

### Features

- Variable flow proportional to the control signal (open loop)
- Closed loop control via external process sensor
- Fail-close construction: Valve closes upon loss of power
- Supplied factory-assembled
- LED indicators for valve status display
- Manual opening and closing function
- Position feedback signal for optimal flow control

### General

**Ambient Temperature Ranges:** 32 to 122°F  
**Response Time:** See chart on following page  
**Accuracy:** < 2%  
**Hysteresis:** < 2%  
**Repeatability:** < 1%  
**Linearity:** < 5%

### Positioner<sup>D</sup>

**Pilot Fluids:** Air or inert gas, filtered 50 micron  
**Pilot Pressure:** 60 to 116 psi  
**Pilot Fluid Temperature:** 32 to 122°F  
**Pilot Connection:** 1/8" NPT  
**Maximum Current:** 500mA  
**Nominal Supply Voltage:** 24VDC ± 10%  
**Maximum Power:** 7.6 W (3.6 W at setpoint)  
**Connector:** Cable gland  
**Positioner Body/Enclosure:** Aluminum, PA/IP66

### Main Valve

**Fluids:** Air, inert gas, water, oil, light slurries, steam, hot water  
**Maximum Viscosity:** 2700 SSU  
**Fluid Temperature Range:** 15 to 366°F

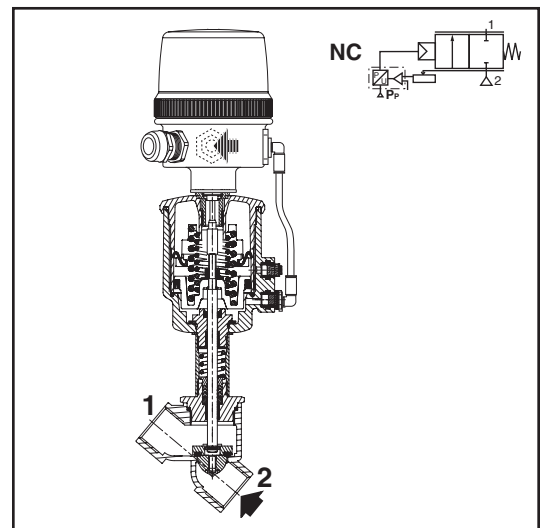
### Control Signal

Control Signal	Suffix ①
4 - 20 mA	PDB67

① Add suffix to 8290 catalog number (e.g. 8290B002PDB67), see following page for complete product range.

### Valve Construction

Valve Parts in Contact with Fluids		
63 mm & 90 mm Operators		
Body	Bronze	316L Stainless Steel
Stem	431 Stainless Steel	431 Stainless Steel
Stuffing Box	Brass	303 Stainless Steel
Stuffing Box Seal	PTFE Chevron	PTFE Chevron
Wiper Seal	FKM	FKM
Profile Disc	Brass	304L Stainless Steel
Disc Seal	PTFE	PTFE

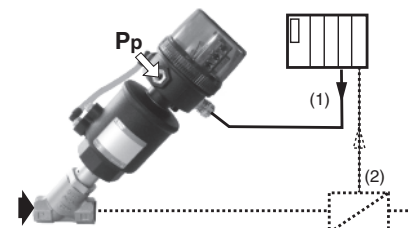


### Electrical Connection

Positioner<sup>D</sup>, screw terminals



1	+ 24 V DC, supply	1
2	GND supply	3
3	+ setpoint (4-20 mA)	2
4	GND setpoint	3
6	disc position feedback	4
7	+ 24V ON/OFF output	5



Open or closed loop control

(1) Setpoint

(2) Valve measured position

**Specifications (English units)**

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	OPD Min (psi)	OPD Max. Fluids (psi)	OPD Max. Steam (psi)	Max. Fluid Temp. °F	Bronze	Stainless Steel	Pilot Pressure Min. (psi)	Pilot Pressure Max. (psi)	Approx. Shipping Weight (lbs.)	Suffix ① (4-20 mA) Fail closed	
<b>63mm Operator</b>													
1/2	1/2	5.3	0	230	150	366	8290B002	8290B045	60	116	4.2	PDB67	
3/4	3/4	8.3	0	230	150	366	8290B005	8290B048	60	116	4.5		
1	1	17	0	150	150	366	8290B010	8290B053	60	116	5.3		
1-1/4	1-1/4	24	0	90	90	366	8290A016	8290A059	60	116	6.6		
1-1/2	1-1/2	33	0	60	60	366	8290A020	8290A063	60	116	8.6		
2	2	46	0	40	40	366	8290A024	8290A067	60	116	10.6		
<b>90mm Operator</b>													
1	1	17	0	230	150	366	8290B011	8290B054	60	116	7.1		
1-1/4	1-1/4	24	0	180	150	366	8290A017	8290A060	60	116	8.3		
1-1/2	1-1/2	33	0	120	120	366	8290A021	8290A064	60	116	10.1		
2	2	46	0	90	90	366	8290A025	8290A068	60	116	16.6		

① Add suffix to 8290 catalog number (EG: 8290B002PDB67). Fail closed construction: Valve returns to closed position upon loss of power.

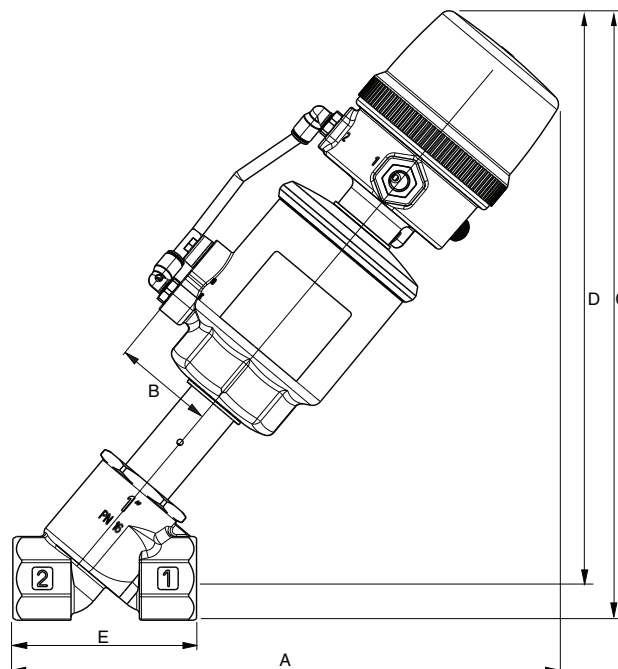
**Response time (seconds)**

At maximum pilot pressure (116 psi)

Pipe Size (in)	Operator			
	63 mm		90 mm	
	Open	Close	Open	Close
1/2	1.0	1.0	-	-
3/4	1.0	1.0	-	-
1	2.0	2.0	2.0	2.5
1 1/4	2.0	2.0	2.0	2.5
1 1/2	2.0	2.0	2.0	2.5
2	2.0	2.0	2.0	2.5

**Dimensions inches (mm)**

Pipe Size	A	B	C	D	E
<b>63 mm Operator</b>					
3/4	9.52	2.0	10.61	10.01	2.95
1	9.92	2.0	11.01	10.21	3.54
1-1/4	11.26	2.0	12.32	11.34	4.33
1-1/2	11.54	2.0	12.95	11.77	4.72
2	12.52	2.0	13.51	12.13	5.90
<b>90 mm Operator</b>					
1	10.28	2.6	11.45	10.65	3.54
1-1/4	11.57	2.6	12.64	11.65	4.33
1-1/2	11.85	2.6	13.26	12.08	4.72
2	12.79	2.6	13.82	12.44	5.91



Valve may be mounted in any position.

SPECIAL SERVICE VALVES