

# ATKOMATIC

 **CIRCLE SEAL CONTROLS, INC.**  
A division of CIRCOR International, Inc.

## 13,000 Series

**Stainless Steel, 3-Way, Direct Lift, 0 to 2500 PSIG**

High Pressure Valve Configurable for Variety of Fluid Applications

### 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 depending on valve type, fluid and orifice size
- Media temperatures from -423° F to +350° F
- Stellite seats (Cobalt alloy for hardness and corrosion resistance)
- Ports sizes of 1/4", 3/8, and 1/2" NPT (British BSBT ports available)
- $C_v$  from .056 through .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

2301 Wardlow Circle, P.O. Box 3300  
Corona, California 92878  
tel 909-270-6200  
fax 909-270-6201  
www.circle-seal.com  
am\_sales@circle-seal.com  
ind\_sales@circle-seal.com

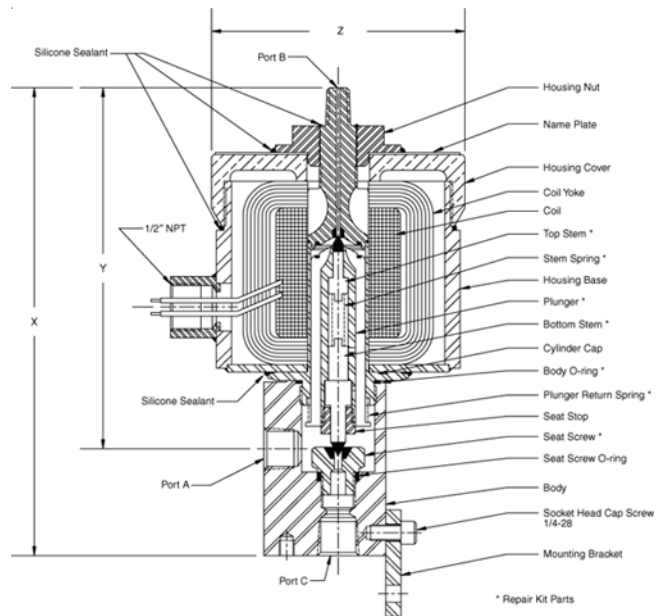
# 13,000 Series

## Operational Pressures - No minimum pressure differential

Orifice Size	Gases		Liquids to 40 SUS		Liquids over 40 SUS		Steam	
	A.C.	D.C.	A.C.	D.C.	A.C.	D.C.	A.C.	D.C.
<b>Normally Open 13110-13130</b>			<b>1/4" through 1/2"</b>					
3/64	2500	2500	2500	2500	2000	2000	300	300
1/16	2300	2300	2300	2300	1400	1400	300	300
3/32	1200	1200	1200	1200	700	700	300	300
1/8	600	600	600	600	300	300	300	300
<b>Directional 13310-13330</b>			<b>1/4" through 1/2"</b>					
3/64	2500	2500	2500	2500	2000	2000	300	300
1/16	2500	2500	2300	2300	1400	1400	300	300
3/32	1200	1200	1200	1200	700	700	300	300
1/8	600	600	600	600	300	300	300	300
<b>Normally Closed 13210-13230</b>			<b>1/4" through 1/2"</b>					
3/64	1300	1300	1300	1300	1200	1200	300	300
1/16	1200	1200	1200	1200	1100	1100	300	300
3/32	600	600	600	600	500	500	300	300
1/8	300	300	300	300	250	250	300	300

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

13230 1/2" 3-Way Valve, shown with a combination explosion-proof NEMA 7 and waterproof NEMA 4 coil housing



## Dimensions and Shipping Weights

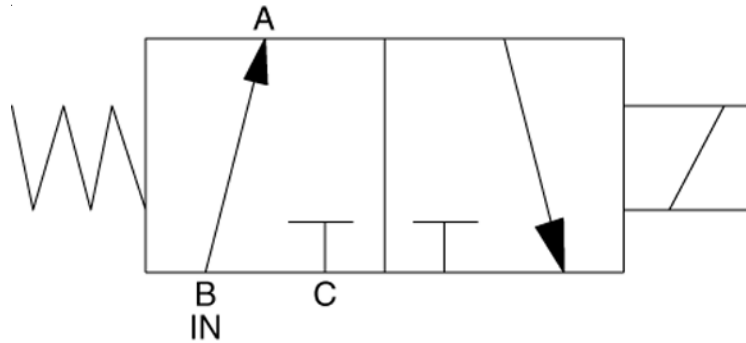
Catalog Number Prefix			Pipe Size	X	Y	Z	Shipping Weight (lbs.)
N.O. (Inlet B)	N.O. (Inlet C)	Directional (Inlet A)					
13110	13210	13310	1/4"	7 1/4"	5 1/2"	4 1/16"	10
13120	13220	13320	3/8"	7 1/4"	5 1/2"	4 1/16"	10
13130	13230	13330	1/2"	7 1/4"	5 1/2"	4 1/16"	10

## Cv Flow Factors

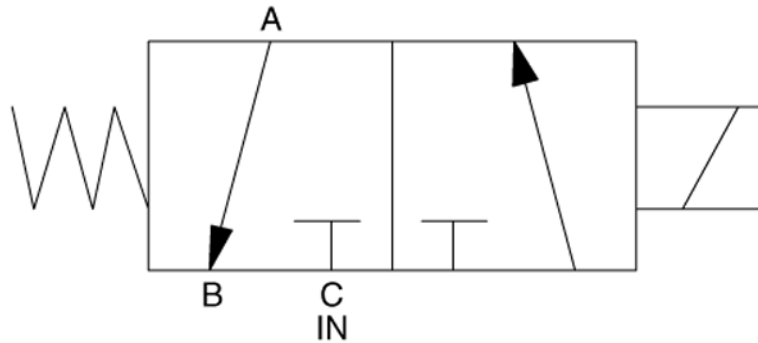
Orifice	Cv
3/64"	.056
1/16"	.093
3/32"	.22
1/8"	.44

# 13,000 Series

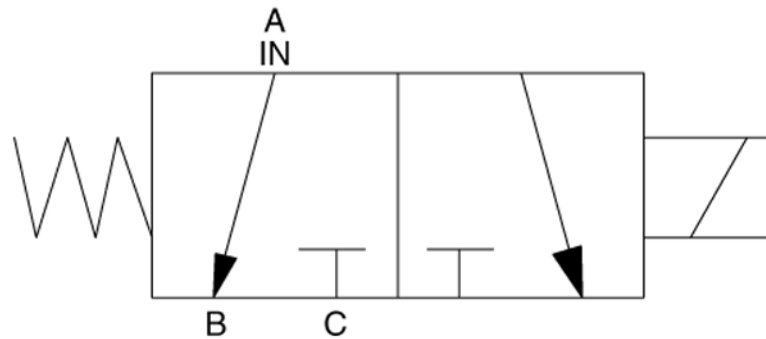
The 13,000 series valve can be built as either a normally open, a normally closed, or a directional valve. For each types of function different ports are used as the inlet and outlet ports. The valve itself is exactly the same. These different types of valve functions are illustrated by the following schematics:



Normally Open Valve  
Port B is the inlet



Normally Closed Valve  
Port C is the inlet



Directional Valve  
Port A is the inlet

# 13,000 Series

## How to Order

13 x x 0 - x x x x x x x

### VALVE TYPE

- 1 3-way valve, normally open
- 2 3-way valve, normally closed
- 3 3-way valve, distributor (FLIP-FLOP)

### PORT CONNECTION SIZE

- 1 1/4"    2 3/8"    3 1/2"

### VOLTAGE AC/60 Hz

- 0 AC/50 Hz or DC Voltage
- 1 100 VAC    4 230 VAC
- 2 115 VAC    5 460 VAC
- 3 200 VAC

### VOLTAGE AC/50 Hz

- 0 AC/60 Hz or DC Voltage
- 1 110 VAC
- 2 220 VAC

### VOLTAGE DC

- 0 AC Voltage
- 1 12 VDC    4 125 VDC
- 2 24 VDC    5 250 VDC
- 3 48 VDC

### COIL HOUSING

- E Explosion-proof
- W Waterproof
- C Explosion-proof & Waterproof
- S Standard

### FLUID MEDIA TYPE

- 1 Gas
- 2 Liquid up to 40 SUS
- 3 Liquid from 41 to 150 SUS
- 4 Steam
- 5 Cryogenic

### ORIFICE SIZES

- 1 3/64"    3 3/32"
- 2 1/16"    4 1/8"

### CONNECTION TYPE

- P NPT
- J British PipeThread