

# ATKOMATIC

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

## 500 Series

**Bronze, Pilot-Piston, Pressure 5 to 300 PSIG**  
**Low Pressure Valve Configurable for Variety of Fluid Applications**

### Features

- Pressures to 300 psig.
- Fluid temperatures from -100° F to +450° F
- For use with any gas or liquid (max. viscosity of 150 SSU), including steam, that is not harmful to bronze
- Pipe sizes from 1/4<sup>2</sup> through 1 1/2<sup>2</sup> NPT (British BSPT ports available)
- Full ported valves—C<sub>v</sub> from 1.4 to 21
- Pilot operated – requires a minimum pressure differential of 5 psig
- Available in normally open and normally closed versions
- Optional pilot and piston seat materials of Teflon®, Kel-F, Buna-N, Viton®, EPR, or metal (316 SS pilot and/or brass piston seat) depending on fluid type and pressure
- Body seal materials of Teflon®, Viton®, Buna-N, or EPR.
- Bronze valve material (Naval M Bronze)
- 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 and throttling devices are available as 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 -100° F through +450° F

### Operational Pressures (5 psid minimum pressure differential)

Normally Closed 500–560 1/4"–1 1/2"

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.
300	300	300	300	300	100	125	125

Normally Open 501–561 1/4"–1 1/2"

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.
300	300	200	200	100	100	125	125

*NOTE: Normally Open valves are rated for intermittent duty only on 500 Series valves and are not recommended for cryogenic service.*

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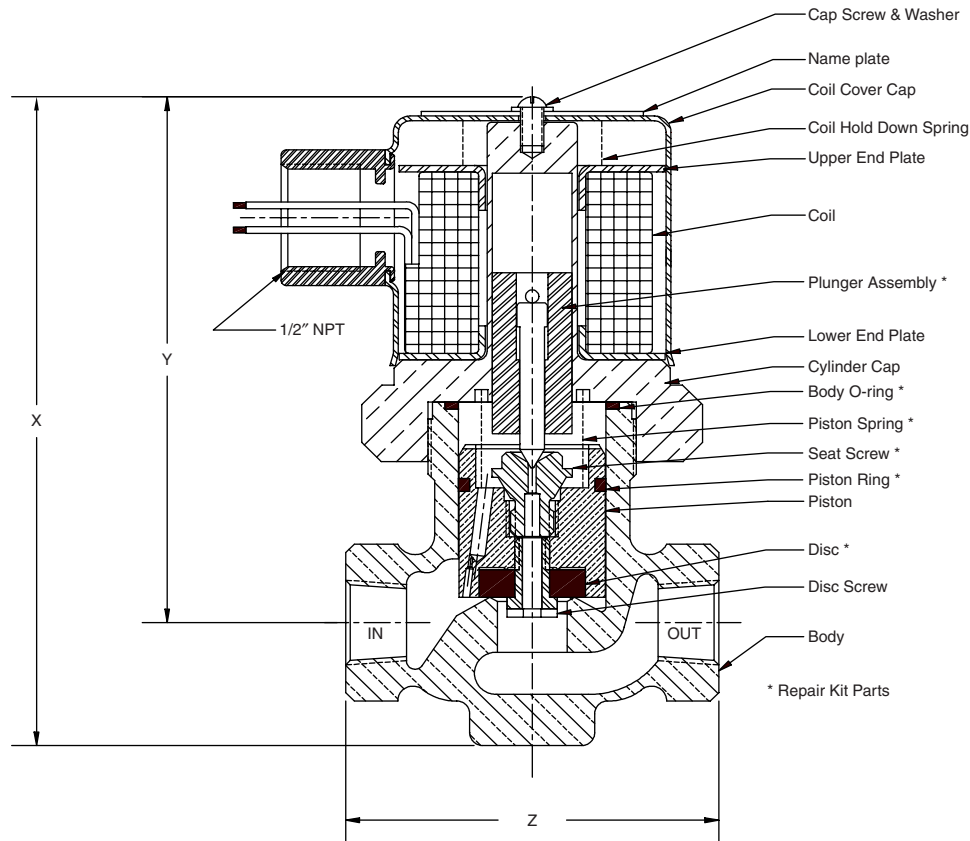
# 500 Series

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

Normally Closed

Catalog Num. Prefix		Pipe Size	Main Seat Orifice Dia	X	Y	Z	Shipping Weight (lbs)	C <sub>v</sub>
N.C.	N.O.							
500	501	1/4"	1/2"	4 3/4"	3 7/8"	2 11/16"	3	1.4
510	511	3/8"	1/2"	4 3/4"	3 7/8"	2 11/16"	3	2.7
520	521	1/2"	1/2"	4 3/4"	3 7/8"	3"	4	3.5
530	531	3/4"	1"	5 1/4"	4"	3 3/4"	5	7.5
540	541	1"	1"	5 1/4"	4"	3 3/4"	5	9.1
550	551	1 1/4"	1 1/2"	7"	5 1/8"	5 1/16"	13	19.5
560	561	1 1/2"	1 1/2"	7"	5 1/8"	5 1/16"	13	21.0

Normally Closed 1/4<sup>2</sup> 500 Valve—shown with a standard NEMA 1 coil housing and a metal pilot seat



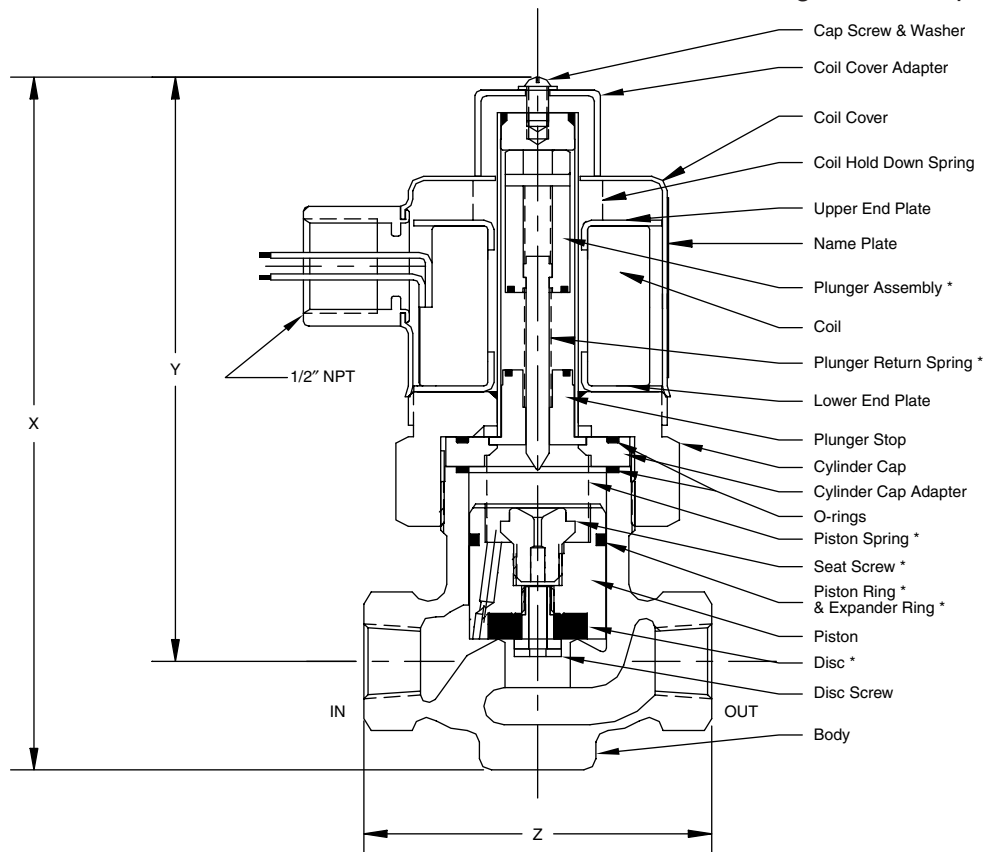
# 500 Series

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

Normally Open

Catalog Num. Prefix		Pipe Size	Main Seat Orifice Dia	X	Y	Z	Shipping Weight (lbs)	Cv
N.C.	N.O.							
500	501	1/4"	1/2"	5 3/4"	4 13/16"	2 11/16"	3	1.4
510	511	3/8"	1/2"	5 3/4"	4 13/16"	2 11/16"	3	2.7
520	521	1/2"	1/2"	5 3/4"	4 13/16"	3"	4	3.5
530	531	3/4"	1"	6 1/8"	4 7/8"	3 3/4"	5	7.5
540	541	1"	1"	6 1/8"	4 7/8"	3 3/4"	5	9.1
550	551	1 1/4"	1 1/2"	8"	6"	5 1/16"	13	19.5
560	561	1 1/2"	1 1/2"	8"	6"	5 1/16"	13	21.0

Normally Open 1/4" 501 Valve - shown with a standard NEMA 1 coil housing and metal pilot seat.



\* Repair kit parts

# 500 Series

## How to Order

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### CONNECTION SIZES

0	1/4"	3	3/4"	6	1 1/2"
1	3/8"	4	1"		
2	1/2"	5	1 1/4"		

### NORMAL (DE-ENERGIZED) POSITION OF VALVE

0	Normally Closed
1	Normally Open

### VOLTAGE AC

0	DC Voltage	5	230-60 VAC
1	24-60 VAC	6	460-60 VAC
2	100-60 VAC	7	110-50 VAC
3	115-60 VAC	8	220-50 VAC
4	200-60 VAC	9	380-50 VAC

### VOLTAGE DC

0	AC Voltage	4	100 VDC
1	12 VDC	5	125 VDC
2	24 & 32 VDC	6	250 VDC
3	48 VDC		

### COIL INSULATION RATING

B	Class B
H	Class H

### CONNECTION TYPE

P	NPT
J	British Pipe Thread

### MAX. OPERATING PRESSURE (psig)

A	20	E	75	I	200
B	25	F	100	J	250
C	50	G	125	K	275
D	60	H	150	L	300

### OPTIONS

M	Manual Opening
T	Manual Throttling 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	Buna pilot & Buna disc
C	Viton® pilot & Viton® disc
D	EPR pilot & EPR disc
E	Kel-F pilot & Kel disc
F	Metal pilot & Metal disc
G	Metal pilot & TFE disc
H	Metal pilot & Buna disc
I	Metal pilot & Viton® disc
J	Metal pilot & EPR disc
L	Metal pilot & Kel-F disc

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 a disk from 909-270-6315