

# ATKOMATIC

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

## 12,000 Series

**Bronze, Pilot-Piston, 5 to 3000 PSIG**

High Pressure Valve Configurable for Variety of Fluid Applications

### Features

- Pressures to 3000 psig.
- Fluid temperatures from -423° F to +400° F
- For use with any gas or liquid (max. viscosity of 150 SSU), including steam and cryogenic, that is not harmful to bronze
- Pipe sizes of 3/8" through 1" (British BSBT ports available)
- Full ported valve, Cv from 2.8 to 8.9
- Pilot operated – require a minimum pressure differential of 5 psig
- Optional pilot seat materials of Teflon®, Kel-F, or 440 stainless steel
- Optional piston seat materials of Teflon®, Kel-F, Buna-N, Viton®, or EPR depending on fluid type and pressure
- Body seal materials of Teflon®, Viton®, Buna-N, or EPR
- Bronze valve material (Naval M Bronze)
- Removable 316 SS body inserts (stainless steel trim)
- Coils housings available in NEMA 1 (standard), NEMA 4 (waterproof), NEMA 7 (explosion-proof for hazardous locations), and combination NEMA 4 and 7
- Manual opening device is available as an options
- Class B coils are available for media temperatures of 0°F through +220° F
- Class H coils are available – recommended for media temperatures of -423° F through +400° F
- Can be mounted in any orientation
- Compact size and relatively low current draw with AC coils

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# 12,000 Series

## Operational Pressures (5psi minimum pressure differential)

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.
3000	3000	3000	3000	3000	3000	200	200

Note: Rubber seats are limited to 500 psi.

# 12,000 Series

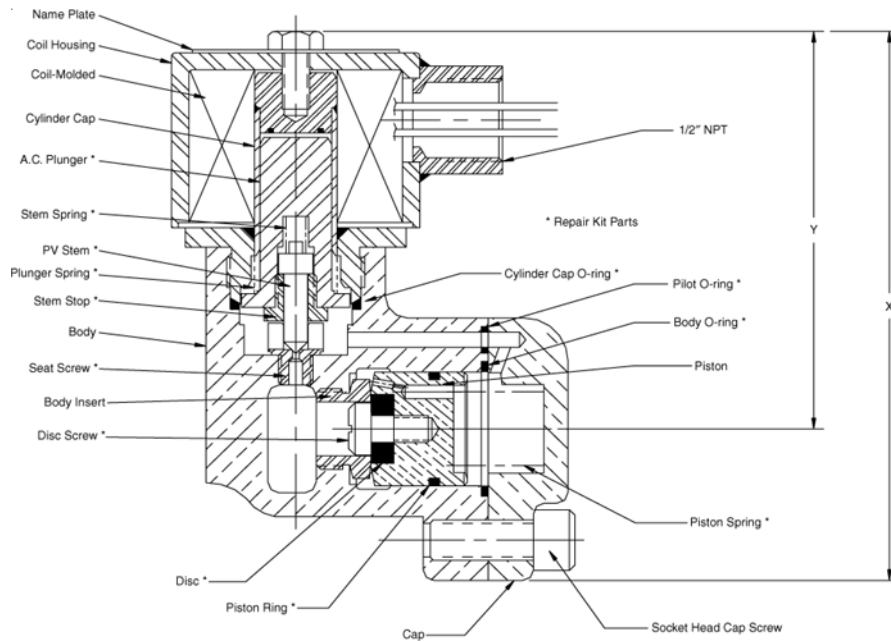
## Dimensions, Shipping Weights, and C<sub>v</sub> Flow Factors

### 12,000 Series AC

Catalog Num. Prefix	Pipe Size	Main Seat Orifice Dia	X	Y	Z	Shipping Weight (lbs.)	Cv
12410	3/8"	1/2"	3 3/4"	4 3/4"	3 1/4"	6	2.8
12420	1/2"	1/2"	3 3/4"	4 3/4"	3 1/4"	6	4.2
12430	3/4"	1"	4 1/8"	6"	4 3/4"	11	8.5
12440	1"	1"	4 1/8"	6"	4 3/4"	11	8.9

### 12,000 Series DC

Catalog Num. Prefix	Pipe Size	Main Seat Orifice Dia	X	Y	Z	Shipping Weight (lbs.)	Cv
12410	3/8"	1/2"	7"	6"	3 1/4"	8	2.8
12420	1/2"	1/2"	7"	6"	3 1/4"	8	4.2
12430	3/4"	1"	8 1/4"	6 3/8"	4 3/4"	13	8.5
12440	1"	1"	8 1/4"	6 3/8"	4 3/4"	13	8.9



12,410 3/8" Valve – shown with a NEMA 7 explosion-proof coil housing & AC coil

# 12,000 Series

## How to Order

12 4 x 0 - x x x x x x x x x x x

### CONNECTION SIZES

- |   |      |   |      |
|---|------|---|------|
| 1 | 3/8" | 3 | 3/4" |
| 2 | 1/2" | 4 | 1"   |

### VOLTAGE AC/60 Hz

- |   |                       |   |         |
|---|-----------------------|---|---------|
| 0 | AC/50Hz or DC Voltage |   |         |
| 1 | 100 VAC               | 3 | 200 VAC |
| 5 | 460 VAC               |   |         |
| 2 | 115 VAC               |   |         |
| 4 | 230 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     | 2 | 24 VDC |
| 3 | 125 VDC    |   |        |

### COIL INSULATION RATING

- |   |                |
|---|----------------|
| B | Class B 155° C |
| H | Class H 180° C |

### CONNECTION TYPE

- |   |                    |
|---|--------------------|
| P | NPT                |
| J | British PipeThread |

### MAX. OPERATING PRESSURE (psig)

- |   |      |   |      |   |      |
|---|------|---|------|---|------|
| A | 200  | E | 1300 | I | 2100 |
| B | 500  | F | 1400 | J | 2500 |
| C | 850  | G | 1900 | K | 3000 |
| D | 1000 | H | 2000 |   |      |

### OPTIONS

- |   |                       |
|---|-----------------------|
| M | Manual Opening Device |
|---|-----------------------|

### COIL HOUSING

- |   |                                   |
|---|-----------------------------------|
| E | Explosion-proof                   |
| S | Standard                          |
| W | Waterproof                        |
| C | Combined Water- & Explosion-proof |

### FLUID MEDIA TYPE

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

### SEAL MATERIAL

- |   |         |   |        |
|---|---------|---|--------|
| A | Teflon® | B | Buna-N |
| C | Viton®  | D | EPR    |

### SEAT/PILOT MATERIAL

- |   |                          |
|---|--------------------------|
| A | TFE pilot & TFE disc     |
| B | TFE pilot & Buna disc    |
| C | TFE pilot & Viton® disc  |
| D | TFE pilot & EPR disc     |
| E | Kel-F pilot & Kel-F disc |
| F | Kel-F pilot & TFE disc   |
| G | Metal pilot & TFE disc   |
| H | Metal pilot & Buna disc  |
| I | Metal pilot & EPR disc   |
| J | Metal pilot & Kel-F disc |

Viton® is a registered trademark of DuPont Dow Elastomers.  
Teflon® is a registered trademark of DuPont.

For ordering wizard go to  
[www.circle-seal.com/atkomatic/product\\_selection\\_wizard.htm](http://www.circle-seal.com/atkomatic/product_selection_wizard.htm)  
or request disk from 909-270-6315