

2 Way Solenoid Valves

Normally Closed and Normally Open Operation
Brass, Stainless Steel and Nylon Bodies • 1/4" to 3" N.P.T.

General Description

These valves provide long trouble-free life on general service applications. A broad selection of body materials and operating pressures is available.

Applications

These dependable 2 way valves are used in:

- pumps
- spraying
- cooling
- air dryers
- pollution controls
- laundry equipment
- irrigation
- compressors
- dishwashers
- water treatment

Special valves available for: • dry air-gas • continuous cycling • exceptionally long life • heavy-duty operation • clickless and quiet (no AC hum) operation. Refer to Long Life Construction.

Specifications

Operation: Two types available:

- (a) Normally Closed — valves closed when de-energized, open when energized.
- (b) Normally Open — valves closed when energized, open when de-energized.

Valve Parts in Contact with Fluid:

Body — Brass, Stainless Steel (Series 300), Nylon or Bronze, as listed.

Seals and Discs — Buna "N," Teflon® or Ethylene Propylene, as listed.

Disc Holder — Nylon, as listed.

Core Tube — 305 s.s.

Core and Plugnut — 430F s.s.

Springs — 302 s.s.

Shading Coil — Copper (brass and nylon body); Silver (stainless steel body).

Solenoid Enclosures: Two types available:

(a) **Type 1** — General Purpose.

(b) **Types 4 and 7 (C and D)** — Combination Watertight and Explosion-Proof. Also meets Types 3 and 9 (E, F and G). Refer to Engineering Section for definitions and details. Consult your local ASCO office for Types 3S and 4X.

Electrical: Standard Voltages:

24, 120, 240, 480 volts, AC, 60 Hz (or 110, 220 volts, AC, 50 Hz).

6, 12, 24, 120, 240 volts, DC.

Other voltages available when required.

*DuPont Co. trademark.



Coil: Continuous Duty Molded Class A, B, F and H, as listed.

Temperature:

Fluid: To 210°F., as listed.

Ambient: Nominal Range, 32°F. to 77°F. (104°F. occasionally — refer to Engineering Section.)

Installation:

Dimensions: Refer to Dimensions Tables for envelope size and mounting.

Attitude: Valves may be mounted in any position except as noted in Dimensions Table.

Approvals: UL listed and CSA certified, as indicated. Refer to Engineering Section for details and coding explanation.

SPECIFICATIONS

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)								Type 1 General Purpose Solenoid Enclosure			Types 4 and 7 (C and D) Watertight and Explosion-Proof Solenoid Enclosure		Watt Rating/Class of Coil Insulation		
			Minimum		Maximum				Maximum Fluid Temp. °F.		Catalog Number	Constr. Ref. No. ②	UL Listing	Catalog Number	UL Listing	AC	DC	
			AC	DC	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC	AC								DC
NORMALLY CLOSED OPERATION, Forged Brass Body, Buna "N" or Teflon® Seating for General Service																		
1/4	3/16	1.2	5	125	—	125	—	—	—	180	—	8210B20	30	•	—	—	6.5/B	—
3/8	3/16	1.2	5	125	—	125	—	—	—	180	—	8210B21	3D	•	—	—	6.5/B	—
	5/16	1.5	①	125	40	125	40	—	—	180	150	8210C73⑥	1P	•	8211C73⑥	•	6/A	11.2/A
	3/8	3	0	125	40	125	40	—	—	180	150	8210C93	5D	•	8211C93	•	11/A	11.2/A
	1/2	3	5	200	125	135	100	135	100	180	150	8210D1	6D	•	8211D1	•	6/A	11.2/A
1/2	3/8	3	5	300	—	300	—	300	—	175	—	8210C6	50	•	8211C6	•	16.7/F	—
	1/2	2.2	①	125	40	125	40	—	—	180	150	8210A15	2P	•	8211A15	•	6/A	11.2/A
	3/4	4	5	200	125	135	100	135	100	180	150	8210D2	6D	•	8211D2	•	6/A	11.2/A
	1	4	0	125	40	125	40	—	—	180	150	8210C94	5D	•	8211C94	•	11/A	11.2/A
3/4	1/2	4	5	300	—	300	—	300	—	175	—	8210C7	5D	•	8211C7	•	16.7/F	—
	3/4	5	0	125	40	125	40	—	—	180	150	8210D95	8D	•	8211D95	•	11/A	11.2/A
	1	5	5	125	100	125	90	125	75	180	150	8210D9	90	•	8211D9	•	6/A	11.2/A
	1 1/4	6	0	350	200	300	180	200	180	200	77	8210B26⑦	10P	⑤	8211B26⑦	⑤	15.4/A	30.6/H
1	3/4	6.5	5	250	125	150	125	100	125	180	150	8210D3	11D	•	8211D3	•	6/A	11.2/A
	1	13	5	125	125	125	125	100	125	180	150	8210D4	12D	•	8211D4	•	6/A	11.2/A
	1 1/4	13.5	10	300	225	300	200	300	200	200	180	8210B78⑧	13P	⑤	8211B78⑧	⑤	16.7/F	16.8/A
	2	13.5	0	300	—	225	—	115	—	200	—	8210B27	14P	•	8211B27	•	20/F	—
1 1/4	1	13	0	125	100	125	100	125	80	180	77	8210B54	31D	⑤	8211B54	⑤	15.4/A	30.6/H
	1 1/4	15	5	125	125	125	125	100	125	180	150	8210D8	16D	•	8211D8	•	6/A	11.2/A
	1 3/4	15	10	300	225	300	200	300	200	200	180	8210B80⑨	17P	—	8211B80⑨	—	16.7/F	16.8/A
	2	15	0	125	100	125	100	125	80	180	77	8210B55	32D	⑤	8211B55	⑤	15.4/A	30.6/H
1 1/2	1 1/4	22.5	5	125	125	125	125	100	125	180	150	8210D22	18D	•	8211D22	•	6/A	11.2/A
	1 3/4	22.5	10	300	225	300	200	300	200	200	180	8210B82⑩	19P	—	8211B82⑩	—	16.7/F	16.8/A
	2	22.5	0	125	100	125	100	125	80	180	77	8210B56	33D	⑤	8211B56	⑤	15.4/A	30.6/H
2	1 3/4	43	5	125	50	125	50	90	50	180	150	8210100	20P	—	8211100	—	6/A	11.2/A
2 1/2	1 3/4	45	5	125	50	125	50	90	50	180	150	8210101	21P	—	8211101	—	6/A	11.2/A
3	3	101	10	250	—	250	—	250	—	200	—	8210B51⑪	22P	—	8211B51⑪⑫	—	28/H	—

SPECIFICATIONS (continued)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Minimum	Operating Pressure Differential (psi)						Maximum Fluid Temp. °F.		Type 1 General Purpose Solenoid Enclosure			Types 4 and 7 (C and D) Watertight and Explosion-Proof Solenoid Enclosure		Watt Rating/ Class of Coil Insulation	
				Maximum								Catalog Number	Constr. Ref. No. ①	UL Listing	Catalog Number	UL Listing		
				Air-Inert Gas		Water		Light Oil @ 300 SSU		AC	DC						AC	DC
NORMALLY OPEN OPERATION, Forged Brass Body, Buna "N" Seating for General Service																		
3/8	3/8	3	0	125	125	125	125	125	80	180	150	8210C33	23D	•	8211C33	•	10.5/A	11.2/A
1/2	5/8	4	0	125	125	125	125	125	80	180	150	8210C34	23D	•	8211C34	•	10.5/A	11.2/A
3/4	3/4	5.5	0	125	125	125	125	125	80	180	150	8210C35	25D	•	8211C35	•	10.5/A	11.2/A
		6.6	5	250	250	200	200	200	200	180	180	8210C13	24D	•	8211C13	•	15.4/A	16.8/A
1	1	13	0	125	—	125	—	125	—	180	—	8210B57	34D	•	—	—	20/F	—
		13	5	125	125	125	125	125	125	180	180	8210D14	26D	③	8211D14	—	15.4/A	16.8/A
1 1/4	1 1/8	15	0	125	—	125	—	125	—	180	—	8210B58	35D	•	—	—	20/F	—
		15	5	125	125	125	125	125	125	180	180	8210D18	28D	—	8211D18	—	15.4/A	16.8/A
1 1/2	1 1/4	22.5	0	125	—	125	—	125	—	180	—	8210B59	36D	•	—	—	20/F	—
		22.5	5	125	125	125	125	125	125	180	180	8210D32	29D	—	8211D32	—	15.4/A	16.8/A
2	1 3/4	43	5	125	125	125	125	125	125	180	150	8210I03	30P	—	8211I03	—	15.4/A	16.8/A
2 1/2	1 3/4	45	5	125	125	125	125	125	125	180	150	8210I04	27P	—	8211I04	—	15.4/A	16.8/A
NORMALLY CLOSED OPERATION, Forged Brass Body, Ethylene Propylene Diaphragm for Hot Water Service																		
3/8	5/8	3	5	—	—	125	100	—	—	210	150	8210D1HW	6D	⑤	8211D1HW	—	6/A	11.2/F
		3	①	—	—	100	40	—	—	210	150	8210C93HW	5D	①	8211C93HW	③	11/A	11.2/F
1/2	5/8	4	5	—	—	125	100	—	—	210	150	8210D2HW	6D	⑤	8211D2HW	—	6/A	11.2/F
		4	①	—	—	100	40	—	—	210	150	8210C94HW	5D	③	8211C94HW	③	11/A	11.2/F
3/4	3/4	5	5	—	—	125	100	—	—	210	150	8210D9HW	9D	⑤	8211D9HW	—	6/A	11.2/F
		5	②	—	—	100	40	—	—	210	150	8210D95HW	8D	⑤	8211D95HW	⑤	11/A	11.2/F
NORMALLY CLOSED OPERATION, Nylon Body, Buna "N" Diaphragm for General Service																		
3/8" O.D. Compression	3/16	1.2	5	125	—	125	—	—	—	130	—	8210B10	4D	•	—	—	6.5/B	—
NORMALLY CLOSED OPERATION, Stainless Steel Body, Buna "N" Diaphragm for Corrosive Liquids and Gases																		
3/8	3/8	1.5	①	125	40	125	40	—	—	180	150	8210A36⑥	1P	•	8211A36⑥	•	6/A	11.2/A
1/2	7/16	2.2	①	125	40	125	40	—	—	180	150	8210A37⑥	2P	•	8211A37⑥	•	6/A	11.2/A
		4	0	125	40	125	40	125	—	175	150	8210C87	7D	•	8211C87	•	16.7/F	11.2/A
3/4	5/8	4.5	0	125	40	125	40	125	—	175	150	8210C88	7D	•	8211C88	•	16.7/F	11.2/A
1	1	11.2	0	125	100	125	100	125	80	180	77	8210D89	15D	③	8211D89	③	15.4/A	30.6/H
NORMALLY OPEN OPERATION, Stainless Steel Body, Buna "N" Diaphragm for Corrosive Liquids and Gases																		
1/2	5/8	3	0	125	125	125	125	100	80	180	150	8210B30	37D	•	8211B30	—	10.5/A	11.2/A
3/4	5/8	3	0	125	125	125	125	100	80	180	150	8210B38	38D	•	8211B38	—	10.5/A	11.2/A

Notes: ① 5 psi on air and inert gas; 1 psi on water. ② "0" psi on AC construction, 1/4 psi on DC.
 ③ Letter "D" denotes diaphragm construction; ④ UL listed as General Purpose Valve on AC voltage only.
 "P" denotes piston construction. ⑤ Valve includes nylon disc holder, except 8210B57, 8210B58, 8210B59.
 ⑥ Main valve has bronze body. ⑦ Valve includes Ryton (Phillips Petroleum trademark) piston. ⑧ Valves provided with Teflon main seat.
 ⑨ Suitable for Types 4 and 7 (C and D) only and has a temperature range code T2B.

ELECTRICAL INFORMATION

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part No.	
	DC Watts	AC				
		Watts	VA Holding	VA Inrush	AC	DC
A	11.2	6	15.6	34	96-619	27-463
F	11.2	—	—	—	—	66-611
A	16.8	10.5 & 11	23	55	27-462	96-671
H	30.6	—	—	—	—	74-073
A	—	15.4	23.6	70	96-817	—
F	—	16.7	35	78	64-982	—
f	—	20	43	240	99-257	—
H	—	28	57	250	272-345	—
B	—	6.5	9.2	17.3	204-945	—

OPTIONAL FEATURES

Many optional electrical and construction features are available, refer to Optional Feature Section

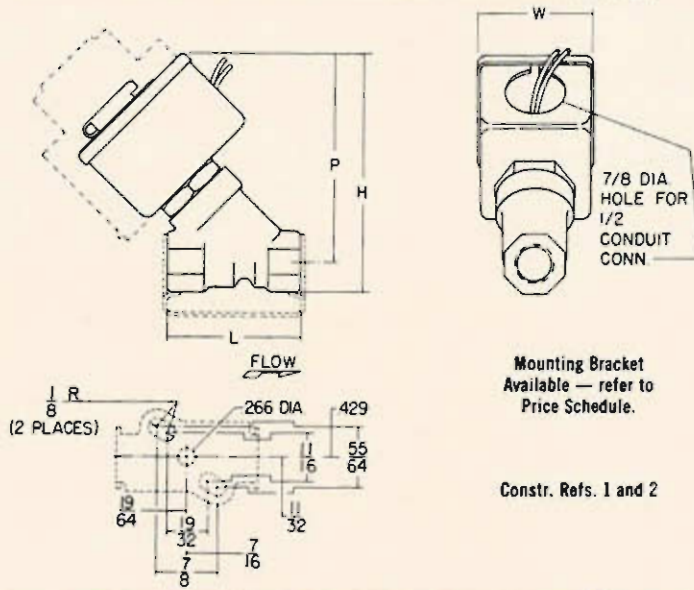
ORDERING INFORMATION

IMPORTANT: We must have CATALOG NUMBER, VOLTAGE and HERTZ, operating pressure and fluid handled. Use strainers with solenoid valves.



DIMENSIONS (in inches)

(Watertight and Explosion-Proof Solenoid Enclosure shown dotted-in. Details available on request.)

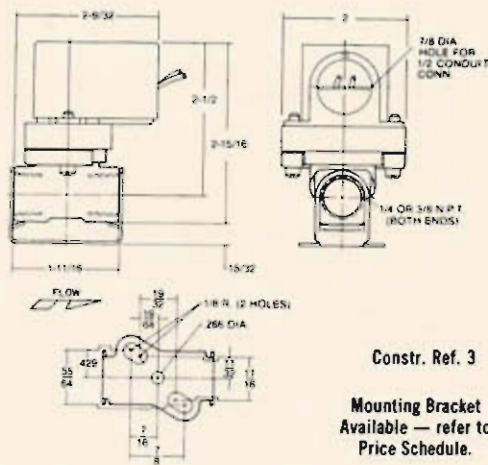


Mounting Bracket Available — refer to Price Schedule.

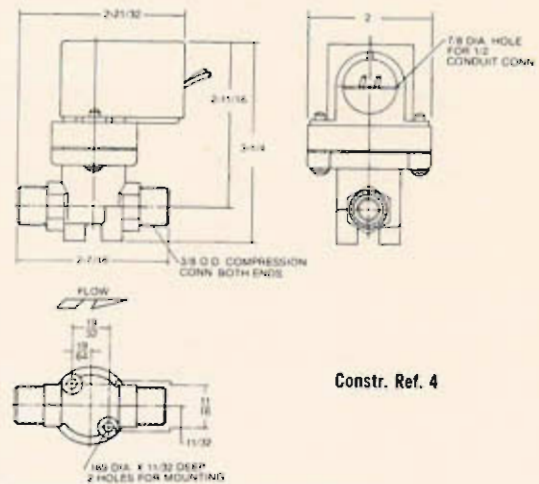
Constr. Ref.	H	L	P	W
1*	3 ¹⁵ / ₁₆	1 ²⁹ / ₃₂	3 ¹ / ₂	1 ¹³ / ₁₆
2*	3 ²⁷ / ₃₂	2 ⁹ / ₃₂	3 ³ / ₄	1 ²¹ / ₃₂

*DC dimensions slightly larger.

Constr. Refs. 1 and 2

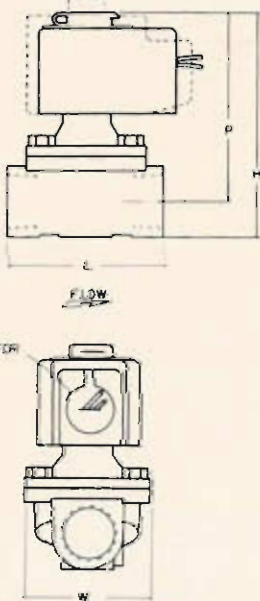


Constr. Ref. 3
Mounting Bracket Available — refer to Price Schedule.



Constr. Ref. 4

Constr. Refs. 5 to 28



Constr. Ref.	H	L	P	W	Constr. Ref.	H	L	P	W
5	3 ²⁹ / ₃₂	2 ³ / ₄	3 ¹¹ / ₃₂	2 ⁵ / ₁₆	22#	13 ⁷ / ₈	10 ¹ / ₂	10 ⁵ / ₃₂	8 ¹⁵ / ₁₆
6*	3 ¹³ / ₃₂	2 ³ / ₄	2 ²⁷ / ₃₂	2 ⁵ / ₁₆	23	4 ¹³ / ₃₂	2 ³ / ₄	3 ²⁷ / ₃₂	2 ⁹ / ₃₂
7	4 ⁷ / ₃₂	2 ¹³ / ₁₆	3 ¹ / ₂	2 ¹³ / ₃₂	24	5 ¹ / ₁₆	3 ²⁹ / ₃₂	4 ⁷ / ₁₆	2 ³ / ₄
8	4 ⁵ / ₃₂	2 ¹³ / ₁₆	3 ¹ / ₂	2 ⁵ / ₁₆	25	4 ⁵ / ₈	2 ¹³ / ₁₆	4	2 ⁹ / ₃₂
9*	3 ³ / ₈	2 ¹³ / ₁₆	3	2 ⁵ / ₁₆	26	6 ¹⁷ / ₃₂	3 ³ / ₄	4 ²⁹ / ₃₂	2 ¹⁵ / ₁₆
10*#	5 ¹ / ₄	2 ¹³ / ₁₆	4 ¹⁹ / ₃₂	2 ⁵ / ₁₆	27	8 ⁷ / ₃₂	5 ¹ / ₂	5 ¹⁵ / ₃₂	5 ⁹ / ₁₆
11*	4 ⁵ / ₃₂	3 ²⁵ / ₃₂	3 ¹⁷ / ₃₂	2 ³ / ₄	28	6 ¹⁷ / ₃₂	3 ²¹ / ₃₂	4 ²⁹ / ₃₂	3 ³ / ₈
12*	5 ⁵ / ₈	3 ³ / ₄	4	2 ¹⁵ / ₁₆	29	7 ¹ / ₃₂	4 ⁷ / ₈	5 ¹ / ₁₆	3 ³ / ₄
13*	5 ⁵ / ₈	3 ³ / ₄	4 ¹ / ₄	4 ¹ / ₄	30	8 ⁷ / ₃₂	5 ¹ / ₁₆	5 ¹⁵ / ₃₂	4 ¹ / ₁₆
14#	6 ¹⁷ / ₃₂	3 ⁵ / ₁₆	5 ²³ / ₃₂	3 ³ / ₄	31*	5 ¹ / ₄	3 ³ / ₄	4 ⁷ / ₁₆	3 ¹ / ₄
15*	5 ¹¹ / ₃₂	3 ³ / ₄	4 ¹⁵ / ₃₂	3 ²⁷ / ₃₂	32*	5 ¹ / ₁₆	3 ²¹ / ₃₂	4 ¹¹ / ₁₆	3 ¹ / ₄
16*	5 ⁵ / ₈	3 ²¹ / ₃₂	4	3 ³ / ₈	33*	6 ⁵ / ₁₆	4 ⁷ / ₈	4 ¹⁵ / ₁₆	3 ²⁹ / ₃₂
17*	5 ⁵ / ₈	3 ²¹ / ₃₂	4 ³ / ₄	4 ¹¹ / ₁₆	34#	6 ²⁹ / ₃₂	3 ³ / ₄	6 ³ / ₃₂	3 ¹ / ₄
18*	6 ¹ / ₈	4 ³ / ₈	4 ⁵ / ₃₂	3 ³ / ₄	35#	7 ¹ / ₃₂	3 ²⁷ / ₃₂	6 ¹³ / ₃₂	3 ¹ / ₄
19*	6 ¹ / ₈	4 ³ / ₈	4 ¹³ / ₃₂	5 ⁹ / ₃₂	36#	7 ²¹ / ₃₂	4 ³ / ₈	6 ⁷ / ₁₆	3 ²⁹ / ₃₂
20*	7 ⁵ / ₁₆	5 ¹ / ₈	4 ³ / ₁₆	4 ¹¹ / ₁₆	37	4 ¹ / ₁₆	2 ¹³ / ₁₆	3 ²¹ / ₃₂	2 ¹³ / ₃₂
21*	7 ⁵ / ₁₆	5 ¹ / ₂	4 ⁹ / ₁₆	5 ⁹ / ₁₆	38	4 ¹ / ₁₆	2 ¹³ / ₁₆	3 ²¹ / ₃₂	2 ¹³ / ₃₂

*DC dimensions slightly larger.

All valves mountable in any position without affecting operation, except construction noted # which must be mounted with solenoid vertical and upright.