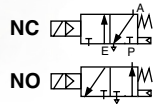
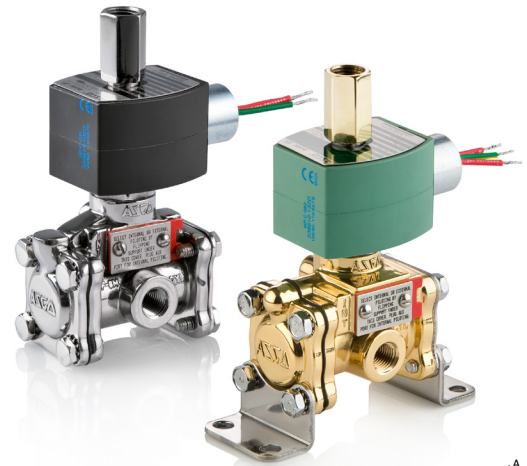


# ASCO™ Zero Minimum Solenoid Valves

Air Piloted, Spring Return, Shutdown System | Brass or Stainless Steel Bodies Air and Inert Gas | 1/4" - 1/2" NPT

**SERIES  
316**

- Brass body construction for general atmospheres; stainless steel for corrosive atmospheres
- Can be internally piloted, or externally piloted to convert valve to zero minimum operation by flipping a gasket
- When externally piloted, loss of electrical power or auxiliary air exhausts air from the actuator and shifts process valve to its original position
- When internally piloted, loss of electric power returns the valve to its original position
- Also available with Low Power or Intrinsically Safe solenoids. See Special Service Valve Section



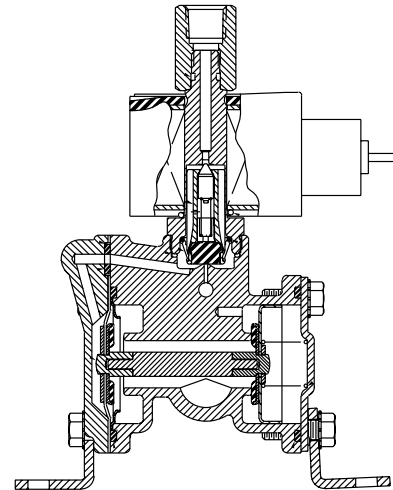
## Construction

Valve Parts in Contact with Fluids		
<b>Body</b>	Brass	316 Stainless Steel
<b>End Plate</b>	304 Stainless Steel	316 Stainless Steel
<b>Seals and Discs</b>	Low Temp NBR	
<b>Core Tube</b>	305 Stainless Steel	
<b>Core Guide</b>	CA	
<b>Shading Coil</b>	Copper	Silver

## Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number					
	DC Watts	AC			General Purpose		Explosionproof (EF)		Explosionproof (EV)	
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	272614	238714	274614	274714

**Standard Voltages:** 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts, AC, 50 Hz).  
6, 12, 24, 120, 240 volts DC. Must be specified when ordering.  
Other voltages are available when required.



## Solenoid Enclosures

### Brass Body Valves:

**Standard:** Watertight, Types 1, 2, 3, 3S, 4, and 4X.

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (Add prefix "EF" to catalog number.)

### Stainless Steel Valves:

**Standard:** Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.

See Optional Features Section for other available options.

## Installation

All valves may be mounted in any position.

316 Stainless Steel mounting brackets available from ASCO. Add suffix "MB".

## Nominal Ambient Temp. Ranges

### Standard Construction:

AC: -4°F to 125°F (-20°C to 52°C)

DC: -4°F to 104°F (-20°C to 40°C)

## Approvals

Valves with prefix "EF" or "EV"; UL approved and CSA certified solenoid. Meets applicable CE directives.

SIL 3 capable per IEC 61508 on normally closed const. Third party certification provided by EXIDA.

ATEX/IECEx certified with prefix "EV" as listed.

Refer to Optional Features Electrical Section for details.

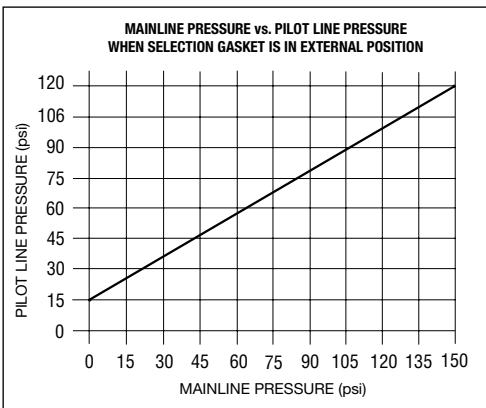
## Specifications (English units)

Pipe Size in	Orifice Size in (mm)	Flow Factor Cv (Kv)	Min.	Max. Air Pressure psi (bar)		Catalog Number		Const. Ref.	Max. Fluid Temp. °F (°C)		Watt Rating/ Class of Coil Insulation	
				AC	DC	Brass Body	Stainless Steel		AC	DC	AC	DC
<b>NORMALLY CLOSED (Closed when de-energized) ① - PFD<sub>AVG</sub> = 9.30 x 10<sup>-4</sup></b>												
1/4	5/16 (8)	1.5 (1.3)	②	150 (10)	120 (8)	8316G001	EV8316G081 ③	1	180 (82)	120 (49)	10.1/F	11.6/F
3/8	5/16 (8)	1.5 (1.3)	②	150 (10)	120 (8)	8316G002	EV8316G082 ③	1	180 (82)	120 (49)	10.1/F	11.6/F
3/8	5/8 (16)	4 (3.4)	②	150 (10)	120 (8)	8316G003	-	2	180 (82)	120 (49)	10.1/F	11.6/F
1/2	5/8 (16)	4 (3.4)	②	150 (10)	120 (8)	8316G004 ③	EV8316G084 ③	2	180 (82)	120 (49)	10.1/F	11.6/F

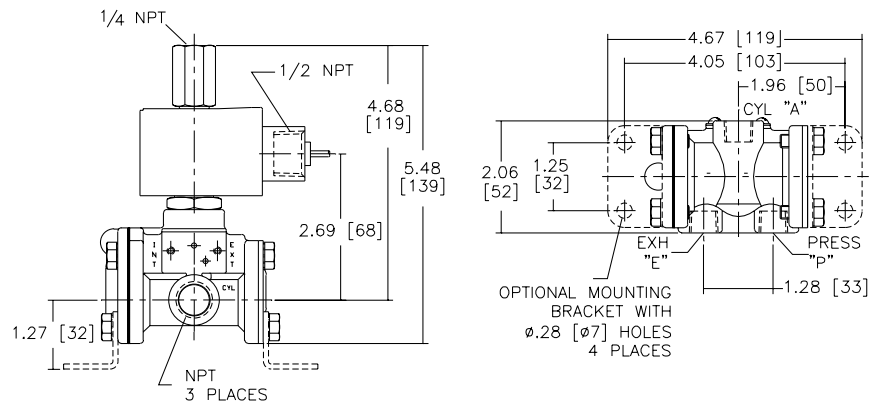
① Consult factory for Normally Open. ② Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. ③ ATEX/IECEx certified with prefix "EV". See graph below for pilot line pressure vs. mainline pressure. Minimum 15 psi (1 bar) operating pressure differential when selection gasket is in the internal position.

**IMPORTANT:** Internal mode Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area and unrestricted. ASCO flow controls and similar components must be installed in the cylinder lines only.

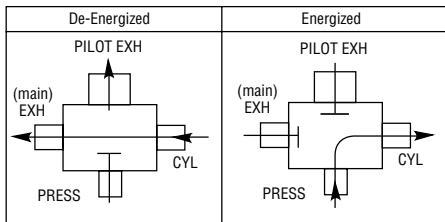
## Dimensions: inches (mm)



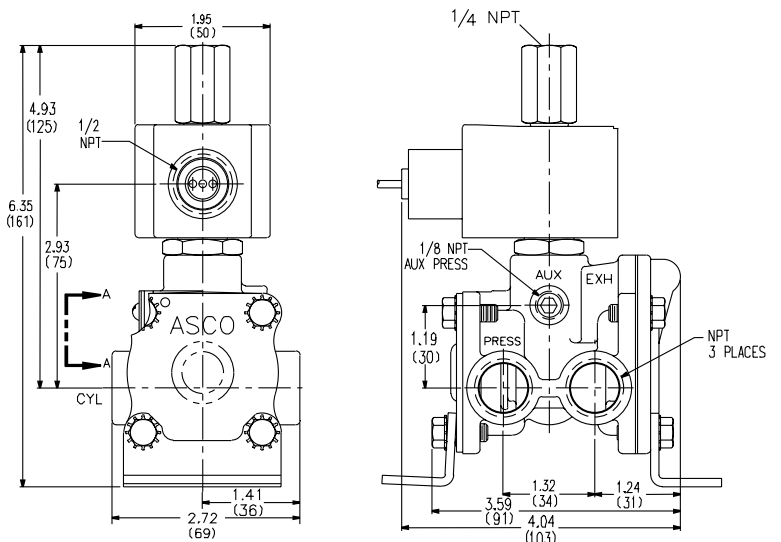
**Const. Ref. 1**



### INTERNAL PILOTING MODE FLOW DIAGRAMS



**Const. Ref. 2**



### EXTERNAL PILOTING MODE FLOW DIAGRAMS

