
- Pressure to 2500 psig (173 bar) depending on valve type, fluid and orifice size
- Media temperatures from  $-423^{\circ}\text{F}$  to  $+350^{\circ}\text{F}$  ( $-253^{\circ}\text{C}$  to  $177^{\circ}\text{C}$ )
- Stellite® seats (cobalt alloy for hardness and corrosion resistance)
- Ports sizes of  $\frac{1}{4}$ ",  $\frac{3}{8}$ ", and  $\frac{1}{2}$ " NPT (British BSBT ports available)
- Cv from 0.056 through 0.40
- Stainless steel construction on all wetted parts: 316 for pressure containing parts and plunger material is 416 stainless that is treated for increased corrosion resistance
- Will handle fluids with viscosity up to 150 SUS
- Class H coils standard
- Suitable for use with wide variety of fluid including: air, gasses, liquids, hydraulic fluids, steam, cryogenic fluids, and corrosive fluids
- Explosion-proof NEMA 7 coil housing is standard; can also be furnished with a combination water- and explosion-proof NEMA 4 & 7 coil housing

### Circle Seal Controls

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# 13000 Series

## Operational Pressures (No minimum pressure differential)

Normally Open 13110–13130 ¼"–½"

| ORIFICE SIZE | GASES |       | LIQUIDS TO 40 SUS |       | LIQUIDS OVER 40 SUS |       | STEAM |     |
|--------------|-------|-------|-------------------|-------|---------------------|-------|-------|-----|
|              | AC    | DC    | AC                | DC    | AC                  | DC    | AC    | DC  |
| ¾"           | 2500  | 2500  | 2500              | 2500  | 2000                | 2000  | 300   | 300 |
| ½"           | 2,300 | 2,300 | 2,300             | 2,300 | 1,400               | 1,400 | 300   | 300 |
| ¾"           | 1,200 | 1,200 | 1,200             | 1,200 | 700                 | 700   | 300   | 300 |
| ¼"           | 600   | 600   | 600               | 600   | 300                 | 300   | 300   | 300 |

Directional 13310–13330 ¼"–½"

| ORIFICE SIZE | GASES |       | LIQUIDS TO 40 SUS |       | LIQUIDS OVER 40 SUS |       | STEAM |     |
|--------------|-------|-------|-------------------|-------|---------------------|-------|-------|-----|
|              | AC    | DC    | AC                | DC    | AC                  | DC    | AC    | DC  |
| ¾"           | 2500  | 2500  | 2500              | 2500  | 2000                | 2000  | 300   | 300 |
| ½"           | 2500  | 2500  | 2,300             | 2,300 | 1,400               | 1,400 | 300   | 300 |
| ¾"           | 1,200 | 1,200 | 1,200             | 1,200 | 700                 | 700   | 300   | 300 |
| ¼"           | 600   | 600   | 600               | 600   | 300                 | 300   | 300   | 300 |

Normally Closed 13210–13230 ¼"–½"

| ORIFICE SIZE | GASES |       | LIQUIDS TO 40 SUS |       | LIQUIDS OVER 40 SUS |       | STEAM |     |
|--------------|-------|-------|-------------------|-------|---------------------|-------|-------|-----|
|              | AC    | DC    | AC                | DC    | AC                  | DC    | AC    | DC  |
| ¾"           | 1,300 | 1,300 | 1,300             | 1,300 | 1,200               | 1,200 | 300   | 300 |
| ½"           | 1,200 | 1,200 | 1,200             | 1,200 | 1,100               | 1,100 | 300   | 300 |
| ¾"           | 600   | 600   | 600               | 600   | 500                 | 500   | 300   | 300 |
| ¼"           | 300   | 300   | 300               | 300   | 250                 | 250   | 300   | 300 |

Note: Normally open 13000 Series valves are NOT subject to intermittent operation restrictions

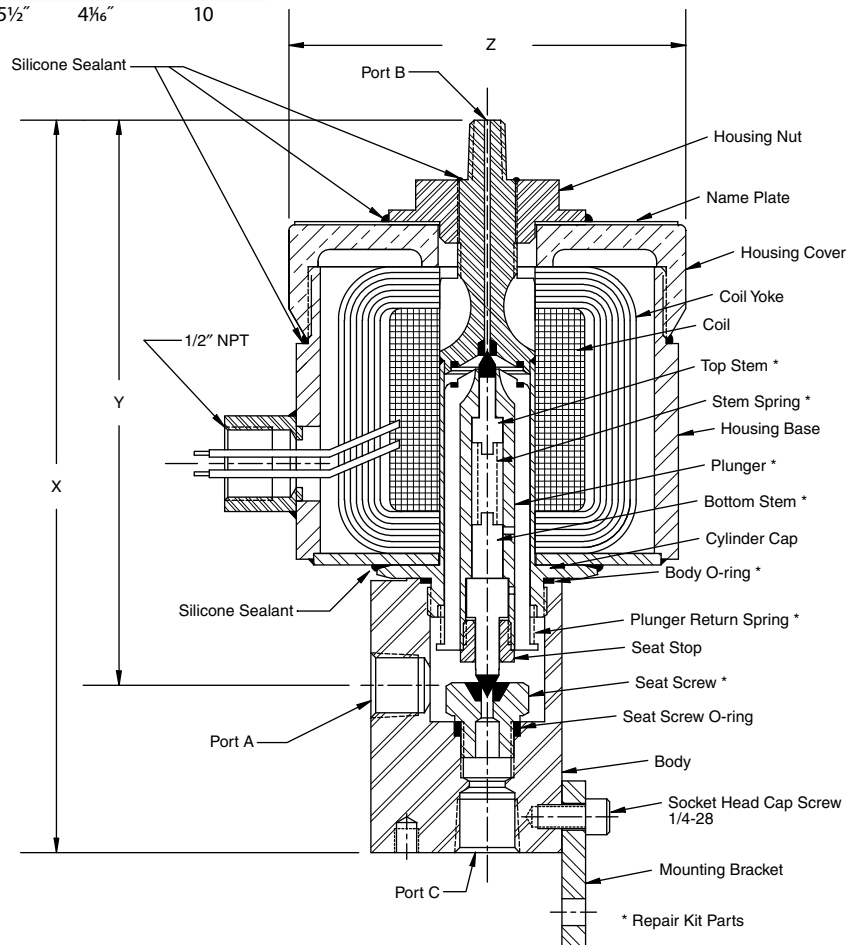
## Dimensions (inches), Shipping Weights and Cv Flow Factors

### Dimensions and Shipping Weights

| CATALOG NUM. PREFIX     |                         |                       | PIPE SIZE | X   | Y   | Z   | SHIPPING WEIGHT (lbs) |
|-------------------------|-------------------------|-----------------------|-----------|-----|-----|-----|-----------------------|
| NORMALLY OPEN (INLET B) | NORMALLY OPEN (INLET C) | DIRECTIONAL (INLET A) |           |     |     |     |                       |
| 13110                   | 13210                   | 13310                 | ¼"        | 7¼" | 5½" | 4¼" | 10                    |
| 13120                   | 13220                   | 13320                 | ¾"        | 7¼" | 5½" | 4¼" | 10                    |
| 13130                   | 13230                   | 13330                 | ½"        | 7¼" | 5½" | 4¼" | 10                    |

### Cv Flow Factors

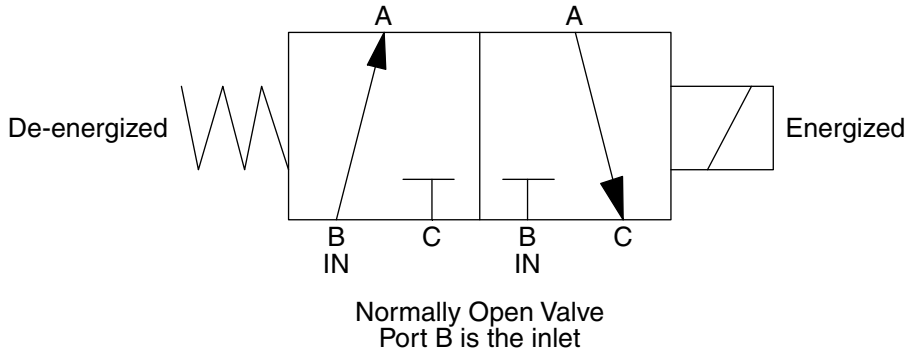
| ORIFICE SIZE | Cv    |
|--------------|-------|
| ¾"           | 0.056 |
| ½"           | 0.093 |
| ¾"           | 0.22  |
| ¼"           | 0.44  |



13230 ½" 3-Way valve, shown with a combination explosion-proof NEMA 7 and waterproof NEMA 4 coil housing

# 13000 Series

The 13000 Series valve can be built as either a normally open, a normally closed, or a directional valve. For each types of function different ports are used as the inlet and outlet ports. The valve itself is exactly the same. These different types of valve functions are illustrated by the following schematics:



## How to Order

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|  |  |
|--|--|
| <p><b>VALVE TYPE</b></p> <ul style="list-style-type: none"> <li>1 3-Way valve, normally open</li> <li>2 3-Way valve, normally closed</li> <li>3 3-Way valve, distributor (FLIP-FLOP)</li> </ul> <p><b>PORT CONNECTION SIZE</b></p> <ul style="list-style-type: none"> <li>1 1/4"</li> <li>2 3/8"</li> <li>3 1/2"</li> </ul> <p><b>VOLTAGE AC/60 Hz</b></p> <ul style="list-style-type: none"> <li>0 AC/50 Hz or DC voltage</li> <li>1 100 VAC      4 230 VAC</li> <li>2 115 VAC      5 460 VAC</li> <li>3 200 VAC</li> </ul> <p><b>VOLTAGE AC/50 Hz</b></p> <ul style="list-style-type: none"> <li>0 AC/60 Hz or DC voltage</li> <li>1 110 VAC</li> <li>2 220 VAC</li> </ul> <p><b>VOLTAGE DC</b></p> <ul style="list-style-type: none"> <li>0 AC voltage</li> <li>1 12 VDC      4 125 VDC</li> <li>2 24 VDC      5 250 VDC</li> <li>3 48 VDC</li> </ul> | <p><b>COIL HOUSING</b></p> <ul style="list-style-type: none"> <li>E Explosion-proof</li> <li>W Waterproof</li> <li>C Explosion-proof &amp; waterproof</li> <li>S Standard</li> </ul> <p><b>FLUID MEDIA TYPE</b></p> <ul style="list-style-type: none"> <li>1 Gas</li> <li>2 Liquid up to 40 SUS</li> <li>3 Liquid from 41 to 150 SUS</li> <li>4 Steam</li> <li>5 Cryogenic</li> </ul> <p><b>ORIFICE SIZES</b></p> <ul style="list-style-type: none"> <li>1 3/4"      3 3/32"</li> <li>2 1/6"      4 1/8"</li> </ul> <p><b>CONNECTION TYPE</b></p> <ul style="list-style-type: none"> <li>P NPT</li> <li>J British pipe thread</li> </ul> |
|--|--|