

ATKOMATIC

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

35,800 Series

Stainless Steel, Pilot-Piston, 35 to 2000 PSIG
High Pressure Valve Configurable for Variety of Fluid Applications

Features

- Rapid response time – achieved by use of an external pilot source
- Pilot operated valve
- Operation up to 2000 psig
- Stainless steel construction on all wetted parts – 316 for machined parts and CF8M for cast parts.
- Plunger material is 416 stainless that is treated for increased corrosion resistance
- Available in 1/2" through 2" NPT pipe size
- Full ported valves; heavy duty, rugged construction
- C_v from 5.1 to 45
- British BSPT ports available
- Media temperatures from -15° F to +400° F
- Optional piston seat materials of Teflon®, Kel-F, Buna-N, Viton®, EPR, or 316 stainless steel depending on fluid type and pressure
- Body seal materials of Teflon®, Viton®, Buna-N, or EPR
- Stellite pilot seats (Cobalt alloy for wear and corrosion resistance)
- Piston lip seals are Viton®
- Optional piston seat materials of Teflon®, Kel-F, Buna-N, Viton®, EPR or 316 stainless steel depending on fluid type and pressure.
- Removable 316 SS body inserts (stainless steel trim)
- Will handle fluids with viscosity up to 150 SUS
- Suitable for use with wide variety of fluid including: air, gasses, liquids, hydraulic fluids, steam, cryogenic fluids, and corrosive fluids
- Class H coils are standard
- 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
- Valve position indicator option is available

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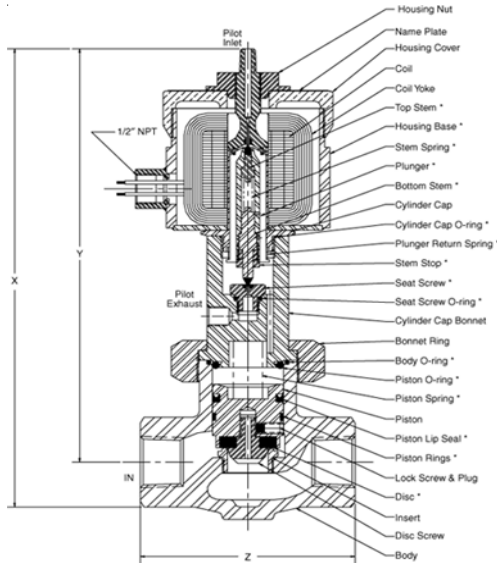
35,800 Series

Operational Pressures (35 psid 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.
1/2" through 1" Normally Open and Closed 35820-35840							
2000	2000	2000	2000	2000	2000	300	300
1 1/4" through 2" Normally Open and Closed 35851-35871							
1500	1500	1500	1500	1500	1500	300	300

Note: Both the pilot inlet and pilot exhaust ports are 1/4" NPT male and female respectively.

Note: On normally open valves the position of the pilot inlet and exhaust are reversed.



In most systems pilot pressure is tapped off the valve's inlet line and pilot exhaust is routed to atmosphere or a low pressure receptacle. Independent sources for pilot pressure are also commonly used and occasionally the valve's outlet pipe is used for pilot exhaust. For valve operation the following minimum conditions must be met:

- For opening, pilot exhaust pressure must be at least 35 psi less than the valve's inlet pressure.
- For closing, pilot pressure must be at least equal to the valve's inlet pressure and at least 35 psi greater than the valve's outlet pressures.
- The fastest operational speeds are obtained at maximum pressure differentials.

35840 1" Valve – shown as a normally closed valve, with a NEMA 7 coil housing, and AC coil.

Dimensions, Shipping Weights, and C_v Flow Factors

35,800 Series Normally Closed or Normally Open Stainless Steel

Catalog Num. Prefix	Pipe Size	Main Seat Orifice Dia	X	Y	Z	Shipping Weight (lbs.)	C _v
35820	1/2"	3/4"	11 11/16"	10 1/4"	4 5/8"	15	5.1
35830	3/4"	3/4"	11 11/16"	10 1/4"	4 5/8"	15	7.5
35840	1"	1"	12 1/8"	10 15/16"	5 1/4"	21	12.5
35851	1 1/4"	1 1/2"	12 9/16"	10 5/16"	5 7/8"	25	21.0
35861	1 1/2"	1 1/2"	12 9/16"	10 5/16"	5 7/8"	25	21.5
35871	2"	2"	14 7/8"	12 3/8"	7"	34	45.0

NOTE: Restrictions that apply to other normally open valves do not affect the 35000 series normally open valves.

35,800 Series

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CONNECTION SIZE

2	1/2"	4	1"	6	1 1/2"
3	3/4"	5	1 1/4"	7	2"

Not significant – is 0 except for 1 1/4 to 2" normally closed stainless steel valves where it is a 1

NORMAL (DE-ENERGIZED) VALVE POSITION

- O Normally Closed
- P Normally Open

VOLTAGE AC/60 Hz

0	AC/50 Hz or DC Voltage		
1	100 VAC	3	200 VAC
2	115 VAC	4	230 VAC
		5	460 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	3	48 VDC
2	24 VDC	4	125 VDC
		5	250 VDC

CONNECTION TYPE

- P NPT
- J British Pipe Thread

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®

BOTTOM PILOT SEAT MATERIAL (TOP STEM SEATS ALWAYS STELLITE)

- A Teflon®
- B Buna N
- C Viton®
- D EPR
- E Kel-F
- F Stellite

MAX. OPERATING PRESSURE (psig)

- | | | | |
|---|------|---|------|
| A | 300 | E | 1400 |
| B | 600 | F | 2000 |
| C | 900 | I | 750 |
| D | 1200 | | |