

# Zero Minimum Solenoid Valves

Brass or Stainless Steel Bodies Air and Inert Gas • 1/4" to 1/2" NPT 3/2 SERIES 8316

#### **Features**

- 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									
Body	Brass	316 Stainless Steel							
End Plate	304 Stainless Steel 316 Stainless St								
Seals and Discs	Low Temp NBR								
Core Tube	305 Stainless Steel								
Core Guide	CA								
Shading Coil	Copper	Silver							

### **Electrical**

	Wa		g and Po Imption	wer	Spare Coil Part Number						
Standard Coil and			AC	AC		General Purpose		Explosionproof (EF)		onproof V)	
Class of Insulation	DC Watts	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.)

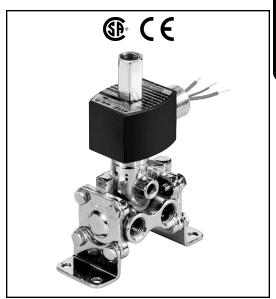
Stainless Steel Valves:

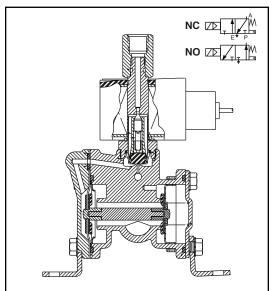
Standard: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.

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: -20°F to 125°F (-28°C to 52°C) DC: -20°F to 104°F (-28°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	Orifice Size	CV Flow		Max. Air Press.(psi) AC DC		Catalog	Const.	Max. Fluid Temp.°F		Watt Rating/ Class of Coil Insulation		
(in)	(in)	Factor	Min.			Brass Body	Stainless Steel	Ref.	AC	DC	AC	DC
NORMALLY CLOSED (Closed when de-energized) ① – PFD <sub>AVG</sub> = 9.30 x 10 <sup>-4</sup>												
1/4	5/16	1.5	2	150	120	8316G001	EV8316G081 3	1	180	120	10.1/F	11.6/F
3/8	5/16	1.5	2	150	120	8316G002	EV8316G082 3	1	180	120	10.1/F	11.6/F
3/8	5/8	4	2	150	120	8316G003	-	2	180	120	10.1/F	11.6/F
1/2	5/8	4	2	150	120	8316G004 ③	EV8316G084 3	2	180	120	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.

## **Specifications (Metric units)**

Pipe Size	Orifice Size	Kv Flow Factor		Max. Air Press. (bar) AC DC		Catalog	Const.	Max. Fluid Temp.°C		Watt Rating/ Class of Coil Insulation		
(in)	(mm)	(m3/h)	Min.			Brass Body	Stainless Steel	Ref.	AC	DC	AC	DC
NORMALLY CLOSED (Closed when de-energized) ① – PFD <sub>AVG</sub> = 9.30 x 10 <sup>-4</sup>												
1/4	8	1.3	2	10	8	8316G001	EV8316G081 3	1	82	49	10.1/F	11.6/F
3/8	8	1.3	2	10	8	8316G002	EV8316G082 3	1	82	49	10.1/F	11.6/F
3/8	16	3.4	2	10	8	8316G003	-	2	82	49	10.1/F	11.6/F
1/2	16	3.4	2	10	8	8316G004 ③	EV8316G084 3	2	82	49	10.1/F	11.6/F

### **Dimensions:** inches (mm)

