2-Way/2 Position Valves

Two-way solenoid valves have one inlet and one outlet, and are used to permit and shut off fluid flow.

Two Types of Operations Apply

Normally Closed (NC)

Fluid is shut off when the coil is de-energized, flows through the valve when the coil is energized.

Normally Open (NO)

Fluid flows through the valve when the coil is de-energized, shuts off when the coil is energized.

Two Types of Constructions Apply

Direct Acting

When the solenoid is energized, the core directly opens the orifice of a Normally Closed valve or closes the orifice in a Normally Open valve. The valve will operate at pressures from 0 psi to its rated maximum. The force needed to open the valve is proportional to the orifice size and fluid pressure. As orifice size increases, so does the required force. To open larger orifices without increasing solenoid size, internal pilots are used.

Internally Piloted

These valves use line pressure to assist operation.

When the coil is de-energized (on a Normally Closed valve), the pilot orifice is closed and line pressure is applied to the top of the piston or diaphragm through the bleed orifice, closing the valve. When the coil is energized, the core opens the pilot orifice, relieving pressure from the diaphragm or piston. Line pressure, alone, opens the valve by lifting the diaphragm or piston off the main orifice.

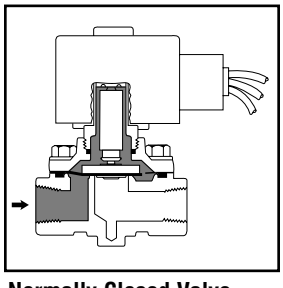
See Engineering Section for further details.

Standard and Optional Features

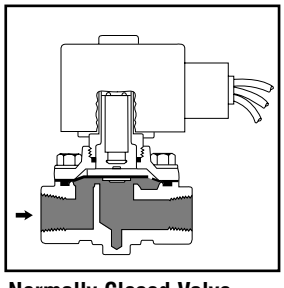
Solenoid valves are supplied, as listed, with either RedHat II molded epoxy solenoids or RedHat solenoids with metal enclosures. RedHat II valves are identified by the letter "G" or "H" in their catalog numbers; e.g., 8030**G**016. Many optional features may be added to your valves; e.g., high-temperature Class H molded coils, manual operators, and metering devices.

See the Optional Features Section for details.

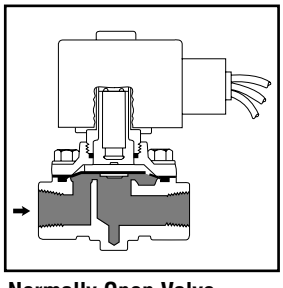
2-Way/2 Position Valves Flow Diagrams



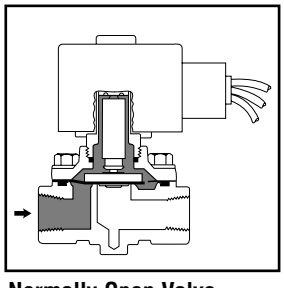
Normally Closed Valve De-Energized



Normally Closed Valve Energized



Normally Open Valve De-Energized



Normally Open Valve Energized

Index

Series	General Description	Pipe Size (NPT)	Page
8030	Low Pressure	3/8" - 3/4"	3
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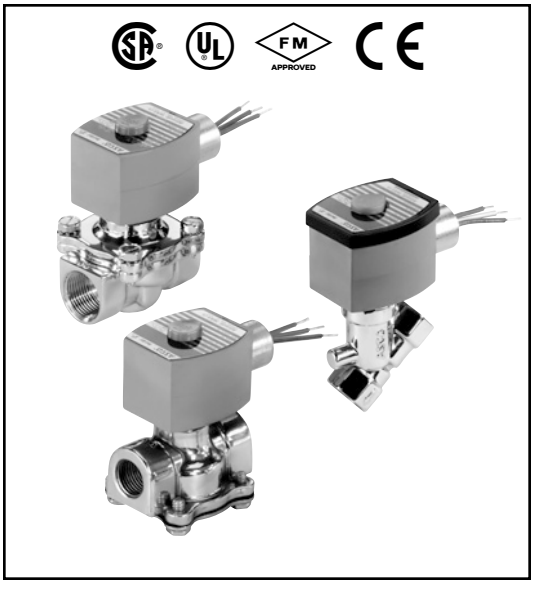
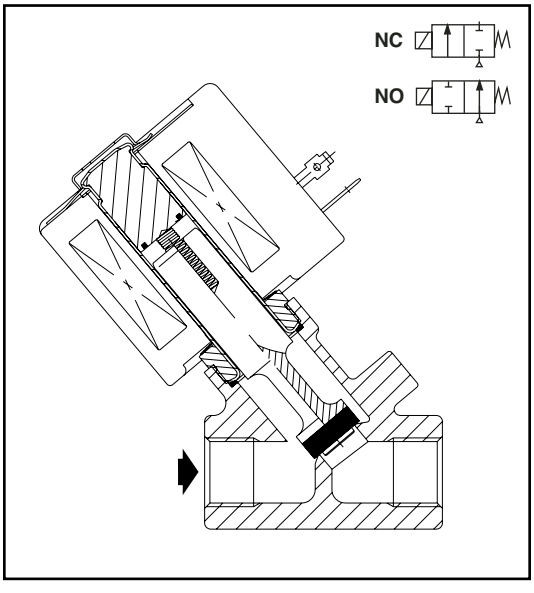
Features

- Operate at low pressures: no minimum required; up to 15 psi (1 bar) maximum differential
- Normally closed or normally open operation
- Widely used for dispensing, collating, gas shutoff, vacuum holding, and tank draining applications
- Normally open valve well suited for venting systems





Construction

Valve Parts in Contact with Fluids		
Body	Brass	304 Stainless Steel
Seals and Disc	NBR	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Spring	302 Stainless Steel	
Shading Coil	Copper	Silver
Stem	PA (Normally Open)	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	40	238210	238310	238214	238314
F	11.6	10.1	25	70	238610	238710	238614	238714
F	-	16.1	35	95	272610	-	272614	-
F	16.8	-	-	-	-	97617	-	97617
F	-	17.1	40	93	238610	-	238614	-
F	-	20.1	48	240	272610	-	272614	-

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 available when required.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X (all except 16.8 watt).
Metal Type 1 General Purpose housing with 7/8" hole for 1/2" conduit hub (16.8 watt)

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

Note: Wattages 16.1 and 20.1 meet Type 7 Groups A, B, C, and D; and Type 9 Groups E and F only.

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed, as indicated. FM approved (Normally closed only except 8030G017 and 8030G067). Meets applicable CE directives.

Refer to Engineering Section for details.

2/2 SERIES 8030

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)					Max. Fluid Temp. ˚F		Brass Body			Stainless Steel Body			Watt Rating/ Class of Coil Insulation ①	
				Max. AC		Max. DC											
			Min.	Air-Inert Gas	Water	Air-Inert Gas	Water	AC	DC	Catalog Number	Const. Ref.	UL ② Listing	Catalog Number	Const. Ref.	UL ② Listing	AC	DC
NORMALLY CLOSED (Closed when de-energized)																	
3/8	3/8	1.8	0	7	5	3	3	180	120	8030G010	1	❍	8030G064	1	❍	6.1/F	10.6/F
3/8	3/8	1.8	0	15	15	3.5	3.5	200	150	8030G013	2	❍	8030G065	2	❍	10.1/F	11.6/F
1/2	7/16	2.8	0	4	6	-	-	125	-	8030G016	3	❍	8030G066	3	❍	6.1/F	-
1/2	7/16	2.8	0	-	-	6	6	-	180	8030A017	11	❍	8030A067	11	❍	-	16.8/F
1/2	7/16	2.8	0	15	15	-	-	200	-	8030G017	11	❍	8030G067	11	❍	16.1/F	-
3/4	3/4	5	0	2	2	1	1	200	150	8030G003	9	❍	-	-	-	10.1/F	11.6/F
3/4	3/4	5	0	4	4	-	-	180	-	8030G043	9	❍	-	-	-	17.1/F	-
3/4	5/8	5.4	0	2.5	2.5	-	-	200	-	-	-	-	8030G063	10	❍	10.1/F	-
NORMALLY OPEN (Open when de-energized)																	
3/8	3/8	1.6	0	15	15	-	-	200	-	8030G070	12	●	-	-	-	16.1/F	-
1/2	7/16	2.2	0	15	15	-	-	200	-	8030G071	13	●	-	-	-	20.1/F	-
1/2	3/4	5	0	2	2	-	-	180	-	8030G082	7	●	-	-	-	10.1/F	-
3/4	3/4	5.5	0	2	2	-	-	180	-	8030G083	8	●	-	-	-	10.1/F	-

① On all 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
② ❍ = Safety Shutoff Valve; ● = General Purpose Valve. *Refer to Engineering Section (Approvals) for details.*

Specifications (Metric units)

Pipe Size (ins.)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Operating Pressure Differential (bar)					Max. Fluid Temp. ˚C		Brass Body			Stainless Steel Body			Watt Rating/ Class of Coil Insulation ①	
				Max. AC		Max. DC											
			Min.	Air-Inert Gas	Water	Air-Inert Gas	Water	AC	DC	Catalog Number	Const. Ref.	UL ② Listing	Catalog Number	Const. Ref.	UL ② Listing	AC	DC
NORMALLY CLOSED (Closed when de-energized)																	
3/8	10	1.5	0	0.5	0.3	0.2	0.2	82	49	8030G010	1	❍	8030G064	1	❍	6.1/F	10.6/F
3/8	10	1.5	0	1.0	1.0	0.2	0.2	93	65	8030G013	2	❍	8030G065	2	❍	10.1/F	11.6/F
1/2	11	2.4	0	0.3	0.4	-	-	52	-	8030G016	3	❍	8030G066	3	❍	6.1/F	-
1/2	11	2.4	0	-	-	0.4	0.4	-	82	8030A017	11	❍	8030A067	11	❍	-	16.8/F
1/2	11	2.4	0	1.0	1.0	-	-	93	-	8030G017	11	❍	8030G067	11	❍	16.1/F	-
3/4	19	4.3	0	0.1	0.1	0.1	0.1	82	65	8030G003	9	❍	-	-	-	10.1/F	11.6/F
3/4	19	4.3	0	0.3	0.3	-	-	82	-	8030G043	9	❍	-	-	-	17.1/F	-
3/4	16	4.6	0	0.2	0.2	-	-	93	-	-	-	-	8030G063	10	❍	10.1/F	-
NORMALLY OPEN (Open when de-energized)																	
3/8	10	1.4	0	1.0	1.0	-	-	93	-	8030G070	12	●	-	-	-	16.1/F	-
1/2	11	1.9	0	1.0	1.0	-	-	93	-	8030G071	13	●	-	-	-	20.1/F	-
1/2	19	4.3	0	0.1	0.1	-	-	82	-	8030G082	7	●	-	-	-	10.1/F	-
3/4	19	4.7	0	0.1	0.1	-	-	82	-	8030G083	8	●	-	-	-	10.1/F	-

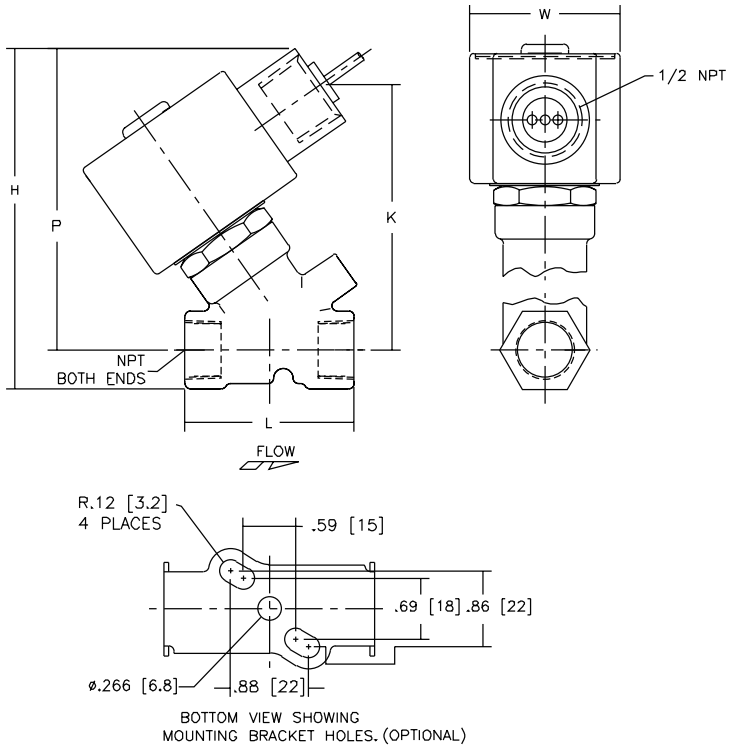
① On all 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
② ❍ = Safety Shutoff Valve; ● = General Purpose Valve. *Refer to Engineering Section (Approvals) for details.*

Dimensions: inches (mm)

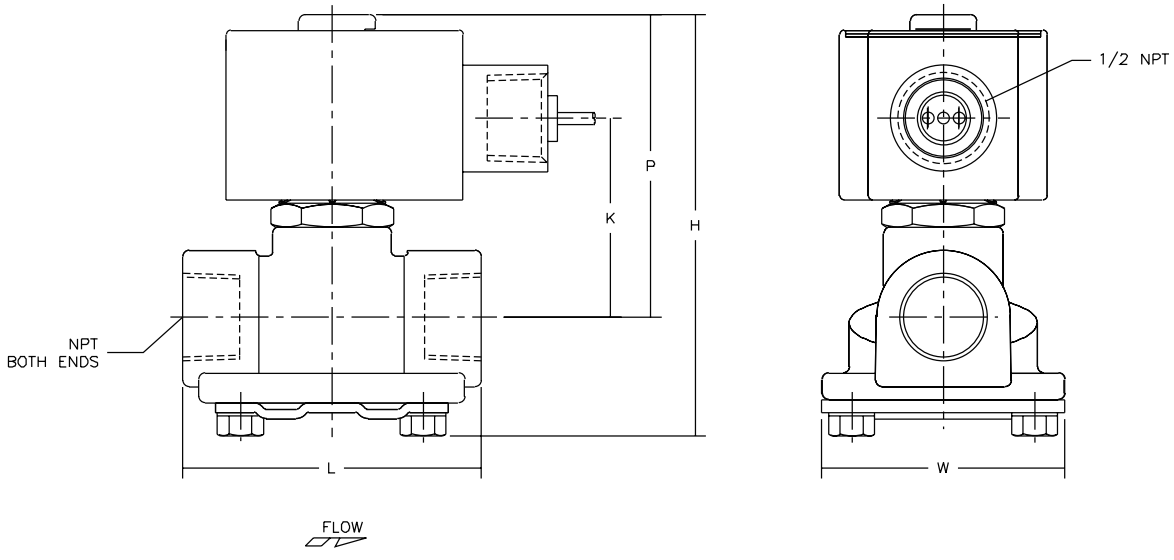
Const. Ref.		H	K	L	P	W
1	ins.	3.85	3	1.91	3.41	1.69
	mm	98	76	49	87	43
2	ins.	4	3.14	1.91	3.55	1.95
	mm	102	80	49	90	50
3	ins.	4.07	3.25	2.28	3.63	1.69
	mm	103	83	58	92	43
7	ins.	3.97	1.88	2.81	2.85	2.29
	mm	101	48	71	72	58
8	ins.	3.97	1.88	2.81	2.85	2.29
	mm	101	48	71	72	58
9	ins.	4.1	2.44	2.81	3.41	2.28
	mm	104	62	71	87	58
10	ins.	4.16	2.47	2.81	3.44	2.28
	mm	106	63	71	87	58
11	ins.	4.31	3.39	2.28	3.77	2.06
	mm	110	86	58	96	52
12	ins.	4.16	1.1	1.91	3.72	2.06
	mm	106	28	49	94	52
13	ins.	4.37	1.05	2.28	3.83	2.06
	mm	111	27	58	97	52

IMPORTANT: Valves may be mounted in any position, except for 8030G003 DC, which must be mounted with the solenoid vertical and upright.

Const. Ref. 1, 2, 3

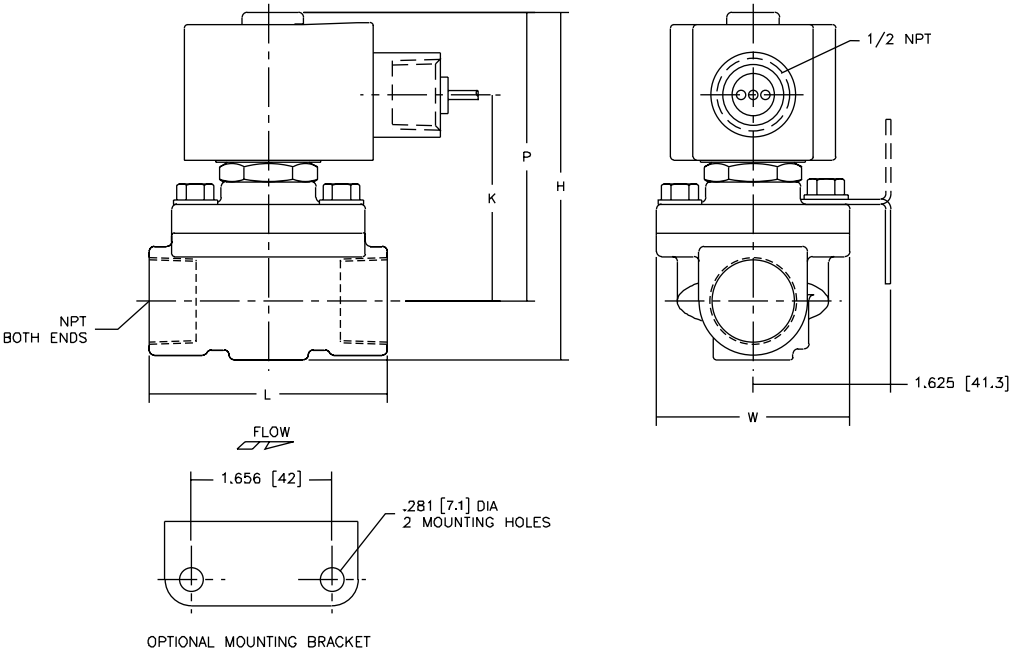


Const. Ref. 7, 8

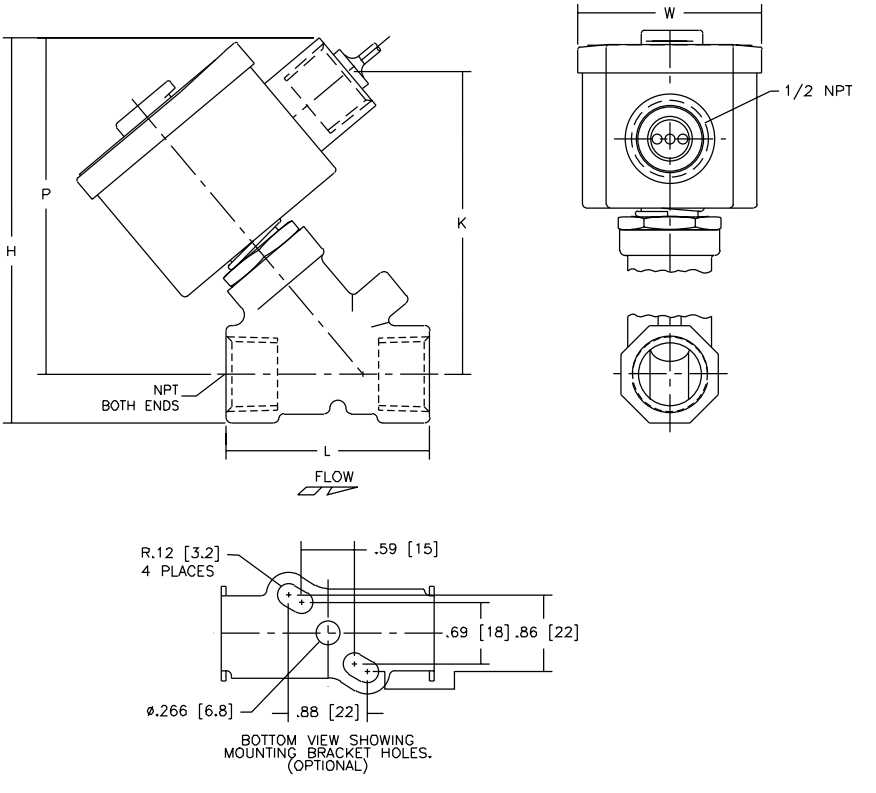


Dimensions: inches (mm)

Const. Ref. 9, 10



Const. Ref. 11, 12, 13



Features

- Lightweight, low-cost valves for air service
- Ideal for low pressure applications
- Provides high flow, Cv up to 138 (Kv 118)
- Air and vacuum service

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals, Diaphragms, Disc	NBR
Disc-Holder	PA (10.1 and 11.6 watt Normally Open only)
Core Guide	POM
Core Tube	305 Stainless Steel
Rider Rings	PTFE
Core and Plugnut	430F Stainless Steel
Springs*	302 Stainless Steel
Shading Coil	Copper
* For 8040H006, 8040H007, 8040H008, spring material is 17-7 PH	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part No.			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	6.1	16	40	238210	-	238214	-
F	11.6	10.1	25	70	238610	238710	238614	238714
B	14.9	-	-	-	-	62691	-	-
F	15.8	15.4	27	160	99257	501695	99257	501696
F	-	28.2	50	385	206409	-	206409	-

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 available when required. (Note: 24 volt AC, 60 Hz not available with 28.2 watt coil)

Solenoid Enclosures

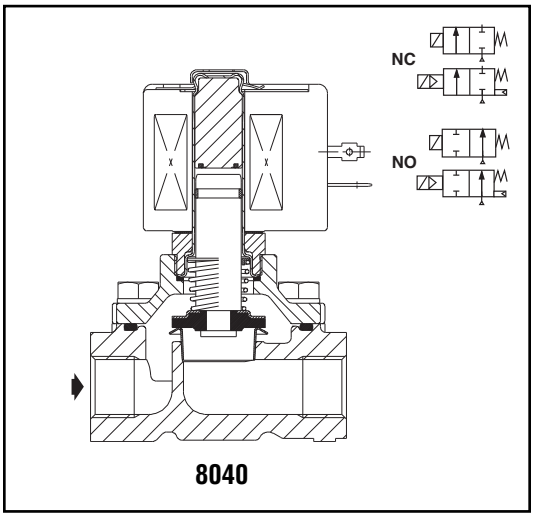
Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type I.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (Except EF8215A40 and EF8215A90, which are suitable for Types 3 and 7 (C and D) only and have a T2B temperature rating code.)
To order, add prefix "EF" to catalog number.

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Series	AC	DC	
	RedHat II/RedHat	RedHat II	RedHat
8040	-40˚F to 125˚F (-40˚C to 52˚C)	-	-
8215	32˚F to 125˚F (0˚C to 52˚C)	32˚F to 104˚F (0˚C to 40˚C)	32˚F to 77˚F (0˚C to 25˚C) (104˚F/40˚C occasionally)
Refer to Engineering Section for details.			



8040

Approvals:

CSA certified to:

8040 Series:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 10381.
2) Automatic Gas Valves Z21.21 (6.5) C/I, File 112872.
3) Automatic Gas Safety Shutoff Valves (3.9), File 112872.

8215 Series Normally Closed:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 10381.
2) Automatic Gas Valves Z21.21 (6.5), File 112872.

8215 Series Normally Open:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 10381.

UL listed, as indicated. FM approved (Normally Closed only, except Catalog Numbers 8215A090 and 8215A040). RedHat II meets applicable CE directives.

Refer to Engineering Section for details.

2/2 SERIES 8040 8215

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity Btu/hr ⑥	Operating Pressure Differential (psi)			Max. Fluid Temp. ˚F		Aluminum Body	Const. Ref.		UL ⑤ Listing	Watt Rating/ Class of Coil Insulation ②	
				Min.	Max. AC Air-Fuel Gas	Max. DC Air-Fuel Gas	AC	DC	Catalog Number	AC	DC		AC	DC
NORMALLY CLOSED (Closed when de-energized)														
1/8	5/16	1.0	53,700	0	15	-	125	-	8040H006	11		❍	6.1/F	-
1/4	5/16	1.1	59,000	0	15	-	125	-	8040H007	11		❍	6.1/F	-
3/8	5/16	1.2	64,400	0	15	-	125	-	8040H008	11		❍	6.1/F	-
3/8	3/4	3.4	183,000	0	50	25	125	104	8215G010	2		❍	10.1/F	11.6/F
3/8	3/4	3.5	-	5	125	125	125	104	8215G001 ①	1		❍	6.1/F	11.6/F
1/2	3/4	5.4	291,000	0	2	-	125	-	8040G022	13A		❍	10.1/F	-
1/2	3/4	4.4	238,500	0	50	25	125	104	8215G020	2		❍	10.1/F	11.6/F
1/2	3/4	4.8	-	5	125	125	125	104	8215G002 ①	1		❍	6.1/F	11.6/F
3/4	3/4	9.5	512,000	0	2	-	125	-	8040G023	13B		❍	10.1/F	-
3/4	3/4	5.1	247,500	0	50	25	125	104	8215G030	4		❍	10.1/F	11.6/F
3/4	3/4	5.1	-	5	125	125	125	104	8215G003 ①	3		❍	6.1/F	11.6/F
1	1 5/8	21	1,119,000	0	25	-	125	-	8215B050 ③	6		❍	15.4/F	-
1	1 5/8	21	1,119,000	0	-	25	-	104	8215G050 ③⑧⑨	16		❍	-	15.8/F
1 1/4	1 5/8	32	1,730,000	0	25	-	125	-	8215B060 ③	6		❍	15.4/F	-
1 1/4	1 5/8	32	1,730,000	0	-	25	-	104	8215G060 ③⑧⑨	16		❍	-	15.8/F
1 1/2	1 5/8	35	1,900,000	0	25	-	125	-	8215B070 ③	6		❍	15.4/F	-
1 1/2	1 5/8	35	1,900,000	0	-	25	-	104	8215G070 ③⑧⑨	16		❍	-	15.8/F
2	2 3/32	60	3,251,000	0	25	-	125	-	8215B080 ③	7		❍	15.4/F	-
2	2 3/32	60	3,251,000	0	-	15	-	104	8215G080 ③⑧⑨	17		❍	-	15.8/F
2 1/2	3	117	5,821,000	0	5	-	125	-	8215A090 ⑦	8		❍	28.2/F	-
3	3	138	7,430,000	0	5	-	125	-	8215A040 ⑦	8		❍	28.2/F	-
NORMALLY OPEN (Open when de-energized)														
3/8	3/4	3.2	172,500	0	125	125	125	104	8215G013	9		●	10.1/F	11.6/F
1/2	3/4	4	206,250	0	125	125	125	104	8215G023	9		●	10.1/F	11.6/F
3/4	3/4	4.6	247,500	0	125	125	125	104	8215G033	10		●	10.1/F	11.6/F
1	1 5/8	22	1,191,750	0	25	15	125	77	8215C053	12	18	●	15.4/F	14.9/B
1 1/4	1 5/8	33	1,793,250	0	25	15	125	77	8215C063	12	18	●	15.4/F	14.9/B
1 1/2	1 5/8	37	1,988,250	0	25	15	125	77	8215C073	13	19	●	15.4/F	14.9/B
2	2 3/32	58	3,100,000	0	25	15	125	77	8215C083	14	20	●	15.4/F	14.9/B
2 1/2	3	117	6,290,000	0	5	-	125	-	8215B093 ④⑦	15		●	28.2/F	-

① Do not use for Fuel Gas.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
③ FM Approved Process Control Valves. *See Engineering Section (Approvals) for details.*
④ Type I enclosure only.
⑤ ❍ = Safety Shutoff Valve; ● = General Purpose Valve. *Refer to Engineering Section (Approvals) for details.*
⑥ 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
⑦ Not available with 24 volt, 60 Hz coil.
⑧ Coil options EF, HT, and HC only.
⑨ Not available with 6 VDC coil.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Gas Capacity Btu/hr ⑥	Operating Pressure Differential (bar)			Max. Fluid Temp.˚C		Aluminum Body	Const. Ref.		UL ⑤ Listing	Watt Rating/ Class of Coil Insulation ②	
				Min.	Max. AC Air-Fuel Gas	Max. DC Air-Fuel Gas	AC	DC	Catalog Number	AC	DC		AC	DC
NORMALLY CLOSED (Closed when de-energized)														
1/8	7.9	.86	53,700	0	1.0	-	52	-	8040H006	11		❍	6.1/F	-
1/4	7.9	.94	59,000	0	1.0	-	52	-	8040H007	11		❍	6.1/F	-
3/8	7.9	1.0	64,400	0	1.0	-	52	-	8040H008	11		❍	6.1/F	-
3/8	19	2.9	183,000	0	3.4	1.7	52	40	8215G010	2		❍	10.1/F	11.6/F
3/8	19	3.0	-	0.3	8.6	8.6	52	40	8215G001 ①	1		❍	6.1/F	11.6/F
1/2	19	4.6	291,000	0	0.1	-	52	-	8040G022	13A		❍	10.1/F	-
1/2	19	3.8	238,500	0	3.4	1.7	52	40	8215G020	2		❍	10.1/F	11.6/F
1/2	19	4.1	-	0.3	8.6	8.6	52	40	8215G002 ①	1		❍	6.1/F	11.6/F
3/4	19	8.1	449,000	0	0.1	-	52	-	8040G023	13B		❍	10.1/F	-
3/4	19	4.4	247,500	0	3.4	1.7	52	40	8215G030	4		❍	10.1/F	11.6/F
3/4	19	4.4	-	0.3	8.6	8.6	52	40	8215G003 ①	3		❍	6.1/F	11.6/F
1	41	18	1,119,000	0	1.7	-	52	-	8215B050 ③	6		❍	15.4/F	-
1	41	18	1,119,000	0	-	1.7	-	40	8215G050 ⑧⑨	16		❍	-	15.8/F
1 1/4	41	27	1,730,000	0	1.7	-	52	-	8215B060 ③	6		❍	15.4/F	-
1 1/4	41	27	1,730,000	0	-	1.7	-	40	8215G050 ③⑧⑨	16		❍	-	15.8/F
1 1/2	41	30	1,900,000	0	1.7	-	52	-	8215B060 ③	6		❍	15.4/F	-
1 1/2	41	30	1,900,000	0	-	1.7	-	40	8215G060 ③⑧⑨	16		❍	-	15.8/F
2	53	51	3,251,000	0	1.7	-	52	-	8215B070 ③	7		❍	15.4/F	-
2	53	51	3,251,000	0	-	1.0	-	40	8215G070 ③⑧⑨	17		❍	-	15.8/F
2 1/2	76	100	5,821,000	0	0.3	-	52	-	8215A090 ⑦	8		❍	28.2/F	-
3	76	118	7,430,000	0	0.3	-	52	-	8215A040 ⑦	8		❍	28.2/F	-
NORMALLY OPEN (Open when de-energized)														
3/8	19	2.74	172,500	0	8.6	8.6	52	40	8215G013	9		●	10.1/F	11.6/F
1/2	19	3.4	206,250	0	8.6	8.6	52	40	8215G023	9		●	10.1/F	11.6/F
3/4	19	3.9	247,500	0	8.6	8.6	52	40	8215G033	10		●	10.1/F	11.6/F
1	41	19	1,191,750	0	1.7	1.0	52	25	8215C053	12	18	●	15.4/F	14.9/B
1 1/4	41	28	1,793,250	0	1.7	1.0	52	25	8215C063	12	18	●	15.4/F	14.9/B
1 1/2	41	32	1,988,250	0	1.7	1.0	52	25	8215C073	13	19	●	15.4/F	14.9/B
2	53	50	3,100,000	0	1.7	1.0	52	25	8215C083	14	20	●	15.4/F	14.9/B
2 1/2	76	100	6,290,000	0	0.3	-	52	-	8215B093 ④⑦	15		●	28.2/F	-

① Do not use for Fuel Gas.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
③ FM Approved Process Control Valves. *See Engineering Section (Approvals) for details.*
④ Type 1 enclosure only.
⑤ ❍ = Safety Shutoff Valve; ● = General Purpose Valve. *Refer to Engineering Section (Approvals) for details.*
⑥ 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
⑦ Not available with 24 volt, 60 Hz coil.
⑧ Coil options EF, HT, and HC only.
⑨ Not available with 6 VDC coil.

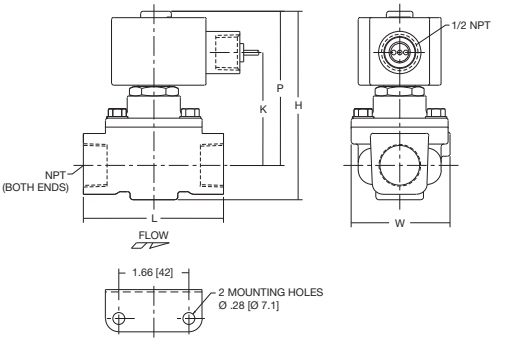
2/2 SERIES 8040 8215

Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.42	2.00	2.75	2.87	2.46
	mm	87	51	70	73	63
2	ins	4.02	2.49	2.75	3.46	2.46
	mm	102	63	70	88	63
3	in	3.87	2.19	3.31	3.05	2.33
	mm	98	56	84	77	59
4	in	4.46	2.68	3.31	3.64	2.33
	mm	113	68	84	92	59
6 ①	in	6.84	4.25	5.00	5.59	5.38
	mm	174	108	127	142	137
7 ①	in	7.47	4.53	6.09	5.94	6.31
	mm	190	115	155	151	160
8 ①	in	10.25	5.75	7.79	7.91	7.94
	mm	260	146	198	201	202
9	in	4.42	2.72	2.75	3.86	2.36
	mm	112	69	70	98	60
10	in	4.86	2.72	3.31	4.04	2.36
	mm	123	69	84	103	60
11	in	2.74	1.44	2.00	2.30	1.69
	mm	69	36	51	58	43
12	in	6.84	2.22	5.00	3.63	5.38
	mm	174	56	127	92	137
13	in	6.84	2.16	5.00	3.56	5.38
	mm	174	55	127	90	137
13A	in	4.05	2.46	2.75	3.44	2.42
	mm	103	63	70	87	62
13B	in	4.49	2.65	3.31	3.63	2.39
	mm	114	67	84	92	61
14 ②	in	7.44	2.41	6.09	3.81	6.31
	mm	189	61	155	97	160
15 ②	in	10.25	3.07	7.80	5.22	7.94
	mm	260	78	198	133	202
16	in	6.7	4.4	5.00	5.5	5.38
	mm	171	111	127	139	137
17	in	7.3	4.7	6.1	5.8	6.31
	mm	186	120	155	148	160
18	in	6.16	2.09	5.00	4.41	5.38
	mm	156	53	127	112	137
19	in	7.59	2.03	5.00	4.34	5.38
	mm	193	52	127	110	137
20	in	8.19	2.28	6.09	4.59	6.31
	mm	2.08	58	155	117	160

IMPORTANT: Valves may be mounted in any position except all DC constructions and those marked ①, which must be mounted with the solenoid vertical and upright. Constructions marked ② must be mounted with the solenoid vertical and upright or horizontal only.

Const. Ref. 1-4, 9, 10, 13A, 13B



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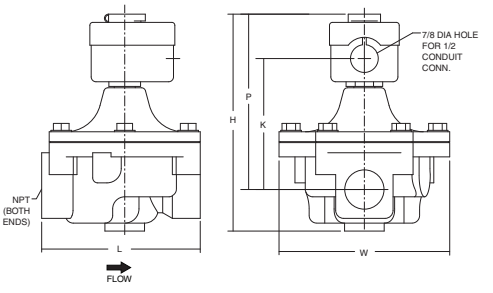

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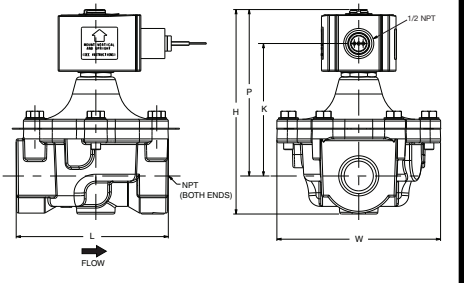

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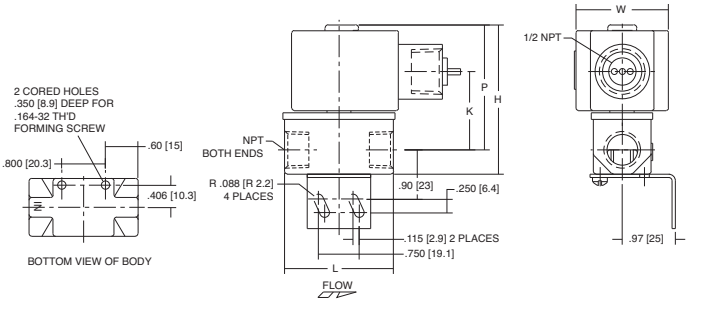

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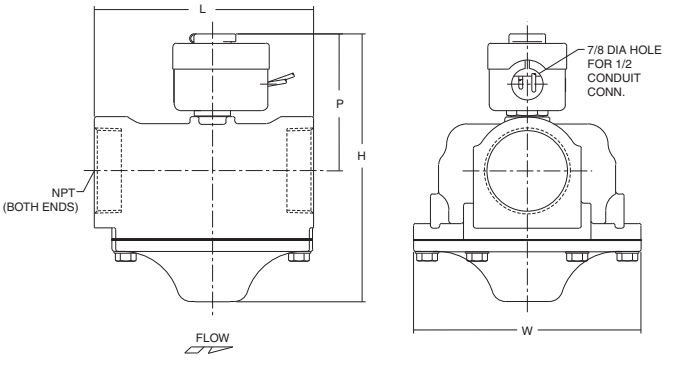
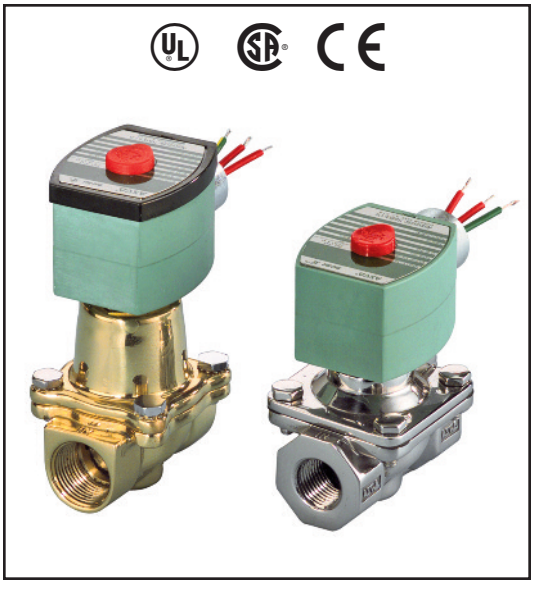
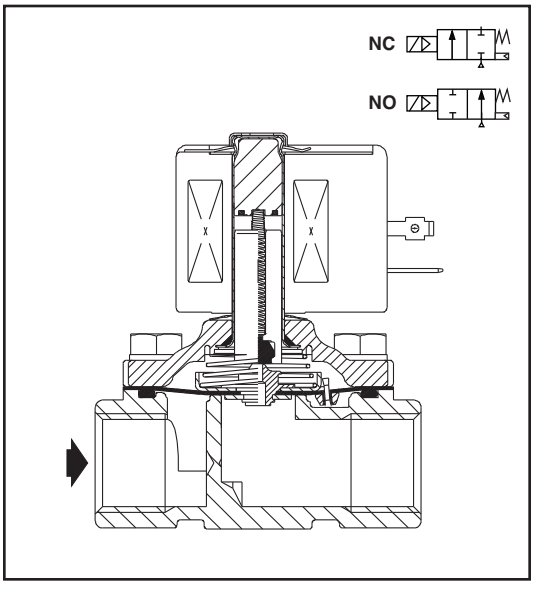


Features

- Wide range of pressure ratings, sizes, and resilient materials provide long service life and low internal leakage
- High flow valves for liquid, corrosive, and air/inert gas service
- Lead-free versions available for Safe Drinking Water Act Compliance
- Industrial applications include:
  - Car wash
  - Laundry equipment
  - Air compressors
  - Industrial water control
  - Pumps





Construction

Valve Parts in Contact with Fluids		
Body	Brass	304 Stainless Steel*
Seals and Discs	NBR or PTFE	
Disc-Holder	PA	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver

*Catalog Numbers 8210G127, 8210G129, 8210G132, 8210G133 have 316L Stainless Steel bodies.

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	6.1	16	40	238210	-	238214	-
F	11.6	10.1	25	70	238610	238710	238614	238714
F	15.8	-	-	-	-	501695	-	501696
F	16.8	16.1	35	180	272610	97617	272614	97617
F	-	17.1	40	93	238610	-	238614	-
F	-	20	43	240	99257	-	99257	-
F	-	20.1	48	240	272610	-	272614	-
F	30.8	-	-	-	-	501695	-	501696
H	11.6	-	-	-	-	238910	-	238914
H	40.6	-	-	-	-	238910	-	238914

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 available when required.

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type I.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; Red-Hat - Explosionproof and Watertight, Types 3, 4, 4X, 7, and 9.

(To order, add prefix "EF" to catalog number, except Catalog Numbers 8210B057, 8210B058, and 8210B059, which are not available with Explosionproof enclosures.)
See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

RedHat II/RedHat AC: 32°F to 125°F (0°C to 52°C)
RedHat II DC: 32°F to 104°F (0°C to 40°C)
RedHat DC: 32°F to 77°F (0°C to 25°C)
(104°F/40°C occasionally)
8210G227 AC: 32°F to 130°F (0°C to 54°C)
DC: 32°F to 90°F (0°C to 32°C)
Refer to Engineering Section for details.

Approvals

UL listed as indicated. CSA certified.
RedHat II meets applicable CE directives.
Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

2/2 SERIES 8210

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp. °F		Brass Body			Stainless Steel Body			Watt Rating/ Class of Coil Insulation ⑦	
				Max. AC			Max. DC												
			Min.	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC	Catalog Number	Const. Ref. ④	UL ⑤ Listing	Catalog Number	Const. Ref. ④	UL ⑤ Listing	AC	DC
NORMALLY CLOSED (Closed when de-energized), NBR or PTFE ② Seating																			
3/8	3/8	1.5	①	150	125	-	40	40	-	180	150	8210G073 ③	1P	●	8210G036 ③	1P	●	6.1/F	11.6/F
3/8	5/8	3	0	150	150	-	40	40	-	180	150	8210G093	5D	❍	-	-	-	10.1/F	11.6/F
3/8	5/8	3	5	200	150	135	125	100	100	180	150	8210G001 ▼	6D	❍	-	-	-	6.1/F	11.6/F
3/8	5/8	3	5	300	300	300	-	-	-	175	-	8210G006 ✓	5D	❍	-	-	-	17.1/F	-
1/2	7/16	2.2	①	150	125	-	40	40	-	180	150	8210G015 ③	2P	●	8210G037 ③	2P	●	6.1/F	11.6/F
1/2	5/8	4	0	150	150	-	40	40	-	180	150	8210G094 ✓♦	5D	❍	-	-	-	10.1/F	11.6/F
1/2	5/8	4	0	150	150	125	40	40	-	175	150	-	-	-	8210G087 ✓	7D	●	17.1/F	11.6/F
1/2	5/8	4	5	200	150	135	125	100	100	180	150	8210G002 ▼♦	6D	❍	-	-	-	6.1/F	11.6/F
1/2	5/8	4	5	300	300	300	-	-	-	175	-	8210G007	5D	❍	-	-	-	17.1/F	-
1/2	3/4	4	5	-	300	-	-	300	-	130	90	8210G227	5D	❍ †	-	-	-	17.1/F	40.6/H
3/4	5/8	4.5	0	150	150	125	40	40	-	175	150	-	-	-	8210G088 ✓	7D	●	17.1/F	11.6/F
3/4	3/4	5	5	125	125	125	100	90	75	180	150	8210G009 ▼♦	9D	❍	-	-	-	6.1/F	11.6/F
3/4	3/4	5	0	150	150	-	40	40	-	180	150	8210G095 ✓♦	8D	❍	-	-	-	10.1/F	11.6/F
3/4	3/4	6.5	5	250	150	100	125	125	125	180	150	8210G003 ▼	11D	❍	-	-	-	6.1/F	11.6/F
3/4	3/4	6	0	350	300	200	200	200	200	200	180	8210G026 ② ‡ ◆	40P/10D	●	-	-	-	16.1F	30.8/F
1	1	13	0	150	125	125	135	120	120	180	180	8210G054 ‡ ◆	41D/31D	●	8210G089 ‡ ◆	45D/15D	●	16.1/F	30.8/F
1	1	13	5	150	150	100	125	125	125	180	150	8210G004 ▼♦	12D	❍	-	-	-	6.1/F	11.6/F
1	1	13.5	0	300	225	115	-	-	-	200	-	8210G027	42P	●	-	-	-	20.1/F	-
1	1	13.5	10	300	300	300	-	-	-	175	-	8210G078 ②	13P	-	-	-	-	17.1/F	-
1 1/4	1 1/8	15	0	150	125	125	135	120	120	180	180	8210G055 ‡ ◆	43D/32D	●	-	-	-	16.1/F	30.8/F
1 1/4	1 1/8	15	5	150	150	100	125	125	125	180	150	8210G008 ▼	16D	❍	-	-	-	6.1/F	11.6/F
1 1/2	1 1/4	22.5	0	150	125	125	135	120	120	180	180	8210G056 ‡ ◆	44D/33D	●	-	-	-	16.1/F	30.8/F
1 1/2	1 1/4	22.5	5	150	150	100	125	125	125	180	150	8210G022 ▼	18D	❍	8210G127	52D	●	6.1/F	11.6/H
2	1 3/4	43	5	150	125	90	50	50	50	180	150	8210G100	20P	●	8210G129	53P	●	6.1/F	11.6/H
2 1/2	1 3/4	45	5	150	125	90	50	50	50	180	150	8210G101	21P	●	-	-	-	6.1/F	11.6/F
NORMALLY OPEN (Open when de-energized), NBR Seating (PA Disc-Holder, except as noted)																			
3/8	5/8	3	0	150	150	125	125	125	80	180	150	8210G033	23D	●	-	-	-	10.1/F	11.6/F
3/8	5/8	3	5	250	200	200	250	200	200	180	180	8210G011 ⑧ ⑨	39D	●	-	-	-	10.1/F	11.6/F
1/2	5/8	4	0	150	150	125	125	125	80	180	150	8210G034 ✓	23D	●	-	-	-	10.1/F	11.6/F
1/2	5/8	3	0	150	150	100	125	125	80	180	150	-	-	-	8210G030 ✓	37D	●	10.1/F	11.6/F
1/2	5/8	4	5	250	200	200	250	200	200	180	180	8210G012 ⑧ ⑨	39D	●	-	-	-	10.1/F	11.6/F
3/4	3/4	5.5	0	150	150	125	125	125	80	180	150	8210G035 ✓	25D	●	-	-	-	10.1/F	11.6/F
3/4	5/8	3	0	150	150	100	125	125	80	180	150	-	-	-	8210G038 ✓	38D	●	10.1/F	11.6/F
3/4	3/4	6.5	5	250	200	200	250	200	200	180	180	8210G013	46D/52D	●	-	-	-	16.1/F	15.8/F
1	1	13	0	125	125	125	-	-	-	180	-	8210B057 ⑥ ⑩	34D	●	-	-	-	20/F	-
1	1	13	5	150	150	125	150	150	125	180	180	8210G014	47D/53D	●	-	-	-	16.1/F	15.8/F
1 1/4	1 1/8	15	0	125	125	125	-	-	-	180	-	8210B058 ⑥ ⑩	35D	●	-	-	-	20/F	-
1 1/4	1 1/8	15	5	150	150	125	150	150	125	180	-	8210G018	48D/54D	●	-	-	-	16.1/F	15.8/F
1 1/2	1 1/4	22.5	0	125	125	125	-	-	-	180	-	8210B059 ⑥ ⑩	36D	●	-	-	-	20/F	-
1 1/2	1 1/4	22.5	5	150	150	125	150	150	125	180	180	8210G032	49D/55D	●	8210G132	29D	●	16.1/F	15.8/F
2	1 3/4	43	5	150	125	125	150	150	125	180	180	8210G103	50P/56P	●	8210G133	30P	●	16.1/F	15.8/F
2 1/2	1 3/4	45	5	150	125	125	150	150	125	180	180	8210G104	51P/57P	●	-	-	-	16.1/F	15.8/F

① 5 psi on Air; 1 psi on Water.
② Valve provided with PTFE main disc.
③ Valve includes ULtem (G.E. trademark) piston.
④ Letter "D" = diaphragm construction; "P"= piston construction.
⑤ ❍ Safety Shutoff Valve; ● General Purpose Valve.
Refer to Engineering Section (Approvals) for details.
⑥ Valves not available with Explosionproof enclosures.
⑦ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
⑧ AC construction also has PA seating.
⑨ No disc-holder.
⑩ Stainless steel disc-holder.
† UL listed for fire protection systems per UL429A 120/60, 110/5024VDC, no prefix and voltage options offered.
‡ DC constructions must have solenoid mounted vertical and upright.
✓ ATEX/IECEx certified with prefix "EV".
▼ ATEX/IECEx certified for DC only with prefix "EV".
◆ Not available in 6 Volt DC. EF and HB prefix only.
♦ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/hr)	Operating Pressure Differential (bar)							Max. Fluid Temp. ˚C		Brass Body			Stainless Steel Body			Watt Rating/ Class of Coil Insulation ⑦	
				Max. AC			Max. DC												
			Min.	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC	Catalog Number	Const. Ref. ④	UL ⑤ Listing	Catalog Number	Const. Ref. ④	UL ⑤ Listing	AC	DC
NORMALLY CLOSED (Closed when de-energized), NBR or PTFE ② Seating																			
3/8	10	1.3	①	10	9	-	3	3	-	82	65	8210G073 ③	1P	●	8210G036 ③	1P	●	6.1/F	11.6/F
3/8	16	2.6	0	10	10	-	3	3	-	82	65	8210G093	5D	❍	-	-	-	10.1/F	11.6/F
3/8	16	2.6	0.3	14	10	9	9	7	7	82	65	8210G001 ▼	6D	❍	-	-	-	6.1/F	11.6/F
3/8	16	2.6	0.3	21	21	21	-	-	-	79	-	8210G006 ✓	5D	❍	-	-	-	17.1/F	-
1/2	11	1.9	①	10	9	-	3	3	-	82	65	8210G015 ③	2P	●	8210G037 ③	2P	●	6.1/F	11.6/F
1/2	16	3.4	0	10	10	-	3	3	-	82	65	8210G094 ✓♦	5D	❍	-	-	-	10.1/F	11.6/F
1/2	16	3.4	0	10	10	9	3	3	-	79	65	-	-	-	8210G087 ✓	7D	●	17.1/F	11.6/F
1/2	16	3.4	0.3	14	10	9	9	7	7	82	65	8210G002 ▼♦	6D	❍	-	-	-	6.1/F	11.6/F
1/2	16	3.4	0.3	21	21	21	-	-	-	79	-	8210G007	5D	❍	-	-	-	17.1/F	-
1/2	19	3.4	0.3	-	21	-	-	21	-	54	32	8210G227	5D	❍ †	-	-	-	17.1/F	40.6H
3/4	16	3.9	0	10	10	9	3	3	-	79	65	-	-	-	8210G088 ✓	7D	●	17.1/F	11.6/F
3/4	19	4.3	0.3	9	9	9	7	6	5	82	65	8210G009 ▼♦	9D	❍	-	-	-	6.1/F	11.6/F
3/4	19	4.3	0	10	10	-	3	3	-	82	65	8210G095 ✓♦	8D	❍	-	-	-	10.1/F	11.6/F
3/4	19	5.6	0.3	17	10	7	9	9	9	82	65	8210G003 ▼	11D	❍	-	-	-	6.1/F	11.6/F
3/4	19	5.1	0	24	21	14	14	14	14	93	82	8210G026 ② ‡ ◆	40P/10D	●	-	-	-	16.1F	30.8/F
1	25	11	0	10	9	9	9	8	8	82	82	8210G054 ‡ ◆	41D/31D	●	8210G089 ‡ ◆	45D/15D	●	16.1/F	30.8/F
1	25	11	0.3	10	10	7	9	9	9	82	65	8210G004 ▼♦	12D	❍	-	-	-	6.1/F	11.6/F
1	25	11.5	0	21	16	8	-	-	-	93	-	8210G027	42P	●	-	-	-	20.1/F	-
1	25	11.5	0.7	21	21	21	-	-	-	79	-	8210G078 ②	13P	-	-	-	-	17.1/F	-
1 1/4	29	13	0	10	9	9	9	8	8	82	82	8210G055 ‡ ◆	43D/32D	●	-	-	-	16.1/F	30.8/F
1 1/4	29	13	0.3	10	10	7	9	9	9	82	65	8210G008 ▼	16D	❍	-	-	-	6.1/F	11.6/F
1 1/2	32	19.5	0	10	9	9	9	8	8	82	82	8210G056 ‡ ◆	44D/33D	●	-	-	-	16.1/F	30.8/F
1 1/2	32	19.5	0.3	10	10	7	9	9	9	82	65	8210G022 ▼	18D	❍	8210G127	52D	●	6.1/F	11.6/H
2	44	37	0.3	10	9	6	3	3	3	82	65	8210G100	20P	●	8210G129	53P	●	6.1/F	11.6H
2 1/2	44	39	0.3	10	9	6	3	3	3	82	65	8210G101	21P	●	-	-	-	6.1/F	11.6/F
NORMALLY OPEN (Open when de-energized), NBR Seating (PA Disc-Holder, except as noted)																			
3/8	16	2.6	0.0	10	10	9	9	9	6	82	65	8210G033	23D	●	-	-	-	10.1/F	11.6/F
3/8	16	2.6	0.3	17	14	14	17	14	14	82	82	8210G011 ⑧ ⑨	39D	●	-	-	-	10.1/F	11.6/F
1/2	16	3.4	0	10	10	9	9	9	6	82	65	8210G034 ✓	23D	●	-	-	-	10.1/F	11.6/F
1/2	16	2.6	0	10	10	7	9	9	6	82	65	-	-	-	8210G030 ✓	37D	●	10.1/F	11.6/F
1/2	16	3.4	0.3	17	14	14	17	14	14	82	82	8210G012 ⑧ ⑨	39D	●	-	-	-	10.1/F	11.6/F
3/4	19	4.7	0	10	10	9	9	9	6	82	65	8210G035 ✓	25D	●	-	-	-	10.1/F	11.6/F
3/4	16	2.6	0	10	10	7	9	9	6	82	65	-	-	-	8210G038 ✓	38D	●	10.1/F	11.6/F
3/4	19	5.6	0.3	17	14	14	17	14	14	82	82	8210G013	46D/52D	●	-	-	-	16.1/F	15.8/F
1	25	11	0	9	9	9	-	-	-	82	-	8210B057 ⑥ ⑩	34D	●	-	-	-	20/F	-
1	25	11	0.3	10	10	9	10	10	9	82	82	8210G014	47D/53D	●	-	-	-	16.1/F	15.8/F
1 1/4	29	13	0	9	9	9	-	-	-	82	-	8210B058 ⑥ ⑩	35D	●	-	-	-	20/F	-
1 1/4	29	13	0.3	10	10	9	10	10	9	82	-	8210G018	48D/54D	●	-	-	-	16.1/F	15.8/F
1 1/2	32	19.5	0	9	9	9	-	-	-	82	-	8210B059 ⑥ ⑩	36D	●	-	-	-	20/F	-
1 1/2	32	19.5	0.3	10	10	9	10	10	9	82	82	8210G032	49D/55D	●	8210G132	29D	●	16.1/F	15.8/F
2	44	37	0.3	10	9	9	10	9	9	82	82	8210G103	50P/56P	●	8210G133	30P	●	16.1/F	15.8/F
2 1/2	44	39	0.3	10	9	9	10	9	9	82	82	8210G104	51P/57P	●	-	-	●	16.1/F	15.8/F

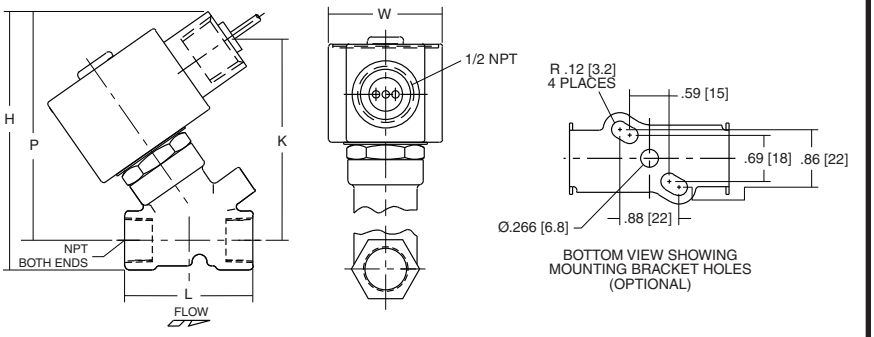
① 0.3 bar on Air; 0.0 bar on Water.
② Valve provided with PTFE main disc.
③ Valve includes UItem (G.E. trademark) piston.
④ Letter "D" = diaphragm construction; "P"= piston construction.
⑤ ❍ Safety Shutoff Valve; ● General Purpose Valve.
Refer to Engineering Section (Approvals) for details.
⑥ Valves not available with Explosionproof enclosures.
⑦ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
⑧ AC construction also has PA seating.
⑨ No disc-holder.
⑩ Stainless steel disc-holder.
† UL listed for fire protection systems per UL429A 120/60, 110/5024VDC, no prefix and voltage options offered.
‡ DC constructions must have solenoid mounted vertical and upright.
✓ ATEX/IECEx certified with prefix "EV".
▼ ATEX/IECEx certified for DC only with prefix "EV".
◆ Not available in 6 Volt DC. EF and HB prefix only.
♦ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1*	in	3.85	3.00	1.91	3.41	1.69
	mm	98	76	49	87	43
2*	in	4.17	3.25	2.28	3.63	1.69
	mm	106	83	58	92	43
5	in	3.84	2.31	2.75	3.28	2.28
	mm	98	59	70	83	58
6*	in	3.38	1.94	2.75	2.80	2.28
	mm	86	49	70	71	58
7	in	4.19	2.50	2.81	3.47	2.39
	mm	106	64	71	88	61
8	in	4.13	2.47	2.81	3.44	2.29
	mm	105	63	71	87	58
9*	in	3.66	2.10	2.81	2.96	2.28
	mm	93	53	71	75	58
10*	in	5.20	3.40	2.80	4.50	2.50
	mm	131	86	71	114	62
11*	in	4.16	2.66	3.84	3.52	2.75
	mm	106	68	98	89	70
12	in	5.64	3.15	3.75	4.01	3.36
	mm	143	80	95	102	85
13	in	4.44	3.22	3.75	4.19	5.81
	mm	113	82	95	106	147
15*	in	5.20	3.30	3.80	4.40	3.80
	mm	133	83	98	111	98
16	in	5.64	3.15	3.66	4.01	3.56
	mm	143	80	93	102	90
18*	in	6.11	3.30	4.38	4.16	3.92
	mm	155	84	111	106	100
20*	in	7.33	3.71	5.06	4.57	4.87
	mm	186	94	129	116	124
21*	in	7.33	3.71	5.50	4.57	4.87
	mm	186	94	140	116	124
23	in	4.35	2.65	2.75	3.79	2.28
	mm	110	67	70	96	58
24	in	5.06	X	3.78	4.44	2.75
	mm	129	X	96	113	70
25	in	4.64	2.81	2.81	3.94	2.28
	mm	118	71	71	100	58
26	in	6.53	X	3.75	4.91	3.19
	mm	166	X	95	125	81
27	in	8.22	X	5.50	5.47	4.87
	mm	209	X	140	139	124
28	in	6.53	X	3.66	4.91	3.19
	mm	166	X	93	125	81
29	in	7.03	X	4.38	5.06	4.40
	mm	179	X	111	129	112

* DC dimensions slightly larger.
IMPORTANT: Valves may be mounted in any position, except as noted in specifications table.

Const. Ref. 1, 2



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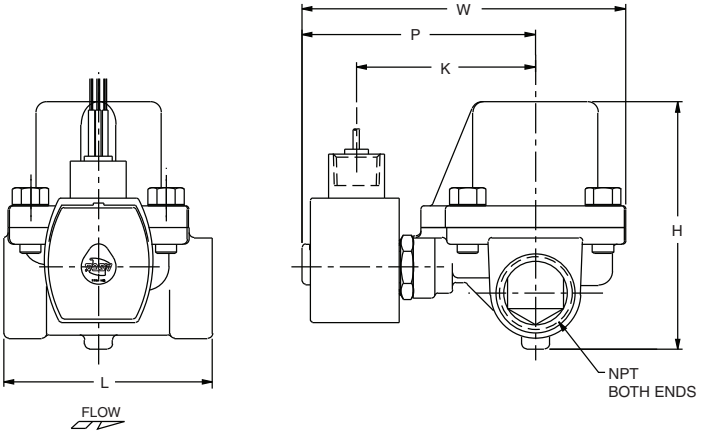
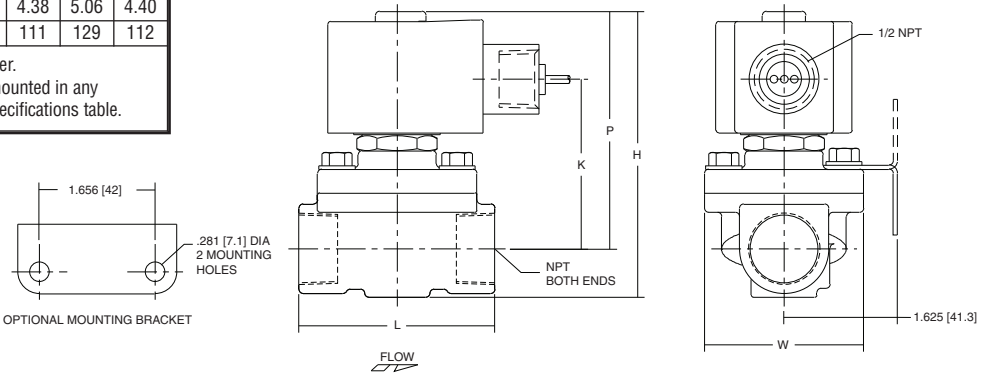


Const. Ref. 5-9, 11, 23 , 25, 37,38, 40-46, 52

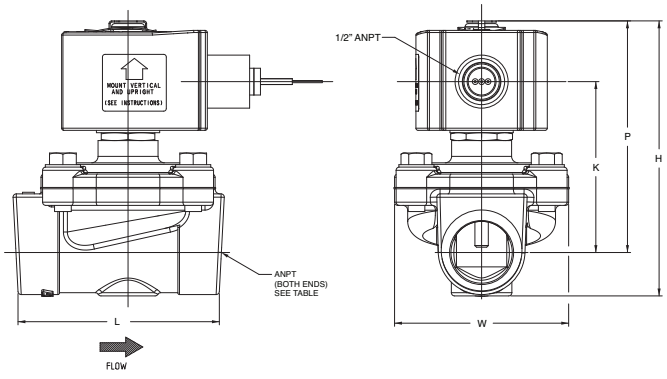


Dimensions: inches (mm)

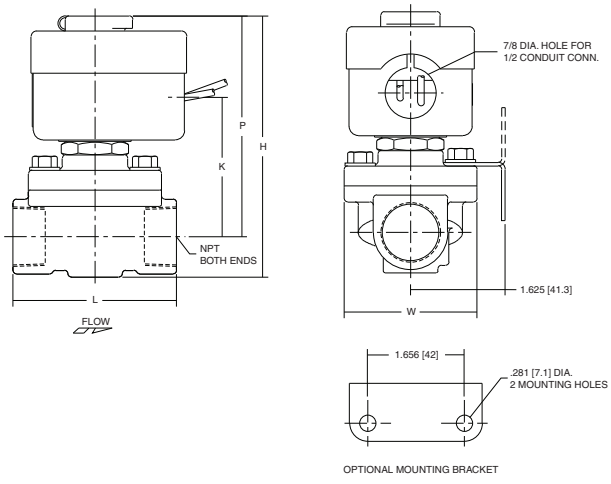
Const. Ref.		H	K	L	P	W
30	in	8.22	X	5.06	5.47	4.87
	mm	209	X	129	139	124
31	in	5.13	3.19	3.76	4.32	3.27
	mm	130	81	95	110	83
32	in	5.60	3.44	3.66	4.57	3.27
	mm	142	87	93	116	83
33	in	5.92	3.66	4.51	4.80	3.89
	mm	150	93	115	122	99
34	in	6.91	X	3.75	6.09	3.25
	mm	176	X	95	155	83
35	in	7.34	X	3.66	6.34	3.25
	mm	186	X	93	161	83
36	in	7.66	X	4.38	6.56	3.91
	mm	1.95	X	111	167	99
37	in	4.61	2.75	2.81	3.89	2.39
	mm	117	70	71	99	61
38	in	4.61	2.75	2.81	3.89	2.39
	mm	117	70	71	99	61
39	in	5.42	2.31	2.75	4.86	3.80
	mm	138	59	70	123	97
40	in	5.20	3.29	2.81	4.50	2.28
	mm	132	83	71	114	58
41	in	5.13	3.10	3.75	4.32	3.25
	mm	130	79	95	110	83
42	in	6.43	4.40	3.93	5.62	3.25
	mm	163	112	100	143	83
43	in	5.57	3.35	3.66	4.57	3.25
	mm	142	85	93	116	83
44	in	5.90	3.57	4.38	4.79	3.91
	mm	150	91	111	122	99
45	in	5.26	3.17	3.75	4.38	3.84
	mm	134	81	95	111	98
46	in	4.95	3.10	3.84	4.31	2.75
	mm	126	79	98	110	70
47	in	6.43	3.59	3.75	4.81	3.52
	mm	163	91	95	122	90
48	in	6.43	3.59	3.66	4.81	3.73
	mm	163	91	93	122	95
49	in	6.91	3.75	4.38	4.96	4.40
	mm	176	95	111	126	112
50	in	8.13	4.15	5.06	5.37	4.87
	mm	207	105	129	136	124
51	in	8.13	4.15	5.50	5.37	5.18
	mm	207	105	140	136	132

IMPORTANT: Valves may be mounted in any position, except as noted in specifications table.

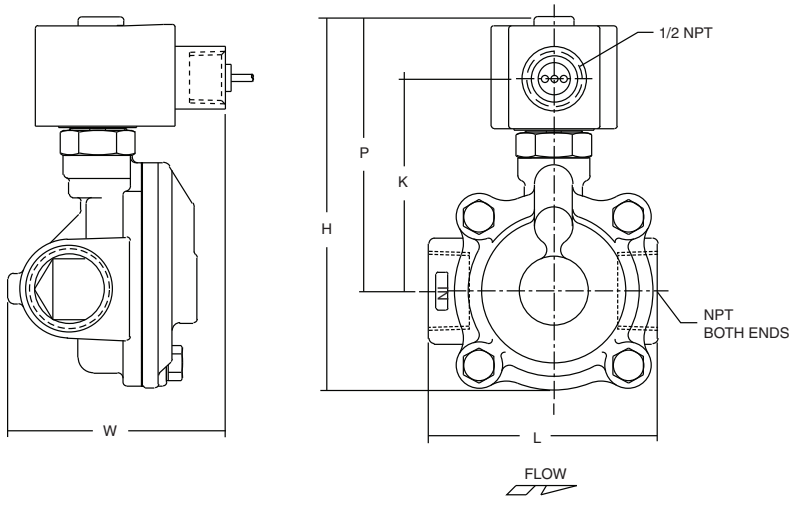
Const. Ref. 10, 15, 31, 32, 33



Const. Ref. 24, 34, 35, 36



Const. Ref. 12, 16, 26, 28, 47, 48, 53, 54, 55

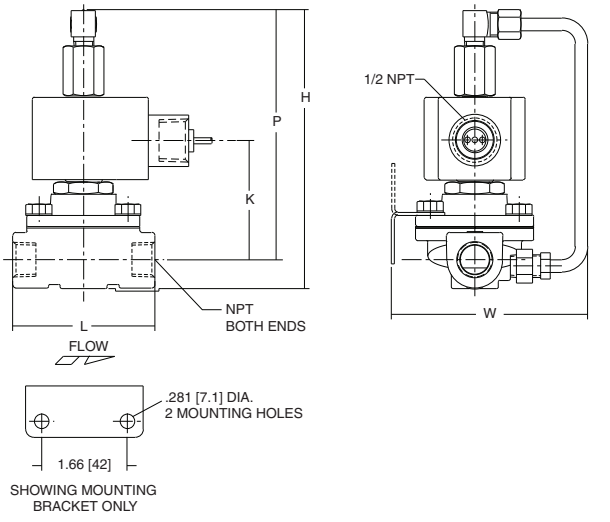


Dimensions: inches (mm)

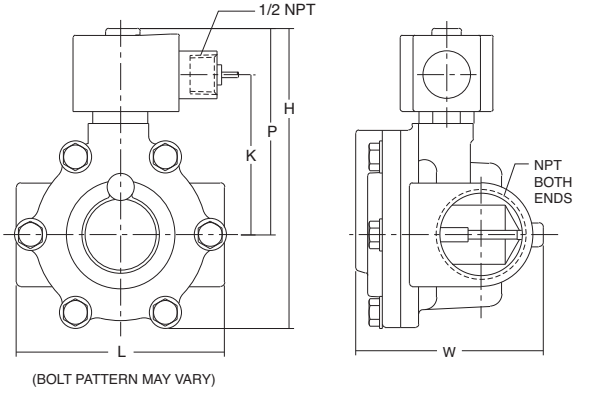
Const. Ref.		H	K	L	P	W
52	in	5.00	3.08	3.84	4.33	3.18
	mm	127	110	98	110	81
53	in	6.46	3.57	3.75	4.83	3.74
	mm	164	91	95	123	95
54	in	6.47	3.57	3.66	4.83	3.94
	mm	164	91	93	123	100
55	in	6.93	3.72	4.38	4.98	4.30
	mm	176	95	111	126	109
56	in	8.17	4.13	5.06	5.39	4.71
	mm	208	105	129	137	120
57	in	8.17	4.13	5.50	5.39	5.21
	mm	208	105	140	137	132

IMPORTANT: Valves may be mounted in any position, except as noted in specifications table.

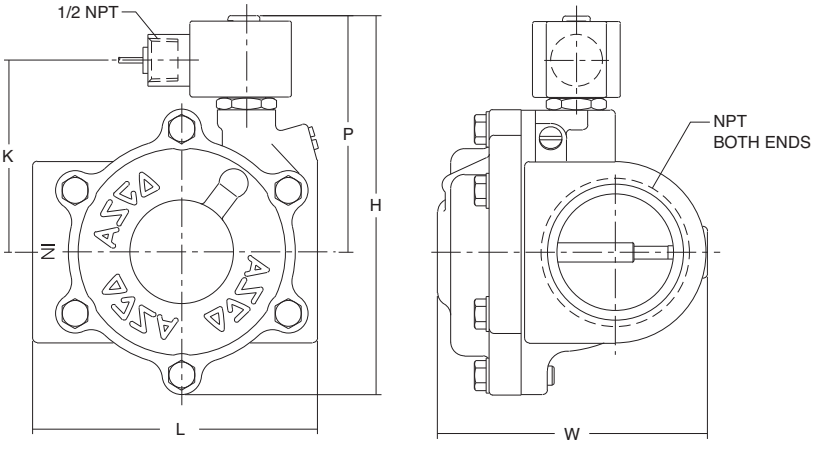
Const. Ref. 39



Const. Ref. 18, 29, 49



Const. Ref. 20, 21, 27, 30, 50, 51, 56, 57



Applications
Water purification, conditioning and distribution in commercial/industrial markets with reverse osmosis systems. Reverse osmosis systems are found in several drinking water applications including restaurants, food and beverage equipment, and grocery store vegetable misting.

Features
- Composite body valve
- 2-way, normally closed and normally open
- FasN™ connection system available in: Turn & Lock • NPT thread • Solvent bond
- Tested and certified by NSF International
- UL and CSA recognized coils
- Mountable in any position, upright preferred
- Manual override available on all normally closed constructions

Construction

Valve Parts in Contact with Fluids	
Body	Composite, Engineered Plastic (PPE)
Core Tube / Bonnet	Stainless Steel
Core and Plugnut	Stainless Steel
Springs	Stainless Steel
Seals and Disc	EPDM, TPE
Shading Coil	Copper

Electrical

Connection Type	Standard Coil and Class of Insulation	Watt Rating and Power consumption				Spare coil Family	
		DC Watts	AC Watts	AC VA Holding	AC VA Inrush	DC	AC
Normally Closed							
Conduit	F	6.9	6.3	8.8	12.1	400117	400117
Leaded	F	6.9	6.3	8.8	12.1	400117	400117
DIN	F	6.9	6.3	8.8	12.1	400127	400127
Normally Open							
Conduit	F	10	11	15.5	19.4	400119	433763
Leaded	F	10	11	15.5	19.4	400119	433763
DIN	F	10	11	15.5	19.4	400129	433765

Standard Voltages: AC: 24/60, 120/60, 240/60. DC: 12 and 24.
Must be specified when ordering, *see How to Order Chart*.

Solenoid Enclosures
Conduit Hub

Open Frame (Leaded) 18" lead

DIN (11 mm Form B) – Watertight IP 65 when used with DIN connector kit for SC coils (*see kits below*).

Kits
Female DIN connector kit for coils 226061-001-*

1/2" NPT conduit hub kit for leaded coils 224735-001-*

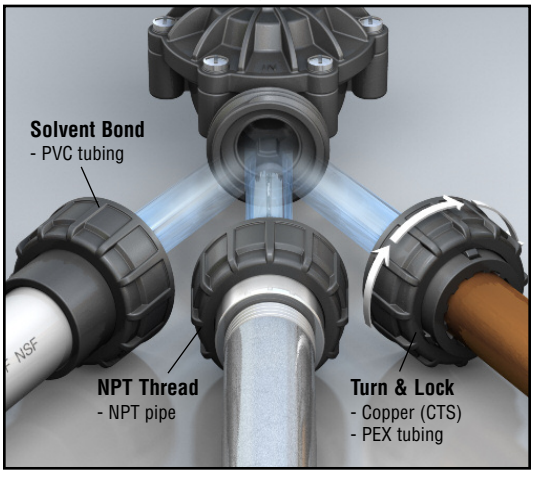
(Kits contains 10 pcs of each: connector, gasket, and attaching screw.)

Mounting bracket kit = 297395-004

Kits for end connection

End Connection Type	Kit Numbers			
	3/8"	1/2"	3/4"	1"
NPT Thread Connector kit	M200453A00	M200454A00	M200455A00	M200456A00
Solvent Bond Connector kit	M200338A00	M200100A00	M200103A00	M200341A00
Turn & Lock Connector kit	M200340A00	M200101A00	M200104A00	M200343A00

FasN Connection System *(See Ordering Page)*



Nominal Ambient Temp. Ranges
Normally Closed AC & DC, Normally Open DC: 32˚F to 120˚F (0˚C to 49˚C)

Normally Open AC: 32˚F to 100˚F (0˚C to 38˚C)

Approvals
UL recognized coil – File E153691*

CSA certified coil – see CSA file No. 113111*

Meets applicable CE directives.

Tested and certified by NSF International:
- NSF 61-G: Drinking Water System Components (includes Lead Free requirements)
- NSF 169: Special Purpose Food Equipment and Devices
- NSF 42 : Drinking Water Treatment Units – Material and Structural Integrity Requirements
- NSF 372: Drinking Water System Components – Lead Content Certification

The NSF Certification Program is accredited by the Standards Council of Canada and ANSI.

*For UL & CSA approvals on NO AC coils, please consult ASCO.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	FasN End Connections System	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp.°F ①	Catalog Number	Wattage	
				Min	Max. AC			Max. DC					AC	DC
					Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU				
DRINKING WATER VERSION: NSF 61-G, 169, 42														
General Service - Normally Closed ②														
3/8	5/8	NPT thread / NPT thread	3	5	-	150	-	-	150	-	180	8212A001	6.3	6.9
3/8	5/8	NPT thread / Solvent Bond	3	5	-	150	-	-	150	-	73*	8212A003	6.3	6.9
3/8	5/8	NPT thread / Turn & Lock	3	5	-	150	-	-	150	-	180	8212A005	6.3	6.9
3/8	5/8	Turn & Lock / Turn & Lock	3	5	-	150	-	-	150	-	180	K212A007	6.3	6.9
3/8	5/8	Turn & Lock / Solvent bond	3	5	-	150	-	-	150	-	73*	K212A009	6.3	6.9
3/8	5/8	Solvent bond / Solvent bond	3	5	-	150	-	-	150	-	73*	W212A011	6.3	6.9
1/2	3/4	NPT thread / NPT thread	4.5	5	-	150	-	-	150	-	180	8212A019	6.3	6.9
1/2	3/4	NPT thread / Solvent Bond	4.5	5	-	150	-	-	150	-	73*	8212A021	6.3	6.9
1/2	3/4	NPT thread / Turn & Lock	4.5	5	-	150	-	-	150	-	180	8212A023	6.3	6.9
1/2	3/4	Turn & Lock / Turn & Lock	4.5	5	-	150	-	-	150	-	180	K212A025	6.3	6.9
1/2	3/4	Turn & Lock / Solvent bond	4.5	5	-	150	-	-	150	-	73*	K212A027	6.3	6.9
1/2	3/4	Solvent bond / Solvent bond	4.5	5	-	150	-	-	150	-	73*	W212A029	6.3	6.9
3/4	3/4	NPT thread / NPT thread	7	5	-	150	-	-	150	-	180	8212A037	6.3	6.9
3/4	3/4	NPT thread / Solvent Bond	7	5	-	150	-	-	150	-	73*	8212A039	6.3	6.9
3/4	3/4	NPT thread / Turn & Lock	7	5	-	150	-	-	150	-	180	8212A041	6.3	6.9
3/4	3/4	Turn & Lock / Turn & Lock	7	5	-	150	-	-	150	-	180	K212A043	6.3	6.9
3/4	3/4	Turn & Lock / Solvent bond	7	5	-	150	-	-	150	-	73*	K212A045	6.3	6.9
3/4	3/4	Solvent bond / Solvent bond	7	5	-	150	-	-	150	-	73*	W212A047	6.3	6.9
1	1	NPT thread / NPT thread	13	5	-	150	-	-	150	-	122	8212A055	6.3	6.9
1	1	NPT thread / Solvent Bond	13	5	-	150	-	-	150	-	73*	8212A057	6.3	6.9
1	1	NPT thread / Turn & Lock	13	5	-	150	-	-	150	-	122	8212A059	6.3	6.9
1	1	Turn & Lock / Turn & Lock	13	5	-	150	-	-	150	-	122	K212A061	6.3	6.9
1	1	Turn & Lock / Solvent bond	13	5	-	150	-	-	150	-	73*	K212A063	6.3	6.9
1	1	Solvent bond / Solvent bond	13	5	-	150	-	-	150	-	73*	W212A065	6.3	6.9
General Service - Normally Open														
3/8	5/8	NPT thread / NPT thread	3	5	-	120	-	-	90	-	180	8212A002	11	10
3/8	5/8	NPT thread / Solvent Bond	3	5	-	120	-	-	90	-	73*	8212A004	11	10
3/8	5/8	NPT thread / Turn & Lock	3	5	-	120	-	-	90	-	180	8212A006	11	10
3/8	5/8	Turn & Lock / Turn & Lock	3	5	-	120	-	-	90	-	180	K212A008	11	10
3/8	5/8	Turn & Lock / Solvent bond	3	5	-	120	-	-	90	-	73*	K212A010	11	10
3/8	5/8	Solvent bond / Solvent bond	3	5	-	120	-	-	90	-	73*	W212A012	11	10
1/2	3/4	NPT thread / NPT thread	4.5	5	-	120	-	-	90	-	180	8212A020	11	10
1/2	3/4	NPT thread / Solvent Bond	4.5	5	-	120	-	-	90	-	73*	8212A022	11	10
1/2	3/4	NPT thread / Turn & Lock	4.5	5	-	120	-	-	90	-	180	8212A024	11	10
1/2	3/4	Turn & Lock / Turn & Lock	4.5	5	-	120	-	-	90	-	180	K212A026	11	10
1/2	3/4	Turn & Lock / Solvent bond	4.5	5	-	120	-	-	90	-	73*	K212A028	11	10
1/2	3/4	Solvent bond / Solvent bond	4.5	5	-	120	-	-	90	-	73*	W212A030	11	10
3/4	3/4	NPT thread / NPT thread	7	5	-	120	-	-	90	-	180	8212A038	11	10
3/4	3/4	NPT thread / Solvent Bond	7	5	-	120	-	-	90	-	73*	8212A040	11	10
3/4	3/4	NPT thread / Turn & Lock	7	5	-	120	-	-	90	-	180	8212A042	11	10
3/4	3/4	Turn & Lock / Turn & Lock	7	5	-	120	-	-	90	-	180	K212A044	11	10
3/4	3/4	Turn & Lock / Solvent bond	7	5	-	120	-	-	90	-	73*	K212A046	11	10
3/4	3/4	Solvent bond / Solvent bond	7	5	-	120	-	-	90	-	73*	W212A048	11	10
1	1	NPT thread / NPT thread	13	5	-	120	-	-	90	-	122	8212A056	11	10
1	1	NPT thread / Solvent Bond	13	5	-	120	-	-	90	-	73*	8212A058	11	10
1	1	NPT thread / Turn & Lock	13	5	-	120	-	-	90	-	122	8212A060	11	10
1	1	Turn & Lock / Turn & Lock	13	5	-	120	-	-	90	-	122	K212A062	11	10
1	1	Turn & Lock / Solvent bond	13	5	-	120	-	-	90	-	73*	K212A064	11	10
1	1	Solvent bond / Solvent bond	13	5	-	120	-	-	90	-	73*	W212A066	11	10

① Prevent from freezing. ② Manual Override is available for all Normally Closed constructions. See “How to Order” section for ordering details.
*Limitation on fluid temperature for PVC tubing for NSF 61-G is 73˚F and for NSF 372 is 122˚F

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	FasN End Connections System	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp.°F ①	Catalog Number	Wattage	
				Min	Max. AC			Max. DC					AC	DC
					Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU				
LEAD FREE VERSION - NSF 372 Lead content certification														
General Service - Normally Closed ②														
3/8	5/8	NPT thread / NPT thread	3	5	-	150	-	-	150	-	180	8212A501	6.3	6.9
3/8	5/8	NPT thread / Solvent Bond	3	5	-	150	-	-	150	-	122*	8212A503	6.3	6.9
3/8	5/8	NPT thread / Turn & Lock	3	5	-	150	-	-	150	-	180	8212A505	6.3	6.9
3/8	5/8	Turn & Lock / Turn & Lock	3	5	-	150	-	-	150	-	180	K212A507	6.3	6.9
3/8	5/8	Turn & Lock / Solvent bond	3	5	-	150	-	-	150	-	122*	K212A509	6.3	6.9
3/8	5/8	Solvent bond / Solvent bond	3	5	-	150	-	-	150	-	122*	W212A511	6.3	6.9
1/2	3/4	NPT thread / NPT thread	4.5	5	-	150	-	-	150	-	180	8212A519	6.3	6.9
1/2	3/4	NPT thread / Solvent Bond	4.5	5	-	150	-	-	150	-	122*	8212A521	6.3	6.9
1/2	3/4	NPT thread / Turn & Lock	4.5	5	-	150	-	-	150	-	180	8212A523	6.3	6.9
1/2	3/4	Turn & Lock / Turn & Lock	4.5	5	-	150	-	-	150	-	180	K212A525	6.3	6.9
1/2	3/4	Turn & Lock / Solvent bond	4.5	5	-	150	-	-	150	-	122*	K212A527	6.3	6.9
1/2	3/4	Solvent bond / Solvent bond	4.5	5	-	150	-	-	150	-	122*	W212A529	6.3	6.9
3/4	3/4	NPT thread / NPT thread	7	5	-	150	-	-	150	-	180	8212A537	6.3	6.9
3/4	3/4	NPT thread / Solvent Bond	7	5	-	150	-	-	150	-	122*	8212A539	6.3	6.9
3/4	3/4	NPT thread / Turn & Lock	7	5	-	150	-	-	150	-	180	8212A541	6.3	6.9
3/4	3/4	Turn & Lock / Turn & Lock	7	5	-	150	-	-	150	-	180	K212A543	6.3	6.9
3/4	3/4	Turn & Lock / Solvent bond	7	5	-	150	-	-	150	-	122*	K212A545	6.3	6.9
3/4	3/4	Solvent bond / Solvent bond	7	5	-	150	-	-	150	-	122*	W212A547	6.3	6.9
1	1	NPT thread / NPT thread	13	5	-	150	-	-	150	-	122	8212A555	6.3	6.9
1	1	NPT thread / Solvent Bond	13	5	-	150	-	-	150	-	122*	8212A557	6.3	6.9
1	1	NPT thread / Turn & Lock	13	5	-	150	-	-	150	-	122	8212A559	6.3	6.9
1	1	Turn & Lock / Turn & Lock	13	5	-	150	-	-	150	-	122	K212A561	6.3	6.9
1	1	Turn & Lock / Solvent bond	13	5	-	150	-	-	150	-	122*	K212A563	6.3	6.9
1	1	Solvent bond / Solvent bond	13	5	-	150	-	-	150	-	122*	W212A565	6.3	6.9
General Service - Normally Open														
3/8	5/8	NPT thread / NPT thread	3	5	-	120	-	-	90	-	180	8212A502	11	10
3/8	5/8	NPT thread / Solvent Bond	3	5	-	120	-	-	90	-	122*	8212A504	11	10
3/8	5/8	NPT thread / Turn & Lock	3	5	-	120	-	-	90	-	180	8212A506	11	10
3/8	5/8	Turn & Lock / Turn & Lock	3	5	-	120	-	-	90	-	180	K212A508	11	10
3/8	5/8	Turn & Lock / Solvent bond	3	5	-	120	-	-	90	-	122*	K212A510	11	10
3/8	5/8	Solvent bond / Solvent bond	3	5	-	120	-	-	90	-	122*	W212A512	11	10
1/2	3/4	NPT thread / NPT thread	4.5	5	-	120	-	-	90	-	180	8212A520	11	10
1/2	3/4	NPT thread / Solvent Bond	4.5	5	-	120	-	-	90	-	122*	8212A522	11	10
1/2	3/4	NPT thread / Turn & Lock	4.5	5	-	120	-	-	90	-	180	8212A524	11	10
1/2	3/4	Turn & Lock / Turn & Lock	4.5	5	-	120	-	-	90	-	180	K212A526	11	10
1/2	3/4	Turn & Lock / Solvent bond	4.5	5	-	120	-	-	90	-	122*	K212A528	11	10
1/2	3/4	Solvent bond / Solvent bond	4.5	5	-	120	-	-	90	-	122*	W212A530	11	10
3/4	3/4	NPT thread / NPT thread	7	5	-	120	-	-	90	-	180	8212A538	11	10
3/4	3/4	NPT thread / Solvent Bond	7	5	-	120	-	-	90	-	122*	8212A540	11	10
3/4	3/4	NPT thread / Turn & Lock	7	5	-	120	-	-	90	-	180	8212A542	11	10
3/4	3/4	Turn & Lock / Turn & Lock	7	5	-	120	-	-	90	-	180	K212A544	11	10
3/4	3/4	Turn & Lock / Solvent bond	7	5	-	120	-	-	90	-	122*	K212A546	11	10
3/4	3/4	Solvent bond / Solvent bond	7	5	-	120	-	-	90	-	122*	W212A548	11	10
1	1	NPT thread / NPT thread	13	5	-	120	-	-	90	-	122	8212A556	11	10
1	1	NPT thread / Solvent Bond	13	5	-	120	-	-	90	-	122*	8212A558	11	10
1	1	NPT thread / Turn & Lock	13	5	-	120	-	-	90	-	122	8212A560	11	10
1	1	Turn & Lock / Turn & Lock	13	5	-	120	-	-	90	-	122	K212A562	11	10
1	1	Turn & Lock / Solvent bond	13	5	-	120	-	-	90	-	122*	K212A564	11	10
1	1	Solvent bond / Solvent bond	13	5	-	120	-	-	90	-	122*	W212A566	11	10

① Prevent from freezing. ② Manual Override is available for all Normally Closed constructions. See "How to Order" section for ordering details.
*Limitation on fluid temperature for PVC tubing for NSF 61-G is 73˚F and for NSF 372 is 122˚F

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	FasN End Connections System	Kv Flow Factor (m^3/hr)	Operating Pressure Differential (bar)							Max. Fluid Temp.°C ①	Catalog Number	Wattage	
				Min	Max. AC			Max. DC						
					Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU			AC	DC
DRINKING WATER VERSION: NSF 61-G, 169, 42														
General Service - Normally Closed ②														
3/8	15.9	NPT thread / NPT thread	2.6	0.3	-	10.3	-	-	10.3	-	82	8212A001	6.3	6.9
3/8	15.9	NPT thread / Solvent Bond	2.6	0.3	-	10.3	-	-	10.3	-	22.7*	8212A003	6.3	6.9
3/8	15.9	NPT thread / Turn & Lock	2.6	0.3	-	10.3	-	-	10.3	-	82	8212A005	6.3	6.9
3/8	15.9	Turn & Lock / Turn & Lock	2.6	0.3	-	10.3	-	-	10.3	-	82	K212A007	6.3	6.9
3/8	15.9	Turn & Lock / Solvent bond	2.6	0.3	-	10.3	-	-	10.3	-	22.7*	K212A009	6.3	6.9
3/8	15.9	Solvent bond / Solvent bond	2.6	0.3	-	10.3	-	-	10.3	-	22.7*	W212A011	6.3	6.9
1/2	19	NPT thread / NPT thread	3.9	0.3	-	10.3	-	-	10.3	-	82	8212A019	6.3	6.9
1/2	19	NPT thread / Solvent Bond	3.9	0.3	-	10.3	-	-	10.3	-	22.7*	8212A021	6.3	6.9
1/2	19	NPT thread / Turn & Lock	3.9	0.3	-	10.3	-	-	10.3	-	82	8212A023	6.3	6.9
1/2	19	Turn & Lock / Turn & Lock	3.9	0.3	-	10.3	-	-	10.3	-	82	K212A025	6.3	6.9
1/2	19	Turn & Lock / Solvent bond	3.9	0.3	-	10.3	-	-	10.3	-	22.7*	K212A027	6.3	6.9
1/2	19	Solvent bond / Solvent bond	3.9	0.3	-	10.3	-	-	10.3	-	22.7*	W212A029	6.3	6.9
3/4	19	NPT thread / NPT thread	6.1	0.3	-	10.3	-	-	10.3	-	82	8212A037	6.3	6.9
3/4	19	NPT thread / Solvent Bond	6.1	0.3	-	10.3	-	-	10.3	-	22.7*	8212A039	6.3	6.9
3/4	19	NPT thread / Turn & Lock	6.1	0.3	-	10.3	-	-	10.3	-	82	8212A041	6.3	6.9
3/4	19	Turn & Lock / Turn & Lock	6.1	0.3	-	10.3	-	-	10.3	-	82	K212A043	6.3	6.9
3/4	19	Turn & Lock / Solvent bond	6.1	0.3	-	10.3	-	-	10.3	-	22.7*	K212A045	6.3	6.9
3/4	19	Solvent bond / Solvent bond	6.1	0.3	-	10.3	-	-	10.3	-	22.7*	W212A047	6.3	6.9
1	25.4	NPT thread / NPT thread	11.2	0.3	-	10.3	-	-	10.3	-	50	8212A055	6.3	6.9
1	25.4	NPT thread / Solvent Bond	11.2	0.3	-	10.3	-	-	10.3	-	22.7*	8212A057	6.3	6.9
1	25.4	NPT thread / Turn & Lock	11.2	0.3	-	10.3	-	-	10.3	-	50	8212A059	6.3	6.9
1	25.4	Turn & Lock / Turn & Lock	11.2	0.3	-	10.3	-	-	10.3	-	50	K212A061	6.3	6.9
1	25.4	Turn & Lock / Solvent bond	11.2	0.3	-	10.3	-	-	10.3	-	22.7*	K212A063	6.3	6.9
1	25.4	Solvent bond / Solvent bond	11.2	0.3	-	10.3	-	-	10.3	-	22.7*	W212A065	6.3	6.9
General Service - Normally Open														
3/8	15.9	NPT thread / NPT thread	2.6	0.3	-	8.3	-	-	6.2	-	82	8212A002	11	10
3/8	15.9	NPT thread / Solvent Bond	2.6	0.3	-	8.3	-	-	6.2	-	22.7*	8212A004	11	10
3/8	15.9	NPT thread / Turn & Lock	2.6	0.3	-	8.3	-	-	6.2	-	82	8212A006	11	10
3/8	15.9	Turn & Lock / Turn & Lock	2.6	0.3	-	8.3	-	-	6.2	-	82	K212A008	11	10
3/8	15.9	Turn & Lock / Solvent bond	2.6	0.3	-	8.3	-	-	6.2	-	22.7*	K212A010	11	10
3/8	15.9	Solvent bond / Solvent bond	2.6	0.3	-	8.3	-	-	6.2	-	22.7*	W212A012	11	10
1/2	19	NPT thread / NPT thread	3.9	0.3	-	8.3	-	-	6.2	-	82	8212A020	11	10
1/2	19	NPT thread / Solvent Bond	3.9	0.3	-	8.3	-	-	6.2	-	22.7*	8212A022	11	10
1/2	19	NPT thread / Turn & Lock	3.9	0.3	-	8.3	-	-	6.2	-	82	8212A024	11	10
1/2	19	Turn & Lock / Turn & Lock	3.9	0.3	-	8.3	-	-	6.2	-	82	K212A026	11	10
1/2	19	Turn & Lock / Solvent bond	3.9	0.3	-	8.3	-	-	6.2	-	22.7*	K212A028	11	10
1/2	19	Solvent bond / Solvent bond	3.9	0.3	-	8.3	-	-	6.2	-	22.7*	W212A030	11	10
3/4	19	NPT thread / NPT thread	6.1	0.3	-	8.3	-	-	6.2	-	82	8212A038	11	10
3/4	19	NPT thread / Solvent Bond	6.1	0.3	-	8.3	-	-	6.2	-	22.7*	8212A040	11	10
3/4	19	NPT thread / Turn & Lock	6.1	0.3	-	8.3	-	-	6.2	-	82	8212A042	11	10
3/4	19	Turn & Lock / Turn & Lock	6.1	0.3	-	8.3	-	-	6.2	-	82	K212A044	11	10
3/4	19	Turn & Lock / Solvent bond	6.1	0.3	-	8.3	-	-	6.2	-	22.7*	K212A046	11	10
3/4	19	Solvent bond / Solvent bond	6.1	0.3	-	8.3	-	-	6.2	-	22.7*	W212A048	11	10
1	25.4	NPT thread / NPT thread	11.2	0.3	-	8.3	-	-	6.2	-	50	8212A056	11	10
1	25.4	NPT thread / Solvent Bond	11.2	0.3	-	8.3	-	-	6.2	-	22.7*	8212A058	11	10
1	25.4	NPT thread / Turn & Lock	11.2	0.3	-	8.3	-	-	6.2	-	50	8212A060	11	10
1	25.4	Turn & Lock / Turn & Lock	11.2	0.3	-	8.3	-	-	6.2	-	50	K212A062	11	10
1	25.4	Turn & Lock / Solvent bond	11.2	0.3	-	8.3	-	-	6.2	-	22.7*	K212A064	11	10
1	25.4	Solvent bond / Solvent bond	11.2	0.3	-	8.3	-	-	6.2	-	22.7*	W212A066	11	10

① Prevent from freezing. ② Manual Override is available for all Normally Closed constructions. See "How to Order" section for ordering details.
*Limitation on fluid temperature for PVC tubing for NSF 61-G is 22.7°C and for NSF 372 is 50°C

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	FasN End Connections System	Kv Flow Factor (m^3/hr)	Operating Pressure Differential (bar)							Max. Fluid Temp.°C ①	Catalog Number	Wattage	
				Min	Max. AC			Max. DC					AC	DC
					Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU				
LEAD FREE VERSION - NSF 372 Lead content certification														
General Service - Normally Closed ②														
3/8	15.9	NPT thread / NPT thread	2.6	0.3	-	10.3	-	-	10.3	-	82	8212A501	6.3	6.9
3/8	15.9	NPT thread / Solvent Bond	2.6	0.3	-	10.3	-	-	10.3	-	50*	8212A503	6.3	6.9
3/8	15.9	NPT thread / Turn & Lock	2.6	0.3	-	10.3	-	-	10.3	-	82	8212A505	6.3	6.9
3/8	15.9	Turn & Lock / Turn & Lock	2.6	0.3	-	10.3	-	-	10.3	-	82	K212A507	6.3	6.9
3/8	15.9	Turn & Lock / Solvent bond	2.6	0.3	-	10.3	-	-	10.3	-	50*	K212A509	6.3	6.9
3/8	15.9	Solvent bond / Solvent bond	2.6	0.3	-	10.3	-	-	10.3	-	50*	W212A511	6.3	6.9
1/2	19	NPT thread / NPT thread	3.9	0.3	-	10.3	-	-	10.3	-	82	8212A519	6.3	6.9
1/2	19	NPT thread / Solvent Bond	3.9	0.3	-	10.3	-	-	10.3	-	50*	8212A521	6.3	6.9
1/2	19	NPT thread / Turn & Lock	3.9	0.3	-	10.3	-	-	10.3	-	82	8212A523	6.3	6.9
1/2	19	Turn & Lock / Turn & Lock	3.9	0.3	-	10.3	-	-	10.3	-	82	K212A525	6.3	6.9
1/2	19	Turn & Lock / Solvent bond	3.9	0.3	-	10.3	-	-	10.3	-	50*	K212A527	6.3	6.9
1/2	19	Solvent bond / Solvent bond	3.9	0.3	-	10.3	-	-	10.3	-	50*	W212A529	6.3	6.9
3/4	19	NPT thread / NPT thread	6.1	0.3	-	10.3	-	-	10.3	-	82	8212A537	6.3	6.9
3/4	19	NPT thread / Solvent Bond	6.1	0.3	-	10.3	-	-	10.3	-	50*	8212A539	6.3	6.9
3/4	19	NPT thread / Turn & Lock	6.1	0.3	-	10.3	-	-	10.3	-	82	8212A541	6.3	6.9
3/4	19	Turn & Lock / Turn & Lock	6.1	0.3	-	10.3	-	-	10.3	-	82	K212A543	6.3	6.9
3/4	19	Turn & Lock / Solvent bond	6.1	0.3	-	10.3	-	-	10.3	-	50*	K212A545	6.3	6.9
3/4	19	Solvent bond / Solvent bond	6.1	0.3	-	10.3	-	-	10.3	-	50*	W212A547	6.3	6.9
1	25.4	NPT thread / NPT thread	11.2	0.3	-	10.3	-	-	10.3	-	50	8212A555	6.3	6.9
1	25.4	NPT thread / Solvent Bond	11.2	0.3	-	10.3	-	-	10.3	-	50*	8212A557	6.3	6.9
1	25.4	NPT thread / Turn & Lock	11.2	0.3	-	10.3	-	-	10.3	-	50	8212A559	6.3	6.9
1	25.4	Turn & Lock / Turn & Lock	11.2	0.3	-	10.3	-	-	10.3	-	50	K212A561	6.3	6.9
1	25.4	Turn & Lock / Solvent bond	11.2	0.3	-	10.3	-	-	10.3	-	50*	K212A563	6.3	6.9
1	25.4	Solvent bond / Solvent bond	11.2	0.3	-	10.3	-	-	10.3	-	50*	W212A565	6.3	6.9
General Service - Normally Open														
3/8	15.9	NPT thread / NPT thread	2.6	0.3	-	8.3	-	-	6.2	-	82	8212A502	11	10
3/8	15.9	NPT thread / Solvent Bond	2.6	0.3	-	8.3	-	-	6.2	-	50*	8212A504	11	10
3/8	15.9	NPT thread / Turn & Lock	2.6	0.3	-	8.3	-	-	6.2	-	82	8212A506	11	10
3/8	15.9	Turn & Lock / Turn & Lock	2.6	0.3	-	8.3	-	-	6.2	-	82	K212A508	11	10
3/8	15.9	Turn & Lock / Solvent bond	2.6	0.3	-	8.3	-	-	6.2	-	50*	K212A510	11	10
3/8	15.9	Solvent bond / Solvent bond	2.6	0.3	-	8.3	-	-	6.2	-	50*	W212A512	11	10
1/2	19	NPT thread / NPT thread	3.9	0.3	-	8.3	-	-	6.2	-	82	8212A520	11	10
1/2	19	NPT thread / Solvent Bond	3.9	0.3	-	8.3	-	-	6.2	-	50*	8212A522	11	10
1/2	19	NPT thread / Turn & Lock	3.9	0.3	-	8.3	-	-	6.2	-	82	8212A524	11	10
1/2	19	Turn & Lock / Turn & Lock	3.9	0.3	-	8.3	-	-	6.2	-	82	K212A526	11	10
1/2	19	Turn & Lock / Solvent bond	3.9	0.3	-	8.3	-	-	6.2	-	50*	K212A528	11	10
1/2	19	Solvent bond / Solvent bond	3.9	0.3	-	8.3	-	-	6.2	-	50*	W212A530	11	10
3/4	19	NPT thread / NPT thread	6.1	0.3	-	8.3	-	-	6.2	-	82	8212A538	11	10
3/4	19	NPT thread / Solvent Bond	6.1	0.3	-	8.3	-	-	6.2	-	50*	8212A540	11	10
3/4	19	NPT thread / Turn & Lock	6.1	0.3	-	8.3	-	-	6.2	-	82	8212A542	11	10
3/4	19	Turn & Lock / Turn & Lock	6.1	0.3	-	8.3	-	-	6.2	-	82	K212A544	11	10
3/4	19	Turn & Lock / Solvent bond	6.1	0.3	-	8.3	-	-	6.2	-	50*	K212A546	11	10
3/4	19	Solvent bond / Solvent bond	6.1	0.3	-	8.3	-	-	6.2	-	50*	W212A548	11	10
1	25.4	NPT thread / NPT thread	11.2	0.3	-	8.3	-	-	6.2	-	50	8212A556	11	10
1	25.4	NPT thread / Solvent Bond	11.2	0.3	-	8.3	-	-	6.2	-	50*	8212A558	11	10
1	25.4	NPT thread / Turn & Lock	11.2	0.3	-	8.3	-	-	6.2	-	50	8212A560	11	10
1	25.4	Turn & Lock / Turn & Lock	11.2	0.3	-	8.3	-	-	6.2	-	50	K212A562	11	10
1	25.4	Turn & Lock / Solvent bond	11.2	0.3	-	8.3	-	-	6.2	-	50*	K212A564	11	10
1	25.4	Solvent bond / Solvent bond	11.2	0.3	-	8.3	-	-	6.2	-	50*	W212A566	11	10

① Prevent from freezing. ② Manual Override is available for all Normally Closed constructions. See "How to Order" section for ordering details.
*Limitation on fluid temperature for PVC tubing for NSF 61-G is 22.7˚C and for NSF 372 is 50˚C

2/2 SERIES 212

How to Order

8	2	1	2	A	0	1	9	S	0	1	0	0	F	0

FasN End Connection

8	NPT
K	Turn & Lock
W	Solvent Bond

Valve Designation
Refer to the Specifications Section

Coil Electrical Connection

S0	DIN Type coil without connector
L0	Leaded coil
L1	Leaded coil with 1/2" NPT threaded conduit adaptor

Pressure Vessel Options

100	No options
101	Manual Override (stainless steel)
200	Mounting Bracket (stainless steel)
201	Manual Override with Mounting Bracket

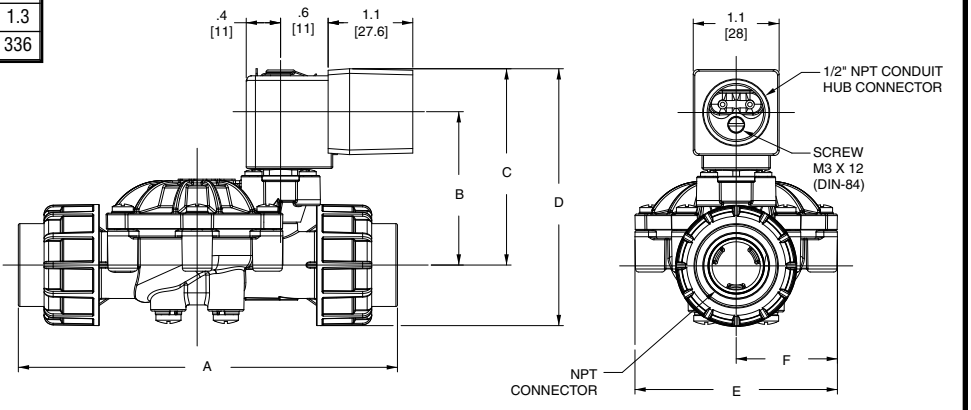
Voltages

AC, for normally closed	
F4	24V, 60 Hz
F0	120V, 60 Hz; 110V, 50 Hz
F6	240V, 60 Hz; 220V 50 Hz
AC, for normally open	
F4	24V, 60 Hz
F2	120V, 60 Hz
FF	240V, 60 Hz
DC, for both normally open and normally closed	
F3	12V
F1	24V

Dimensions: inches (mm)

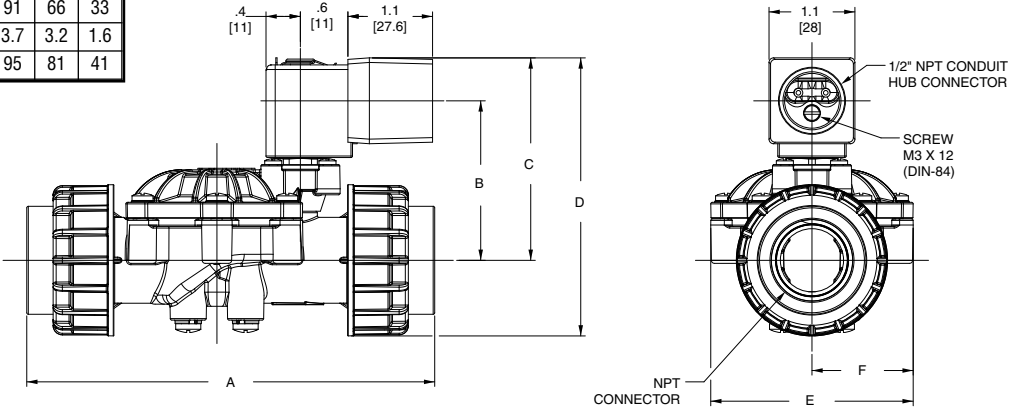
Pipe Size		A	B	C	D	E	F
3/8"	in	4.6	1.9	2.4	3	2.3	1.2
	mm	117	47	61	75	59	30
1/2"	in	4.9	2	2.5	3.3	2.6	1.3
	mm	124	50	64	84	66	336

3/8" & 1/2" NPT CONNECTOR
WITH CONDUIT HUB CONNECTOR



Pipe Size		A	B	C	D	E	F
3/4"	in	5.2	2	2.6	3.6	2.6	1.3
	mm	133	50	66	91	66	33
1"	in	6.5	2.3	2.8	3.7	3.2	1.6
	mm	164	59	71	95	81	41

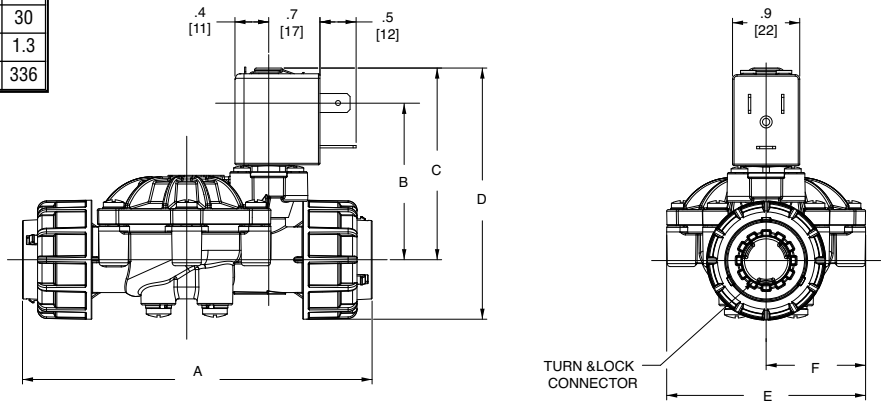
3/4" & 1" NPT CONNECTOR
WITH CONDUIT HUB CONNECTOR



Dimensions: inches (mm)

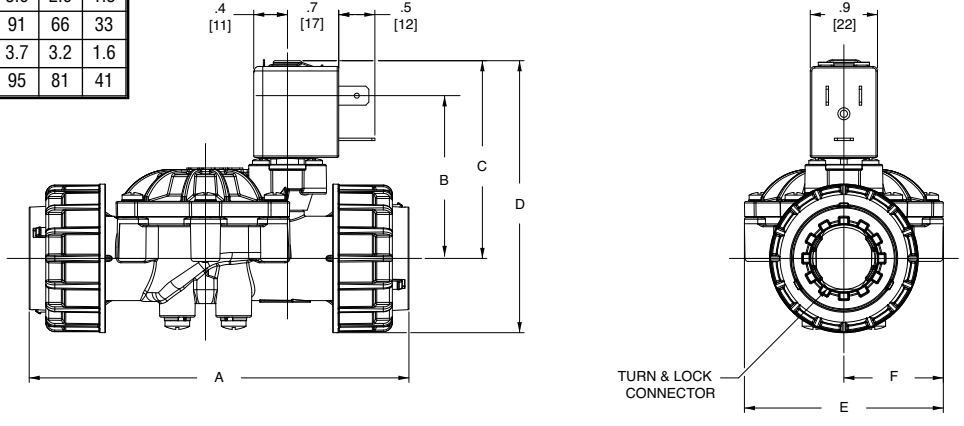
Pipe Size		A	B	C	D	E	F
3/8"	in	4.3	1.9	2.4	3	2.3	1.2
	mm	110	47	61	75	59	30
1/2"	in	4.6	2	2.5	3.3	2.6	1.3
	mm	117	50	64	84	66	336

3/8" & 1/2" TURN & LOCK CONNECTION
WITH DIN CONNECTION



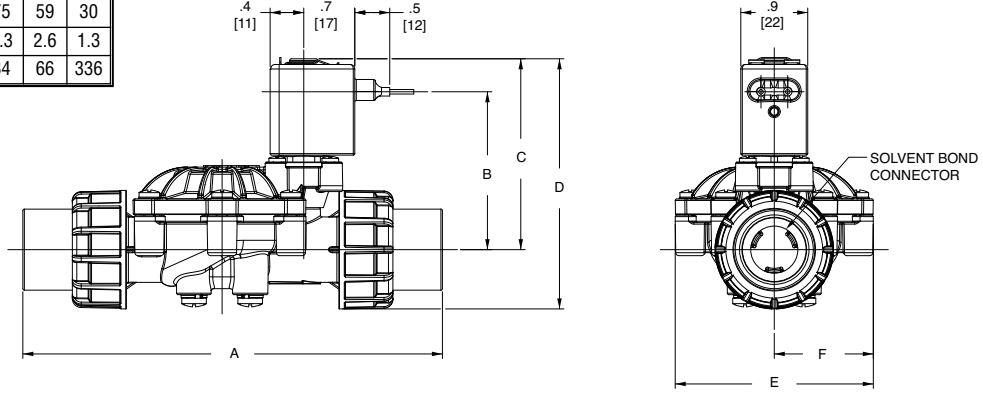
Pipe Size		A	B	C	D	E	F
3/4"	in	4.8	2	2.6	3.6	2.6	1.3
	mm	121	50	66	91	66	33
1"	in	6.1	2.3	2.8	3.7	3.2	1.6
	mm	154	59	71	95	81	41

3/4" & 1" TURN & LOCK CONNECTION
WITH DIN CONNECTION



Pipe Size		A	B	C	D	E	F
3/8"	in	5	1.9	2.4	3	2.3	1.2
	mm	127	47	61	75	59	30
1/2"	in	5.5	2	2.5	3.3	2.6	1.3
	mm	140	50	64	84	66	336

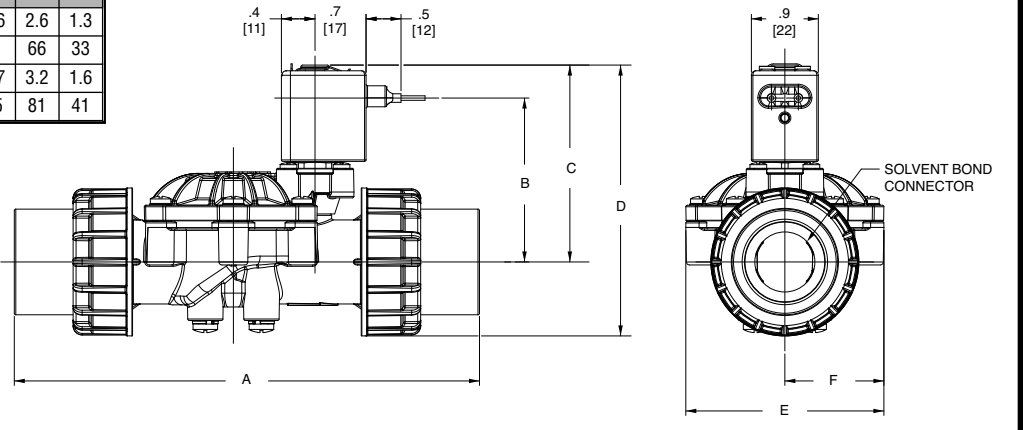
3/8" & 1/2" SOLVENT BOND CONNECTION
WITH LEAD WIRE CONNECTION



Dimensions: inches (mm)

Pipe Size		A	B	C	D	E	F
3/4"	in	6.1	2	2.6	3.6	2.6	1.3
	mm	155	50	66	91	66	33
1"	in	7.3	2.3	2.8	3.7	3.2	1.6
	mm	186	59	71	95	81	41

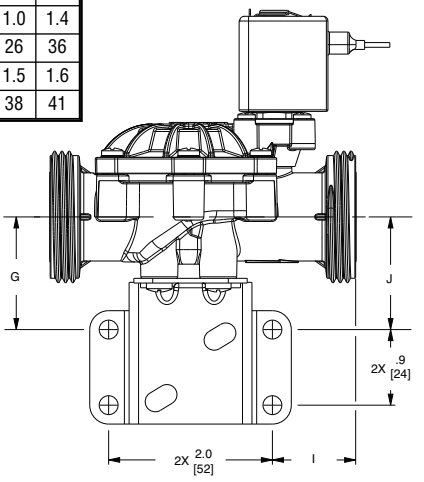
3/4" & 1" SOLVENT BOND CONNECTION
WITH LEAD WIRE CONNECTION

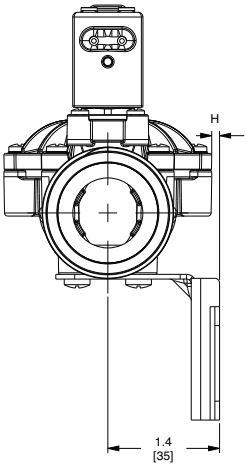


Pipe Size		G	H	I	J
3/8"	in	1.2	0.3	0.8	1.2
	mm	31	7	2.0	31
1/2"	in	1.2	0.1	0.8	1.2
	mm	31	3	2.0	31
3/4"	in	1.4	0.1	1.0	1.4
	mm	36	3	26	36
1"	in	1.6	0.2	1.5	1.6
	mm	41	5	38	41

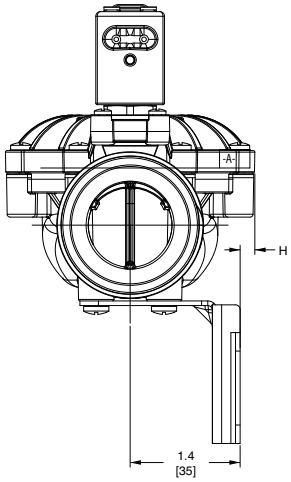
SHOWN WITH OPTIONAL MOUNTING BRACKET
FOR VALVES WITH ANY END CONNECTOR

3/8" through 3/4" VALVES



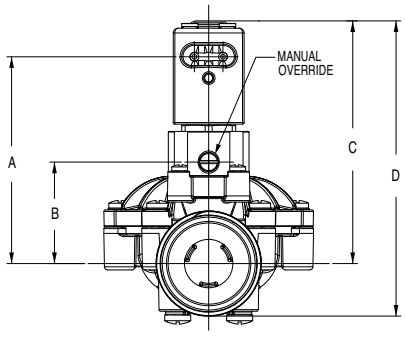


1" VALVES



Pipe Size		A	B	C	D
3/8"	in	2.5	1.1	2.9	3.4
	mm	62	29	74	87
1/2"	in	2.6	1.3	3.0	3.7
	mm	65	32	76	93
3/4"	in	2.6	1.3	3.1	3.9
	mm	67	34	78	99
1"	in	2.8	1.5	3.3	4.2
	mm	72	39	83	108

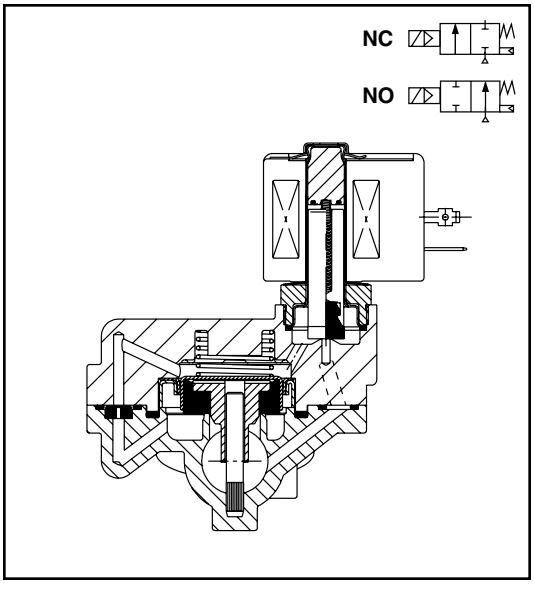
SHOWN WITH OPTIONAL MANUAL OVERRIDE
FOR VALVES WITH ANY END CONNECTOR



Features

- Pilot operated, normally open or normally closed
- Snubber slows disc closing speed to protect system against water hammer damage more effectively than other techniques
- Pressure spike due to water hammer is reduced to a point eliminating the need for suppressors or other controls in most water systems
- Fluid Controls Institute Inc. evaluations have classified these valves:

Pipe Sizes	FCI-82-1 Class
3/8", 1/2", 3/4"	CC
1", 1 1/4", 1 1/2", 2", 2 1/2"	BB



Construction

Valve Parts in Contact with Fluids	
Body	Brass
Disc	NBR
Seals	PTFE & NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Piston	Stainless Steel or Brass
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part No.			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	6.1	16	30	238210	238710	238214	238714
F	16.8	16.1	35	95	272610	97617	272614	97617
F	22.6	-	-	-	-	238710	-	238714

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

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type I.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges:

RedHat II/
RedHat AC: 32˚F to 125˚F (0˚C to 52˚C)
RedHat II DC: 32˚F to 104˚F (0˚C to 40˚C)
RedHat DC: 32˚F to 77˚F (0˚C to 25˚C)
(104˚F/40˚C occasionally)

Refer to Engineering Section for details.

Approvals:

CSA certified (Excludes 8221G015, -035, -G035).
UL listed, General Purpose Valves.
RedHat II meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. Fluid Temp. ˚F		Brass Body	Const. Ref.	Watt Rating/ Class of Coil Insulation ③	
			Min. ①	Max. AC Water ②	Max. DC Water ②	AC	DC	Catalog Number		AC	DC
NORMALLY CLOSED (Closed when de-energized)											
3/8	9/16	3	5	150	125	180	150	8221G001	1	6.1/F	11.6/F
1/2	9/16	3.5	5	150	125	180	150	8221G003	1	6.1/F	11.6/F
3/4	3/4	5.5	5	150	125	180	150	8221G005	2	6.1/F	11.6/F
1	1	11.5	5	150	125	180	150	8221G007	5	6.1/F	11.6/F
1 1/4	1 1/8	13	5	150	125	180	150	8221G009	6	6.1/F	11.6/F
1 1/2	1 1/4	24	5	150	125	180	150	8221G011	7	6.1/F	11.6/F
2	1 3/4	36	5	150	125	180	150	8221G013	11	6.1/F	22.6/F
2 1/2	1 3/4	38	5	150	125	180	150	8221G015 ④	12	6.1/F	22.6/F
NORMALLY OPEN (Open when de-energized)											
3/8	9/16	3	5	-	125	-	150	8221 021	15	-	16.8/F
3/8	9/16	3	5	150	-	180	-	8221G021	3	16.1/F	-
1/2	9/16	3.5	5	-	125	-	150	8221 023	15	-	16.8/F
1/2	9/16	3.5	5	150	-	180	-	8221G023	3	16.1/F	-
3/4	3/4	5.5	5	-	125	-	150	8221 025	16	-	16.8/F
3/4	3/4	5.5	5	150	-	180	-	8221G025	4	16.1/F	-
1	1	11.5	5	-	125	-	150	8221 027	17	-	16.8/F
1	1	11.5	5	150	-	180	-	8221G027	8	16.1/F	-
1 1/4	1 1/8	13	5	-	125	-	150	8221 029	18	-	16.8/F
1 1/4	1 1/8	13	5	150	-	180	-	8221G029	9	16.1/F	-
1 1/2	1 1/4	24	5	-	125	-	150	8221 031	19	-	16.8/F
1 1/2	1 1/4	24	5	150	-	180	-	8221G031	10	16.1/F	-
2	1 3/4	36	5	-	125	-	150	8221 033	20	-	16.8/F
2	1 3/4	36	5	150	-	180	-	8221G033	13	16.1/F	-
2 1/2	1 3/4	38	5	-	125	-	150	8221 035 ④	21	-	16.8/F
2 1/2	1 3/4	38	5	150	-	180	-	8221G035 ④	14	16.1/F	

① Valves require a 5 psi Minimum Pressure Differential to open. Once open, they remain open with 3 psi differential pressure.
② Refer to Steam/Hot Water Valve Series for Hot Water constructions.
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
④ Not CSA certified.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Operating Pressure Differential (bar)			Max. Fluid Temp. ˚C		Brass Body	Const. Ref.	Watt Rating/ Class of Coil Insulation ③	
			Min. ①	Max. AC Water ②	Max. DC Water ②	AC	DC	Catalog Number		AC	DC
NORMALLY CLOSED (Closed when de-energized)											
3/8	14	2.6	0.3	10	9	82	65	8221G001	1	6.1/F	11.6/F
1/2	14	3.0	0.3	10	9	82	65	8221G003	1	6.1/F	11.6/F
3/4	19	4.7	0.3	10	9	82	65	8221G005	2	6.1/F	11.6/F
1	25	9.9	0.3	10	9	82	65	8221G007	5	6.1/F	11.6/F
1 1/4	29	11	0.3	10	9	82	65	8221G009	6	6.1/F	11.6/F
1 1/2	32	21	0.3	10	9	82	65	8221G011	7	6.1/F	11.6/F
2	44	31	0.3	10	9	82	65	8221G013	11	6.1/F	22.6/F
2 1/2	44	33	0.3	10	9	82	65	8221G015 ④	12	6.1/F	22.6/F
NORMALLY OPEN (Open when de-energized)											
3/8	14	2.6	0.3	-	9	-	65	8221 021	15	-	16.8/F
3/8	14	2.6	0.3	10	-	82	-	8221G021	3	16.1/F	-
1/2	14	3.0	0.3	-	9	-	65	8221 023	15	-	16.8/F
1/2	14	3.0	0.3	10	-	82	-	8221G023	3	16.1/F	-
3/4	19	4.7	0.3	-	9	-	65	8221 025	16	-	16.8/F
3/4	19	4.7	0.3	10	-	82	-	8221G025	4	16.1/F	-
1	25	9.9	0.3	-	9	-	65	8221 027	17	-	16.8/F
1	25	9.9	0.3	10	-	82	-	8221G027	8	16.1/F	-
1 1/4	29	11	0.3	-	9	-	65	8221 029	18	-	16.8/F
1 1/4	29	11	0.3	10	-	82	-	8221G029	9	16.1/F	-
1 1/2	32	21	0.3	-	9	-	65	8221 031	19	-	16.8/F
1 1/2	32	21	0.3	10	-	82	-	8221G031	10	16.1/F	-
2	44	31	0.3	-	9	-	65	8221 033	20	-	16.8/F
2	44	31	0.3	10	-	82	-	8221G033	13	16.1/F	-
2 1/2	44	33	0.3	-	9	-	65	8221 035 ④	21	-	16.8/F
2 1/2	44	33	0.3	10	-	82	-	8221G035 ④	14	16.1/F	-

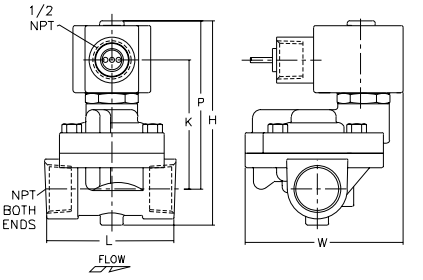
① Valves require a 0.3 bar Minimum Pressure Differential to open. Once open, they remain open with 0.2 bar differential pressure.
② Refer to Steam/Hot Water Valve Series for Hot Water constructions.
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
④ Not CSA certified.

Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1	in	4.34	2.69	2.72	3.59	3.41
	mm	110	68	69	91	87
2	in	4.53	2.85	2.78	3.75	3.41
	mm	115	72	71	95	87
3	in	5.22	3.14	2.72	4.47	3.69
	mm	133	80	69	114	94
4	in	5.41	3.30	2.78	4.62	3.69
	mm	137	84	71	117	94
5	in	5.62	3.15	3.75	4.03	3.16
	mm	143	80	95	102	80
6	in	5.56	3.15	3.66	4.03	3.56
	mm	141	80	93	102	90
7	in	6.12	3.30	4.38	4.19	4.12
	mm	156	84	111	106	105
8	in	6.53	3.59	3.75	4.91	3.16
	mm	166	91	95	125	80
9	in	6.47	3.59	3.56	4.91	3.56
	mm	164	91	93	125	90
10	in	7.03	3.74	4.38	5.06	4.12
	mm	179	95	111	129	105
11	in	7.38	3.71	5.06	4.59	4.72
	mm	188	94	129	117	120
12	in	7.38	3.71	5.50	4.59	5.19
	mm	188	94	140	117	132
13	in	8.22	4.15	5.06	5.47	4.72
	mm	209	105	129	139	120
14	in	8.22	4.15	5.50	5.47	5.19
	mm	209	105	140	139	132
15	in	5.22	-	2.72	4.47	3.69
	mm	133	-	69	114	94
16	in	5.41	-	2.78	4.62	3.69
	mm	137	-	71	117	94
17	in	6.53	-	3.75	4.91	3.16
	mm	166	-	95	125	80
18	in	6.47	-	3.66	4.91	3.56
	mm	164	-	93	125	90
19	in	7.03	-	4.38	5.06	4.12
	mm	179	-	111	129	105
20	in	8.22	-	5.06	5.47	4.72
	mm	209	-	129	139	120
21	in	8.22	-	5.50	5.47	5.19
	mm	209	-	140	139	132

IMPORTANT: Valves may be mounted in any position.

Const. Ref. 1, 2



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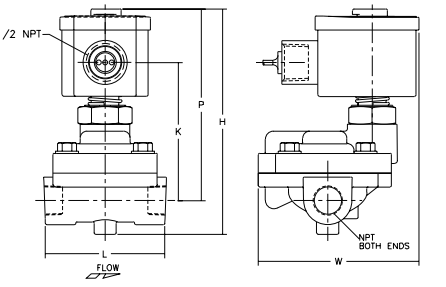

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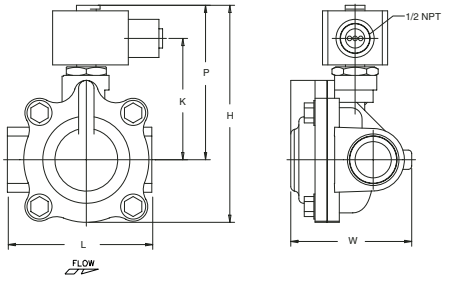

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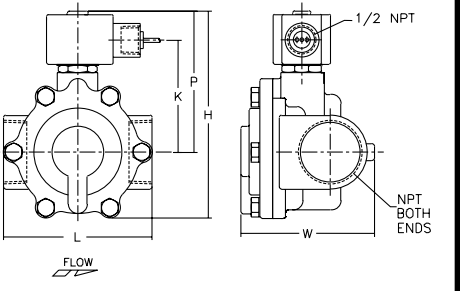

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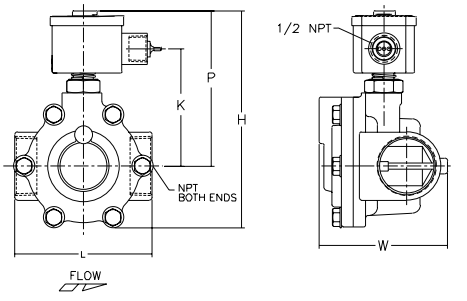

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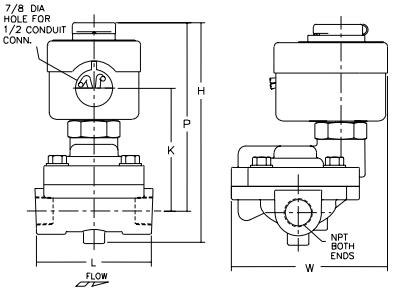

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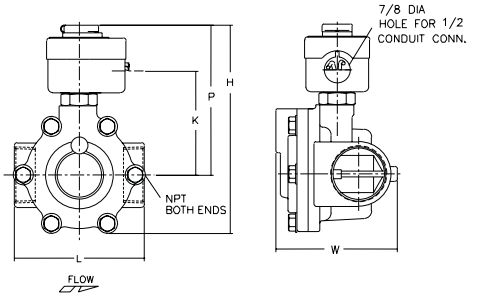
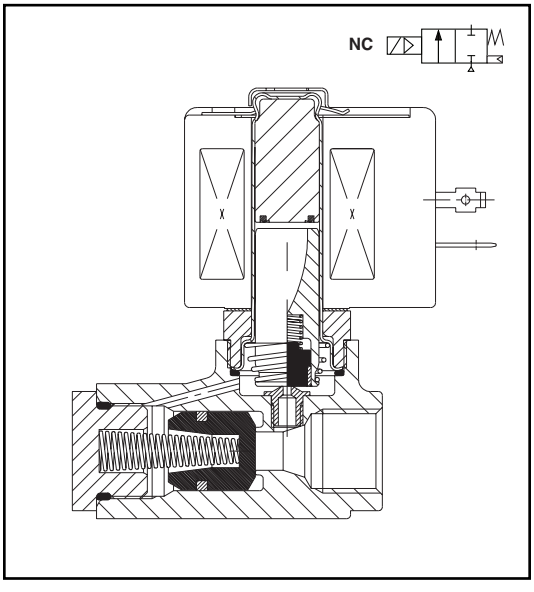


Features

- Rugged piston construction built to withstand pressure ratings to 1500 psi
- Angle body design for high flows
- Ideal for high-pressure water applications, such as car washes
- Mountable in any position

Construction

Valve Parts in Contact with Fluids		
Body	Brass	300 Stainless Steel
Seals and Disc	NBR, PA, PTFE	PTFE, NBR
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Spring	302 Stainless Steel	
Shading Coil	Copper	Silver



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	10.1	25	50	238610	-	238614	-
F	22.6	17.1	40	70	238610	238710	238614	238714

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 available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. Meets applicable CE directives. *Refer to Engineering Section for details.*

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

2/2 SERIES 8223

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp. ˚F		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC			Max. DC			AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
				Air-Inert Gas	Water ①	Light Oil @ 300 SSU	Air-Inert Gas	Water ①	Light Oil @ 300 SSU								
NORMALLY CLOSED (Closed when de-energized)																	
1/4	5/16	1.5	10	750	750	750	-	-	-	200	-	8223G021	1	-	-	10.1/F	-
1/4	5/16	1.5	10	1500	1500	1500	500	500	500	200	150	8223G025 ②	1	-	-	17.1/F	22.6/F
3/8	5/16	1.5	10	750	750	750	400	400	400	200	150	8223G023	1	-	-	10.1/F	22.6/F
3/8	5/16	1.5	10	1500	1500	1500	500	500	500	200	150	8223G027	1	-	-	17.1/F	22.6/F
1/2	3/8	3.2	25	1500	1500	1500	500	500	500	200	150	8223G003	2	8223G010 ②	4	17.1/F	22.6/F
3/4	3/4	7.8	25	750	750	750	450	450	450	200	150	8223G005	3	8223G012	5	17.1/F	22.6/F

① Water rating, CSA certified up to 232 psi. ② ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

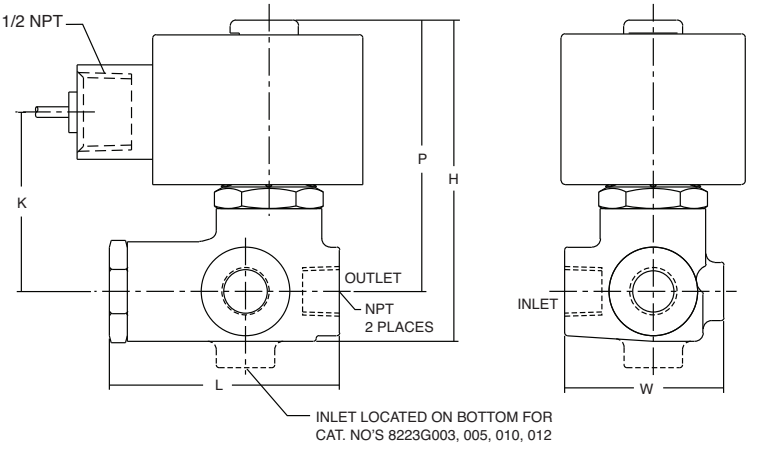
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Operating Pressure Differential (bar)							Max. Fluid Temp. ˚C		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC			Max. DC			AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
				Air-Inert Gas	Water ①	Light Oil @ 300 SSU	Air-Inert Gas	Water ①	Light Oil @ 300 SSU								
NORMALLY CLOSED (Closed when de-energized)																	
1/4	8	1.3	0.7	52	52	52	-	-	-	93	-	8223G021	1	-	-	10.1/F	-
1/4	8	1.3	0.7	103	103	103	34	34	34	93	65	8223G025 ②	1	-	-	17.1/F	22.6/F
3/8	8	1.3	0.7	52	52	52	28	28	28	93	65	8223G023	1	-	-	10.1/F	22.6/F
3/8	8	1.3	0.7	103	103	103	34	34	34	93	65	8223G027	1	-	-	17.1/F	22.6/F
1/2	10	2.7	1.7	103	103	103	34	34	34	93	65	8223G003	2	8223G010 ②	4	17.1/F	22.6/F
3/4	19	6.7	1.7	52	52	52	31	31	31	93	65	8223G005	3	8223G012	5	17.1/F	22.6/F

① Water rating, CSA certified up to 16 bar. ② ATEX/IECEx certified with prefix "EV".

Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.41	1.91	2.44	2.88	1.95
	mm	87	49	62	73	50
2	in	4.32	2.17	3.03	3.13	1.95
	mm	110	55	77	80	50
3	in	5.03	2.64	3.60	3.61	2.00
	mm	128	67	91	92	51
4	in	4.34	2.15	2.50	3.13	1.95
	mm	110	55	64	80	50
5	in	5.03	2.53	3.53	3.50	3.50
	mm	128	64	90	89	89

Const. Ref. 1 - 5

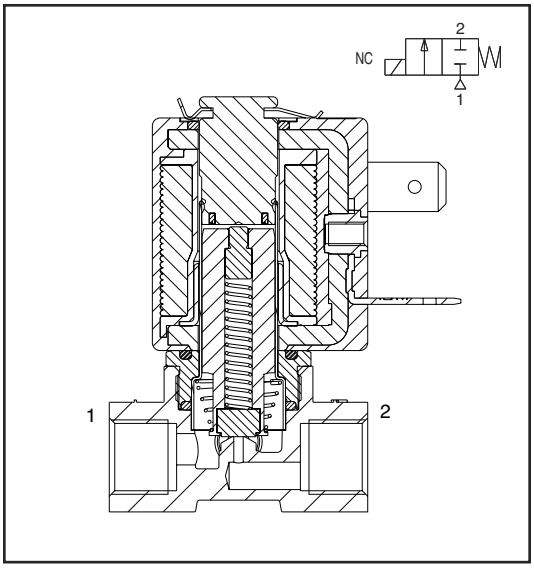


Features

- 2-way normally closed operation
- Compact design
- Brass and 316 stainless steel body constructions
- Mountable in any position
- NSF 61 Annex G and 169 version available for potable water and food service

Construction

Valve Parts in Contact with Fluids			
	General Purpose		NSF
Body	**Brass**	**316 Stainless Steel**	**316 Stainless Steel**
Core Tube/Bonnet	S.S. / Plated Steel	S.S. / S.S.	S.S. / S.S.
Core and Plugnut	Stainless Steel		
Springs	Stainless Steel		
Seals and Disc	FKM		EPDM
Shading Coil	Copper		Copper



Electrical

Prefix	Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.˚F	Spare Coil Family	
		DC Watts	AC					
			Watts	VA Holding	VA Inrush		AC	DC
U	F	6.9	6.3	8.8	12.1	15 to 140	400117	400117
SC	F	6.9	6.3	8.8	12.1	15 to 140	400127	400127

Standard voltages: 24,120, 240 volts AC, 50-60 Hz. 12, 24, 120 volts DC
Must be specified when ordering.

Solenoid Enclosures

Standard: Open frame (Prefix U) 18" leads

Optional: DIN (size 11mm, form B) (Prefix SC). Watertight/IP-65 when used with DIN connector kit for SC coils (see kits below).

Kits

1/2" NPT conduit hub kit for leaded coils 224735-001-*
(Kit contains 10 pcs of each: threaded hub, gasket, and attaching screw.)

DIN connector kit for SC coils 226061-001-*
(Kit contains 10 pcs of each: connector, gasket, and attaching screw.)

Mounting adapter kit 289719 (Kit contains 2 screws and plate.)

Approvals

UL recognized coil - File E153691

CSA certified coil - see CSA certificate No. 113111

Meets applicable CE directives

NSF (Designated models only, see table)

- NSF 61 - Drinking water system components
- NSF 169 - Special purpose food Equipment and Devices
- Also certified to NSF/ANSI Standard 61, Annex G (weighted average lead content of <=0.25%) and is in compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193.

The NSF Certification Program is accredited by the Standards Council of Canada and ANSI.

2/2 SERIES 8256

Specifications (English Units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Max. AC Air - Inert Gas	Max. AC Water	Max. AC Light Oil @ 300 SSU	Max. DC Air - Inert Gas	Max. DC Water	Max. DC Light Oil @ 300 SSU	Max. Fluid Temp. °F AC	Max. Fluid Temp. °F DC	Brass	Stainless Steel	Const. Ref.	Wattage AC	Wattage DC	Approx. Shipping Weight (lbs.)
General Service - Normally Closed																
1/8	3/64	0.05	500	500	400	360	360	330	180	180	U8256A001V	U8256A013V	1	6.3	6.9	0.5
1/8	1/16	0.08	400	390	230	220	220	220	180	180	U8256A002V	U8256A014V	1	6.3	6.9	0.5
1/8	3/32	0.15	180	180	105	90	90	90	180	180	U8256A004V	U8256A016V	1	6.3	6.9	0.5
1/8	7/64	0.19	135	135	135	25	25	25	180	180	U8256B045V	U8256B046V	2	6.3	6.9	0.6
NSF 61 and 169 Listed																
1/8	3/32	0.15	-	200	-	-	130	-	180	180	-	U8256A103E	1	6.3	6.9	0.5
1/8	7/64	0.17	-	150	-	-	100	-	180	180	-	U8256A104E	2	6.3	6.9	0.6
1/4	3/32	0.15	-	200	-	-	130	-	180	180	-	U8256A107E	3	6.3	6.9	0.5
1/4	7/64	0.17	-	150	-	-	100	-	180	180	-	U8256A108E	3	6.3	6.9	0.6

Specifications (Metric Units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Operating Pressure Differential (bar) Max. AC Air - Inert Gas	Max. AC Water	Max. AC Light Oil @ 300 SSU	Max. DC Air - Inert Gas	Max. DC Water	Max. DC Light Oil @ 300 SSU	Max. Fluid Temp. °C AC	Max. Fluid Temp. °C DC	Brass	Stainless Steel	Const. Ref.	Wattage AC	Wattage DC	Approx. Shipping Weight (kgs.)
General Service - Normally Closed																
1/8	1.2	0.04	34	34	27	25	25	23	82	82	U8256A001V	U8256A013V	1	6.3	6.9	0.22
1/8	1.6	0.07	27	27	16	15	15	15	82	82	U8256A002V	U8256A014V	1	6.3	6.9	0.22
1/8	2.4	0.13	12	12	7	6	6	6	82	82	U8256A004V	U8256A016V	1	6.3	6.9	0.22
1/8	2.7	0.16	9	9	9	1.7	1.7	1.7	82	82	U8256B045V	U8256B046V	2	6.3	6.9	0.27
NSF 61 and 169 Listed																
1/8	2.4	0.13	-	14	-	-	9	-	82	82	-	U8256A103E	1	6.3	6.9	0.22
1/8	2.7	0.16	-	10	-	-	7	-	82	82	-	U8256A104E	2	6.3	6.9	0.22
1/4	2.4	0.13	-	14	-	-	9	-	82	82	-	U8256A107E	3	6.3	6.9	0.22
1/4	2.7	0.16	-	10	-	-	7	-	82	82	-	U8256A108E	3	6.3	6.9	0.27

Capabilities Chart

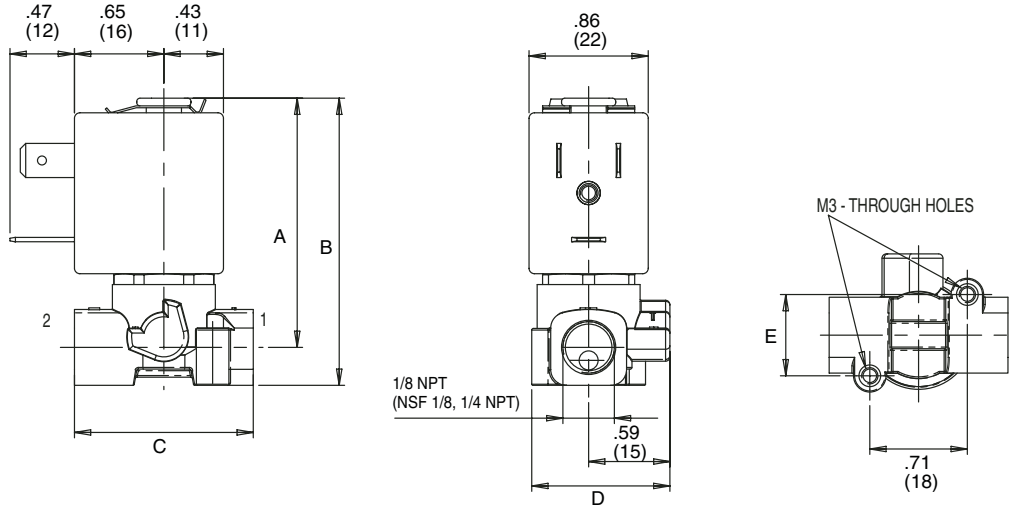
Solenoid Options ②							Base Catalog Number		Resilient Materials ①							Other		Standard Rebuild Kit	
NEMA Type 3-9	High Temp. DIN	Wiring Box Screw Terminal	Multipin	DIN	Spade	Open Frame with Leads	Brass	Stainless Steel	FKM	EPDM	RUBY	Oxygen Service	PTFE	Urethane	Vacuum	Manual Operator	Mounting Bracket	Brass AC/DC	Stainless AC/DC
-	-	-	-	SC	-	●	U8256A001V	U8256A013V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8256A002V	U8256A014V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8256A004V	U8256A016V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8256B045V	U8256B046V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8256A103E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8256A104E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8256A107E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8256A108E	-	●	-	-	-	-	-	-	-	-	-

● = Standard. ① Replace V suffix. ② Replace U prefix with SC prefix.

Dimensions: inches (mm)

Const. Ref.		A	B	C	D	E
1	in	1.81	2.08	1.29	1	0.59
	mm	46	53	33	25	15
2	ins	1.98	2.25	.984	1	0.59
	mm	50	57	25	25	15
3	in	1.86	2.25	1.73	1.12	.83
	mm	46	57	44	28	21

Shown with DIN coil without connector

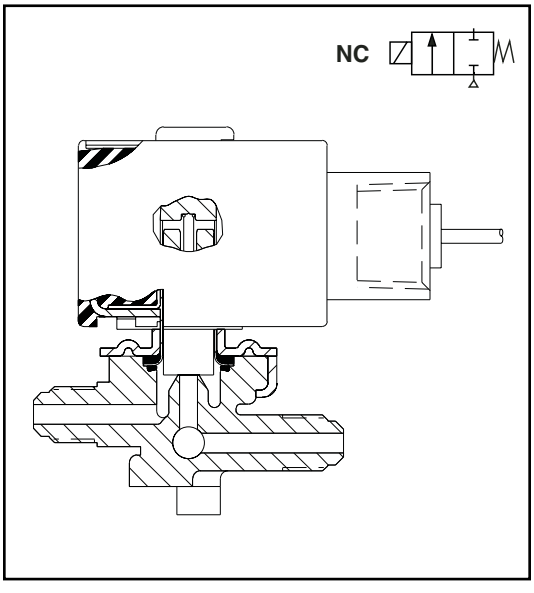


Features

- Corrosion-resistant plastic bodies
- Available with compression fitting ends for metal or plastic tube to save installation cost
- Mountable in any position
- Dispensing vending construction NSF 169 listed

Construction

Valve Parts in Contact with Fluids	
Body	CA, PA, PP
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
		AC			General Purpose	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC
B	6.4	6.5	9.2	17.3	174879	180555
F	10.6	6.1	16	30	238210	238310

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 available when required.

Solenoid Enclosures

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

Optional: Open Frame Solenoid, Junction Box enclosures.

See Optional Features Section for descriptions on these options.

Nominal Ambient Temp. Range:

AC: 32˚F to 125˚F (0˚C to 52˚C)

DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals:

CSA certified. UL Recognized Component. Meets applicable CE directives.

Refer to Engineering Section for details.

2/2 SERIES 8260

ASCO®

Specifications (English units)

Pipe Connections	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Max. AC Air-Inert Gas	Max. AC Water	Max. DC Air-Inert Gas	Max. DC Water	Max. Fluid Temp. ˚F AC	Max. Fluid Temp. ˚F DC	Plastic Body Catalog Number	Plastic Body Const. Ref.	Watt Rating/ Class of Coil Insulation ② AC	Watt Rating/ Class of Coil Insulation ② DC
GENERAL SERVICE CONSTRUCTION - CA Body, Watertight enclosure with leads												
1/4" Male Flare	9/64	.35	120	120	50	50	130	120	8260G042	1	6.1/F	10.6/F
Bib for 1/4" I.D. Tube	9/64	.35	120	120	50	50	130	120	8260G054	2	6.1/F	10.6/F
1/4" O.D. Compression ①	9/64	.35	120	120	50	50	130	120	8260G071	3	6.1/F	10.6/F
GENERAL SERVICE CONSTRUCTION - PP Body, Open Frame Solenoid and Spade Terminal Coils												
1/4" O.D. Compression ①	1/16	.09	150	150	60	60	130	120	USM8260 073	5	6.5/B	6.4/B
	3/32	.19	100	100	20	20	130	120	USM8260 074	5	6.5/B	6.4/B
	1/8	.31	60	60	10	10	130	120	USM8260 075	5	6.5/B	6.4/B
	5/32	.43	35	35	5	5	130	120	USM8260 076	5	6.5/B	6.4/B
DISPENSING VENDING CONSTRUCTION - NSF Listed - PP Body, Open Frame Solenoid and Spade Terminal Coils												
1/4" O.D. Compression ①	1/16	.09	150	150	60	60	130	120	USM8260 077 ③	4	6.5/B	6.4/B
	3/32	.19	100	100	20	20	130	120	USM8260 078	4	6.5/B	6.4/B
	1/8	.31	60	60	10	10	130	120	USM8260 079	4	6.5/B	6.4/B
	5/32	.43	35	35	5	5	130	120	USM8260 080	4	6.5/B	6.4/B
PA Body, Open Frame Solenoid and Spade Terminal Coils												
3/8" O.D. Compression ①	5/16	1.3	5	5	-	-	130	-	USM8260 089	6	6.5/B	-

① Fittings not supplied with valve. To order, refer to Kit No. 224150 - plastic tubing, and Kit No. 224151 - metal tubing.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
③ NSF 169 listed

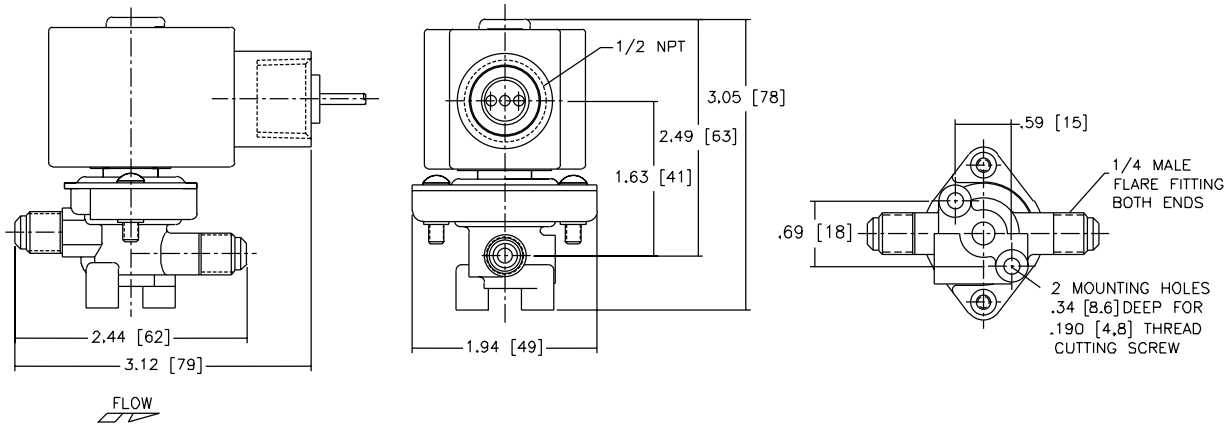
Specifications (Metric units)

Pipe Connections	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Max. AC Air-Inert Gas	Max. AC Water	Max. DC Air-Inert Gas	Max. DC Water	Max. Fluid Temp. ˚C AC	Max. Fluid Temp. ˚C DC	Plastic Body Catalog Number	Plastic Body Constr. Ref.	Watt Rating/ Class of Coil Insulation ② AC	Watt Rating/ Class of Coil Insulation ② DC
GENERAL SERVICE CONSTRUCTION - CA Body, Watertight enclosure with leads												
1/4" Male Flare	3.6	.30	8.3	8.3	3.4	3.4	54	49	8260G042	1	6.1/F	10.6/F
Bib for 1/4" I.D. Tube	3.6	.30	8.3	8.3	3.4	3.4	54	49	8260G054	2	6.1/F	10.6/F
1/4" O.D. Compression ①	3.6	.30	8.3	8.3	3.4	3.4	54	49	8260G071	3	6.1/F	10.6/F
GENERAL SERVICE CONSTRUCTION - PP Body, Open Frame Solenoid and Spade Terminal Coils												
1/4" O.D. Compression ①	1.6	.08	10.3	10.3	4.1	4.1	54	49	USM8260 073	5	6.5/B	6.4/B
	2.4	.16	6.9	6.9	1.4	1.4	54	49	USM8260 074	5	6.5/B	6.4/B
	3.2	.27	4.1	4.1	0.7	0.7	54	49	USM8260 075	5	6.5/B	6.4/B
	4.0	.37	2.4	2.4	0.3	0.3	54	49	USM8260 076	5	6.5/B	6.4/B
DISPENSING VENDING CONSTRUCTION - NSF Listed - PP Body, Open Frame Solenoid and Spade Terminal Coils												
1/4" O.D. Compression ①	1.6	.08	10.3	10.3	4.1	4.1	54	49	USM8260 077 ③	4	6.5/B	6.4/B
	2.4	.16	6.9	6.9	1.4	1.4	54	49	USM8260 078	4	6.5/B	6.4/B
	3.2	.27	4.1	4.1	0.7	0.7	54	49	USM8260 079	4	6.5/B	6.4/B
	4.0	.37	2.4	2.4	0.3	0.3	54	49	USM8260 080	4	6.5/B	6.4/B
PA Body, Open Frame Solenoid and Spade Terminal Coils												
3/8" O.D. Compression ①	7.9	1.1	0.3	0.3	-	-	54	-	USM8260 089	6	6.5/B	-

① Fittings not supplied with valve. To order, refer to Kit No. 224150 - plastic tubing, and Kit No. 224151 - metal tubing.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
③ NSF 169 listed

Dimensions: inches (mm)

Const. Ref. 1



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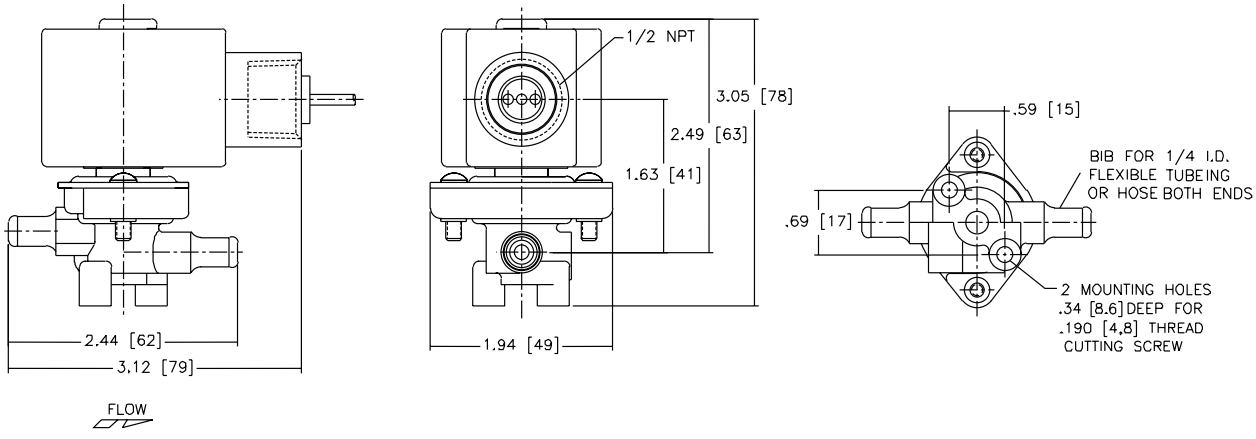

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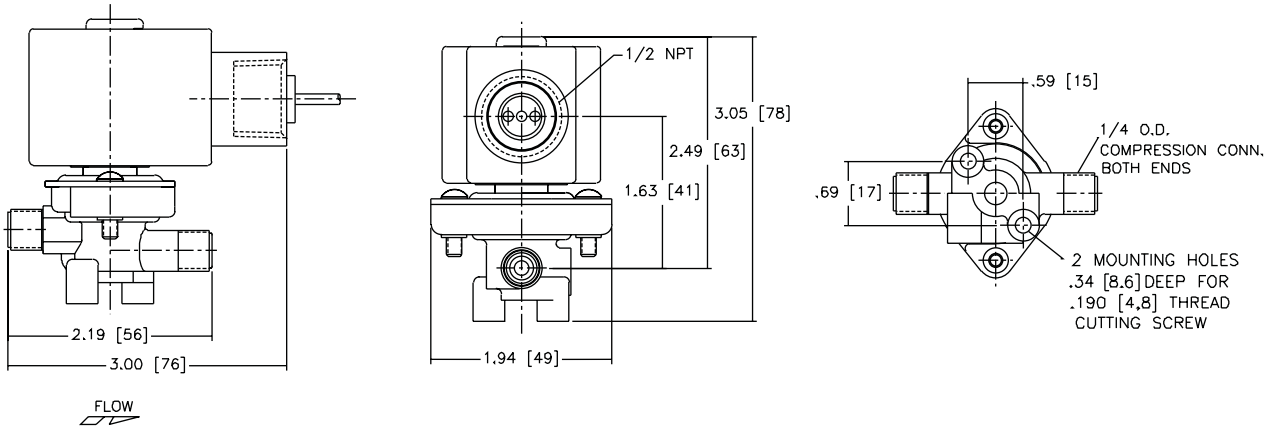
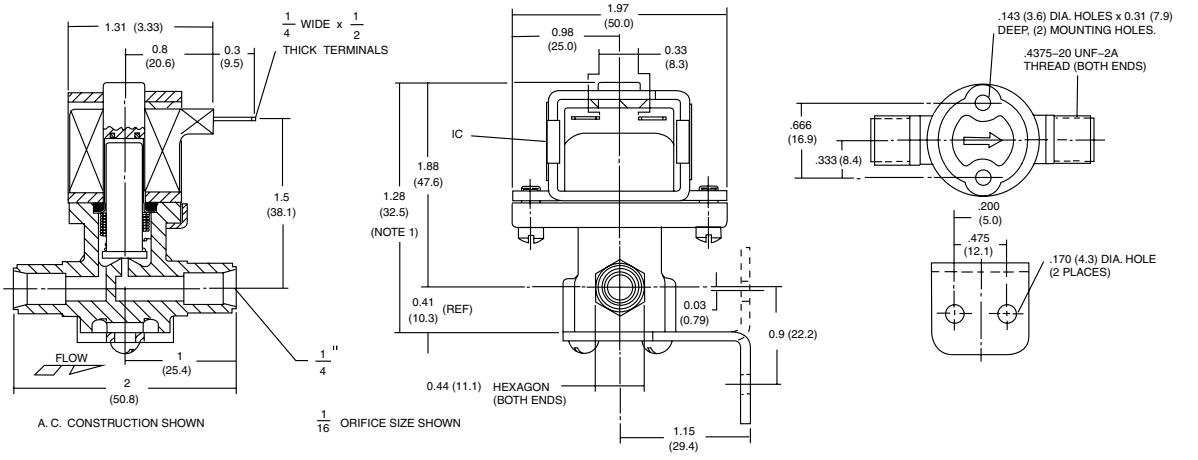


Dimensions: inches (mm)

Const. Ref. 4



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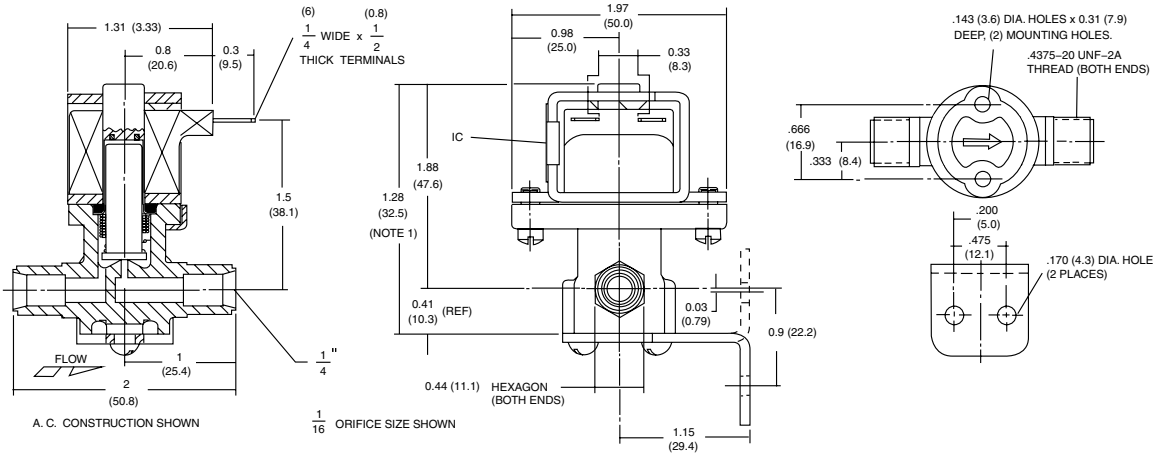

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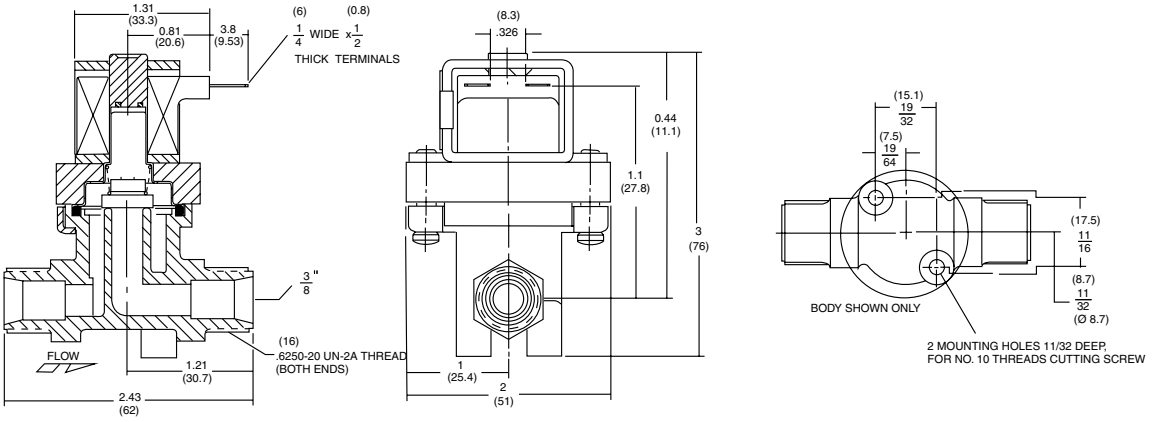


Features

- Welded core tube provides higher pressure ratings
- Reliable, proven design with high flows
- Small poppet valves for tight shutoff
- Lead-free versions available for Safe Drinking Water Act Compliance
- Wide range of elastomers for specialty service applications
- Mountable in any position
- Tapped mounting holes in body standard

Construction

Valve Parts in Contact with Fluids		
Body	Brass	Cast 304 Stainless Steel
Seals and Discs	NBR or Cast UR	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver

Electrical

Watt Rating & Power Consumption				Spare Coil Part No.			
	AC			General Purpose		Explosionproof	
DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
10.6	6.1*	16	30	238210	238510	238214	238514
18.6	9.1*	20	45	238210	238510	238214	238514
11.6	10.1	25	50	238610	238910	238614	238914
22.6	17.1	40	70	238610	238910	238614	238914

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 available when required.

*On 50 hertz service, the rating for the 6.1/F solenoid is 8.1 watts, and the rating for the 9.1/F solenoid is 11.1 watts.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

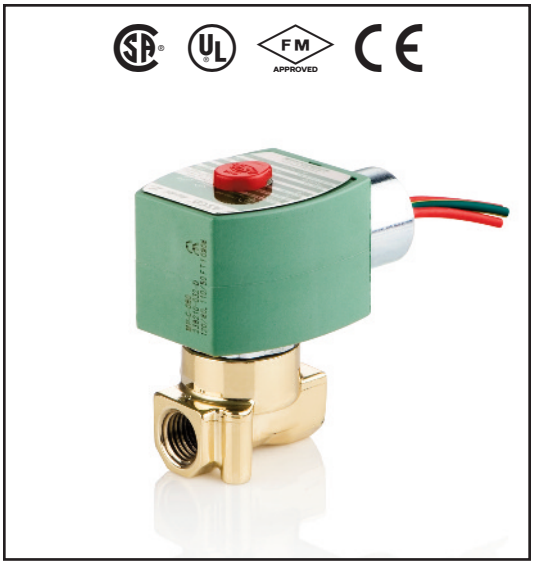
Options

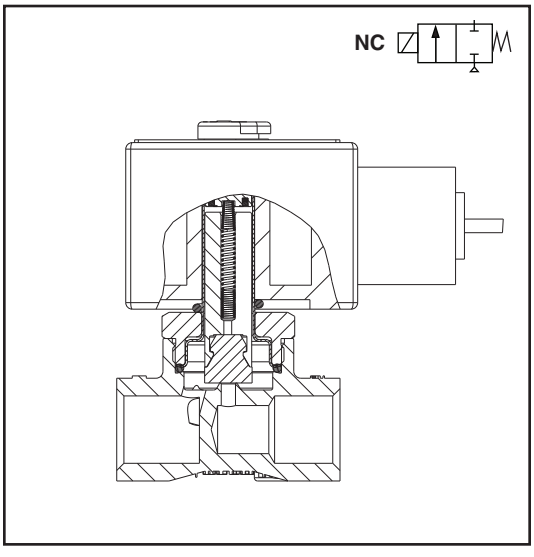
Mounting bracket (suffix MB)
Quarter-turn manual operator with screw slot (suffix MS)
Panel mount (prefix GP for conduit; *consult ASCO for other electrical connections*)
Vacuum service (suffix VH; *see Vacuum Section for more details.*)
Oxygen service (suffix N)
Silicone Free (suffix SF)

Elastomers: FKM (suffix V), Ethylene Propylene (suffix E), CR (suffix J), PTFE* (suffix T), Low Temp NBR** (suffix A)

Note: *PTFE reduces pressure rating by 25% (i.e. 750 psi reduced to 560 psi)
** For Low Temp. NBR, fluid temperature range is -40˚F to 167˚F (only for valves with 10.1, 17.1, 11.6, and 22.6 watt coils).

Refer to Engineering Section for fluid and temperature compatibility.





Nominal Ambient Temp. Ranges

The nominal limitation of 32°F (0°C) is advisable for any valve that might contain moisture (water vapor).

AC: -13˚F to 131˚F (-25˚C to 55˚C)

DC: -13˚F to 104˚F (-25˚C to 40˚C)
-13˚F to 131˚F (-25˚C to 55˚C)

Note: Max ambient for explosionproof (EF) is 125˚F (52˚C) for AC, 131˚F (55˚C) for DC.

Optional: For AC, the max. ambient temperature is 140˚F (60˚C) with Class H coil (with or without prefix EF)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed, as indicated. Safety Shutoff Valves FM approved. Meets applicable CE directives. *Refer to Engineering Section for details.*

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

2/2 SERIES 8262 8263

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice size (in)	Cv Flow Factor	Operating Pressure Differential (psi)									Max. Fluid Temp. °F		Catalog Number		Const. Ref.	UL Listing	Watt Rating/ Class of Coil Insulation	
			Max. AC@131°F			Max. DC@104°F			Max. DC@131°F										
			Air-Inert Gas	Water	Lt. Oil @ 300ssu	Air-Inert Gas	Water	Lt. Oil @ 300ssu	Air-Inert Gas	Water	Lt. Oil 300ssu	AC	DC	Brass	Stainless Steel			AC	DC
NORMALLY CLOSED (Closed when de-energized), NBR Disc																			
1/8	3/64	0.06	2200	2200	1700	-	-	-	-	-	-	140	-	-	8262H175 ①	1	●	10.1/F	-
1/8	3/64	0.06	-	-	-	2000	2000	1725	1900	1900	1700	-	140	-	8262H176 ①	1	●	-	22.6/H
1/8	3/64	0.06	-	-	-	1500	1500	1500	1500	1500	1500	-	140	8262H089 ①	-	1	●	-	22.6/H
1/8	3/64	0.06	2025	1710	825	965	745	720	920	700	675	140	140	-	8262H079 ①	2	●	9.1/F	18.6/H
1/8	3/64	0.06	1500	1350	825	750	620	565	700	565	530	140	140	8262H096 ①	-	2	●	6.1/F	10.6/H
1/8	3/64	0.06	1500	1350	825	-	-	-	-	-	-	140	-	-	8262H173 ①	2	●	6.1/F	-
1/8	3/64	0.06	1500	1500	1500	1170	1145	945	1000	965	855	140	140	8262H099 ①	-	1	●	10.1/F	11.6/H
1/8	3/64	0.06	750	750	725	750	640	550	750	600	500	180	180	8262H001	8262H012	2	❍	6.1/F	10.6/H
1/8	3/32	0.21	720	410	410	610	410	410	600	410	400	180	180	8262H277	8262H178	1	❍	17.1/F	22.6/H
1/8	3/32	0.21	-	-	-	290	290	270	240	240	255	180	180	-	8262H177 ②	1	❍	-	11.6/H
1/8	3/32	0.21	500	350	325	295	210	205	285	200	195	180	180	8262H011	-	2	❍	9.1/F	18.6/H
1/8	3/32	0.21	370	330	190	235	160	160	215	150	145	180	180	8262H014	8262H015	2	❍	6.1/F	10.6/H
1/8	1/8	0.35	500	380	355	275	275	235	250	250	225	180	180	8262H105 ♦	8262H174	1	❍	17.1/F	22.6/H
1/8	1/8	0.35	340	300	215	-	-	-	-	-	-	-	180	-	8262H179	1	❍	10.1/F	-
1/8	1/8	0.35	275	260	195	165	130	130	155	120	120	180	180	8262H016 ♦	-	2	❍	9.1/F	18.6/H
1/8	1/8	0.35	185	180	120	130	110	95	120	100	90	180	180	8262H002 ♦	8262H006	2	❍	6.1/F	10.6/H
1/4	3/64	0.06	2200	2200	1700	1170	1145	945	1000	965	855	140	140	-	8262H214 ①	3	●	10.1/F	11.6/H
1/4	3/64	0.06	1500	1500	1500	1170	1145	945	1000	965	855	140	140	8262H200 ①	-	3	●	10.1/F	11.6/H
1/4	3/64	0.06	1500	1500	1500	1500	1500	1500	1500	1500	1500	140	140	8262H107 ①	-	3	●	17.1/F	22.6/H
1/4	3/64	0.06	-	-	-	2000	2000	1725	1900	1900	1700	-	140	-	8262H181 ①	3	●	-	22.6/H
1/4	3/64	0.06	1500	1350	825	750	620	530	700	565	495	140	140	8262H106 ①	8262H180 ①	4	●	6.1/F	10.6/H
1/4	3/64	0.06	750	750	725	750	640	550	750	600	500	180	180	8262H019	8262H080	4	❍	6.1/F	10.6/H
1/4	3/32	0.21	720	410	410	610	410	410	600	410	400	180	180	8262H109 ♦	8262H183 ②	3	❍	17.1/F	22.6/H
1/4	3/32	0.21	590	410	410	290	290	270	240	240	225	180	180	8262H108 ♦	8262H182 ②	3	❍	10.1/F	11.6/H
1/4	3/32	0.21	500	350	270	295	210	205	285	200	195	180	180	8262H021 ♦	-	4	❍	9.1/F	18.6/H
1/4	3/32	0.21	370	330	160	235	160	160	215	150	145	180	180	8262H020 ♦	8262H086	4	❍	6.1/F	10.6/H
1/4	1/8	0.35	500	380	355	275	275	235	250	250	225	180	180	8262H110 ♦	8262H185 ②	3	❍	17.1/F	22.6/H
1/4	1/8	0.35	340	300	215	130	125	115	110	105	100	180	180	8262H232 ♦	-	3	❍	10.1/F	11.6/H
1/4	1/8	0.35	340	300	215	-	-	-	-	-	-	180	-	-	8262H184 ②	3	❍	10.1/F	-
1/4	1/8	0.35	275	260	150	165	130	120	155	120	115	180	180	8262H023 ♦	-	4	❍	9.1/F	18.6/H
1/4	1/8	0.35	185	180	90	130	110	90	120	100	85	180	180	8262H022 ♦	8262H007	4	❍	6.1/F	10.6/H
1/4	5/32	0.52	300	210	210	135	135	135	115	115	115	180	180	8262H112	8262H187 ②	3	❍	17.1/F	22.6/H
1/4	5/32	0.52	210	200	145	65	63	63	55	54	54	180	180	8262H202	-	3	❍	10.1/F	11.6/H
1/4	5/32	0.52	210	200	145	-	-	-	-	-	-	180	180	-	8262H220 ②	3	❍	10.1/F	-
1/4	5/32	0.52	150	140	100	95	75	75	85	72	70	180	180	8262H113	-	4	❍	9.1/F	18.6/H
1/4	5/32	0.52	100	100	55	72	60	55	67	53	52	180	180	8262H111	8262H186	4	❍	6.1/F	10.6/H
1/4	7/32	0.73	125	125	125	70	70	70	65	65	65	180	180	8262H114 ♦	8262H188	3	❍	17.1/F	22.6/H
1/4	7/32	0.73	100	100	100	35	35	35	30	30	30	180	180	8262H208 ♦	-	3	❍	10.1/F	11.6/H
1/4	7/32	0.73	100	100	100	-	-	-	-	-	-	180	-	-	8262H226	3	❍	10.1/F	-
1/4	7/32	0.73	55	54	40	38	33	31	35	30	28	180	180	8262H013 ♦	8262H036	4	❍	6.1/F	10.6/H
1/4	9/32	0.88	90	90	90	53	50	47	48	46	44	180	180	8262H212	8262H230	3	❍	17.1/F	22.6/H
1/4	9/32	0.88	65	75	60	25	25	22	22	22	20	180	180	8262H210	-	3	❍	10.1/F	11.6/H
1/4	9/32	0.88	65	75	60	-	-	-	-	-	-	180	-	-	8262H189	3	❍	10.1/F	-
1/4	9/32	0.88	36	36	33	27	23	21	24	22	20	180	180	8262H090	8262H038	4	❍	6.1/F	10.6/H
3/8	1/8	0.35	500	380	355	275	275	160	250	250	150	180	180	8263H115	8263H191	5	❍	17.1/F	22.6/H
3/8	1/8	0.35	340	300	215	130	125	85	110	105	75	180	180	8263H232	-	5	❍	10.1/F	11.6/H
3/8	1/8	0.35	340	300	215	-	-	-	-	-	-	180	-	-	8263H190	5	❍	10.1/F	-
3/8	1/8	0.35	275	260	140	165	130	110	155	120	105	180	180	8263H003	-	6	❍	9.1/F	18.6/H
3/8	1/8	0.35	185	180	90	130	110	80	120	100	75	180	180	8263H002	8263H330	6	❍	6.1/F	10.6/H
3/8	5/32	0.52	300	210	195	135	135	100	115	115	90	180	180	8263H118 ♦	8263H193	5	❍	17.1/F	22.6/H
3/8	5/32	0.52	210	185	100	65	63	50	55	54	44	180	180	8263H200 ♦	-	5	❍	10.1/F	11.6/H
3/8	5/32	0.52	210	185	100	-	-	-	-	-	-	180	-	-	8263H331 ②	5	❍	10.1/F	-
3/8	5/32	0.52	150	140	80	95	75	75	85	72	70	180	180	8263H117 ♦	-	6	❍	9.1/F	18.6/H
3/8	5/32	0.52	100	100	50	72	60	55	67	53	52	180	180	8263H116 ♦	8263H192	6	❍	6.1/F	10.6/H
3/8	7/32	0.73	125	100	100	70	70	70	65	65	65	180	180	8263H206 ②	8263H332	5	❍	17.1/F	22.6/H
3/8	7/32	0.73	100	86	70	35	35	35	30	30	30	180	180	8263H124	-	5	❍	10.1/F	11.6/H
3/8	7/32	0.73	100	86	70	-	-	-	-	-	-	180	-	-	8263H195	5	❍	10.1/F	-
3/8	7/32	0.73	55	54	29	38	33	31	35	30	28	180	180	8263H119	8263H194	6	❍	6.1/F	10.6/H
3/8	9/32	0.88	100	85	70	53	50	47	48	46	44	180	180	8263H210	8263H333	5	❍	17.1/F	22.6/H
3/8	9/32	0.88	65	63	47	-	-	-	-	-	-	180	180	8263H125	8263H197	5	❍	10.1/F	-
3/8	9/32	0.88	35	32	21	27	23	21	24	22	20	180	180	8263H054	8263H196	6	❍	6.1/F	10.6/H

① Only available with UR disc, limits min. ambient temp. to 32˚F (0˚C).
② ATEX/IECEx certified with prefix "EV".
● = General Purpose Valve, ❍ = Safety Shutoff Valve

♦ Valve available with lead-free brass body using suffix "LF".
The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

Specifications (Metric units)

Pipe Size (in)	Orifice size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)									Max. Fluid Temp. °C		Catalog Number		Const. Ref.	UL Listing	Watt Rating/ Class of Coil Insulation	
			Max. AC@55°C			Max. DC@40°C			Max. DC@55°C										
			Air-Inert Gas	Water	Lt. Oil @ 300ssu	Air-Inert Gas	Water	Lt. Oil @ 300ssu	Air-Inert Gas	Water	Lt. Oil 300ssu	AC	DC	Brass	Stainless Steel			AC	DC
NORMALLY CLOSED (Closed when de-energized), NBR Disc																			
1/8	1.2	0.05	152	152	117	-	-	-	-	-	-	60	-	-	8262H175 ①	1	●	10.1/F	-
1/8	1.2	0.05	-	-	-	138	138	119	131	131	117	-	60	-	8262H176 ①	1	●	-	22.6/H
1/8	1.2	0.05	-	-	-	103	103	103	103	103	103	-	60	8262H089 ①	-	1	●	-	22.6/H
1/8	1.2	0.05	140	118	57	67	51	50	63	48	47	60	60	-	8262H079 ①	2	●	9.1/F	18.6/H
1/8	1.2	0.05	103	93	57	52	43	39	48	39	37	60	60	8262H096 ①	-	2	●	6.1/F	10.6/H
1/8	1.2	0.05	103	93	57	-	-	-	-	-	-	60	-	-	8262H173 ①	2	●	6.1/F	-
1/8	1.2	0.05	103	103	103	81	79	65	69	67	59	60	60	8262H099 ①	-	1	●	10.1/F	11.6/H
1/8	1.2	0.05	52	52	50	52	44	38	52	41	34	82	82	8262H001	8262H012	2	❍	6.1/F	10.6/H
1/8	2.4	0.18	50	28	28	42	28	28	41	28	28	82	82	8262H277	8262H178	1	❍	17.1/F	22.6/H
1/8	2.4	0.18	-	-	-	20	20	19	17	17	18	-	82	-	8262H177 ②	1	❍	-	11.6/H
1/8	2.4	0.18	34	24	22	20	14	14	20	14	13	82	82	8262H011	-	2	❍	9.1/F	18.6/H
1/8	2.4	0.18	26	23	13	16	11	11	15	10	10	82	82	8262H014	8262H015	2	❍	6.1/F	10.6/H
1/8	3.2	0.30	34	26	24	19	19	16	17	17	16	82	82	8262H105 ♦	8262H174	1	❍	17.1/F	22.6/H
1/8	3.2	0.30	23	21	15	-	-	-	-	-	-	82	-	-	8262H179	1	❍	10.1/F	-
1/8	3.2	0.30	19	18	13	11	9	9	11	8	8	82	82	8262H016 ♦	-	2	❍	9.1/F	18.6/H
1/8	3.2	0.30	13	12	8	9	8	7	8	7	6	82	82	8262H002 ♦	8262H006	2	❍	6.1/F	10.6/H
1/4	1.2	0.05	152	152	117	81	79	65	69	67	59	60	60	-	8262H214 ①	3	●	10.1/F	11.6/H
1/4	1.2	0.05	103	103	103	81	79	65	69	67	59	60	60	8262H200 ①	-	3	●	10.1/F	11.6/H
1/4	1.2	0.05	103	103	103	103	103	103	103	103	103	60	60	8262H107 ①	-	3	●	17.1/F	22.6/H
1/4	1.2	0.05	-	-	-	138	138	119	131	131	117	-	60	-	8262H181 ①	3	●	-	22.6/H
1/4	1.2	0.05	103	93	57	52	43	37	48	39	34	60	60	8262H106 ①	8262H180 ①	4	●	6.1/F	10.6/H
1/4	1.2	0.05	52	52	50	52	44	38	52	41	34	82	82	8262H019	8262H080	4	❍	6.1/F	10.6/H
1/4	2.4	0.18	50	28	28	42	28	28	41	28	28	82	82	8262H109 ♦	8262H183 ②	3	❍	17.1/F	22.6/H
1/4	2.4	0.18	41	28	28	20	20	19	17	17	16	82	82	8262H108 ♦	8262H182 ②	3	❍	10.1/F	11.6/H
1/4	2.4	0.18	34	24	19	20	14	14	20	14	13	82	82	8262H021 ♦	-	4	❍	9.1/F	18.6/H
1/4	2.4	0.18	26	23	11	16	11	11	15	10	10	82	82	8262H020 ♦	8262H086	4	❍	6.1/F	10.6/H
1/4	3.2	0.30	34	26	24	19	19	16	17	17	16	82	82	8262H110 ♦	8262H185 ②	3	❍	17.1/F	22.6/H
1/4	3.2	0.30	23	21	15	9	9	8	8	7	7	82	82	8262H232 ♦	-	3	❍	10.1/F	11.6/H
1/4	3.2	0.30	23	21	15	-	-	-	-	-	-	82	-	-	8262H184 ②	3	❍	10.1/F	-
1/4	3.2	0.30	19	18	10	11	9	8	11	8	8	82	82	8262H023 ♦	-	4	❍	9.1/F	18.6/H
1/4	3.2	0.30	13	12	6	9	8	6	8	7	6	82	82	8262H022 ♦	8262H007	4	❍	6.1/F	10.6/H
1/4	4.0	0.45	21	14	14	9	9	9	8	8	8	82	82	8262H112	8262H187 ②	3	❍	17.1/F	22.6/H
1/4	4.0	0.45	14	14	10	4	4	4	4	4	4	82	82	8262H202	-	3	❍	10.1/F	11.6/H
1/4	4.0	0.45	14	14	10	-	-	-	-	-	-	82	-	-	8262H220 ②	3	❍	10.1/F	-
1/4	4.0	0.45	10	10	7	7	5	5	6	5	5	82	82	8262H113	-	4	❍	9.1/F	18.6/H
1/4	4.0	0.45	7	7	4	5	4	4	5	4	4	82	82	8262H111	8262H186	4	❍	6.1/F	10.6/H
1/4	5.6	0.63	9	9	9	5	5	5	4	4	4	82	82	8262H114 ♦	8262H188	3	❍	17.1/F	22.6/H
1/4	5.6	0.63	7	7	7	2	2	2	2	2	2	82	82	8262H208 ♦	-	3	❍	10.1/F	11.6/H
1/4	5.6	0.63	7	7	7	-	-	-	-	-	-	82	-	-	8262H226	3	❍	10.1/F	-
1/4	5.6	0.63	4	4	3	3	2	2	2	2	2	82	82	8262H013 ♦	8262H036	4	❍	6.1/F	10.6/H
1/4	7.1	0.76	6	6	6	4	3	3	3	3	3	82	82	8262H212	8262H230	3	❍	17.1/F	22.6/H
1/4	7.1	0.76	4	5	4	2	2	2	2	2	1	82	82	8262H210	-	3	❍	10.1/F	11.6/H
1/4	7.1	0.76	4	5	4	-	-	-	-	-	-	82	-	-	8262H189	3	❍	10.1/F	-
1/4	7.1	0.76	2	2	2	2	2	1	2	2	1	82	82	8262H090	8262H038	4	❍	6.1/F	10.6/H
3/8	3.2	0.30	34	26	24	19	21	11	17	19	10	82	82	8263H115	8263H191	5	❍	17.1/F	22.6/H
3/8	3.2	0.30	23	21	15	9	9	6	8	7	5	82	82	8263H232	-	5	❍	10.1/F	11.6/H
3/8	3.2	0.30	23	21	15	-	-	-	-	-	-	82	82	-	8263H190	5	❍	10.1/F	-
3/8	3.2	0.30	19	18	10	11	9	8	11	8	7	82	82	8263H003	-	6	❍	9.1/F	18.6/H
3/8	3.2	0.30	13	12	6	9	8	6	8	7	5	82	82	8263H002	8263H330	6	❍	6.1/F	10.6/H
3/8	4.0	0.45	21	14	13	9	9	7	8	8	6	82	82	8263H118 ♦	8263H193	5	❍	17.1/F	22.6/H
3/8	4.0	0.45	14	13	7	4	4	3	4	4	3	82	82	8263H200 ♦	-	5	❍	10.1/F	11.6/H
3/8	4.0	0.45	14	13	7	-	-	-	-	-	-	82	-	-	8263H331 ②	5	❍	10.1/F	-
3/8	4.0	0.45	10	10	6	7	5	5	6	5	5	82	82	8263H117 ♦	-	6	❍	9.1/F	18.6/H
3/8	4.0	0.45	7	7	3	5	4	4	5	4	4	82	82	8263H116 ♦	8263H192	6	❍	6.1/F	10.6/H
3/8	5.6	0.63	9	7	7	5	5	5	4	4	4	82	82	8263H206 ②	8263H332	5	❍	17.1/F	22.6/H
3/8	5.6	0.63	7	6	5	2	2	2	2	2	2	82	82	8263H124	-	5	❍	10.1/F	11.6/H
3/8	5.6	0.63	7	6	5	-	-	-	-	-	-	82	-	-	8263H195	5	❍	10.1/F	-
3/8	5.6	0.63	4	4	2	3	2	2	2	2	2	82	82	8263H119	8263H194	6	❍	6.1/F	10.6/H
3/8	7.1	0.76	7	6	5	4	3	3	3	3	3	82	82	8263H210	8263H333	5	❍	17.1/F	22.6/H
3/8	7.1	0.76	4	4	3	-	-	-	-	-	-	82	-	8263H125	8263H197	5	❍	10.1/F	-
3/8	7.1	0.76	2	2	1	2	2	1	2	2	1	82	82	8263H054	8263H196	6	❍	6.1/F	10.6/H

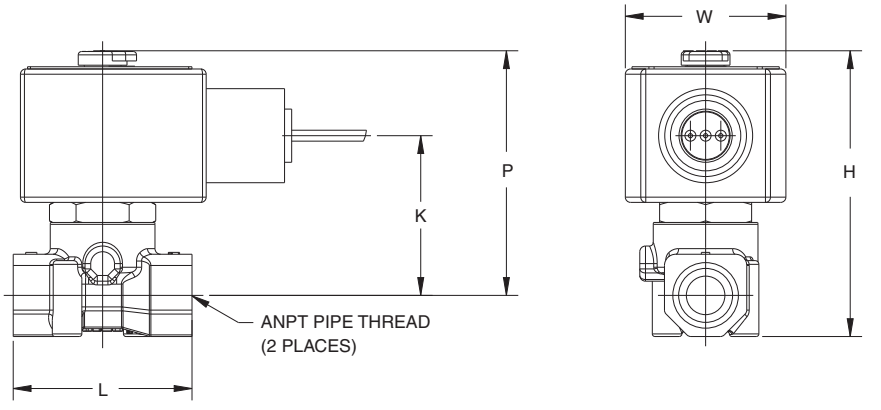
① Only available with UR disc, limits min. ambient temp. to 32˚F (0˚C).
② ATEX/IECEx certified with prefix "EV".
● = General Purpose Valve, ❍ = Safety Shutoff Valve

♦ Valve available with lead-free brass body using suffix "LF".
The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

Dimensions: inches (mm)

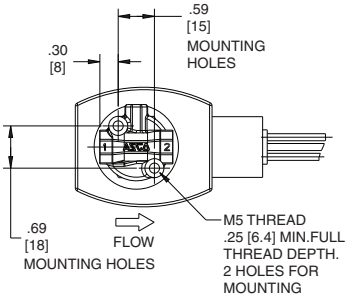
Const. Ref.		H	K	L	P	W
1	ins	3.05	1.71	1.19	2.69	1.95
	mm	77	43	30	68	50
2	ins	2.85	1.60	1.19	2.50	1.69
	mm	72	41	30	63	43
3	ins	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50
4	ins	2.96	1.72	1.56	2.60	1.69
	mm	75	44	40	66	43
5	ins	3.20	1.79	1.88	2.77	1.95
	mm	81	45	48	70	50
6	ins	3.03	1.72	1.88	2.60	1.69
	mm	77	44	48	66	43

Const. Ref. 1-6

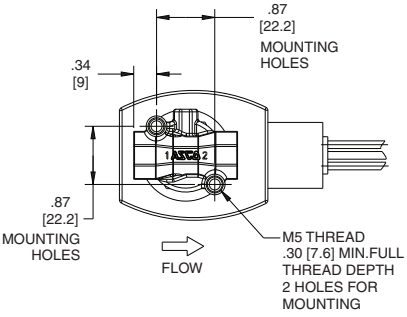


Mounting Dimensions

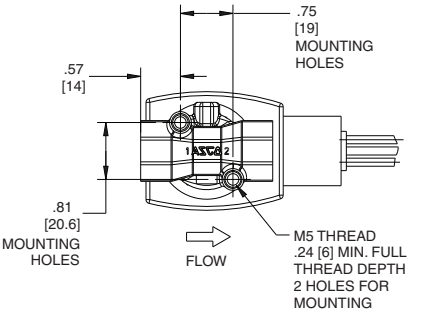
Const. Ref. 1, 2
(1/8" Pipe)



Const. Ref. 3, 4
(1/4" Pipe)



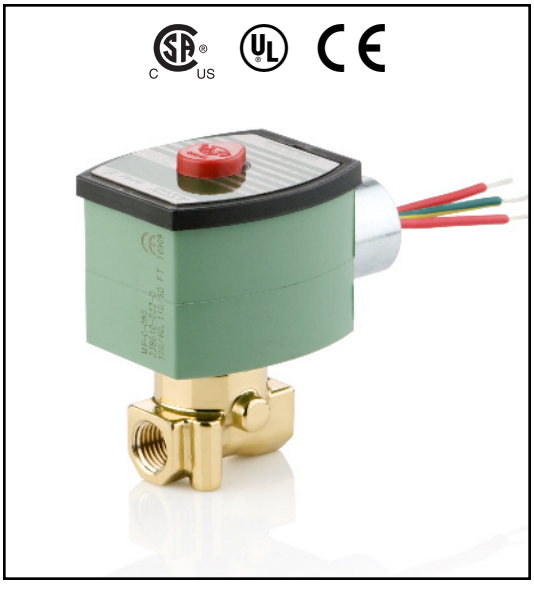
Const. Ref. 5, 6
(3/8" Pipe)



Note: Mounting holes will accept a standard #10-32 machine screw.

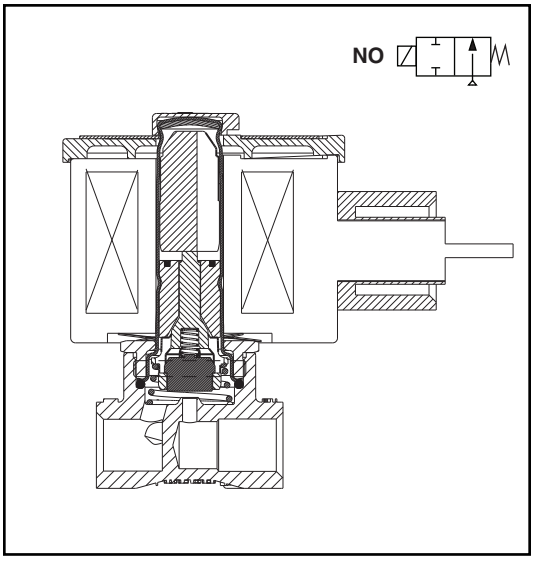
Features

- Reliable, proven design with high flows
- Small poppet valves for tight shutoff
- Wide range of elastomers for specialty service
- Mountable in any position
- Brass and stainless steel constructions



Construction

Valve Parts in Contact with Fluids		
Body	Brass	303/304 Stainless Steel
Seals and Discs	NBR or Cast UR	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Stem	PA	



Electrical

Watt Rating and Power Consumption				Spare Coil Part No.			
	AC			General Purpose		Explosionproof	
DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
11.6	10.1	25	50	238610	238910	238614	238914
22.6	17.1	40	70	238810	238910	238814	238914

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 available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Options

Mounting bracket (suffix MB)
High Vacuum service (suffix VH; *see Vacuum Section for more details.*)
Oxygen service (suffix N)
Silicone Free (suffix SF)

Elastomers: FKM (suffix V), Ethylene Propylene (suffix E), CR (suffix J), PTFE* (suffix T), Low Temp. NBR** (suffix A)

Note: *PTFE reduces pressure rating by 25% (i.e. 750 psi reduced to 560 psi)
**For Low Temp. NBR, fluid temperature range is -40˚F to 167˚F

Refer to Engineering Section for fluid and temperature compatibility.

Nominal Ambient Temp. Ranges

AC: -13˚F to 131˚F (-25˚C to 55˚C)
DC: -13˚F to 131˚F (-25˚C to 55˚C)

Optional: For AC Class H coil option with 10.1 W coil, the max. ambient temperature is 140˚F (60˚C) (with or without prefix EF)

Note: Max. ambient for explosionproof (EF) is 125˚F (52˚C) for AC, 131˚F (55˚C) for DC.

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed, as indicated.
Meets applicable CE directives.
Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

Specifications (English units)

Pipe Size (in)	Orifice Size (mm)	Cv Flow	Min Press	Operating Pressure Differential (psi)						Max. Fluid Temp °F		Catalog Number		Const. Ref	UL Listing	Watt Rating/ Class of Coil Insulation	
				Max AC@131°F			Max DC@131°F										
				Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Air-Inert Gas	Water	Lt. Oil @ 300 SSU	AC	DC	Brass	Stainless Steel			AC	DC
1/8	3/64	0.06	0	1500	1375	1125	700	600	510	140	140	8262H154 ①	-	1	●	17.1/H	22.6/H
1/8	3/64	0.06	0	1650	1375	1125	700	600	510	140	140	-	8262H167 ①	1	●	17.1/H	22.6/H
1/8	3/64	0.06	0	1150	900	800	640	490	325	140	140	8262H155 ①	8262H168 ①	1	●	10.1/F	11.6/H
1/8	3/64	0.06	0	750	750	750	650	560	400	180	180	8262H156	8262H169	1	●	10.1/F	11.6/H
1/8	3/32	0.21	0	350	305	275	230	190	155	167	180	8262H157	8262H172	1	●	17.1/H	22.6/H
1/8	3/32	0.21	0	275	230	180	160	135	95	180	180	8262H128	8262H236	1	●	10.1/F	11.6/H
1/8	1/8	0.35	0	210	195	175	135	110	100	167	180	8262H158	8262H228	1	●	17.1/H	22.6/H
1/8	1/8	0.35	0	160	145	125	100	100	70	180	180	8262H129	8262H237	1	●	10.1/F	11.6/H
1/4	3/64	0.06	0	1500	1375	1125	940	600	510	140	140	8262H159 ①	-	2	●	17.1/H	22.6/H
1/4	3/64	0.06	0	1650	1375	1125	940	600	510	140	140	-	8262H198 ①	2	●	17.1/H	22.6/H
1/4	3/64	0.06	0	1150	900	800	640	490	325	140	140	8262H161 ①	8262H199 ①	2	●	10.1/F	11.6/H
1/4	3/64	0.06	0	750	750	750	650	560	400	180	180	8262H260	8262H130	2	●	10.1/F	11.6/H
1/4	3/32	0.21	0	350	305	275	230	190	155	167	180	8262H162	8262H205	2	●	17.1/H	22.6/H
1/4	3/32	0.21	0	275	230	180	160	135	95	180	180	8262H261	8262H134	2	●	10.1/F	11.6/H
1/4	1/8	0.35	0	210	195	175	135	110	100	167	180	8262H163	8262H219	2	●	17.1/H	22.6/H
1/4	1/8	0.35	0	160	145	125	100	100	70	180	180	8262H262	8262H138	2	●	10.1/F	11.6/H
1/4	5/32	0.54	0	120	110	105	75	65	55	167	180	8262H164	8262H223	2	●	17.1/H	22.6/H
1/4	5/32	0.54	0	90	90	70	60	55	45	180	180	8262H263	8262H142	2	●	10.1/F	11.6/H
1/4	7/32	0.83	0	60	55	55	35	35	30	167	180	8262H165	8262H224	2	●	17.1/H	22.6/H
1/4	7/32	0.83	0	45	45	40	30	25	25	180	180	8262H264 ②	8262H148	2	●	10.1/F	11.6/H
1/4	9/32	0.96	0	38	38	38	25	25	25	167	180	8262H166	8262H225	2	●	17.1/H	22.6/H
1/4	9/32	0.96	0	30	30	30	20	17	17	180	180	8262H265	8262H152	2	●	10.1/F	11.6/H
3/8	1/8	0.35	0	210	195	175	135	110	100	167	180	8263H100	8263H104	3	●	17.1/H	22.6/H
3/8	1/8	0.35	0	160	145	125	100	100	70	180	180	8263H070	8263H080 ②	3	●	10.1/F	11.6/H
3/8	5/32	0.54	0	120	110	105	75	65	55	167	180	8263H101	8263H105	3	●	17.1/H	22.6/H
3/8	5/32	0.54	0	90	90	70	60	55	45	180	180	8263H071	8263H081	3	●	10.1/F	11.6/H
3/8	7/32	0.83	0	60	55	55	35	35	30	167	180	8263H102	8263H106	3	●	17.1/H	22.6/H
3/8	7/32	0.83	0	45	45	40	30	25	25	180	180	8263H072	8263H082	3	●	10.1/F	11.6/H
3/8	9/32	0.96	0	38	38	38	25	25	25	167	180	8263H103	8263H107	3	●	17.1/H	22.6/H
3/8	9/32	0.96	0	30	30	30	20	17	17	180	180	8263H073	8263H083	3	●	10.1/F	11.6/H

① Cast UR disc supplied as standard. ② ATEX/IECEx certified with prefix "EV". ● General Purpose Valve.

Specifications (Metric units)

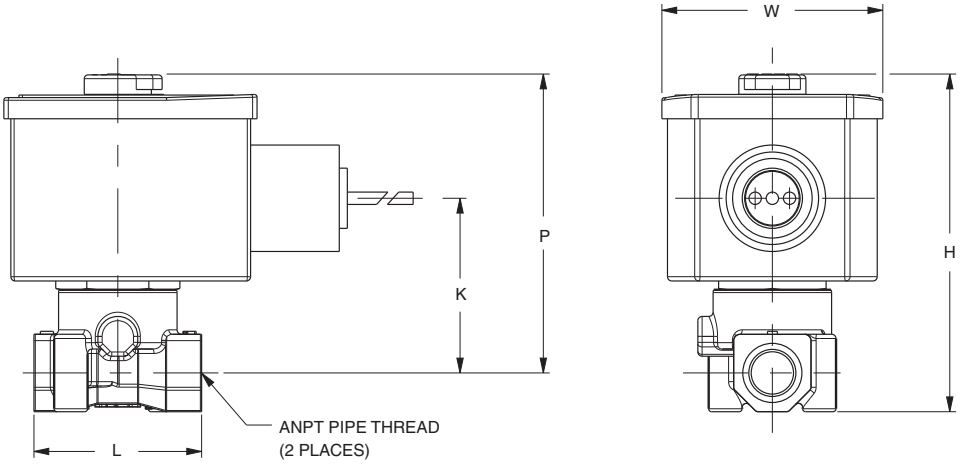
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Min Press	Operating Pressure Differential (bar)						Max. Fluid Temp ˚C		Catalog Number		Const. Ref	UL Listing	Watt Rating/ Class of Coil Insulation	
				Max AC @ 55°C			Max DC @ 55°C										
				Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Air-Inert Gas	Water	Lt. Oil @ 300 SSU	AC	DC	Brass	Stainless Steel			AC	DC
1/8	1.2	0.05	0	103	95	78	48	41	35	60	60	8262H154 ①	-	1	●	17.1/H	22.6/H
1/8	1.2	0.05	0	114	95	78	48	41	35	60	60	-	8262H167 ①	1	●	17.1/H	22.6/H
1/8	1.2	0.05	0	79	62	55	44	34	22	60	60	8262H155 ①	8262H168 ①	1	●	10.1/F	11.6/H
1/8	1.2	0.05	0	52	52	52	45	39	28	82	82	8262H156	8262H169	1	●	10.1/F	11.6/H
1/8	2.4	0.18	0	24	21	19	16	13	11	75	82	8262H157	8262H172	1	●	17.1/H	22.6/H
1/8	2.4	0.18	0	19	16	12	11	9	7	82	82	8262H128	8262H236	1	●	10.1/F	11.6/H
1/8	3.2	0.30	0	14	13	12	9	8	7	75	82	8262H158	8262H228	1	●	17.1/H	22.6/H
1/8	3.2	0.30	0	11	10	9	7	7	5	82	82	8262H129	8262H237	1	●	10.1/F	11.6/H
1/4	1.2	0.05	0	103	95	78	65	41	35	60	60	8262H159 ①	-	2	●	17.1/H	22.6/H
1/4	1.2	0.05	0	114	95	78	65	41	35	60	60	-	8262H198 ①	2	●	17.1/H	22.6/H
1/4	1.2	0.05	0	79	62	55	44	34	22	60	60	8262H161 ①	8262H199 ①	2	●	10.1/F	11.6/H
1/4	1.2	0.05	0	52	52	52	45	39	28	82	82	8262H260	8262H130	2	●	10.1/F	11.6/H
1/4	2.4	0.18	0	24	21	19	16	13	11	75	82	8262H162	8262H205	2	●	17.1/H	22.6/H
1/4	2.4	0.18	0	19	16	12	11	9	7	82	82	8262H261	8262H134	2	●	10.1/F	11.6/H
1/4	3.2	0.30	0	14	13	12	9	8	7	75	82	8262H163	8262H219	2	●	17.1/H	22.6/H
1/4	3.2	0.30	0	11	10	9	7	7	5	82	82	8262H262	8262H138	2	●	10.1/F	11.6/H
1/4	4.0	0.47	0	8	8	7	5	4	4	75	82	8262H164 ②	8262H223	2	●	17.1/H	22.6/H
1/4	4.0	0.47	0	6	6	5	4	4	3	82	82	8262H263	8262H142	2	●	10.1/F	11.6/H
1/4	5.6	0.72	0	4	4	4	2	2	2	75	82	8262H165	8262H224	2	●	17.1/H	22.6/H
1/4	5.6	0.72	0	3	3	3	2	2	2	82	82	8262H264	8262H148	2	●	10.1/F	11.6/H
1/4	7.1	0.83	0	3	3	3	2	2	2	75	82	8262H166	8262H225	2	●	17.1/H	22.6/H
1/4	7.1	0.83	0	2	2	2	1	1	1	82	82	8262H265	8262H152	2	●	10.1/F	11.6/H
3/8	3.2	0.30	0	14	13	12	9	8	7	75	82	8263H100	8263H104	3	●	17.1/H	22.6/H
3/8	3.2	0.30	0	11	10	9	7	7	5	82	82	8263H070	8263H080 ②	3	●	10.1/F	11.6/H
3/8	4.0	0.47	0	8	8	7	5	4	4	75	82	8263H101	8263H105	3	●	17.1/H	22.6/H
3/8	4.0	0.47	0	6	6	5	4	4	3	82	82	8263H071	8263H081	3	●	10.1/F	11.6/H
3/8	5.6	0.72	0	4	4	4	2	2	2	75	82	8263H102	8263H106	3	●	17.1/H	22.6/H
3/8	5.6	0.72	0	3	3	3	2	2	2	82	82	8263H072	8263H082	3	●	10.1/F	11.6/H
3/8	7.1	0.83	0	3	3	3	2	2	2	75	82	8263H103	8263H107	3	●	17.1/H	22.6/H
3/8	7.1	0.83	0	2	2	2	1	1	1	82	82	8263H073	8263H083	3	●	10.1/F	11.6/H

① Cast UR disc supplied as standard. ② ATEX/IECEx certified with prefix "EV". ● General Purpose Valve.

Dimensions: inches (mm)

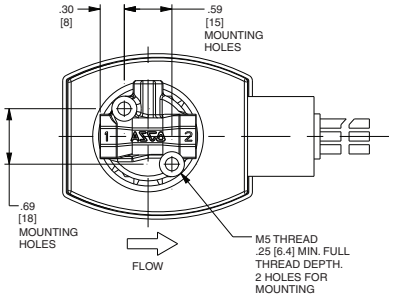
Const. Ref.		H	K	L	P	W
1	in	3.00	1.54	1.19	2.69	2.06
	mm	76	39	30	68	52
2	in	3.12	1.62	1.56	2.76	2.06
	mm	79	41	40	70	52
3	in	3.20	1.62	1.88	2.77	2.06
	mm	81	41	48	70	52
IMPORTANT: Valves may be mounted in any position.						

Const. Ref. 1-3

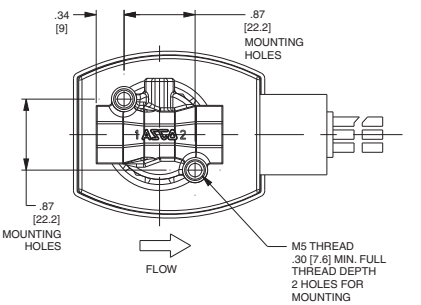


Mounting Dimensions

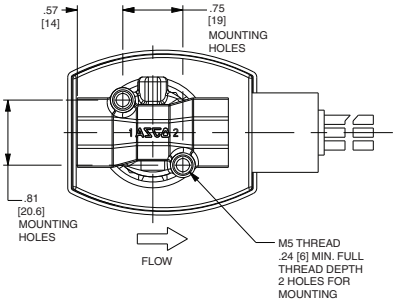
Const. Ref. 1
(1/8" Pipe)



Const. Ref. 2
(1/4" Pipe)



Const. Ref. 3
(3/8" Pipe)



Note: Mounting holes will accept a standard #10-32 machine screw.

Three-way valves have three pipe connections and two orifices. When one orifice is open, the other is closed, and vice versa. They are commonly used to alternately apply pressure to and exhaust pressure from a valve actuator or a single-acting cylinder.

Three Types of Operations Apply

Normally Closed (NC)

When the valve is de-energized, the pressure port is closed and the exhaust port is connected to the cylinder port. When the valve is energized, the exhaust port is closed and the pressure port is connected to the cylinder port.

Normally Open (NO)

When the valve is de-energized, the pressure port is connected to the cylinder port and the exhaust port is closed. When the valve is energized, the pressure port is closed and the cylinder port is connected to the exhaust port.

Universal (Univ)

This allows the valve to be connected in either the Normally Closed or Normally Open position… or to select one of two fluids or to divert flow from one port to another.

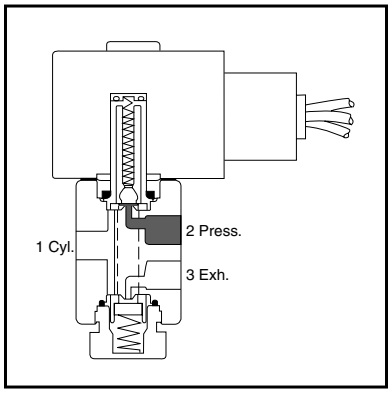
See Engineering Section for further details.

Standard and Optional Features

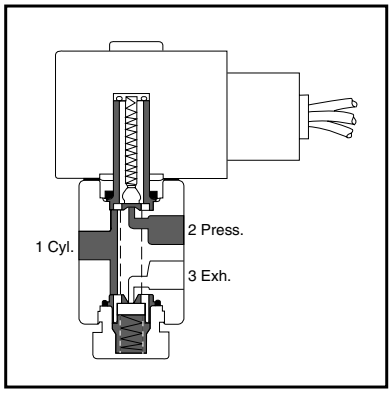
Solenoid valves are supplied, as listed, with either RedHat II molded epoxy solenoids or RedHat solenoids with metal enclosures. RedHat II valves are identified by the letter "G" or "H" in their catalog numbers; e.g., 8320**G**001. Many optional features may be added to your valves; e.g. high-temperature Class H molded coils and manual operators.

See the Optional Features Section for details.

3-Way/2 Position NC Valves Flow Diagrams



De-Energized



Energized

Index

Series	General Description	Pipe Size (NPT)	Page
8300/8315	General Service	1/8" - 1/2"	47
8314	General Service	1/8" - 1/4"	51
8316	Air and Water	3/8" - 1"	55
8316	Zero Minimum	1/4" - 1/2"	59
8317/8321	Quick Exhaust	1/4" and 3/8"	61
8320	General Service	1/8" - 1/4"	65
8327	High Flow Direct Acting	1/4"	69
8356	Subminiature	1/8"	71
8360	Plastic Body	1/4"	75
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8551/8553	RedHat II Spool Valve	1/4" and 1/2"	79

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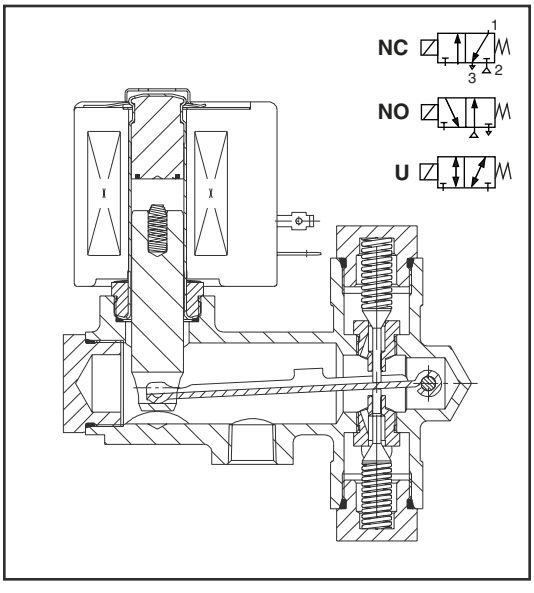
Features

- Designed for high flow and high pressure service
- Direct acting, requires no minimum operating pressure
- Choice of metal seating materials to handle aggressive fluids, or resilient seating for airtight shutoff
- Ideal for power plants and similar applications



Construction

Valve Parts in Contact with Fluids		
Body	Brass	304 Stainless Steel
Disc	303 Stainless Steel (Metal), PA, or Brass (Resilient)	
Seats	NBR, Phosphor Bronze	303 Stainless Steel
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel, 17-7PH, or Iconel	
Shading Coil	Copper	Silver
Gaskets	NBR	PTFE

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	20.1	43	240	272610	-	272614	-
H	36.2	28	60	330	222345	222184	222345	222184
H	-	16.1	35	180	272810	-	272814	-
H	-	28.2	50	385	224195	-	224195	-

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.
(Note: 24 volt AC, 60 Hz not available with 28.2 watt coil)

Note: 125 and 250 volts DC are battery voltages applied in power plants. Special AC and DC constructions are available to pilot power plant control valves. Consult your local ASCO sales office for details.

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Watertight, Types 3, 4, 4X, 7, and 9. See footnote on next page. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges:

Class F Coils AC: 32˚F to 125˚F (0˚C to 52˚C)
Class H Coils AC: 32˚F to 140˚F (0˚C to 59˚C)
Class H Coils DC: 32˚F to 77˚F (0˚C to 25˚C)
(104˚F/40˚C occasionally)

Refer to Engineering Section for details.

Approvals

CSA certified (8300 Series only).
Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Air-Inert Gas, Water, Lt. Oil ④ Max. AC NC/NO	Max. AC Univ.	Max. DC NC/NO	Max. DC Univ.	Max. Fluid Temp. ˚F AC	Max. Fluid Temp. ˚F DC	Brass Body Add Suffix "F" for NC, "G" for NO, "U" for Univ. ① Catalog Number	Brass Body Const. Ref.	Stainless Steel Body Add Suffix "F" for NC, "G" for NO, "U" for Univ. ① Catalog Number	Stainless Steel Body Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
METAL SEATS AND DISCS														
1/8	1/8	.13	-	-	250	125	-	180	8300D055	1	-	-	-	36.2/H
1/8	1/8	.13	550	300	-	-	200	-	8300G055	1	-	-	20.1/F	-
1/8	3/16	.35	-	-	125	60	-	180	8300D003	1	-	-	-	36.2/H
1/8	3/16	.35	250	150	-	-	200	-	8300G003	1	-	-	20.1/F	-
1/4	3/16	.35	-	-	125	60	-	180	8300D058	1	-	-	-	36.2/H
1/4	3/16	.35	250	150	-	-	200	-	8300G058	1	-	-	20.1/F	-
1/4	1/4	.45	-	-	75	35	-	180	8300A081	1	-	-	-	36.2/H
1/4	1/4	.45	190	90	-	-	200	-	8300G081	1	-	-	20.1/F	-
1/4	1/4	.45	250	120	-	-	200	-	8300D061 ②	1	-	-	28/H	-
3/8	1/4	.45	-	-	50	25	-	180	-	-	8300B410	2	-	36.2/H
3/8	1/4	.45	150	75	-	-	200	-	-	-	8300G410	2	20.1/F	-
3/8	1/4	.45	-	-	75	35	-	180	8300A082	1	-	-	-	36.2/H
3/8	1/4	.45	190	90	-	-	200	-	8300G082	1	-	-	20.1/F	-
3/8	1/4	.45	250	120	-	-	200	-	8300D009 ②	1	-	-	28/H	-
3/8	1/4	.45	175	85	-	-	200	-	-	-	8300B411 ②	2	28/H	-
3/8	5/16	.75	-	-	40	20	-	180	8300D064	2	8300B412	2	-	36.2/H
3/8	5/16	.75	120	60	-	-	200	-	8300G064	2	8300G412	2	20.1/F	-
3/8	3/8	1.00	-	-	30	15	-	180	8300D072	2	8300B413	2	-	36.2/H
3/8	3/8	1.00	75	35	-	-	200	-	8300G072	2	8300G413	2	20.1/F	-
1/2	5/16	.75	-	-	40	20	-	180	8300D068	2	8300B403	3	-	36.2/H
1/2	5/16	.75	120	60	-	-	200	-	8300G068	2	8300G403	3	20.1/F	-
1/2	3/8	1.00	-	-	30	15	-	180	8300D076	2	8300B404	3	-	36.2/H
1/2	3/8	1.00	75	35	-	-	200	-	8300G076	2	8300G404	3	20.1/F	-
NBR SEATS AND BRASS DISCS														
1/4	3/16	.25	-	-	125	60	-	180	8300D058R	1	-	-	-	36.2/H
1/4	3/16	.25	250	150	-	-	180	-	8300G058R	1	-	-	20.1/F	-
1/4	1/4	.39	-	-	75	35	-	180	8300A081R	1	-	-	-	36.2/H
1/4	1/4	.39	150	75	-	-	180	-	8300G081R	1	-	-	20.1/F	-
3/8	1/4	.39	-	-	75	35	-	180	8300A082R	1	-	-	-	36.2/H
3/8	1/4	.39	150	75	-	-	180	-	8300G082R	1	-	-	20.1/F	-
3/8	5/16	.53	-	-	40	20	-	180	8300D064R	2	-	-	-	36.2/H
3/8	5/16	.53	120	60	-	-	180	-	8300G064R	2	-	-	20.1/F	-
1/2	5/16	.53	-	-	40	20	-	180	8300D068R	2	-	-	-	36.2/H
1/2	5/16	.53	120	60	-	-	180	-	8300G068R	2	-	-	20.1/F	-
PHOSPHOR BRONZE SEATS - STEAM SERVICE ONLY														
1/4	1/4	.45	100	50	-	-	344	-	8315G002	1	-	-	16.1/H	-
3/8	1/4	.45	100	50	-	-	344	-	8315G003	1	-	-	16.1/H	-
3/8	5/16	.75	105	50	-	-	344	-	8315 034 ③	4	-	-	28.2/H	-
1/2	5/16	.75	105	50	-	-	344	-	8315 035 ③	4	-	-	28.2/H	-

① NC = Normally Closed: Exhaust pressure when de-energized. NO = Normally Open: Applies pressure when de-energized. Univ. = Universal: Pressure at any port.
② "EF" Prefix variations are suitable for enclosures Types 3, 4, 7 (C&D), and 9 (E) only and have a temperature range code T3A. *Refer to Engineering Section for details.*
③ Not available with 24 volt, 60 Hz coil. ④ Water rating, CSA certified up to 232 psi.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Air-Inert Gas, Water, Lt. Oil ④ Max. AC NC/NO	Max. AC Univ.	Max. DC NC/NO	Max. DC Univ.	Max. Fluid Temp. ˚C AC	Max. Fluid Temp. ˚C DC	Brass Body Add Suffix "F" for NC, "G" for NO, "U" for Univ. ① Catalog Number	Brass Body Const. Ref.	Stainless Steel Body Add Suffix "F" for NC, "G" for NO, "U" for Univ. ① Catalog Number	Stainless Steel Body Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
METAL SEATS AND DISCS														
1/8	3	.11	-	-	17	9	-	82	8300D055	1	-	-	-	36.2/H
1/8	3	.11	38	21	-	-	93	-	8300G055	1	-	-	20.1/F	-
1/8	5	.30	-	-	9	4	-	82	8300D003	1	-	-	-	36.2/H
1/8	5	.30	17	10	-	-	93	-	8300G003	1	-	-	20.1/F	-
1/4	5	.30	-	-	9	4	-	82	8300D058	1	-	-	-	36.2/H
1/4	5	.30	17	10	-	-	93	-	8300G058	1	-	-	20.1/F	-
1/4	6	.39	-	-	5	2	-	82	8300A081	1	-	-	-	36.2/H
1/4	6	.39	13	6	-	-	93	-	8300G081	1	-	-	20.1/F	-
1/4	6	.39	17	8	-	-	93	-	8300D061 ②	1	-	-	28/H	-
3/8	6	.39	-	-	3	2	-	82	-	-	8300B410	2	-	36.2/H
3/8	6	.39	10	5	-	-	93	-	-	-	8300G410	2	20.1/F	-
3/8	6	.39	-	-	5	2	-	82	8300A082	1	-	-	-	36.2/H
3/8	6	.39	13	6	-	-	93	-	8300G082	1	-	-	20.1/F	-
3/8	6	.39	17	8	-	-	93	-	8300D009 ②	1	-	-	28/H	-
3/8	6	.39	12	6	-	-	93	-	-	-	8300B411 ②	2	28/H	-
3/8	8	.64	-	-	3	1	-	82	8300D064	2	8300B412	2	-	36.2/H
3/8	8	.64	8	4	-	-	93	-	8300G064	2	8300G412	2	20.1/F	-
3/8	10	.86	-	-	2	1	-	82	8300D072	2	8300B413	2	-	36.2/H
3/8	10	.86	5	2	-	-	93	-	8300G072	2	8300G413	2	20.1/F	-
1/2	8	.64	-	-	3	1	-	82	8300D068	2	8300B403	3	-	36.2/H
1/2	8	.64	8	4	-	-	93	-	8300G068	2	8300G403	3	20.1/F	-
1/2	10	.86	-	-	2	1	-	82	8300D076	2	8300B404	3	-	36.2/H
1/2	10	.86	5	2	-	-	93	-	8300G076	2	8300G404	3	20.1/F	-
NBR SEATS AND BRASS DISCS														
1/4	5	.21	-	-	9	4	-	82	8300D058R	1	-	-	-	36.2/H
1/4	5	.21	17	10	-	-	82	-	8300G058R	1	-	-	20.1/F	-
1/4	6	.33	-	-	5	2	-	82	8300A081R	1	-	-	-	36.2/H
1/4	6	.33	10	5	-	-	82	-	8300G081R	1	-	-	20.1/F	-
3/8	6	.33	-	-	5	2	-	82	8300A082R	1	-	-	-	36.2/H
3/8	6	.33	10	5	-	-	82	-	8300G082R	1	-	-	20.1/F	-
3/8	8	.45	-	-	3	1	-	82	8300D064R	2	-	-	-	36.2/H
3/8	8	.45	8	4	-	-	82	-	8300G064R	2	-	-	20.1/F	-
1/2	8	.45	-	-	3	1	-	82	8300D068R	2	-	-	-	36.2/H
1/2	8	.45	8	4	-	-	82	-	8300G068R	2	-	-	20.1/F	-
PHOSPHOR BRONZE SEATS - STEAM SERVICE ONLY														
1/4	.5	.39	7	3	-	-	173	-	8315G002	1	-	-	16.1/H	-
3/8	.5	.39	7	3	-	-	173	-	8315G003	1	-	-	16.1/H	-
3/8	.6	.64	7	3	-	-	173	-	8315 034 ③	4	-	-	28.2/H	-
1/2	.6	.64	7	3	-	-	173	-	8315 035 ③	4	-	-	28.2/H	-

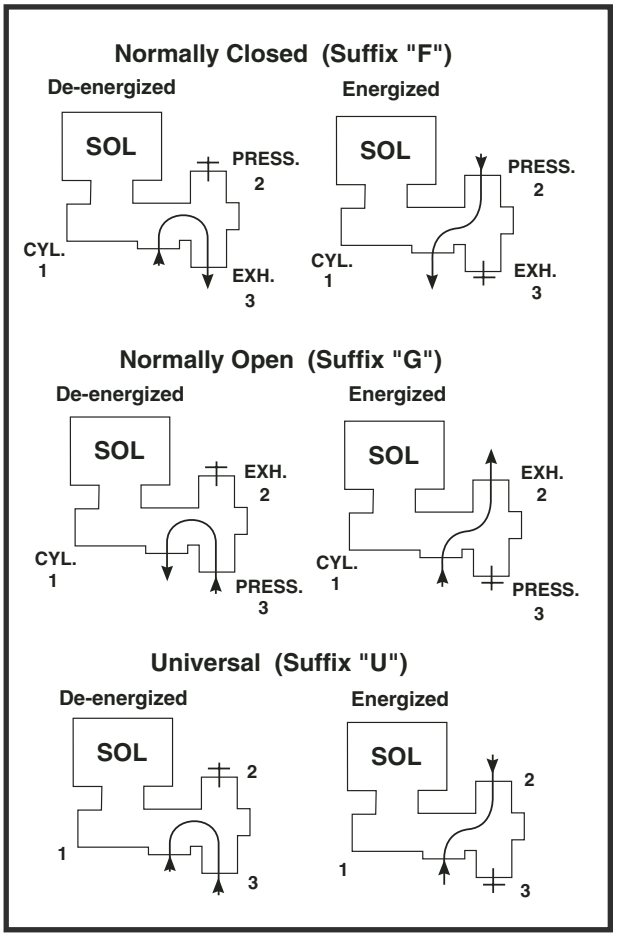
① NC = Normally Closed: Exhaust pressure when de-energized. NO = Normally Open: Applies pressure when de-energized. Univ. = Universal: Pressure at any port.
② "EF" Prefix variations are suitable for enclosures Types 3, 4, 7 (C&D), and 9 (E) only and have a temperature range code T3A. *Refer to Engineering Section for details.*
③ Not available with 24 volt, 60 Hz coil. ④ Water rating, CSA certified up to 16 bar.

Dimensions: inches (mm)

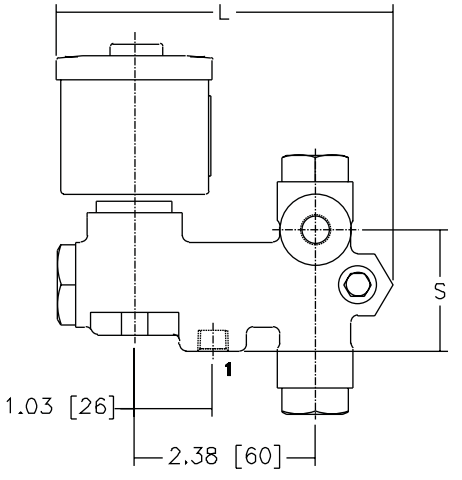
Const. Ref.		H	K	L	P	R	S	W	T
1	in	4.89	1.44	4.44	2.46	1.34	1.60	3.30	1.44
	mm	124	37	113	62	34	40	84	37
2	in	5.91	1.88	4.44	2.37	1.66	2.00	3.30	1.88
	mm	150	48	113	60	42	51	84	48
3	in	5.90	1.88	4.62	2.37	1.66	2.00	3.55	1.88
	mm	150	48	117	60	42	51	90	48
4	in	4.89	1.44	4.44	2.46	1.34	1.60	3.30	1.44
	mm	124	37	113	62	34	40	84	37

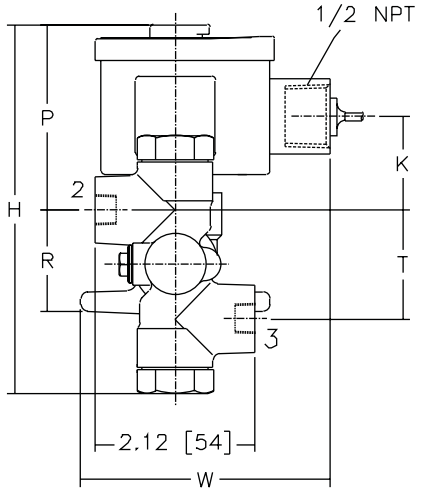
IMPORTANT: Valves must be mounted vertical and upright.

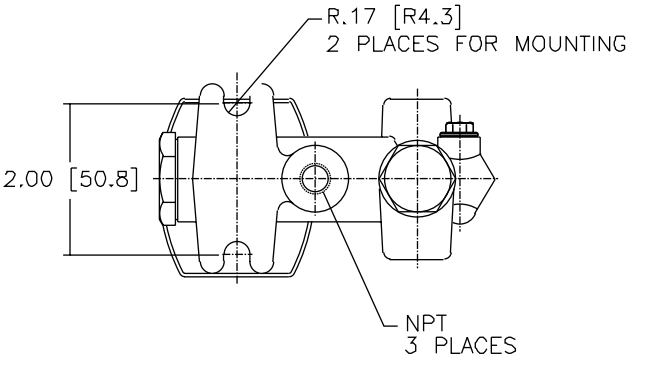
Flow Diagrams



Const. Ref. 1, 2, 3, 4

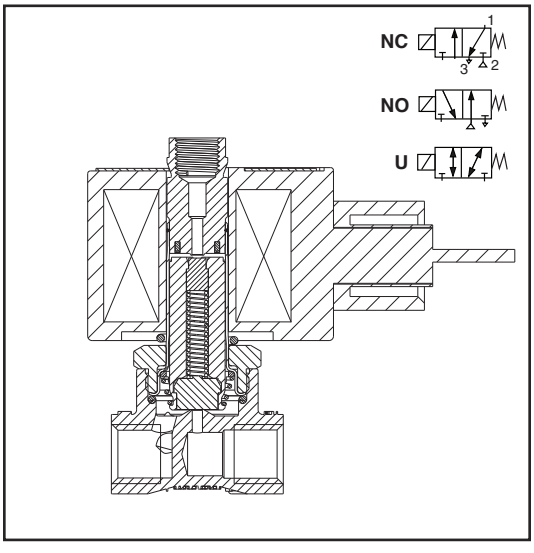






Features

- No minimum operating pressure required
- The original 3-way valve design
- Simplest valve for basic 3-way piloting operation, only a spring and two moving parts
- Moderate flow pilots, smaller control valves and actuators
- Can also be used for low-volume fluid diversion
- High speed general service



Construction

Valve Parts in Contact with Fluids		
Body	Brass	Cast 304 Stainless Steel
Seals and Discs	Nitrile (Upper Disk - FKM)	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Core Guide	POM	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	238614	238714

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220, 440 volts AC, 50 Hz). 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Options

Mounting bracket (suffix MB)
Quarter-turn manual operator with screw slot (suffix MS)
FKM (suffix V)
Oxygen (suffix N)
Silicon Free (suffix SF)

Nominal Ambient Temp. Ranges

The nominal limitation of 32˚F (0˚C) is advisable for any valve that might contain moisture (water vapor).

AC: -13˚F to 131˚F (-25˚C to 55˚C)*
DC: -13˚F to 131˚F (-25˚C to 55˚C)
*Max. ambient for explosionproof (EF/EV) is 125˚F (52˚C)

Optional: For AC, the max. ambient temperature is 140˚F (60˚C) with Class H coil (with or without prefix EF/EV)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed General Purpose Valves.

Meets applicable CE directives.

SIL 3 capable per IEC 61508 on normally closed const. Third party certification provided by EXIDA.
Refer to Engineering Section for details.

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)	Cv Flow Factor 2-1	Cv Flow Factor 1-3	Operating Pressure Differential (psi)						Max. Fluid Temp. °F ①		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation	
				Max. AC			Max. DC										
				Air-Inert Gas	Water ②	Light Oil @ 45 SSU	Air-Inert Gas	Water ②	Light Oil @ 45 SSU	AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
Universal Operation (Pressure at any port)																	
1/8	3/64	0.05	0.06	200	200	200	200	200	200	200	200	8314H041	1	8314H042	1	10.1/F	11.6/F
1/8	3/32	0.15	0.20	105	85	60	105	85	60	200	200	8314H043	1	8314H044	1	10.1/F	11.6/F
1/8	1/8	0.25	0.20	70	70	40	55	45	45	200	200	8314H045	1	8314H040	1	10.1/F	11.6/F
1/4	3/64	0.05	0.06	200	200	200	200	200	200	200	200	8314H006	2	8314H123	2	10.1/F	11.6/F
1/4	3/32	0.15	0.20	105	85	60	105	85	60	200	200	8314H007	2	8314H120 ③	2	10.1/F	11.6/F
1/4	1/8	0.25	0.20	70	70	40	55	45	45	200	200	8314H008	2	8314H124	2	10.1/F	11.6/F
1/4	5/32	0.50	0.20	35	35	35	25	25	25	200	200	8314H127	2	8314H227	2	10.1/F	11.6/F
1/4	7/32	0.70	0.20	18	18	18	12	12	12	200	200	8314H128	2	8314H228	2	10.1/F	11.6/F
1/4	9/32	0.85	0.20	10	10	10	8	8	8	200	200	8314H129	2	8314H229	2	10.1/F	11.6/F
Normally Closed (Closed when de-energized) – $PFD_{AVG} = 4.77 \times 10^{-4}$																	
1/8	3/64	0.05	0.06	300	300	300	250	250	250	200	200	8314H031	1	8314H037	1	10.1/F	11.6/F
1/8	3/32	0.15	0.20	205	205	190	150	120	90	200	200	8314H032	1	8314H038	1	10.1/F	11.6/F
1/8	1/8	0.25	0.20	145	145	100	90	90	70	200	200	8314H033	1	8314H039	1	10.1/F	11.6/F
1/4	3/64	0.05	0.06	300	300	300	250	250	250	200	200	8314H034	2	8314H068	2	10.1/F	11.6/F
1/4	3/32	0.15	0.20	205	205	190	150	120	90	200	200	8314H035	2	8314H121 ③	2	10.1/F	11.6/F
1/4	1/8	0.25	0.20	145	145	100	90	90	70	200	200	8314H036	2	8314H126	2	10.1/F	11.6/F
1/4	5/32	0.50	0.20	75	75	75	50	50	50	200	200	8314H130	2	8314H230	2	10.1/F	11.6/F
1/4	7/32	0.70	0.20	40	40	40	25	25	25	200	200	8314H131	2	8314H231	2	10.1/F	11.6/F
1/4	9/32	0.85	0.20	25	25	25	15	15	15	200	200	8314H132	2	8314H232	2	10.1/F	11.6/F
Normally Open (Open when de-energized)																	
1/8	3/64	0.05	0.06	300	300	300	250	250	250	200	200	8314H049	1	8314H055	1	10.1/F	11.6/F
1/8	3/32	0.15	0.20	175	175	175	160	160	160	200	200	8314H050	1	8314H056	1	10.1/F	11.6/F
1/8	1/8	0.25	0.20	160	160	160	150	150	120	200	200	8314H051	1	8314H057	1	10.1/F	11.6/F
1/4	3/64	0.05	0.06	300	300	300	250	250	250	200	200	8314H052	2	8314H069	2	10.1/F	11.6/F
1/4	3/32	0.15	0.20	175	175	175	160	160	160	200	200	8314H053	2	8314H122	2	10.1/F	11.6/F
1/4	1/8	0.25	0.20	160	160	160	150	150	120	200	200	8314H054	2	8314H070	2	10.1/F	11.6/F
1/4	5/32	0.50	0.20	150	150	150	65	60	60	200	200	8314H133	2	8314H233	2	10.1/F	11.6/F
1/4	7/32	0.70	0.20	100	100	100	35	35	35	200	200	8314H134	2	8314H234	2	10.1/F	11.6/F
1/4	9/32	0.85	0.20	65	65	65	25	25	25	200	200	8314H135	2	8314H235	2	10.1/F	11.6/F

① Maximum fluid temperature for light oil @ 45 SSU is 180˚F. ② Water rating, CSA certified up to 232 psi. ③ ATEX/IECEx certified with prefix "EV".

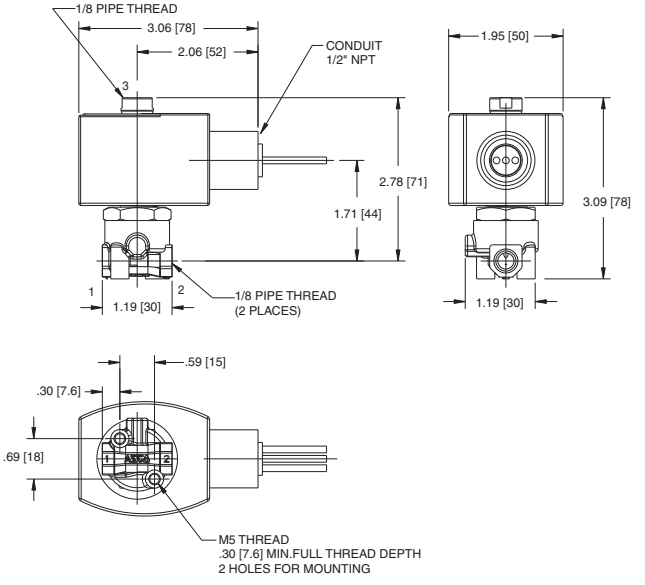
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h) 2-1	Kv Flow Factor (m^3/h) 1-3	Operating Pressure Differential (bar)						Max. Fluid Temp. °C ①		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation	
				Max. AC			Max. DC										
				Air-Inert Gas	Water ②	Light Oil @ 45 SSU	Air-Inert Gas	Water ②	Light Oil @ 45 SSU	AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
Universal Operation (Pressure at any port)																	
1/8	1.2	0.04	0.05	14	14	14	14	14	14	93	93	8314H041	1	8314H042	1	10.1/F	11.6/F
1/8	2.4	0.13	0.17	7	6	4	7	6	4	93	93	8314H043	1	8314H044	1	10.1/F	11.6/F
1/8	3.2	0.22	0.17	5	5	3	4	3	3	93	93	8314H045	1	8314H040	1	10.1/F	11.6/F
1/4	1.2	0.04	0.05	14	14	14	14	14	14	93	93	8314H006	2	8314H123	2	10.1/F	11.6/F
1/4	2.4	0.13	0.17	7	6	4	7	6	4	93	93	8314H007	2	8314H120 ③	2	10.1/F	11.6/F
1/4	3.2	0.22	0.17	5	5	3	4	3	3	93	93	8314H008	2	8314H124	2	10.1/F	11.6/F
1/4	4.0	0.43	0.17	2.5	2.5	2.5	2	2	2	93	93	8314H127	2	8314H227	2	10.1/F	11.6/F
1/4	5.6	0.60	0.17	1.5	1.5	1.5	1	1	1	93	93	8314H128	2	8314H228	2	10.1/F	11.6/F
1/4	7.1	0.73	0.17	0.7	0.7	0.7	0.6	0.6	0.6	93	93	8314H129	2	8314H229	2	10.1/F	11.6/F
Normally Closed (Closed when de-energized) – $PFD_{AVG} = 4.77 \times 10^{-4}$																	
1/8	1.2	0.04	0.05	21	21	21	17	17	17	93	93	8314H031	1	8314H037	1	10.1/F	11.6/F
1/8	2.4	0.13	0.17	14	14	13	10	8	6	93	93	8314H032	1	8314H038	1	10.1/F	11.6/F
1/8	3.2	0.22	0.17	10	10	7	6	6	5	93	93	8314H033	1	8314H039	1	10.1/F	11.6/F
1/4	1.2	0.04	0.05	21	21	21	17	17	17	93	93	8314H034	2	8314H068	2	10.1/F	11.6/F
1/4	2.4	0.13	0.17	14	14	13	10	8	6	93	93	8314H035	2	8314H121 ③	2	10.1/F	11.6/F
1/4	3.2	0.22	0.17	10	10	7	6	6	5	93	93	8314H036	2	8314H126	2	10.1/F	11.6/F
1/4	4.0	0.43	0.17	5.2	5.2	5.2	3.5	3.5	3.5	93	93	8314H130	2	8314H230	2	10.1/F	11.6/F
1/4	5.6	0.60	0.17	3	3	3	2	2	2	93	93	8314H131	2	8314H231	2	10.1/F	11.6/F
1/4	7.1	0.73	0.17	2	2	2	1	1	1	93	93	8314H132	2	8314H232	2	10.1/F	11.6/F
Normally Open (Open when de-energized)																	
1/8	1.2	0.04	0.05	21	21	21	17	17	17	93	93	8314H049	1	8314H055	1	10.1/F	11.6/F
1/8	2.4	0.13	0.17	12	12	12	11	11	11	93	93	8314H050	1	8314H056	1	10.1/F	11.6/F
1/8	3.2	0.22	0.17	11	11	11	10	10	8	93	93	8314H051	1	8314H057	1	10.1/F	11.6/F
1/4	1.2	0.04	0.05	21	21	21	17	17	17	93	93	8314H052	2	8314H069	2	10.1/F	11.6/F
1/4	2.4	0.13	0.17	12	12	12	11	11	11	93	93	8314H053	2	8314H122	2	10.1/F	11.6/F
1/4	3.2	0.22	0.17	11	11	11	10	10	8	93	93	8314H054	2	8314H070	2	10.1/F	11.6/F
1/4	4.0	0.43	0.17	10	10	10	4.5	4.2	4.2	93	93	8314H133	2	8314H233	2	10.1/F	11.6/F
1/4	5.6	0.60	0.17	6.8	6.8	6.8	2.5	2.5	2.5	93	93	8314H134	2	8314H234	2	10.1/F	11.6/F
1/4	7.1	0.73	0.17	4.5	4.5	4.5	2	2	2	93	93	8314H135	2	8314H235	2	10.1/F	11.6/F

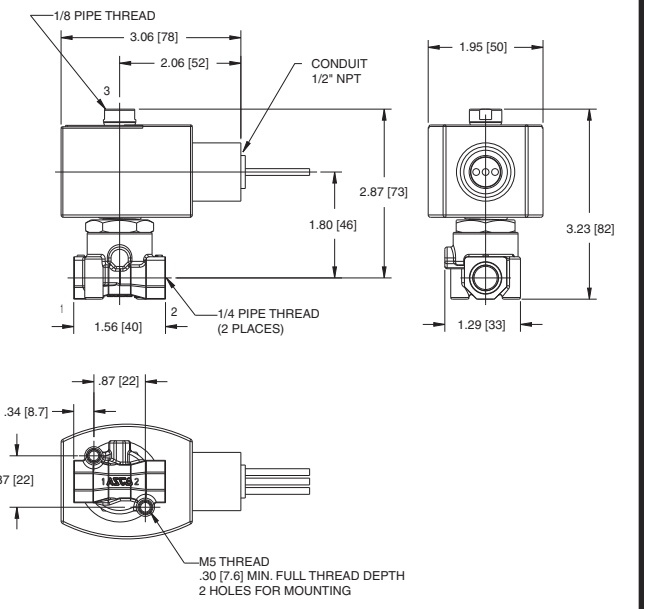
① Maximum fluid temperature for light oil @ 45 SSU is 82°C. ② Water rating, CSA certified up to 16 bar. ③ ATEX/IECEx certified with prefix "EV".

Dimensions: inches (mm)

Const. Ref. 1

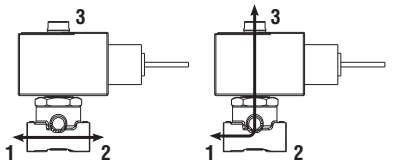


Const. Ref. 2

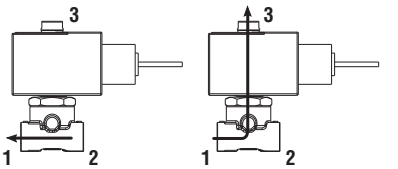


Flow Diagrams

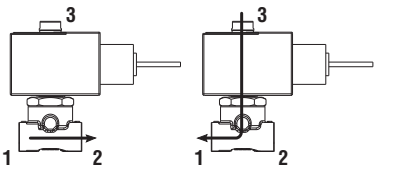
UNIVERSAL CONST.
Pressure at any Port



NORMALLY CLOSED CONST.
Pressure at 2

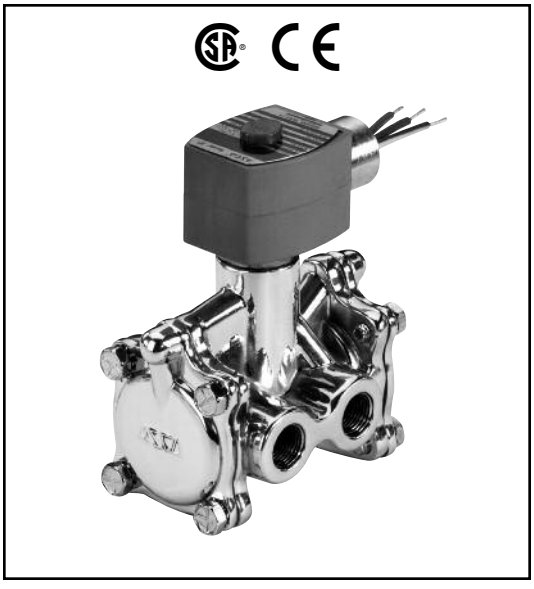


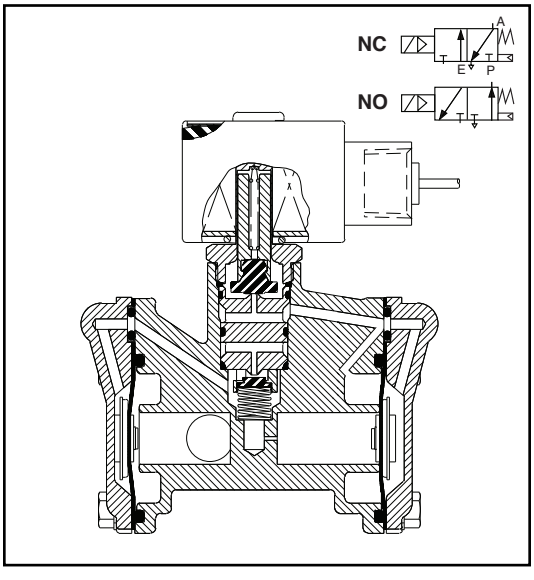
NORMALLY OPEN CONST.
Pressure at 3



Features

- Diaphragm poppet valves suitable for controlling air, inert gas, and liquids
- Internal piloting controls large orifices to provide high flows
- Can be used to pilot large actuators to provide quick closing of large control valves
- Resilient seating for tight shutoff
- Mountable in any position





Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	NBR
Diaphragm Assembly	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Springs	302 Stainless Steel and 17-7PH Stainless Steel
Shading Coil	Copper
Pilot Seat Cartridge and Disc-Holder	CA

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
					General Purpose		Explosionproof	
	DC Watts	AC Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	22.6	17.1	40	70	238610	238710	238614	238714

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 available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. Meets applicable CE directives.
Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed.
Refer to Optional Features Electrical Section for details.

Important

A minimum operating pressure differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)					Max. Fluid Temp. ˚F		Brass Body	Const. Ref.	Watt Rating/ Class of Coil Insulation ②	
			Min. ①	Max. AC		Max. DC							
				Air-Inert Gas	Water ③	Air-Inert Gas	Water ③	AC	DC	Catalog Number		AC	DC
NORMALLY CLOSED (Closed when de-energized)													
3/8	5/8	2.5	10	150	125	125	125	180	120	8316G054	1	6.1/F	10.6/F
3/8	5/8	2.5	10	250	250	250	250	180	120	8316G014 ④	2	17.1/F	22.6/F
1/2	5/8	3.2	10	150	125	125	125	180	120	8316G064	1	6.1/F	10.6/F
1/2	5/8	3.2	10	250	250	250	250	180	120	8316G024	2	17.1/F	22.6/F
3/4	11/16	4.8	10	150	125	125	125	180	120	8316G074	3	6.1/F	10.6/F
3/4	11/16	4.8	10	250	250	250	250	180	120	8316G044	4	17.1/F	22.6/F
1	1	12.5	10	150	125	125	125	180	120	8316G034	5	6.1/F	10.6/F
NORMALLY OPEN (Open when de-energized)													
3/8	5/8	2.5	10	150	125	125	125	180	120	8316G056	1	6.1/F	10.6/F
3/8	5/8	2.5	10	250	250	250	250	180	120	8316G016	2	17.1/F	22.6/F
1/2	5/8	3.2	10	150	125	125	125	180	120	8316G066	1	6.1/F	10.6/F
1/2	5/8	3.2	10	250	250	250	250	180	120	8316G026	2	17.1/F	22.6/F
3/4	11/16	4.8	10	150	125	125	125	180	120	8316G076	3	6.1/F	10.6/F
3/4	11/16	4.8	10	250	250	250	250	180	120	8316G046	4	17.1/F	22.6/F
1	1	12.5	10	150	125	125	125	180	120	8316G036	5	6.1/F	10.6/F

① 10 psi Minimum Operating Pressure Differential required. Valve vents to "zero" psi. ② On 50 hertz service, the watt rating for 6.1/F solenoid is 8.1 watts.
③ Water rating, CSA certified up to 232 psi. ④ ATEX/IECEx certified with prefix “EV”.

Specifications (Metric units)

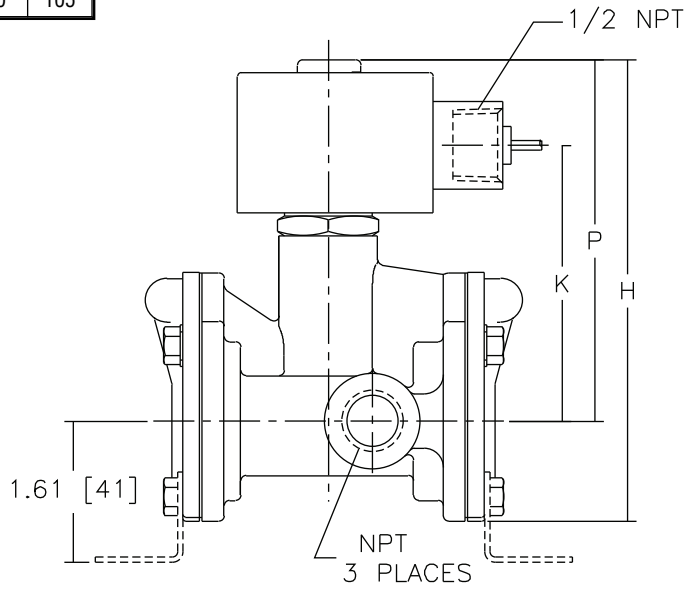
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)					Max. Fluid Temp. ˚C		Brass Body	Const. Ref.	Watt Rating/ Class of Coil Insulation ②	
			Min. ①	Max. AC		Max. DC							
				Air-Inert Gas	Water ③	Air-Inert Gas	Water ③	AC	DC	Catalog Number		AC	DC
NORMALLY CLOSED (Closed when de-energized)													
3/8	16	2.1	0.7	10	9	9	9	82	49	8316G054	1	6.1/F	10.6/F
3/8	16	2.1	0.7	17	17	17	17	82	49	8316G014 ④	2	17.1/F	22.6/F
1/2	16	2.7	0.7	10	9	9	9	82	49	8316G064	1	6.1/F	10.6/F
1/2	16	2.7	0.7	17	17	17	17	82	49	8316G024	2	17.1/F	22.6/F
3/4	17	4.1	0.7	10	9	9	9	82	49	8316G074	3	6.1/F	10.6/F
3/4	17	4.1	0.7	17	17	17	17	82	49	8316G044	4	17.1/F	22.6/F
1	25	11	0.7	10	9	9	9	82	49	8316G034	5	6.1/F	10.6/F
NORMALLY OPEN (Open when de-energized)													
3/8	16	2.1	0.7	10	9	9	9	82	49	8316G056	1	6.1/F	10.6/F
3/8	16	2.1	0.7	17	17	17	17	82	49	8316G016	2	17.1/F	22.6/F
1/2	16	2.7	0.7	10	9	9	9	82	49	8316G066	1	6.1/F	10.6/F
1/2	16	2.7	0.7	17	17	17	17	82	49	8316G026	2	17.1/F	22.6/F
3/4	17	4.1	0.7	10	9	9	9	82	49	8316G076	3	6.1/F	10.6/F
3/4	17	4.1	0.7	17	17	17	17	82	49	8316G046	4	17.1/F	22.6/F
1	25	11	0.7	10	9	9	9	82	49	8316G036	5	6.1/F	10.6/F

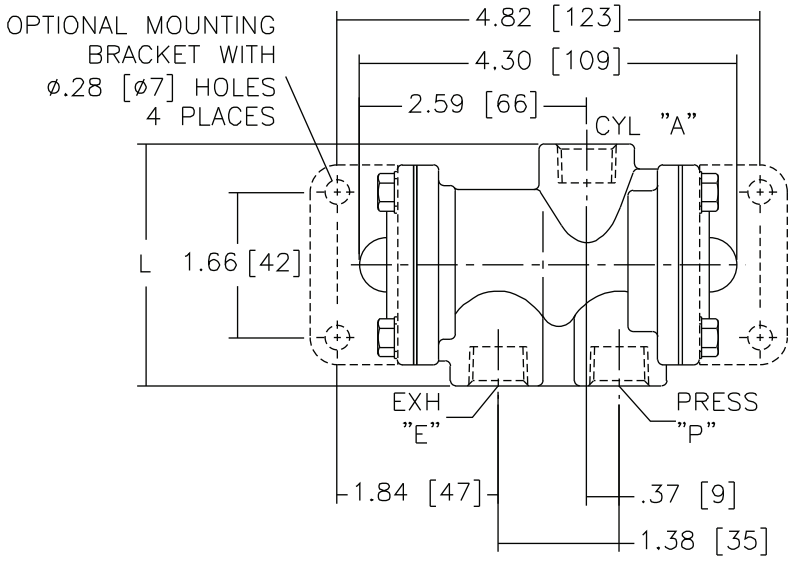
① 1 bar Minimum Operating Pressure Differential required. Valve vents to "zero" bar. ② On 50 hertz service, the watt rating for 6.1/F solenoid is 8.1 watts.
③ Water rating, CSA certified up to 16 bar. ④ ATEX/IECEx certified with prefix “EV”.

Dimensions: inches (mm)

Const. Ref.		H	K	L	P
1	in	5.08	3.08	2.76	3.94
	mm	129	78	70	100
2	in	5.26	3.15	2.76	4.12
	mm	134	80	70	105

Const. Ref. 1, 2

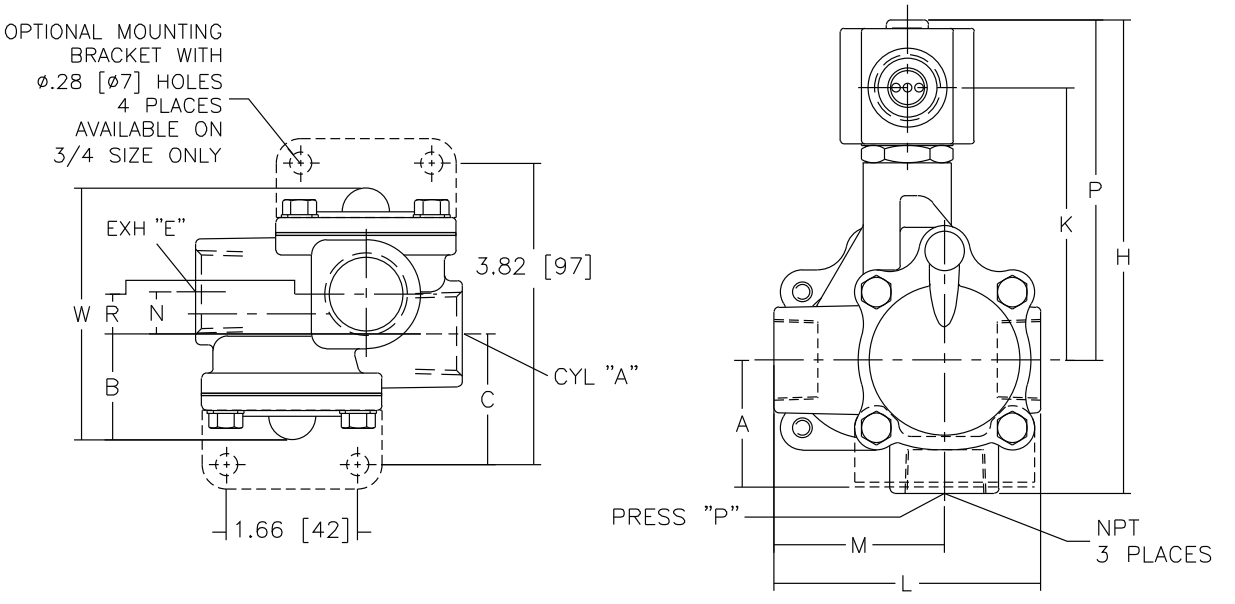




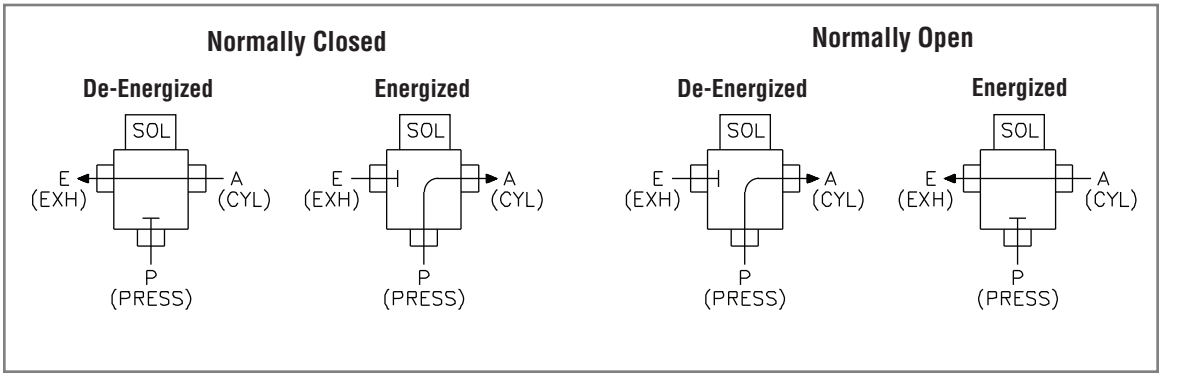
Dimensions: inches (mm)

Const. Ref.		A	B	C	H	K	L	M	N	P	R	W
3	in	1.61	1.41	1.66	6.01	3.46	3.38	2.16	.53	4.32	.50	3.31
	mm	41	36	42	153	88	86	55	13	110	13	84
4	in	1.61	1.41	1.66	6.19	3.53	3.38	2.16	.53	4.50	.50	3.31
	mm	41	36	42	157	90	86	55	13	114	13	84
5	in	-	1.80	-	6.63	3.71	4.44	2.81	.88	4.57	1.74	5.32
	mm	-	46	-	168	94	113	71	22	116	44	135

Const. Ref. 3, 4, 5

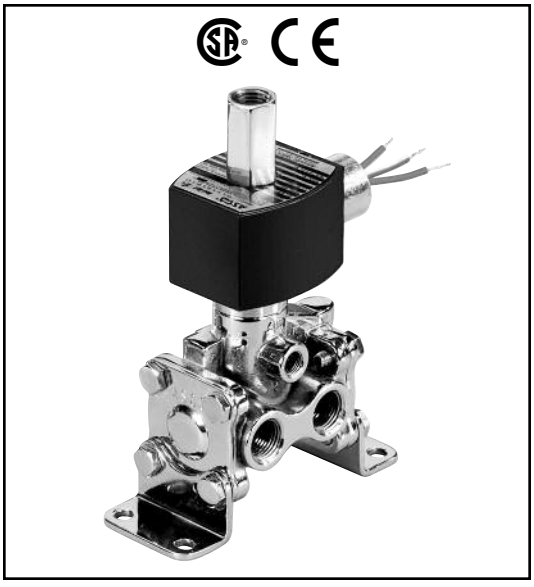


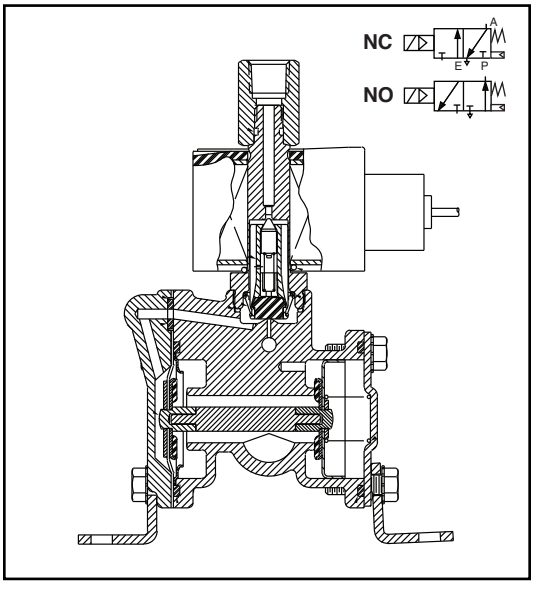
FLOW DIAGRAMS



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 Steel
Seals and Discs	Low Temp NBR	
Core Tube	305 Stainless Steel	
Core Guide	CA	
Shading Coil	Copper	Silver

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number					
		AC			General Purpose		Explosionproof (EF)		Explosionproof (EV)	
	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 (in)	Orifice Size (in)	CV Flow Factor	Min.	Max. Air Press.(psi) AC	Max. Air Press.(psi) DC	Catalog Number Brass Body	Catalog Number Stainless Steel	Const. Ref.	Max. Fluid Temp.°F AC	Max. Fluid Temp.°F DC	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
NORMALLY CLOSED (Closed when de-energized) ① – PFD_{AVG} = 9.30 x 10^{-4}												
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

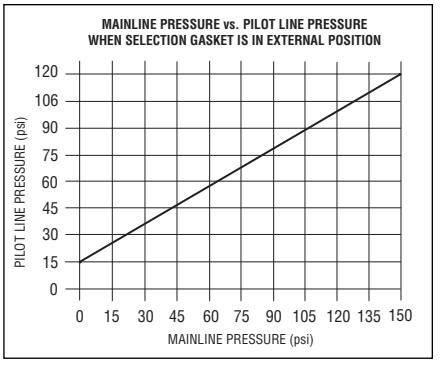
① Consult factory for Normally Open. ② Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. ③ ATEX/IECEx certified with prefix "EV". See graph below for pilot line pressure vs. mainline pressure. Minimum 15 psi (1 bar) operating pressure differential 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 (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Min.	Max. Air Press. (bar) AC	Max. Air Press. (bar) DC	Catalog Number Brass Body	Catalog Number Stainless Steel	Const. Ref.	Max. Fluid Temp.°C AC	Max. Fluid Temp.°C DC	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
NORMALLY CLOSED (Closed when de-energized) ① – PFD_{AVG} = 9.30 x 10^{-4}												
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)



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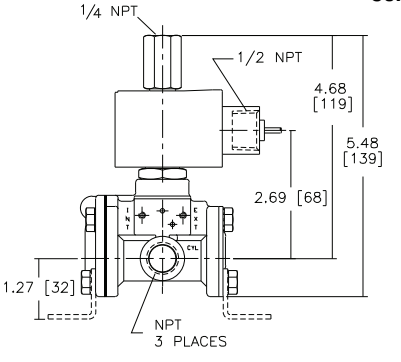

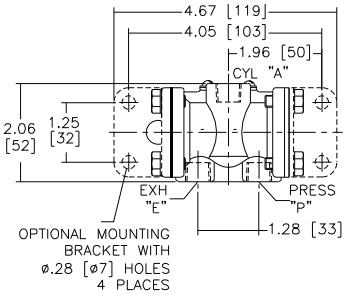

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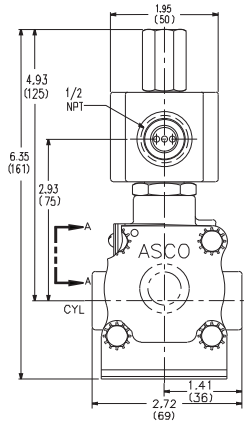
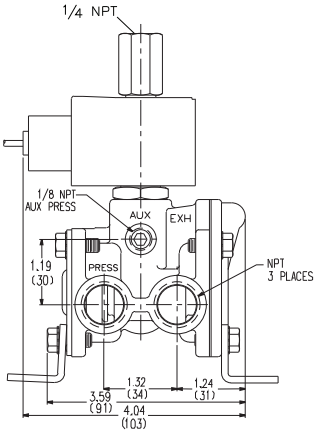
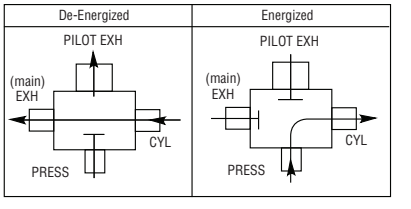
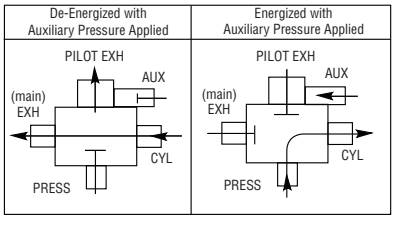




INTERNAL PILOTING MODE FLOW DIAGRAMS

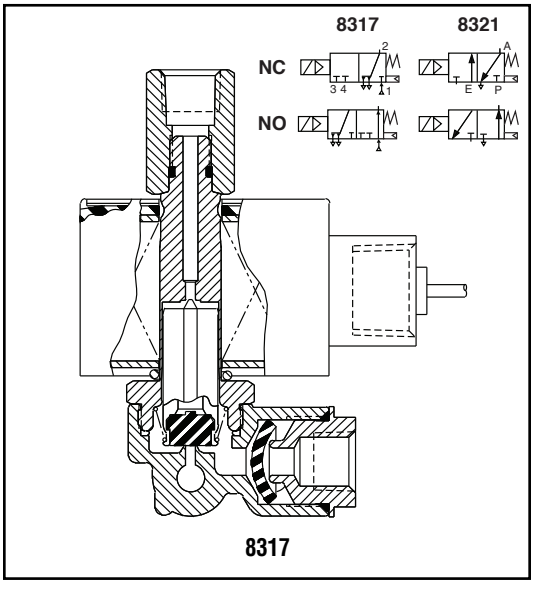


EXTERNAL PILOTING MODE FLOW DIAGRAMS



Features

- Designed for quick venting to 0 psi through the exhaust orifice
- Resilient seated poppets for tight shutoff
- Air is exhausted to quickly shift control valves
- Multi-industry applications
- Mountable in any position



Construction

Valve Parts in Contact with Fluids		
Body	Brass	304 Stainless Steel
Seals and Disc	NBR (PA upper disc for 8317 Series)	
Diaphragm	CR (8317 Series only)	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel and 17-7 PH Stainless Steel	
Shading Coil	Copper	Silver
Pilot Seat Cartridge and Disc-Holder	CA (8321 Series only)	
Piston	Brass and 303 Stainless Steel (8321 only)	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	11.6	10.1	25	50	238610	238710	238614	238714

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 available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed General Purpose Valves.
Meets applicable CE directives.
Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed.
Refer to Optional Features Electrical Section for details.

Important

A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp. °F		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation ③	
					Max. AC				Max. DC										
	Press.	Exh.	Press.	Exh.	Min. ①	Air-Inert Gas	Water	Lt. Oil ① @45 SSU	Air-Inert Gas	Water	Lt. Oil ① @45 SSU	AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
NORMALLY CLOSED (Pressure at Port 2) / NORMALLY OPEN (Pressure at Port 3)																			
1/4	3/32	1/4	.20	.73	5 ②	80	50	50	40	30	15	180	104	8317G007	2	8317G008	4	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized)																			
1/4	3/32	1/4	.20	.73	5 ②	150	150	95	75	55	30	180	104	8317G035	2	8317G036 ④	4	10.1/F	11.6/F
1/4	9/32	11/32	.80	1.2	10	200	200	200	200	200	200	180	120	8321G001	3	-	-	6.1/F	10.6/F
3/8	9/32	11/32	.80	1.2	10	200	200	200	200	200	200	180	120	8321G002	3	-	-	6.1/F	10.6/F
NORMALLY CLOSED (Closed when de-energized), Air Only - Vents to Atmosphere																			
1/4	3/32	1/4	.20	.73	5	150	-	-	-	-	-	180	-	8317G023	1	8317G024 ④	5	10.1/F	-
NORMALLY OPEN (Open when de-energized)																			
1/4	3/32	1/4	.15	.73	5 ②	160	160	95	75	45	25	180	104	8317G053	2	8317G054	4	10.1/F	11.6/F
1/4	9/32	11/32	.80	1.2	10	200	200	200	200	200	200	180	120	8321G003	3	-	-	6.1/F	10.6/F
3/8	9/32	11/32	.80	1.2	10	200	200	200	200	200	200	180	120	8321G004	3	-	-	6.1/F	10.6/F

① Rating for 8321 valves established with 300 SSU light oil. ② Minimum Operating Pressure Differential on light oil is 10 psi.
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts. ④ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

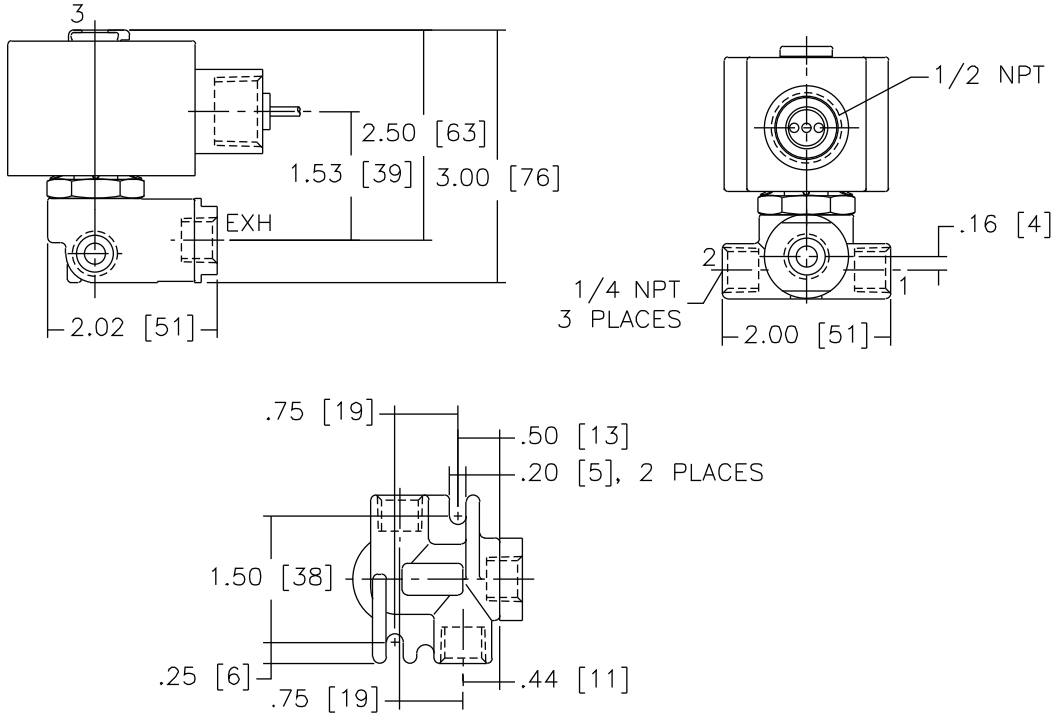
Pipe Size (in)	Orifice Size (mm)		Kv Flow Factor (m^3/h)		Operating Pressure Differential (bar)							Max. Fluid Temp.°C		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation ③	
					Max. AC				Max. DC										
	Press.	Exh.	Press.	Exh.	Min. ①	Air-Inert Gas	Water	Lt. Oil ① @45 SSU	Air-Inert Gas	Water	Lt. Oil ① @45 SSU	AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
NORMALLY CLOSED (Pressure at Port 2) / NORMALLY OPEN (Pressure at Port 3)																			
1/4	2	6	.17	.63	.3 ②	6	3	3	2.7	2	1	82	40	8317G007	2	8317G008	4	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized)																			
1/4	2	6	.17	.63	.3 ②	10	10	7	5	4	2	82	40	8317G035	2	8317G036 ④	4	10.1/F	11.6/F
1/4	7	9	.69	1.0	.7	14	14	14	14	14	14	82	49	8321G001	3	-	-	6.1/F	10.6/F
3/8	7	9	.69	1.0	.7	14	14	14	14	14	14	82	49	8321G002	3	-	-	6.1/F	10.6/F
NORMALLY CLOSED (Closed when de-energized), Air Only - Vents to Atmosphere																			
1/4	2	6	.17	.63	.3	10	-	-	-	-	-	82	-	8317G023	1	8317G024 ④	5	10.1/F	-
NORMALLY OPEN (Open when de-energized)																			
1/4	2	6	.13	.63	.3 ②	11	11	7	5	3	2	82	40	8317G053	2	8317G054	4	10.1/F	11.6/F
1/4	7	9	.69	1.0	.7	14	14	14	14	14	14	82	49	8321G003	3	-	-	6.1/F	10.6/F
3/8	7	9	.69	1.0	.7	14	14	14	14	14	14	82	49	8321G004	3	-	-	6.1/F	10.6/F

① Rating for 8321 valves established with 300 SSU light oil. ② Minimum Operating Pressure Differential on light oil is .7 bar.
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts. ④ ATEX/IECEx certified with prefix "EV".

Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
2	in	4.04	1.55	2.05	3.54	2.00
	mm	103	39	52	90	51
4	in	4.02	1.53	2.02	3.52	2.00
	mm	102	39	51	89	51

Const. Ref. 1, 5



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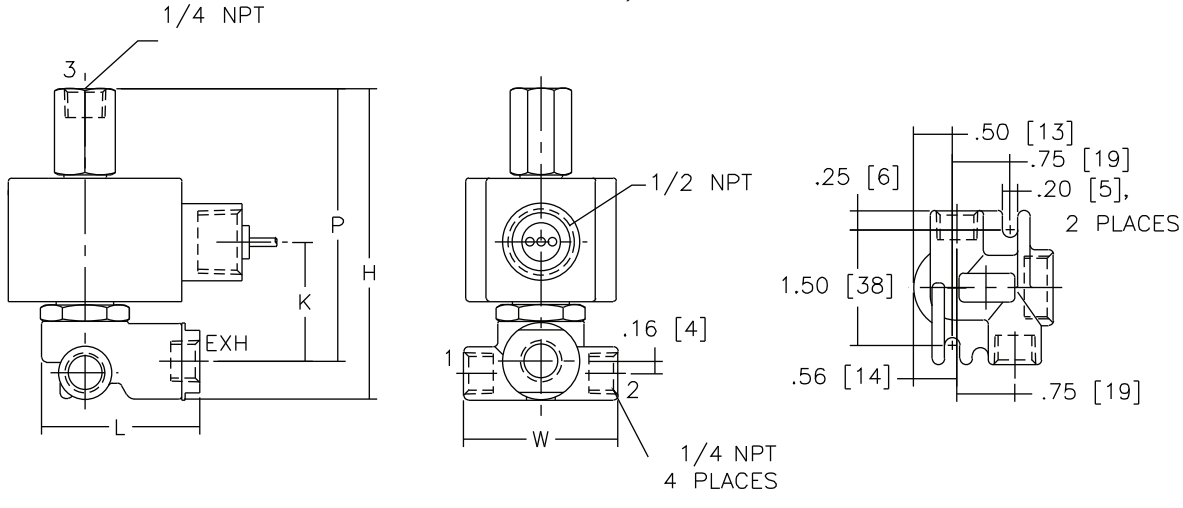
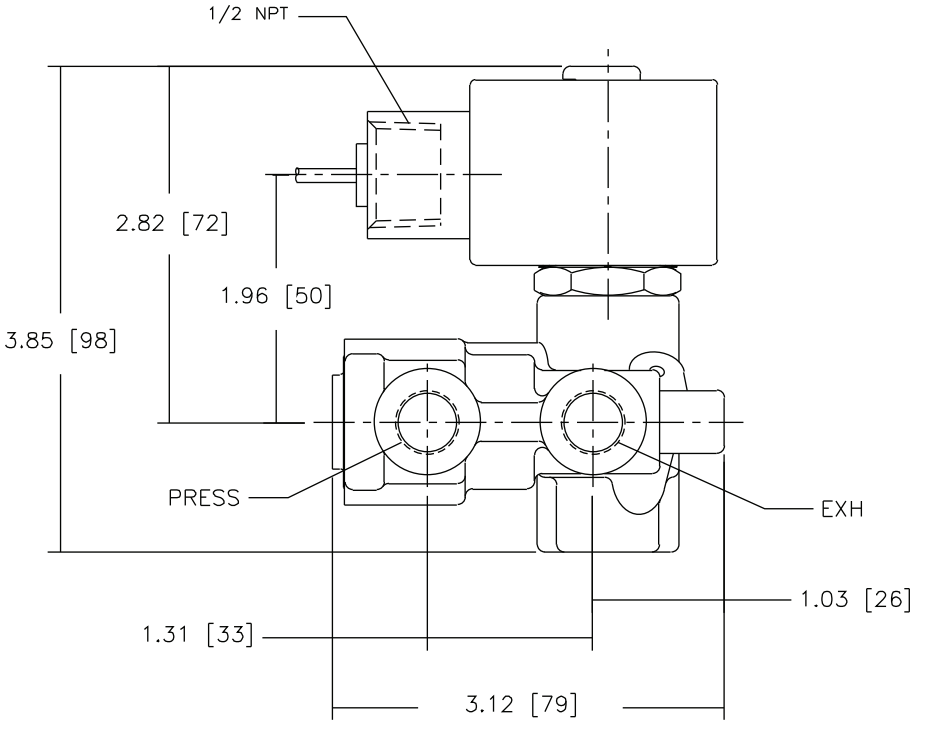
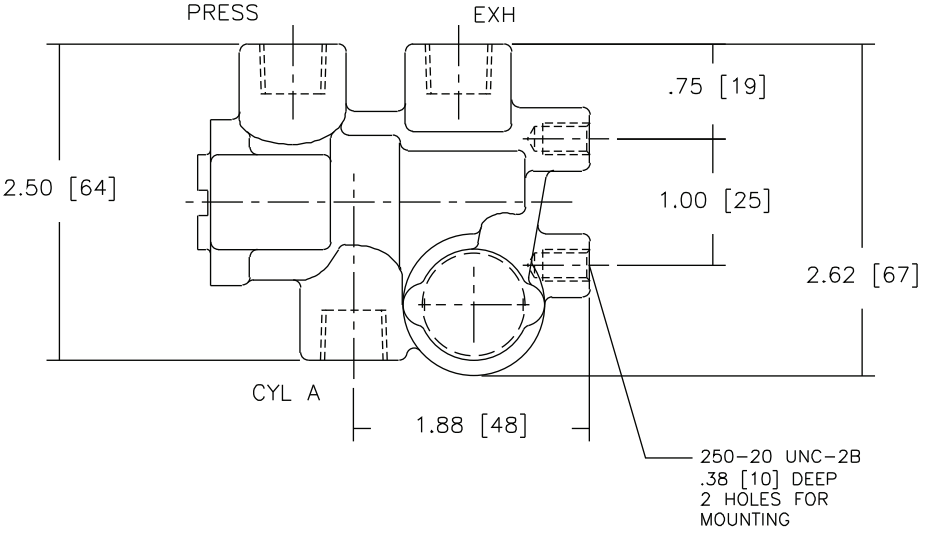


Dimensions: inches (mm)

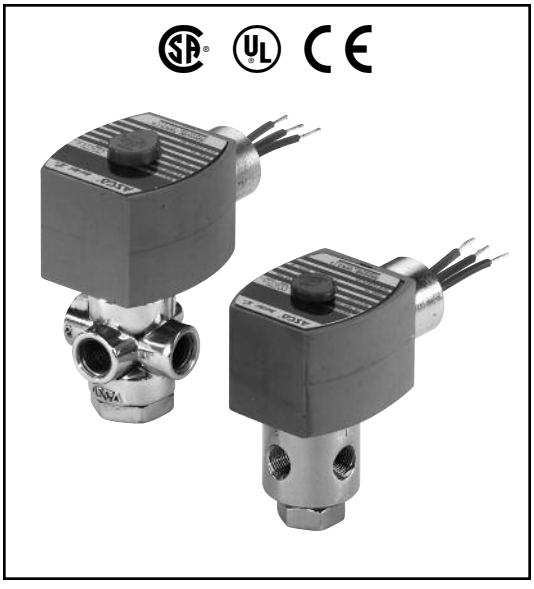
Const. Ref. 3

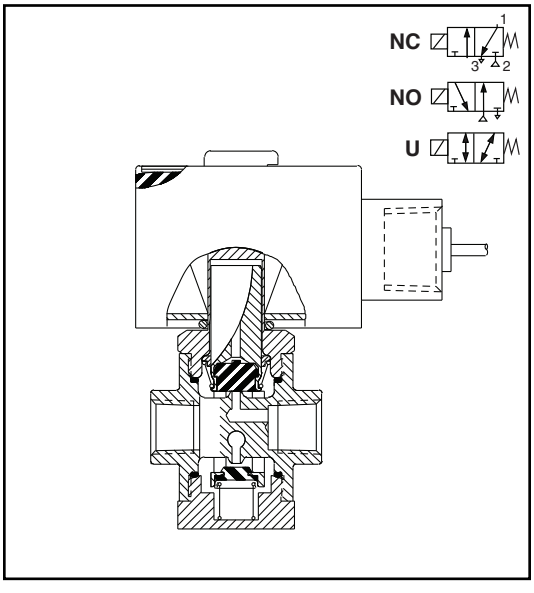




Features

- All NPT connections are in the valve body to allow in-line piping
- No Minimum Operating Pressure Differential required
- Broadest range of applications
- Mountable in any position





Construction

Valve Parts in Contact with Fluids		
Body	Brass	303 Stainless Steel
Seals and Disc	NBR or Cast UR, as Listed	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Disc-Holder	CA	
Core Guide	CA (10.1 and 17.1 Watt only)	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	-	9.1	25	40	238210	-	238214	-
F	11.6	10.1	25	50	238610	238710	238614	238714
F	22.6	17.1	40	70	238610	238710	238614	238714

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

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Note: Some stainless steel constructions are rated -40˚F (-40˚C). See note ④ in specifications table.

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed General Purpose Valves. Meets applicable CE directives.

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

Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed.
Refer to Optional Features Electrical Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Max. AC Air-Inert Gas	Max. AC Water ⑤	Max. AC Lt. Oil @ 300 SSU	Max. DC Air-Inert Gas	Max. DC Water ⑤	Max. DC Lt. Oil @ 300 SSU	Max. Fluid Temp. °F AC	Max. Fluid Temp. °F DC	Brass Body Catalog Number	Brass Body Const. Ref.	Stainless Steel Body Catalog Number	Stainless Steel Body Const. Ref.	Watt Rating/ Class of Coil Insulation ② AC	Watt Rating/ Class of Coil Insulation ② DC
UNIVERSAL OPERATION (Pressure at any port)																
1/8	3/64	0.06	175	175	175	125	125	125	140	120	8320G130 ①	1	8320G140 ①	1	9.1F	10.6F
1/8	1/16	0.09	100	100	100	65	65	65	180	120	8320G001	1	8320G041 ③	1	9.1F	10.6F
1/8	1/16	0.09	175	175	175	125	125	125	200	150	8320G212	4	8320G221 ④⑥	4	17.1/F	22.6/F
1/8	3/32	0.12	50	50	50	50	50	50	180	120	8320G083	1	8320G087 ③	1	6.1/F	10.6/F
1/8	3/32	0.12	100	100	100	60	60	60	200	150	8320G213	4	8320G222 ④	4	17.1/F	11.6/F
1/8	1/8	0.21	30	30	30	20	20	20	180	120	8320G003	1	8320G043 ③	1	9.1/F	10.6/F
1/8	1/8	0.21	50	50	50	25	25	25	200	150	8320G214	4	8320G223 ④	4	17.1/F	11.6/F
1/4	1/16	0.09	125	130	130	75	75	75	200	150	8320G172	2	-	-	10.1/F	11.6/F
1/4	1/16	0.09	175	175	175	125	125	125	200	150	-	-	8320G230 ④⑥	3	17.1/F	22.6/F
1/4	3/32	0.12	100	100	100	60	60	60	200	150	8320G174	2	8320G200 ③④⑥	3	17.1/F	11.6/F
1/4	1/8	0.25	50	50	50	25	25	25	200	150	8320G176 ⑥	2	8320G201 ③④⑥	3	17.1/F	11.6/F
1/4	11/64	0.35	20	20	20	12	12	12	200	150	8320G178	2	-	-	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized) – PFD_{AVG} = 6.81 x 10^{-4}																
1/8	3/64	0.06	200	200	200	200	200	200	180	120	8320G132	1	8320G142 ③	1	6.1F	10.6/F
1/8	1/16	0.09	150	125	125	125	125	125	180	120	8320G013	1	8320G045 ③	1	6.1F	10.6/F
1/8	1/16	0.09	210	225	225	160	160	160	200	150	8320G215	4	8320G224 ④	4	17.1/F	11.6/F
1/8	3/32	0.12	100	100	100	100	100	100	180	120	8320G015	1	8320G047 ③	1	6.1F	10.6/F
1/8	3/32	0.12	150	150	150	115	115	115	200	150	8320G216	4	8320G225 ④	4	10.1/F	11.6/F
1/8	1/8	0.21	40	40	40	40	40	40	180	120	8320G017	1	8320G049 ③	1	6.1F	10.6/F
1/8	1/8	0.21	85	85	85	60	60	60	200	150	8320G217	4	8320G226 ④	4	10.1/F	11.6/F
1/4	1/16	0.09	210	225	225	160	160	160	200	150	8320G182 ⑥	2	8320G231 ④	3	17.1/F	11.6/F
1/4	3/32	0.12	150	150	150	115	115	115	200	150	8320G184	2	8320G202 ③④⑥	3	10.1/F	11.6/F
1/4	1/8	0.25	85	85	85	60	60	60	200	150	8320G186	2	8320G203 ③④⑥	3	10.1/F	11.6/F
1/4	11/64	0.35	45	45	45	25	25	25	200	150	8320G188	2	-	-	10.1/F	11.6/F
NORMALLY OPEN (Open when de-energized)																
1/8	3/64	0.06	200	200	200	200	200	200	180	120	8320G136	1	8320G146 ③	1	6.1F	10.6/F
1/8	1/16	0.09	150	125	125	125	125	125	180	120	8320G027	1	8320G051 ③	1	6.1F	10.6/F
1/8	1/16	0.09	235	250	250	160	160	160	200	150	8320G218	4	8320G227 ④	4	17.1/F	11.6/F
1/8	3/32	0.12	100	100	100	100	100	100	180	120	8320G029	1	8320G053 ③	1	6.1F	10.6/F
1/8	3/32	0.12	150	140	140	100	100	100	200	150	8320G219	4	8320G228 ④	4	10.1/F	11.6/F
1/8	1/8	0.21	40	40	40	40	40	40	180	120	8320G031	1	8320G055 ③	1	6.1F	10.6/F
1/8	1/8	0.21	70	70	70	55	55	55	200	150	8320G220	4	8320G229 ④	4	10.1/F	11.6/F
1/4	1/16	0.09	235	250	250	160	160	160	200	150	8320G192 ⑥	2	8320G232 ④	3	17.1/F	11.6/F
1/4	3/32	0.12	150	140	140	100	100	100	200	150	8320G194	2	8320G204 ③④⑥	3	10.1/F	11.6/F
1/4	1/8	0.25	70	70	70	55	55	55	200	150	8320G196	2	8320G205 ③④	3	10.1/F	11.6/F
1/4	11/64	0.35	40	40	40	30	30	30	200	150	8320G198	2	-	-	10.1/F	11.6/F

① Supplied with cast UR disc.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.
③ Can be used for ***dry*** natural gas service with the EF prefix.
④ Constructions standard rated -40˚F (-40˚C) ambient temperature. EFX prefix and TPL # not required.
⑤ Water rating, CSA certified up to 232 psi.
⑥ ATEX/IECEx certified with prefix "EV".

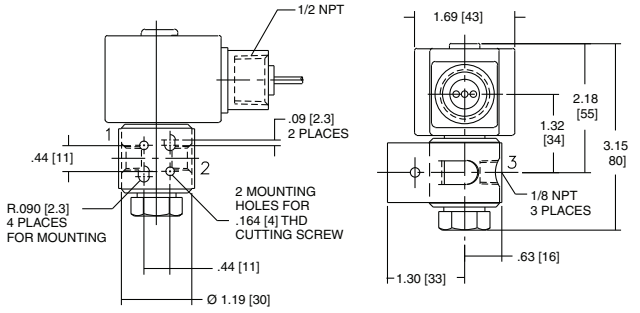
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Operating Pressure Differential (bar) Max. AC Air-Inert Gas	Max. AC Water ⑤	Max. AC Lt. Oil @ 300 SSU	Max. DC Air-Inert Gas	Max. DC Water ⑤	Max. DC Lt. Oil @ 300 SSU	Max. Fluid Temp. °C AC	Max. Fluid Temp. °C DC	Brass Body Catalog Number	Brass Body Const. Ref.	Stainless Steel Body Catalog Number	Stainless Steel Body Const. Ref.	Watt Rating/ Class of Coil Insulation② AC	Watt Rating/ Class of Coil Insulation② DC
UNIVERSAL OPERATION (Pressure at any port)																
1/8	1.2	0.05	12	12	12	9	9	9	60	49	8320G130 ①	1	8320G140 ①	1	9.1F	10.6F
1/8	1.6	0.08	7	7	7	4	4	4	82	49	8320G001	1	8320G041 ③	1	9.1F	10.6F
1/8	1.6	0.08	12	12	12	9	9	9	93	66	8320G212	4	8320G221 ④⑥	4	17.1/F	22.6/F
1/8	2.4	0.10	3	3	3	3	3	3	82	49	8320G083	1	8320G087 ③	1	6.1/F	10.6/F
1/8	2.4	0.10	7	7	7	4	4	4	93	66	8320G213	4	8320G222 ④	4	17.1/F	11.6/F
1/8	3.2	0.18	2	2	2	1	1	1	82	49	8320G003	1	8320G043 ③	1	9.1/F	10.6/F
1/8	3.2	0.18	3	3	3	2	2	2	93	66	8320G214	4	8320G223 ④	4	17.1/F	11.6/F
1/4	1.6	0.08	9	9	9	5	5	5	93	66	8320G172	2	-	-	10.1/F	11.6/F
1/4	1.6	0.08	12	12	12	9	9	9	93	66	-	-	8320G230 ④⑥	3	17.1/F	22.6/F
1/4	2.4	0.10	7	7	7	4	4	4	93	66	8320G174	2	8320G200 ③④⑥	3	17.1/F	11.6/F
1/4	3.2	0.21	3	3	3	2	2	2	93	66	8320G176 ⑥	2	8320G201 ③④⑥	3	17.1/F	11.6/F
1/4	4.4	0.30	1	1	1	1	1	1	93	66	8320G178	2	-	-	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized) – PFD_{AVG} = 6.81 x 10^{-4}																
1/8	1.2	0.05	14	14	14	14	14	14	82	49	8320G132	1	8320G142 ③	1	6.1F	10.6/F
1/8	1.6	0.08	10	9	9	9	9	9	82	49	8320G013	1	8320G045 ③	1	6.1F	10.6/F
1/8	1.6	0.08	14	15	15	11	11	11	93	66	8320G215	4	8320G224 ④	4	17.1/F	11.6/F
1/8	2.4	0.10	7	7	7	7	7	7	82	49	8320G015	1	8320G047 ③	1	6.1F	10.6/F
1/8	2.4	0.10	10	10	10	8	8	8	93	66	8320G216	4	8320G225 ④	4	10.1/F	11.6/F
1/8	3.2	0.18	3	3	3	3	3	3	82	49	8320G017	1	8320G049 ③	1	6.1F	10.6/F
1/8	3.2	0.18	6	6	6	4	4	4	93	66	8320G217	4	8320G226 ④	4	10.1/F	11.6/F
1/4	1.6	0.08	14	15	15	11	11	11	93	66	8320G182 ⑥	2	8320G231 ④	3	17.1/F	11.6/F
1/4	2.4	0.10	10	10	10	8	8	8	93	66	8320G184	2	8320G202 ③④⑥	3	10.1/F	11.6/F
1/4	3.2	0.21	6	6	6	4	4	4	93	66	8320G186	2	8320G203 ③④⑥	3	10.1/F	11.6/F
1/4	4.4	0.30	3	3	3	2	2	2	93	66	8320G188	2	-	-	10.1/F	11.6/F
NORMALLY OPEN (Open when de-energized)																
1/8	1.2	0.05	14	14	14	14	14	14	82	49	8320G136	1	8320G146 ③	1	6.1F	10.6/F
1/8	1.6	0.08	10	9	9	9	9	9	82	49	8320G027	1	8320G051 ③	1	6.1F	10.6/F
1/8	1.6	0.08	16	17	17	11	11	11	93	66	8320G218	4	8320G227 ④	4	17.1/F	11.6/F
1/8	2.4	0.10	7	7	7	7	7	7	82	49	8320G029	1	8320G053 ③	1	6.1F	10.6/F
1/8	2.4	0.10	10	10	10	7	7	7	93	66	8320G219	4	8320G228 ④	4	10.1/F	11.6/F
1/8	3.2	0.18	3	3	3	3	3	3	82	49	8320G031	1	8320G055 ③	1	6.1F	10.6/F
1/8	3.2	0.18	5	5	5	4	4	4	93	66	8320G220	4	8320G229 ④	4	10.1/F	11.6/F
1/4	1.6	0.08	16	17	17	11	11	11	93	66	8320G192 ⑥	2	8320G232 ④	3	17.1/F	11.6/F
1/4	2.4	0.10	10	10	10	7	7	7	93	66	8320G194	2	8320G204 ③④⑥	3	10.1/F	11.6/F
1/4	3.2	0.21	5	5	5	4	4	4	93	66	8320G196	2	8320G205 ③④	3	10.1/F	11.6/F
1/4	4.4	0.30	3	3	3	2	2	2	93	66	8320G198	2	-	-	10.1/F	11.6/F

① Supplied with cast UR disc.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.
③ Can be used for ***dry*** natural gas service with the EF prefix.
④ Constructions standard rated -40˚F (-40˚C) ambient temperature. EFX prefix and TPL # not required.
⑤ Water rating, CSA certified up to 16 bar.
⑥ ATEX/IECEx certified with prefix "EV".

Dimensions: inches (mm)

Const. Ref. 1



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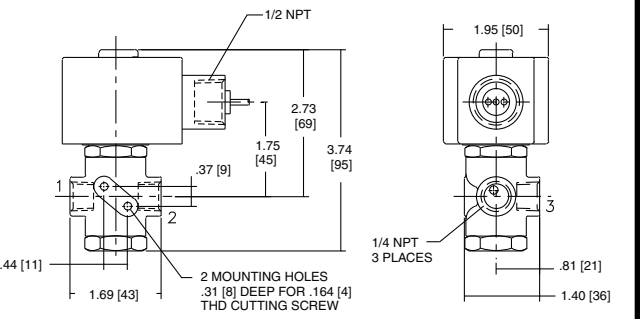

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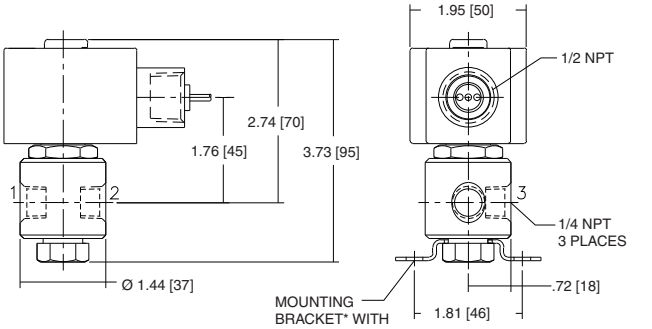
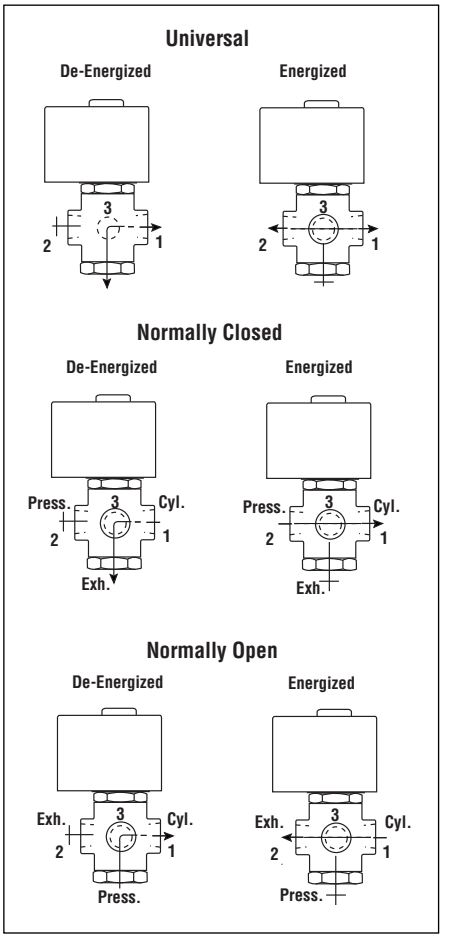
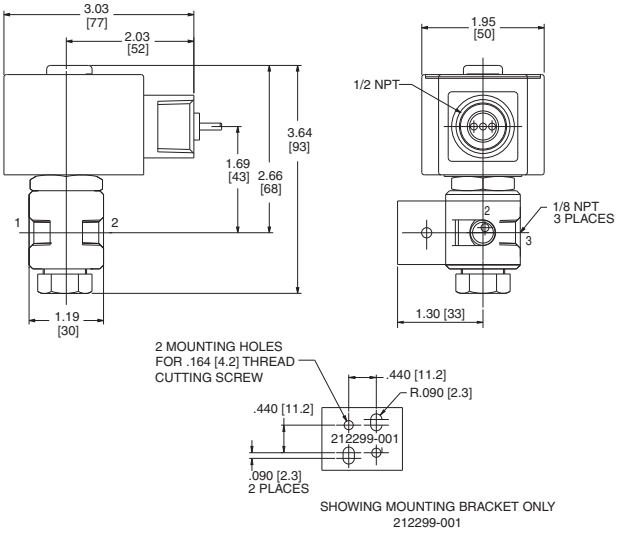


* MOUNTING BRACKET IS STANDARD ON THIS CONSTRUCTION

FLOW DIAGRAMS



Const. Ref. 4



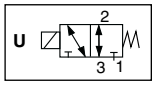
SHOWING MOUNTING BRACKET ONLY
212299-001

ASCO™ High-Flow Direct Acting Valves

Balanced Poppet Type | Brass and 316 Stainless Steel Bodies | 1/4" NPT

Features

- Designed for high flow piloting with no minimum operating pressure required; e.g. power plants, refineries, chemical processing
- Balanced Poppet construction for high flow at minimum power levels
- PTFE rider rings and graphite-filled seals reduce friction and eliminate sticking to provide exceptional service life
- 316 Stainless Steel construction for highly corrosive atmospheres
- Available with manual reset (See Special Service Section)
- Low power construction available for applications with power limitations



Construction

	Standard Power		Low Power	
Body	Brass	316 Stainless Steel	Brass	316 Stainless Steel
Core Tube	Stainless Steel		304 Stainless Steel	
Stem and Insert	303 Stainless Steel			
Core and Plugnut	430F Stainless Steel			
O-ring Holder	430F Stainless Steel			
Springs	302 Stainless Steel			
Seals and Discs	NBR	FKM	FKM	
	VMQ (Low-Temp. Construction)		FVMQ (Low-Temp. Construction)	
Rider Ring	PTFE			

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number				
	DC Watts	AC			General Purpose		Explosionproof		Explosionproof EV
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC	DC
F	11.6	12	12	12	276000	238710	276002	238714	-
F	2.0	-	-	-	-	501695	-	501696	521364
F	2.4	-	-	-	-	-	-	521368	521372
H	2.7	-	-	-	-	440162	-	501694	521365
H	2.9	-	-	-	-	-	-	521369	521373
H	3.4	-	-	-	-	-	-	501694	521365

Note. See next page for low power electrical information.

Solenoid Enclosures

Standard:
For Brass Valves: Standard Solenoid enclosure is Types, 1, 2, 3, 3S, 4, and 4X.
For 316 Stainless Steel valves: Standard Solenoid enclosure is Explosionproof and Watertight Types 3, 3S, 4, 4X, 6, and 6P.

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" or, for Explosionproof Stainless Steel trim and hub on Brass-Bodied valves, add "EV" to catalog number.

See Optional Features Section for other available options.

SIL (Safety Integrity Level) Information:*

- SIL 3 capable, see engineering for FITs information.

*Excludes constructions with manual operators

Nominal Ambient Temp. Ranges

8327G041 & 042: -4˚F to 131˚F (-20˚C to 55˚C)
8327G051 & 052: -40˚F to 131˚F (-40˚C to 55˚C)
8327H301 & 302: Class F: -4°F to 140°F (-20°C to 60°C)
Class H: -4°F to 194°F (-20°C to 90°C)
8327H311 & 312: -58°F to 140°F (-50°C to 60°C)
Refer to Engineering Section for details.

Approvals

UL & CSA solenoid only approvals for Explosionproof versions (8327 H Series)

Meets applicable CE directives
(General Purpose versions only)

CSA certified, UL listed General Purpose Valves for (8327 G Series)
(Excludes low-power General Purpose coil constructions)

Explosionproof/EV low-power constructions carry ATEX/IECEx approvals

ATEX: II2G Ex db mb IIC Tx Gb
II2D Ex mb tb IIIC Txx Db

IECEx: Ex db mb IIC Tx Gb
Ex mb tb IIIC Txx Db

SIL 3 capable per IEC 61508. Third party certification by Exida.

Refer to Engineering Section for details.

ASCO™ High-Flow Direct Acting Valves

Balanced Poppet Type | Brass and 316 Stainless Steel Bodies | 1/4" NPT

Electrical - Low Power

Low Power Description	Wattage	Max. Ambient Temp.	UL/CSA T Code*	ATEX/IECEx T Code*	Insulation Class
Standard Ambient Version	2.0	140˚F (60˚C)	T6/85	T6/85˚C	F
Surge Suppression Version	2.4	140˚F (60˚C)			F
High Ambient Version	2.7	194˚F (90˚C)	T5/100 (T6/85 @ 70˚C Amb.)	T4/135 (T5/100 @ 80˚C Amb.)	H
Surge Suppression Version High Ambient	2.9	194˚F (90˚C)			H
Battery Charging Circuit Version	3.4	194˚F (90˚C)			H

* Explosion-proof version only

Low Power Description	Prefix	Wattage	Voltage (DC)	Min Pull In (mA)	Drop Out (mA)	Coil Resistance @68˚F (20˚C) (ohms)
Standard Ambient Version	-	2.0W	12V	108	39.7	3500
			24V	50	19	6800
			48V	28	9.8	13450
			120V	10	3.7	33370
Surge Suppression Version (Explosionproof version only)	MF	2.4W	12V	115	42	2900
			24V	54	20	6200
			48V	28	11	12100
			120V	12	4.3	29450
High Ambient Version	HT	2.7W	12V	117	41	3150
			24V	57	19.7	5800
			48V	29	10	12050
			120V	11	4	29450
Surge Suppression Version High Ambient (Explosionproof version only)	MH	2.9W	12V	118	41	2750
			24V	59	18.7	5450
			48V	30	9.4	11000
			120V	12	4	27300
Battery Charging (Explosionproof version only)	HC	3.4W	125V	12	4.3	27000

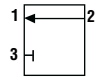
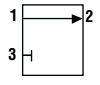
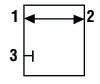
Specifications English (Metric units)

Pipe Size (in)	Orifice Size (in)	Cv Flow (Kv = m³/hr)		Maximum Operating Pressure Differential psi (bar)			Max. Fluid Temp. ˚F (˚C)	Catalog Number		Const. Ref.	Watt Rating/ Class of Coil Insulation	
		Ports 1-2	Ports 2-3	Air-Inert Gas	Water	Light Oil @ 300 SSU		Brass Body	316 Stainless Steel Body		AC	DC
UNIVERSAL OPERATION (Pressure at any port)												
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	150 (10.3)	150 (10.3)	176 (80)	8327G041	–	1	12.0/F	11.6/F
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	150 (10.3)	150 (10.3)	248 (120)	–	EV8327G042	1	12.0/F	11.6/F
UNIVERSAL LOW-TEMPERATURE OPERATION (Pressure at any port)												
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	–	–	131 (55)	8327G051	–	1	12.0/F	11.6/F
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	–	–	131 (55)	–	EV8327G052	1	12.0/F	11.6/F
UNIVERSAL LOW-POWER OPERATION (Pressure at any port)												
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	-	-	140 (60)	8327H311	8327H312	2	-	2.0/F ①
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	150 (10.3)	150 (10.3)	140 (60)	8327H301	8327H302	2	-	2.0/F ①
1/4	1/4	0.49 (0.42)	0.56 (0.48)	150 (10.3)	150 (10.3)	150 (10.3)	194 (90)	HT8327H301	HT8327H302	2	-	2.7/H ①

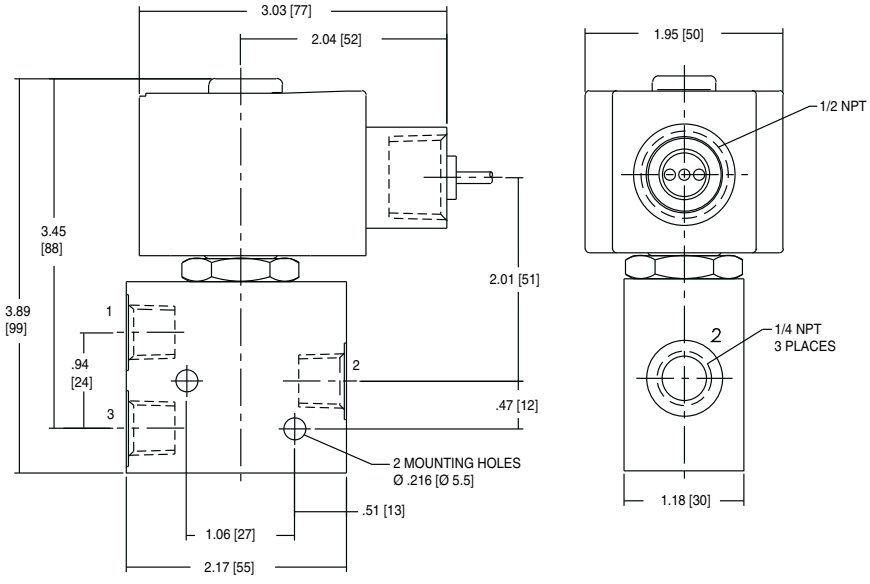
① Wattage will vary depending on prefix.

Dimensions: inches (mm)

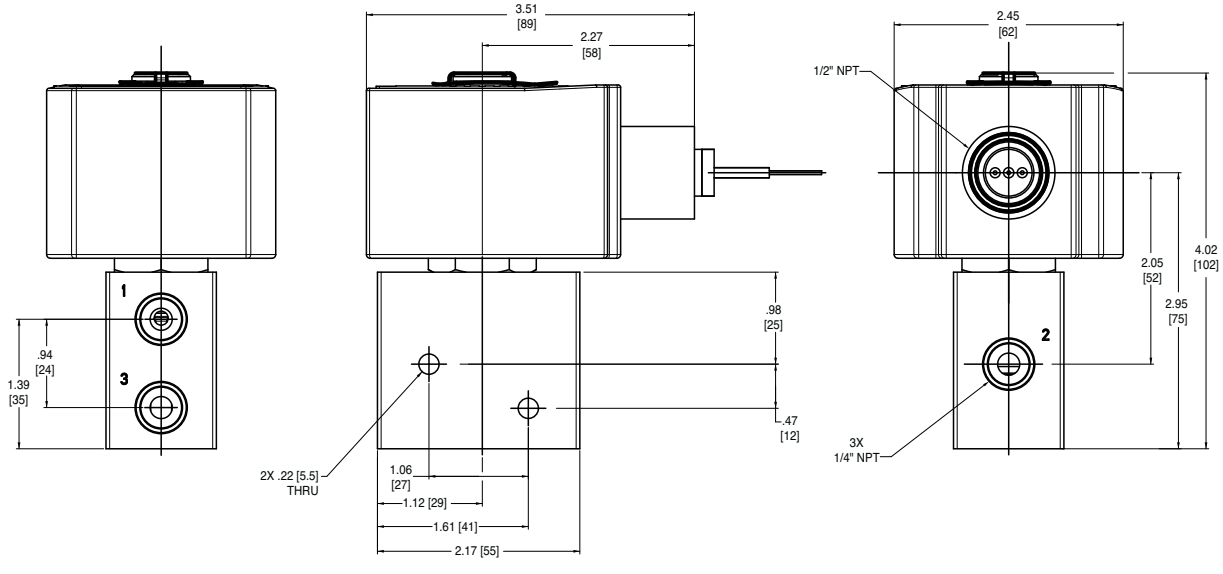
Flow Diagrams

OPERATION	DE-ENERGIZED	ENERGIZED
NORMALLY CLOSED PRESSURE AT 3		
NORMALLY OPEN PRESSURE AT 1		
UNIVERSAL PRESSURE AT ANY PORT		

Const. Ref. 1



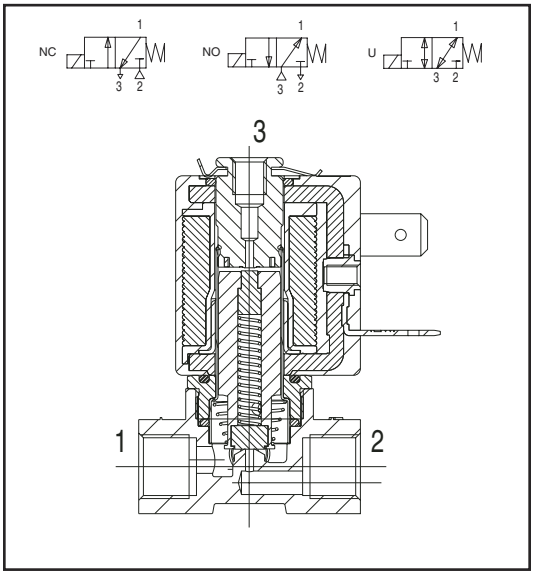
Const. Ref. 2



IMPORTANT: Valves may be mounted in any position.

Features

- 3-way normally closed, normally open, or universal operation
- Compact design
- Brass and 316 stainless steel body constructions
- Mountable in any position
- NSF 61 Annex G and 169 version available for potable water and food service



Construction

Valve Parts in Contact with Fluids			
	General Purpose		NSF
Body	**Brass**	**316 Stainless Steel**	**316 Stainless Steel**
Core Tube/Bonnet	S.S. / Plated Steel	S.S. / S.S.	S.S. / S.S.
Core and Plugnut	Stainless Steel		
Springs	Stainless Steel		
Seals and Disc	FKM		EPDM
Shading Coil	Copper		Copper

Electrical

Prefix	Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.˚F	Spare Coil Family	
		DC Watts	AC					
			Watts	VA Holding	VA Inrush		AC	DC
U	F	6.9	6.3	8.8	12.1	15 to 140	400117	400117
SC	F	6.9	6.3	8.8	12.1	15 to 140	400127	400127

Standard voltages: 24,120, 240 volts AC, 50-60 Hz. 12, 24, 120 volts DC
Must be specified when ordering.

Solenoid Enclosures

Standard: Open frame (Prefix U) 18" leads

Optional: DIN (size 11mm, form B) (Prefix SC). Watertight/IP-65 when used with DIN connector kit for SC coils (see kits below).

Kits

1/2" NPT conduit hub kit for leaded coils 224735-001-*
(Kit contains 10 pcs of each: threaded hub, gasket, and attaching screw.)

DIN connector kit for SC coils 226061-001-*
(Kit contains 10 pcs of each: connector, gasket, and attaching screw.)

Mounting adapter kit 289719 (Kit contains 2 screws and plate.)

M5 to 1/8" port adaptors: HV289666001 (Brass), HV289667001 (SS)
(Kit contains 10 pcs)

Approvals

UL recognized coil - File E153691

CSA certified coil - see CSA certificate No. 113111

Meets applicable CE directives

NSF (Designated models only, see table)

- NSF 61 - Drinking water system components
- NSF 169 - Special purpose food Equipment and Devices
- Also certified to NSF/ANSI Standard 61, Annex G (weighted average lead content of <=0.25%) and is in compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193.

The NSF Certification Program is accredited by the Standards Council of Canada and ANSI.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow		Operating Pressure Differential (psi)						Max. Fluid Temp. °F		Brass	Stainless Steel	Const. Ref.	Wattage		Approx. Shipping Weight (lbs.)
				Max. AC			Max. DC										
		At Port 2	At Port 3	Air - Inert Gas	Water	Light Oil @ 300 SSU	Air - Inert Gas	Water	Light Oil @ 300 SSU	AC	DC				AC	DC	
General Service - Normally Closed																	
1/8	3/64	0.06	0.06	215	215	215	215	215	215	180	180	U8356A001V	U8356A013V	1	6.3	6.9	0.5
1/8	1/16	0.09	0.06	145	145	145	145	145	145	180	180	U8356A002V	U8356A014V	1	6.3	6.9	0.5
1/8	3/32	0.13	0.06	60	60	60	60	60	60	180	180	U8356A004V	U8356A016V	1	6.3	6.9	0.5
1/8	7/64	0.15	0.06	35	35	35	35	35	35	180	180	U8356B045V	U8356B046V	2	6.3	6.9	0.6
NSF 61 and 169 Listed - Normally Closed																	
1/8	3/32	0.13	0.04	-	70	-	-	70	-	180	180	-	U8356A103E	1	6.3	6.9	0.5
1/4	3/32	0.13	0.04	-	70	-	-	70	-	180	180	-	U8356A115E	3	6.3	6.9	0.5
General Service - Normally Open																	
1/8	3/64	0.06	0.06	125	125	125	125	125	125	180	180	U8356A005V	U8356A017V	1	6.3	6.9	0.5
1/8	1/16	0.09	0.06	125	125	125	125	125	125	180	180	U8356A006V	U8356A018V	1	6.3	6.9	0.5
1/8	3/32	0.13	0.06	125	125	125	85	85	85	180	180	U8356A008V	U8356A020V	1	6.3	6.9	0.5
1/8	7/64	0.15	0.06	75	75	75	30	30	30	180	180	U8356B054V	U8356B055V	2	6.3	6.9	0.6
NSF 61 and 169 Listed - Normally Open																	
1/8	3/32	0.13	0.04	-	140	-	-	85	-	180	180	-	U8356A107E	1	6.3	6.9	0.5
1/4	3/32	0.13	0.04	-	140	-	-	85	-	180	180	-	U8356A119E	3	6.3	6.9	0.5
General Service - Universal																	
1/8	3/64	0.06	0.06	100	100	100	100	100	100	180	180	U8356A009V	U8356A021V	1	6.3	6.9	0.5
1/8	1/16	0.09	0.06	65	65	65	65	65	65	180	180	U8356A010V	U8356A022V	1	6.3	6.9	0.5
1/8	3/32	0.13	0.06	30	30	30	30	30	30	180	180	U8356A012V	U8356A024V	1	6.3	6.9	0.5
1/8	7/64	0.15	0.06	15	15	15	15	15	15	180	180	U8356B047V	U8356B048V	2	6.3	6.9	0.6
NSF 61 and 169 Listed - Universal																	
1/8	3/32	0.13	0.04	-	35	-	-	35	-	180	180	-	U8356A111E	1	6.3	6.9	0.5
1/4	3/32	0.13	0.04	-	35	-	-	35	-	180	180	-	U8356A123E	3	6.3	6.9	0.5

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)		Operating Pressure Differential (bar)						Max. Fluid Temp.°C		Brass	Stainless Steel	Const. Ref.	Wattage		Approx. Shipping Weight (kgs.)
				Max. AC			Max. DC										
		At Port 2	At Port 3	Air - Inert Gas	Water	Light Oil @ 300 SSU	Air - Inert Gas	Water	Light Oil @ 300 SSU	AC	DC				AC	DC	
General Service - Normally Closed																	
1/8	1.2	0.05	0.05	15	15	15	15	15	15	82	82	U8356A001V	U8356A013V	1	6.3	6.9	0.22
1/8	1.6	0.08	0.05	10	10	10	10	10	10	82	82	U8356A002V	U8356A014V	1	6.3	6.9	0.22
1/8	2.4	0.11	0.05	4	4	4	4	4	4	82	82	U8356A004V	U8356A016V	1	6.3	6.9	0.22
1/8	2.7	0.13	0.05	2.5	2.5	2.5	2.5	2.5	2.5	82	82	U8356B045V	U8356B046V	2	6.3	6.9	0.27
NSF 61 and 169 Listed - Normally Closed																	
1/8	2.4	0.11	0.03	-	5	-	-	5	-	82	82	-	U8356A103E	1	6.3	6.9	0.22
1/4	2.4	0.11	0.03	-	5	-	-	5	-	82	82	-	U8356A115E	3	6.3	6.9	0.22
General Service - Normally Open																	
1/8	1.2	0.05	0.05	8.5	8.5	8.5	8.5	8.5	8.5	82	82	U8356A005V	U8356A017V	1	6.3	6.9	0.22
1/8	1.6	0.08	0.05	8.5	8.5	8.5	8.5	8.5	8.5	82	82	U8356A006V	U8356A018V	1	6.3	6.9	0.22
1/8	2.4	0.11	0.05	8.5	8.5	8.5	6	6	6	82	82	U8356A008V	U8356A020V	1	6.3	6.9	0.22
1/8	2.7	0.15	0.05	5	5	5	2	2	2	82	82	U8356B054V	U8356B055V	2	6.3	6.9	0.27
NSF 61 and 169 Listed - Normally Open																	
1/8	2.4	0.11	0.03	-	10	-	-	6	-	82	82	-	U8356A107E	1	6.3	6.9	0.22
1/4	2.4	0.11	0.03	-	10	-	-	6	-	82	82	-	U8356A119E	3	6.3	6.9	0.22
General Service - Universal																	
1/8	1.2	0.05	0.05	7	7	7	7	7	7	82	82	U8356A009V	U8356A021V	1	6.3	6.9	0.22
1/8	1.6	0.08	0.05	4.5	4.5	4.5	4.5	4.5	4.5	82	82	U8356A010V	U8356A022V	1	6.3	6.9	0.22
1/8	2.4	0.11	0.05	2	2	2	2	2	2	82	82	U8356A012V	U8356A024V	1	6.3	6.9	0.22
1/8	2.7	0.13	0.05	1	1	1	1	1	1	82	82	U8356B047V	U8356B048V	2	6.3	6.9	0.27
NSF 61 and 169 Listed - Universal																	
1/8	2.4	0.11	0.03	-	2	-	-	2	-	82	82	-	U8356A111E	1	6.3	6.9	0.22
1/4	2.4	0.11	0.03	-	2	-	-	2	-	82	82	-	U8356A123E	3	6.3	6.9	0.22

Capabilities Chart

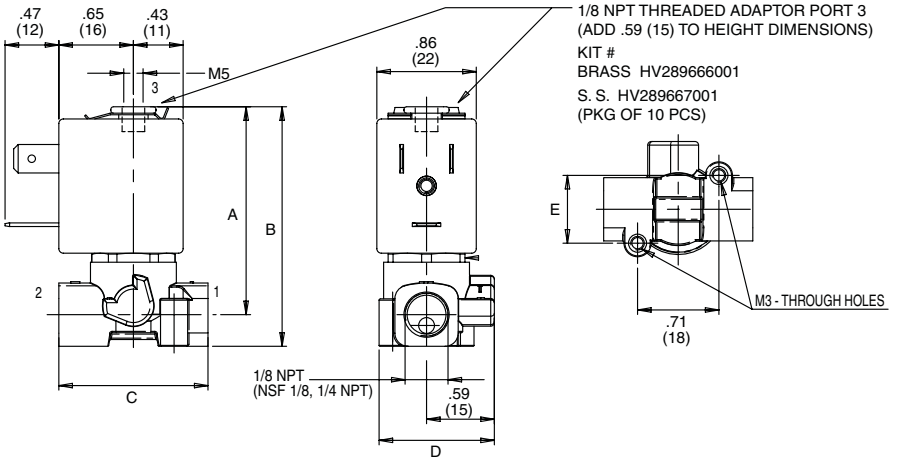
Solenoid Options ②							Base Catalog Number		Resilient Materials ①							Other		Standard Rebuild Kit	
NEMA Type 3-9	High Temp. DIN	Wiring Box Screw Terminal	Multipin	DIN	Spade	Open Frame with Leads	Brass	Stainless Steel	FKM	EPDM	RUBY	Oxygen Service	PTFE	Urethane	Vacuum	Manual Operator	Mounting Bracket	Brass AC/DC	Stainless AC/DC
-	-	-	-	SC	-	●	U8356A001V	U8356A013V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A002V	U8356A014V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A004V	U8356A016V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356B045V	U8356B046V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8356A103E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8356A115E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A005V	U8356A017V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A006V	U8356A018V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A008V	U8356A020V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356B054V	U8356B055V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8356A107E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8356A119E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A009V	U8356A021V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A010V	U8356A022V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356A012V	U8356A024V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8356B047V	U8356B048V	●	E	-	NV	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8356A111E	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	-	U8356A123E	-	●	-	-	-	-	-	-	-	-	-

● = Standard. ① Replace V suffix. ② Replace U prefix with SC prefix.

Dimensions: inches (mm)

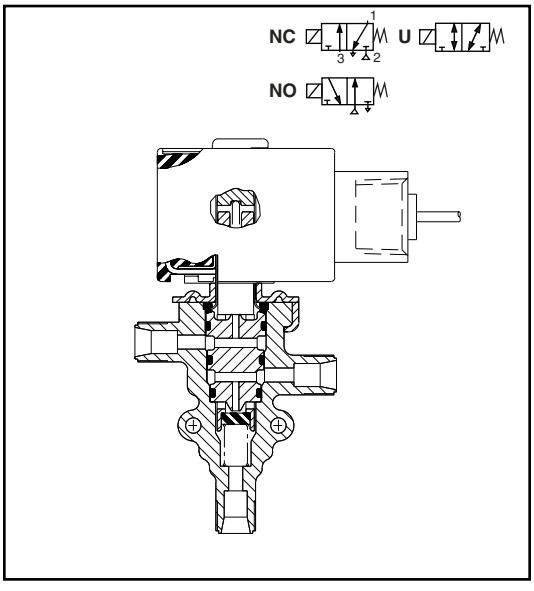
Const. Ref.		A	B	C	D	E
1	in	1.81	2.08	1.29	1	0.59
	mm	46	53	33	25	15
2	ins	1.98	2.25	.984	1	0.59
	mm	50	57	25	25	15
3	in	1.86	2.25	1.73	1.12	.83
	mm	46	57	44	28	21

Shown with DIN coil without connector



Features

- Available with compression fitting ends for metal or plastic tube to save installation cost
- Direct acting for reliable performance; resilient seating for tight shutoff
- Operation similar to 8320, but with plastic body
- Ideal valve for dispensing, damper control, and water applications
- Mountable in any position



Construction

Valve Parts in Contact with Fluids	
Body	CA
Disc	NBR
Disc-Holder	CA
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel and 17-7PH Stainless Steel
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
		AC			General Purpose	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC
F	10.6	6.1	16	30	238210	238310
F	-	9.1	25	40	238210	-

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

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

Optional: Open Frame Solenoid, Junction Box.

See Optional Features Section for descriptions on these and other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL recognized components.
Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Connections	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Max. AC Air-Inert Gas	Max. AC Water	Max. DC Air-Inert Gas	Max. DC Water	Max. Fluid Temp. ˚F AC	Max. Fluid Temp. ˚F DC	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation ② AC	Watt Rating/ Class of Coil Insulation ② DC
UNIVERSAL OPERATION (Pressure at any port)												
1/4" O.D. Compression ①	1/16	.07	100	100	65	65	130	120	8360G071	1	9.1/F	10.6/F
	3/32	.11	50	50	50	50	130	120	8360G073	1	6.1/F	10.6/F
	1/8	.16	30	30	20	20	130	120	8360G074	1	9.1/F	10.6/F
NORMALLY CLOSED (Closed when de-energized)												
1/4" O.D. Compression ①	1/16	.07	125	125	125	125	130	120	8360G075	1	6.1/F	10.6/F
	3/32	.11	100	100	100	100	130	120	8360G077	1	6.1/F	10.6/F
	1/8	.16	40	40	40	40	130	120	8360G078	1	6.1/F	10.6/F
NORMALLY OPEN (Open when de-energized)												
1/4" O.D. Compression ①	1/16	.07	125	125	125	125	130	120	8360G067	1	6.1/F	10.6/F
	3/32	.11	100	100	100	100	130	120	8360G069	1	6.1/F	10.6/F
	1/8	.16	40	40	40	40	130	120	8360G070	1	6.1/F	10.6/F

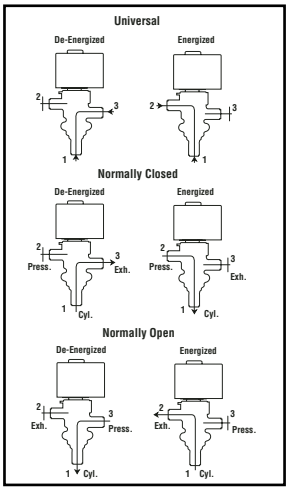
① Fittings not supplied with valve. To order, refer to List Price Schedule.
② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.

Specifications (Metric units)

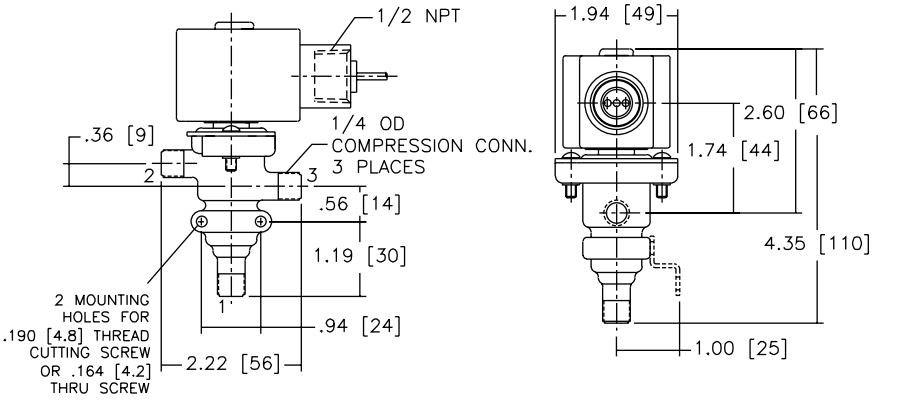
Pipe Connections	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Max. AC Air-Inert Gas	Max. AC Water	Max. DC Air-Inert Gas	Max. DC Water	Max. Fluid Temp. ˚C AC	Max. Fluid Temp. ˚C DC	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation ② AC	Watt Rating/ Class of Coil Insulation ② DC
UNIVERSAL OPERATION (Pressure at any port)												
1/4" O.D. Compression ①	1.6	.06	7	7	4	4	54	49	8360G071	1	9.1/F	10.6/F
	2.4	.09	3	3	3	3	54	49	8360G073	1	6.1/F	10.6/F
	3.2	.14	2	2	1	1	54	49	8360G074	1	9.1/F	10.6/F
NORMALLY CLOSED (Closed when de-energized)												
1/4" O.D. Compression ①	1.6	.06	9	9	9	9	54	49	8360G075	1	6.1/F	10.6/F
	2.4	.09	7	7	7	7	54	49	8360G077	1	6.1/F	10.6/F
	3.2	.14	3	3	3	3	54	49	8360G078	1	6.1/F	10.6/F
NORMALLY OPEN (Open when de-energized)												
1/4" O.D. Compression ①	1.6	.06	9	9	9	9	54	49	8360G067	1	6.1/F	10.6/F
	2.4	.09	7	7	7	7	54	49	8360G069	1	6.1/F	10.6/F
	3.2	.14	3	3	3	3	54	49	8360G070	1	6.1/F	10.6/F

Dimensions: inches (mm)

FLOW DIAGRAMS



Const. Ref. 1



ASCO™ Spool Valves

Manual & Pilot Operated | 1/4" - 1" NPT

3/2 SERIES 362/562

Features

- Ideal for valve automation for the oil and gas market
- Reliable, robust design with high flow performance
- Low temperature options
- Stainless steel constructions are NACE MR0175-2003 compliant
- Corrosion resistant - 316L Stainless Steel valve materials make it ideal for offshore and harsh environments
- Extensive manual and pneumatic options
- Rated for air, inert gas, and sweet dry natural gas
- SIL 3 Capable options

SPECIAL SERVICE PILOT

Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel, Brass
Spring	Cobalt Alloy
Seals	FKM (standard), Low Temp NBR (optional)
Spool	316L Stainless Steel

Minimum Ambient/Fluid Temperature

Brass	Stainless Steel
FKM: -4˚F (-20˚C)	-4˚F (-20˚C)
NBR: -40˚F (-40˚C)	-40˚F (-40˚C)

Note: Low Temperature option for all manual component options: -20˚F to 200˚F (-29˚C to 93˚C)

Approvals

SIL 3 Capable options

Refer to Engineering for details.

Important

These solenoid valves are intended for use on clean dry air, inert gas, or sweet dry natural gas filtered to 40 micron or better. The dew point of the media should be at least 10˚C (18˚F) below the minimum temperature to which any portion of the air, inert gas or sweet dry natural gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with FKM and LT NBR elastomers. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

How to order

8	362	A	4	10	00	1	1	0	00

Connection Type
8 = NPT

Product Series
362 = 3 way for Process Automation
562 = 4 way for Process Automation

Select version from Specification Tables on following pages.
(Configurator available at www.asco.com)

Voltage
00 = Pilot or Manually Actuated

Solenoid Type/Orientation
0 = None

Elastomer/Manual Override
1 = FKM
3 = Low Temperature NBR

Specifications English (Metric)

Pipe Size (in)	Base Catalog Number ①		Function ②	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)		Product Weight lbs (kg)	Const. Ref.
	Stainless Steel	Brass			Min.	Max.	Min.	Max.		
Normally Closed / Externally Piloted										
1/4"	8362A108000	-	Pilot,Palm Button /Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.19 (0.54)	2
1/4"	8362A110000	-	Pilot With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.23 (0.56)	3
1/4"	8362A112000	-	Pilot, Palm Button With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.25 (0.57)	4
1/4"	8362A114000	-	Palm Button/Spring Return	2.0 (1.7)	0	150 (10.3)	-	-	1.19 (0.54)	5
1/4"	8362A107000	-	Pilot Operated/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	0.9 (0.41)	1
1/4"	-	8362BA07000	Pilot Operated/Spring Return	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	1.65 (0.75)	38
1/4"	8362A147000	-	Manual Lever Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA47000	Manual Lever Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A167000	-	Spring Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA67000	Spring Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A187000	-	Spring Return, Latches In De-energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA87000	Spring Return, Latches In De-energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
3/8"	8362A207000	-	Pilot Operated/Spring Return	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.37 (1.07)	24
3/8"	8362A247000	-	Manual Lever Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	8362A267000	-	Spring Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	8362A287000	-	Spring Return, Latches In De-energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	-	8362AC07000	Pilot Operated/Spring Return	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.98 (1.35)	24
3/8"	-	8362AC47000	Manual Lever Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/8"	-	8362AC67000	Spring Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/8"	-	8362AC87000	Spring Return, Latches In De-energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	8362A307000	-	Pilot Operated/Spring Return	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.30 (1.04)	24
1/2"	8362A347000	-	Manual Lever Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	8362A367000	-	Spring Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	8362A387000	-	Spring Return, Latches In De-energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	-	8362AD07000	Pilot Operated/Spring Return	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.87 (1.3)	24
1/2"	-	8362AD47000	Manual Lever Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	-	8362AD67000	Spring Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	-	8362AD87000	Spring Return, Latches In De-energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/4"	8362A407000	-	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.44 (9.78)	28
3/4"	-	8362AE07000	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.90 (10.80)	28
1"	8362A507000	-	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.31 (9.78)	28
1"	-	8362AF07000	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.71 (10.39)	28
Normally Open / Externally Piloted										
1/4"	8362A108001	-	Pilot,Palm Button /Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.19 (0.54)	7
1/4"	8362A110001	-	Pilot With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.23 (0.56)	8
1/4"	8362A112001	-	Pilot, Palm Button With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.25 (0.57)	9
1/4"	8362A114001	-	Palm Button/Spring Return	2.0 (1.7)	0	150 (10.3)	-	-	1.19 (0.54)	10
1/4"	8362A107001	-	Pilot Operated/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	0.9 (0.41)	6
1/4"	-	8362BA07001	Pilot Operated/Spring Return	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	1.65 (0.75)	38
1/4"	8362A147001	-	Manual Lever Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA47001	Manual Lever Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A167001	-	Spring Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA67001	Spring Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A187001	-	Spring Return, Latches In De-energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA87001	Spring Return, Latches In De-energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
3/8"	8362A207001	-	Pilot Operated/Spring Return	4.8 (4.1)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.37 (1.07)	24
3/8"	8362A247001	-	Manual Lever Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.37 (1.07)	34
3/8"	8362A267001	-	Spring Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	8362A287001	-	Spring Return, Latches In De-energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	-	8362AC07001	Pilot Operated/Spring Return	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	24
3/8"	-	8362A247001	Manual Lever Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.98 (1.35)	34
3/8"	-	8362A267001	Spring Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/8"	-	8362A287001	Spring Return, Latches In De-energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	8362A307001	-	Pilot Operated/Spring Return	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	24
1/2"	8362A347001	-	Manual Lever Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.30 (1.04)	34
1/2"	8362A367001	-	Spring Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	8362A387001	-	Spring Return, Latches In De-energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	-	8362AD07001	Pilot Operated/Spring Return	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	24
1/2"	-	8362AD47001	Manual Lever Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.87 (1.3)	34
1/2"	-	8362AD67001	Spring Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	-	8362AD87001	Spring Return, Latches In De-energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/4"	8362A407001	-	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.44 (9.78)	28
3/4"	-	8362AE07001	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.90 (10.80)	28
1"	8362A507001	-	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.31 (9.78)	28
1"	-	8362AF07001	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.71 (10.39)	28
Normally Closed Detent/Externally Piloted										
1/4"	8362A109004	-	Pilot, Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.36 (0.62)	11
1/4"	8362A115004	-	Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	-	-	1.36 (0.62)	12
Normally Open Detent/Externally Piloted										
1/4"	8362A109005	-	Pilot, Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.36 (0.62)	13
1/4"	8362A115005	-	Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	-	-	1.36 (0.62)	14
Detent / Externally Piloted										
1/4"	8362A113007	-	Double Pilot	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	1.21 (0.55)	15
1/4"	-	8362BA13007	Double Pilot	1.8 (1.55)	0	150 (10.3)	15 (1.0)	150 (10.3)	2.32 (1.05)	35

① Please refer to How to Order section to complete base catalog number selection.
② 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

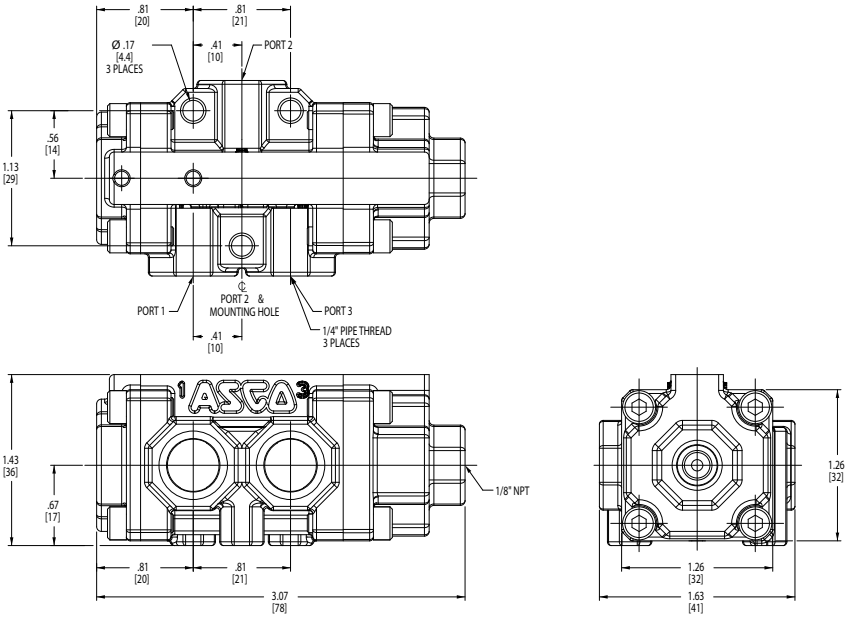
Specifications English (Metric)

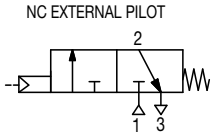
Pipe Size (in)	Base Catalog Number ①		Function ②	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)		Product Weight lbs (kg)	Const. Ref.
	Stainless Steel	Brass			Min.	Max.	Min.	Max.		
Externally Piloted										
1/4"	8562A108003	-	Pilot,Palm Button/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.36 (0.62)	17
1/4"	8562A110003	-	Pilot With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.43 (0.65)	18
1/4"	8562A112003	-	Pilot, Palm Button With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.45 (0.66)	19
1/4"	8562A114003	-	Palm Button,/Spring Return	2.0 (1.7)	0	150 (10.3)	-	-	1.38 (0.63)	20
1/4"	8562A107003	-	Pilot Operated/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.08 (0.49)	16
1/4"	-	8562BA07003	Pilot Operated/Spring Return	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.07 (0.94)	40
1/4"	8562A147003	-	Manual Lever Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	2.12 (0.96)	35
1/4"	-	8562BA47003	Manual Lever Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	3.06 (1.39)	36
1/4"	8562A167003	-	Spring Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	2.12 (0.96)	35
1/4"	-	8562BA67003	Spring Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	3.06 (1.39)	36
1/4"	8562A187003	-	Spring Return, Latches In De-energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	2.12 (0.96)	35
1/4"	-	8562BA87003	Spring Return, Latches In De-energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	3.06 (1.39)	38
3/8"	8562A207003	-	Pilot Operated/Spring Return	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.93 (1.33)	25
3/8"	8562A247003	-	Manual Lever Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.93 (1.33)	37
3/8"	8562A267003	-	Spring Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
3/8"	8562A287003	-	Spring Return, Latches In De-energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
3/8"	-	8562AC07003	Pilot Operated/Spring Return	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	25
3/8"	-	8562AC47003	Manual Lever Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
3/8"	-	8562AC67003	Spring Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
3/8"	-	8562AC87003	Spring Return, Latches In De-energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
1/2"	8562A307003	-	Pilot Operated/Spring Return	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.82 (1.28)	25
1/2"	8562A347003	-	Manual Lever Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
1/2"	8562A367003	-	Spring Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
1/2"	8562A387003	-	Spring Return, Latches In De-energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
1/2"	-	8562AD07003	Pilot Operated/Spring Return	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.50 (1.59)	25
1/2"	-	8562AD47003	Manual Lever Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
1/2"	-	8562AD67003	Spring Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
1/2"	-	8562AD87003	Spring Return, Latches In De-energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
3/4"	8562A407003	-	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	12.84 (5.82)	29
3/4"	-	8562AE07003	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	12.84 (5.82)	29
1"	8562A507003	-	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	12.33 (5.59)	29
1"	-	8562AF07003	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	13.73 (6.23)	29
3/8"	8362A213003	-	Double Pilot	4.8 (4.1)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.46 (1.11)	26
3/8"	-	8362AC13003	Double Pilot	4.0 (3.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.95 (1.34)	26
3/8"	8562A213003	-	Double Pilot	4.8 (4.1)	0	200 (13.8)	20 (1.4)	200 (13.8)	3.02 (1.37)	27
3/8"	-	8562AC13003	Double Pilot	4.0 (3.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	3.66 (1.66)	27
1/2"	8362A313003	-	Double Pilot	5.6 (4.8)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.39 (1.08)	26
1/2"	-	8362AD13003	Double Pilot	5.0 (4.3)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.85 (1.29)	26
1/2"	8562A313003	-	Double Pilot	5.6 (4.8)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.91 (1.32)	27
1/2"	-	8562AD13003	Double Pilot	5.0 (4.3)	0	200 (13.8)	20 (1.4)	200 (13.8)	3.48 (1.58)	27
3/4"	8362A413003	-	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	9.91 (4.50)	30
3/4"	-	8362AE13003	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	10.93 (4.96)	30
3/4"	8562A413003	-	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	12.97 (5.88)	31
3/4"	-	8562AE13003	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	14.54 (6.60)	31
1"	8362A513003	-	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	9.62 (4.37)	30
1"	-	8362AF13003	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	10.51 (4.77)	30
1"	8562A513003	-	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	12.46 (5.65)	31
1"	-	8562AF13003	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	13.86 (6.29)	31
Detent / Externally Piloted										
1/4"	8562A113007	-	Double Pilot	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	1.38 (0.63)	21
1/4"	-	8562BA13007	Double Pilot	1.8 (1.55)	0	150 (10.3)	15 (1.0)	150 (10.3)	2.73 (1.24)	41
1/4"	8562A109007	-	Pilot, Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.56 (0.71)	22
1/4"	8562A115007	-	Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	-	-	1.52 (0.69)	23

① Please refer to How to Order section to complete base catalog number selection.
② 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

Dimensions: inches (mm)

Const Ref. 1





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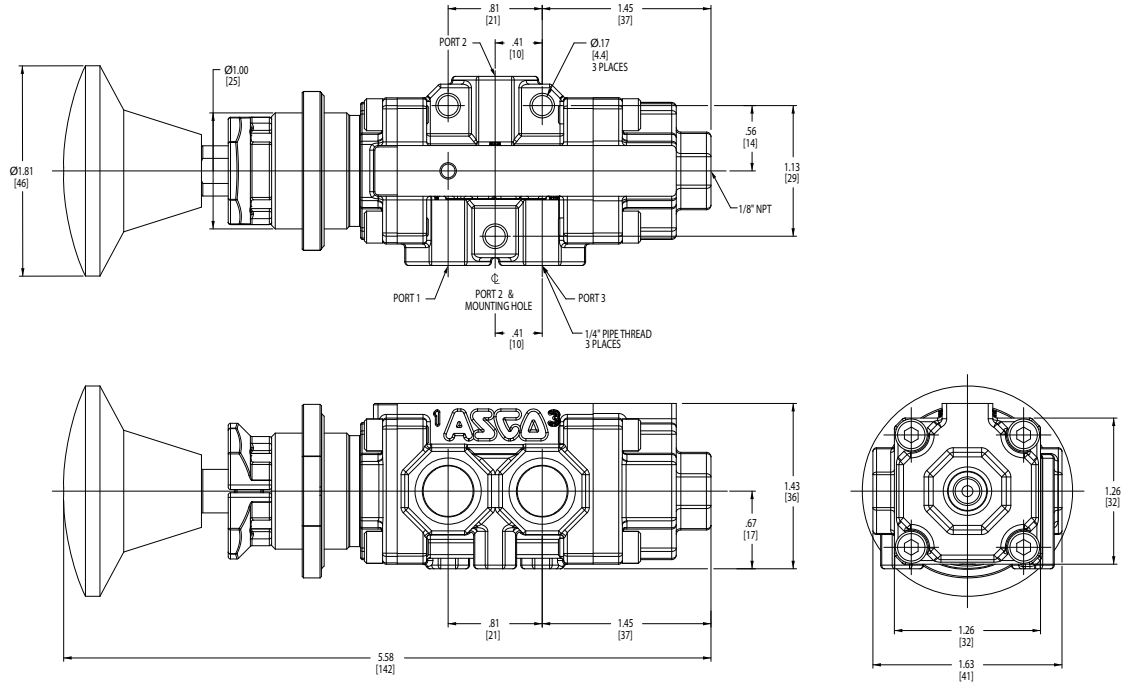
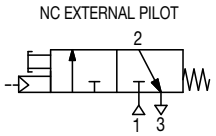
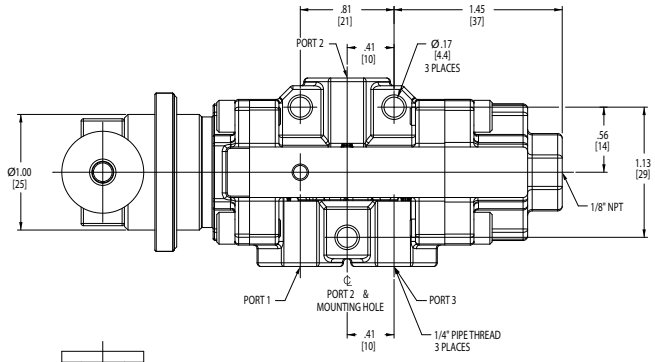


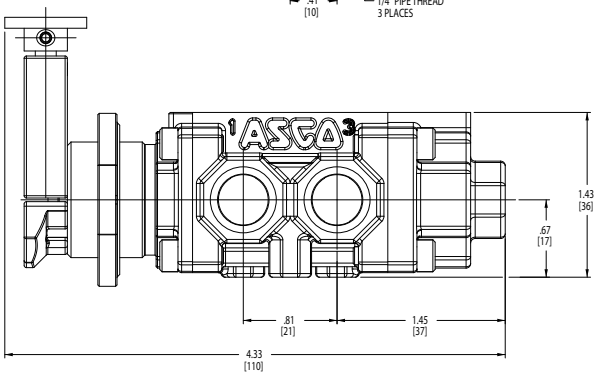


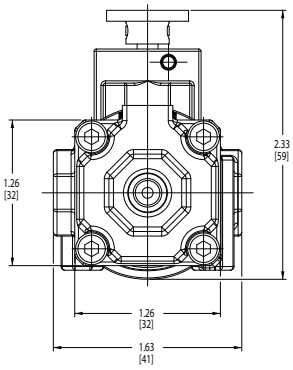
SPECIAL SERVICE PILOT

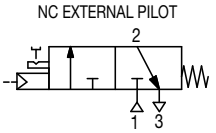
Dimensions: inches (mm)

Const. Ref. 3



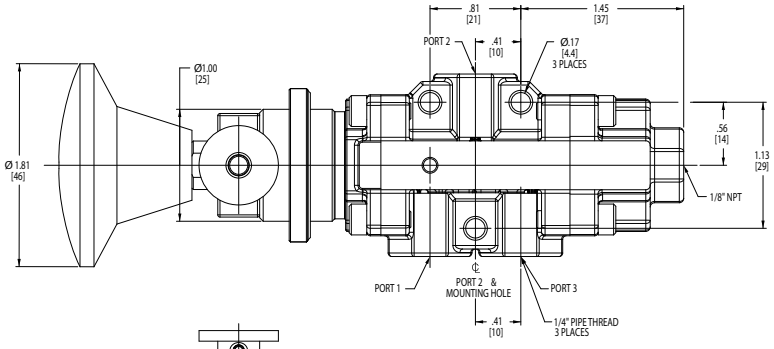


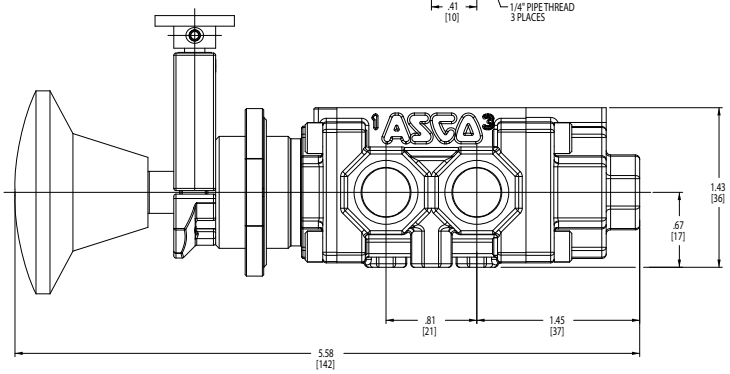


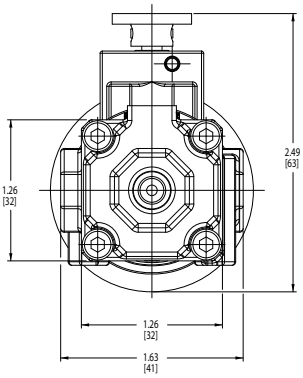


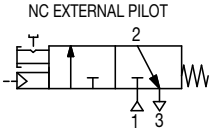
SPECIAL SERVICE PILOT

Const. Ref. 4



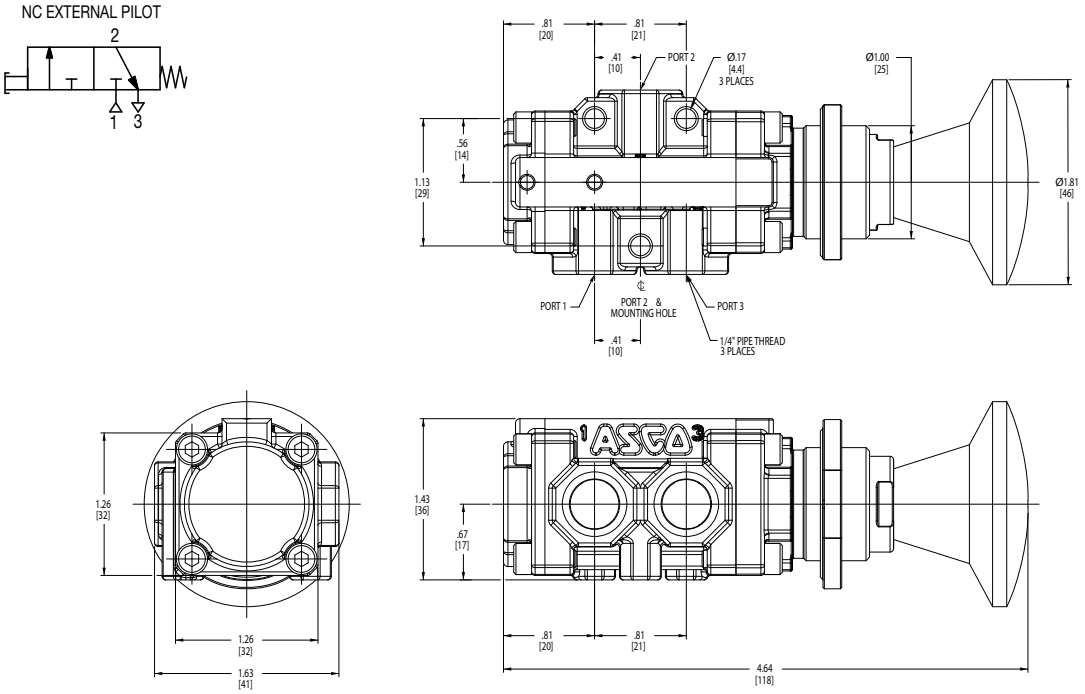






Dimensions: inches (mm)

Const. Ref. 5



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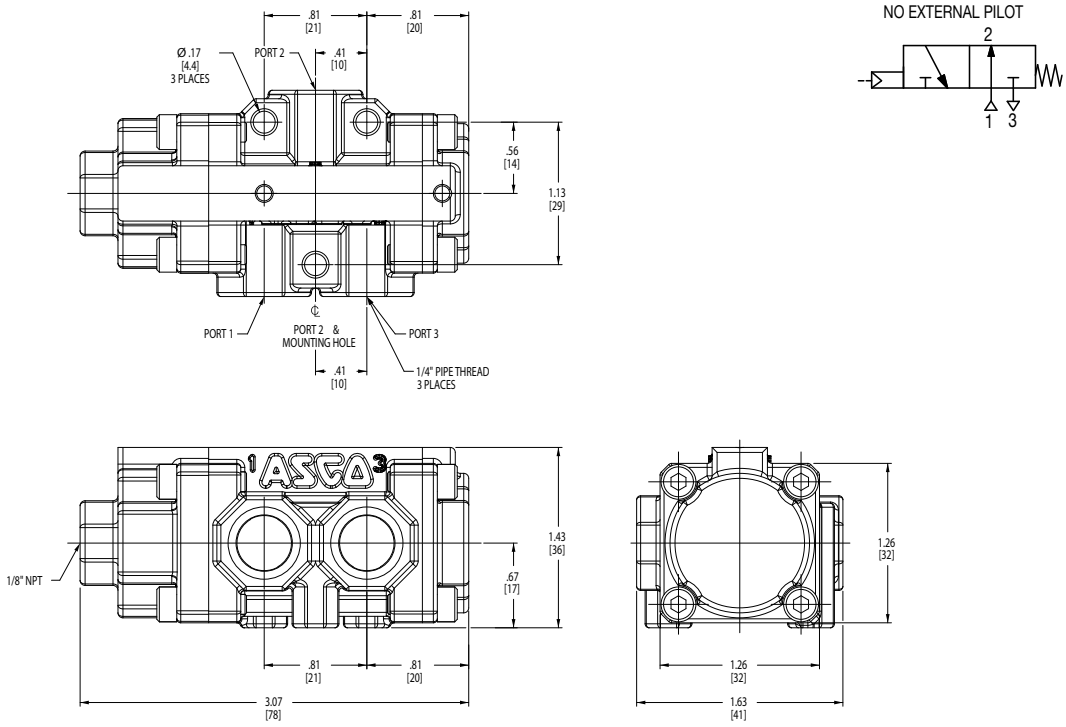
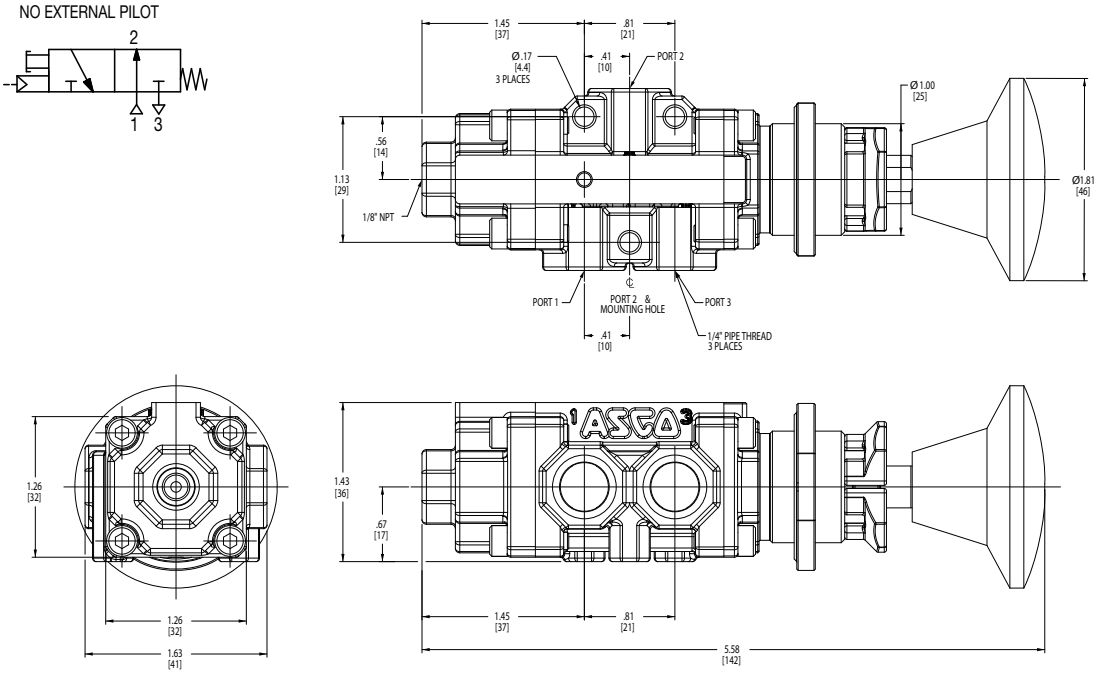


Dimensions: inches (mm)

Const. Ref. 7



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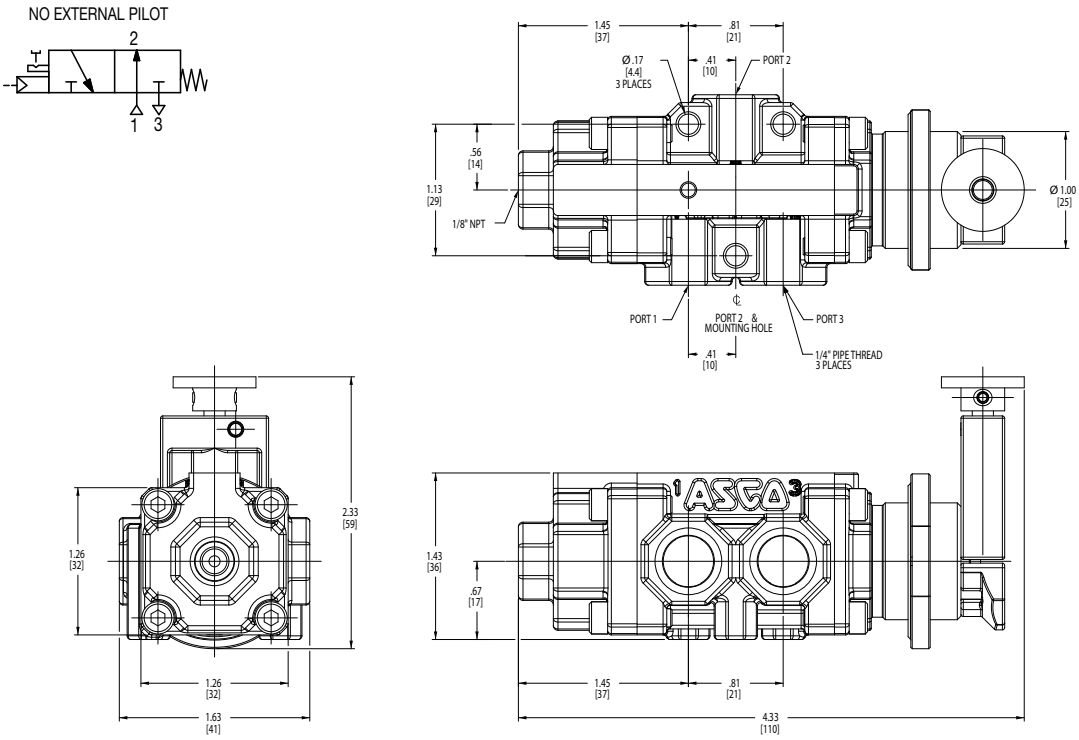
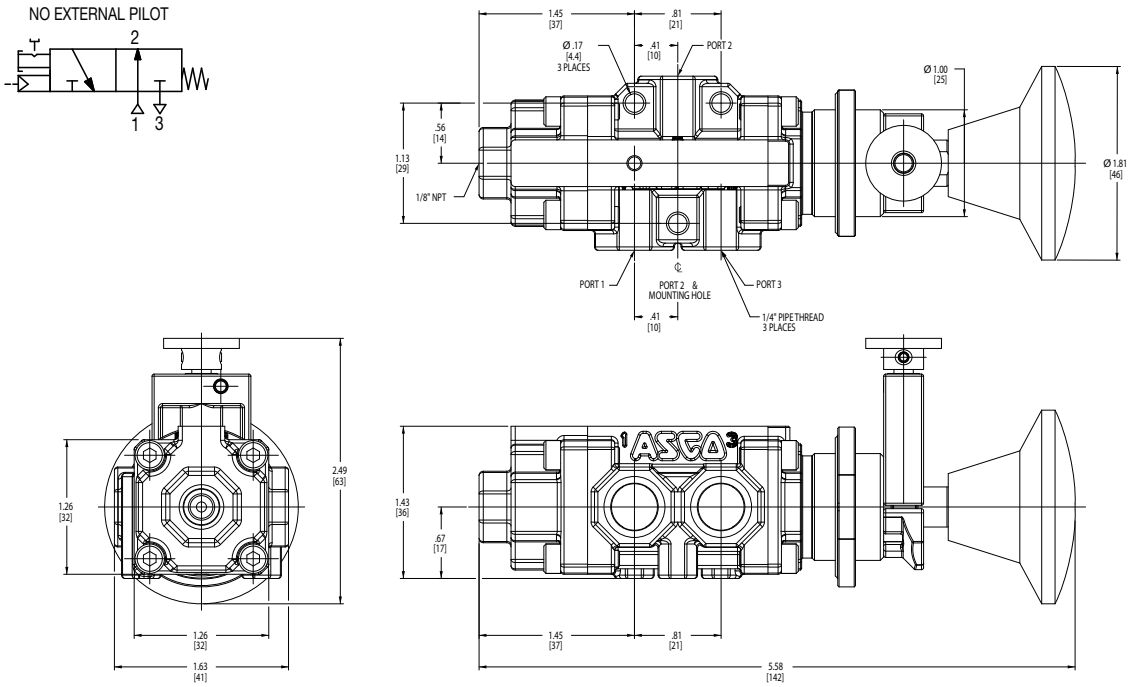


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 9



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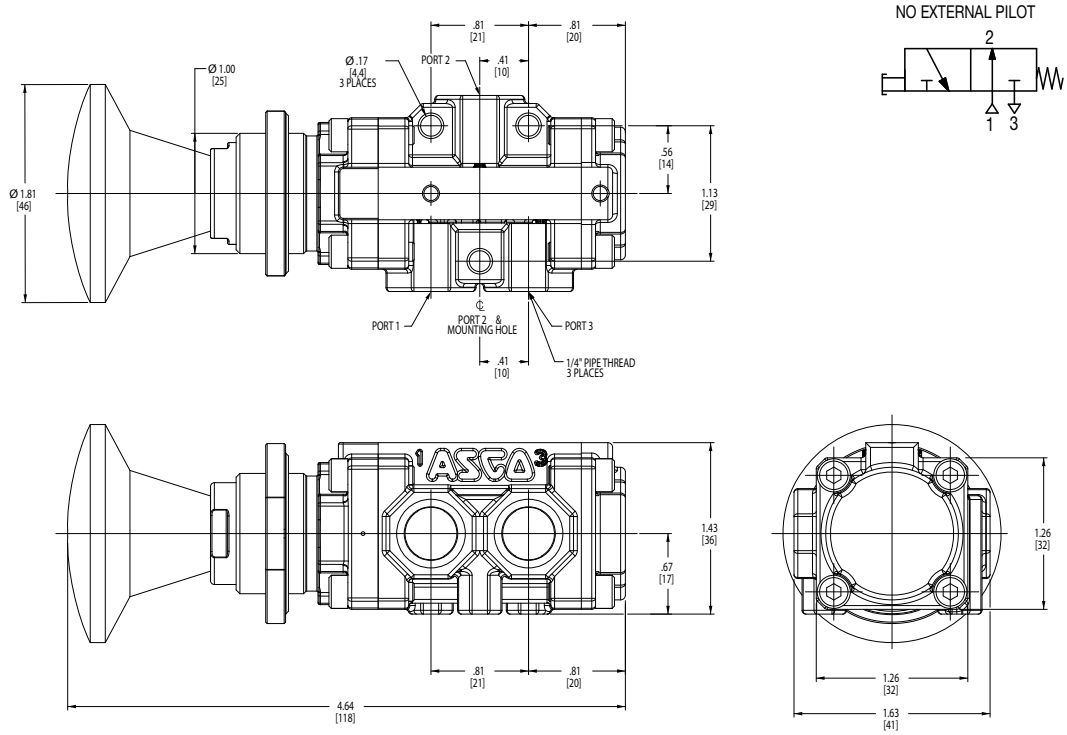
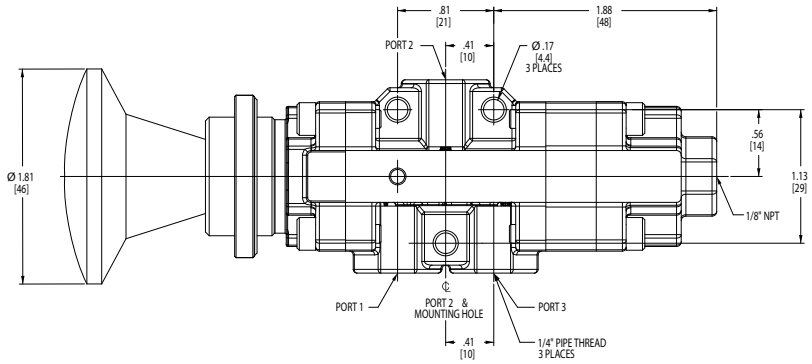
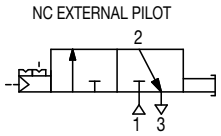


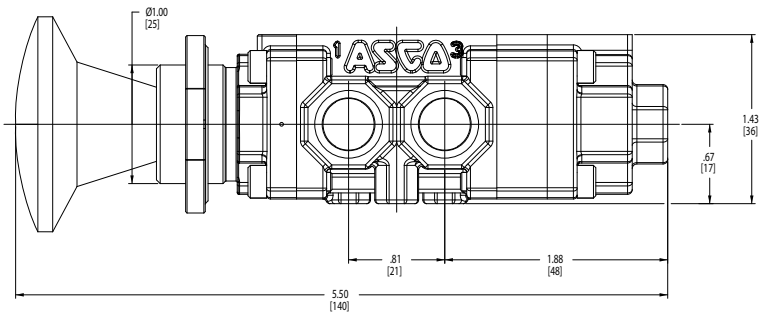
SPECIAL SERVICE PILOT

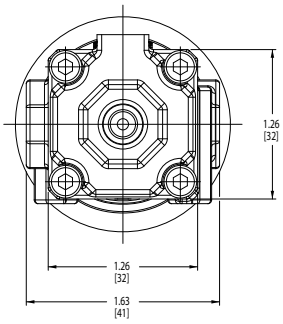
Dimensions: inches (mm)

Const. Ref.11









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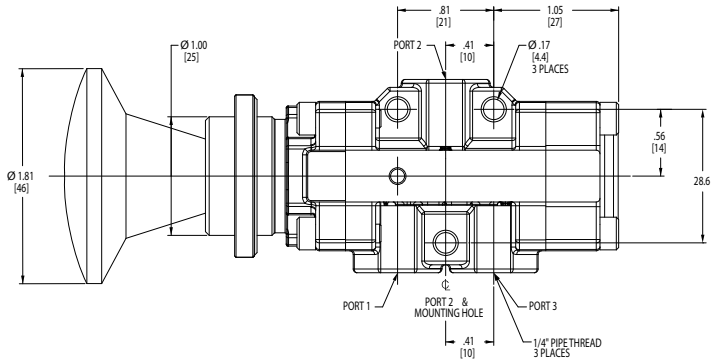
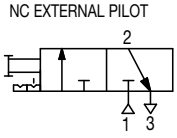
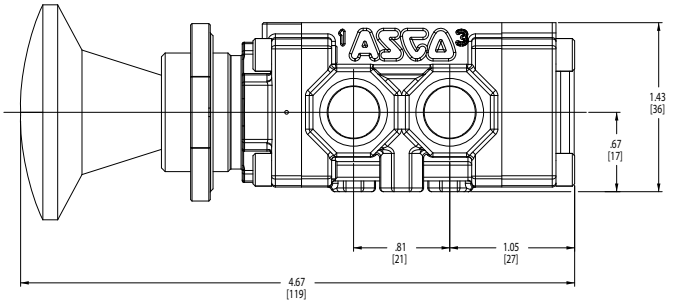
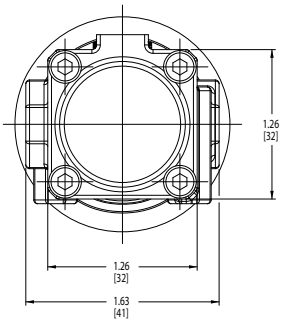




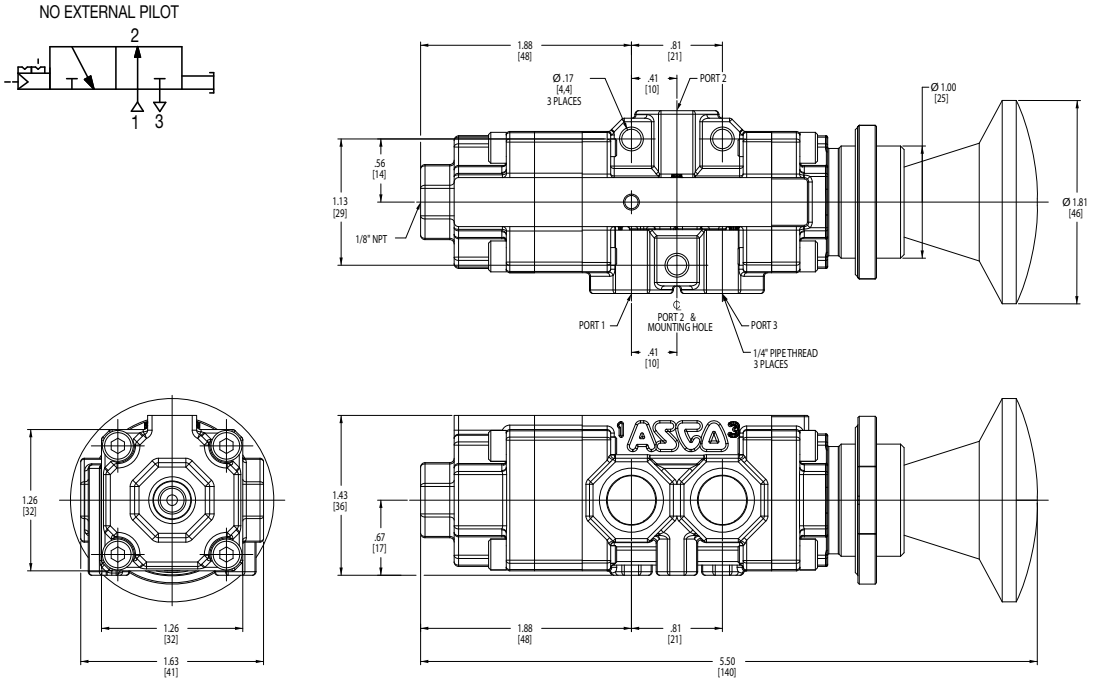




SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 13



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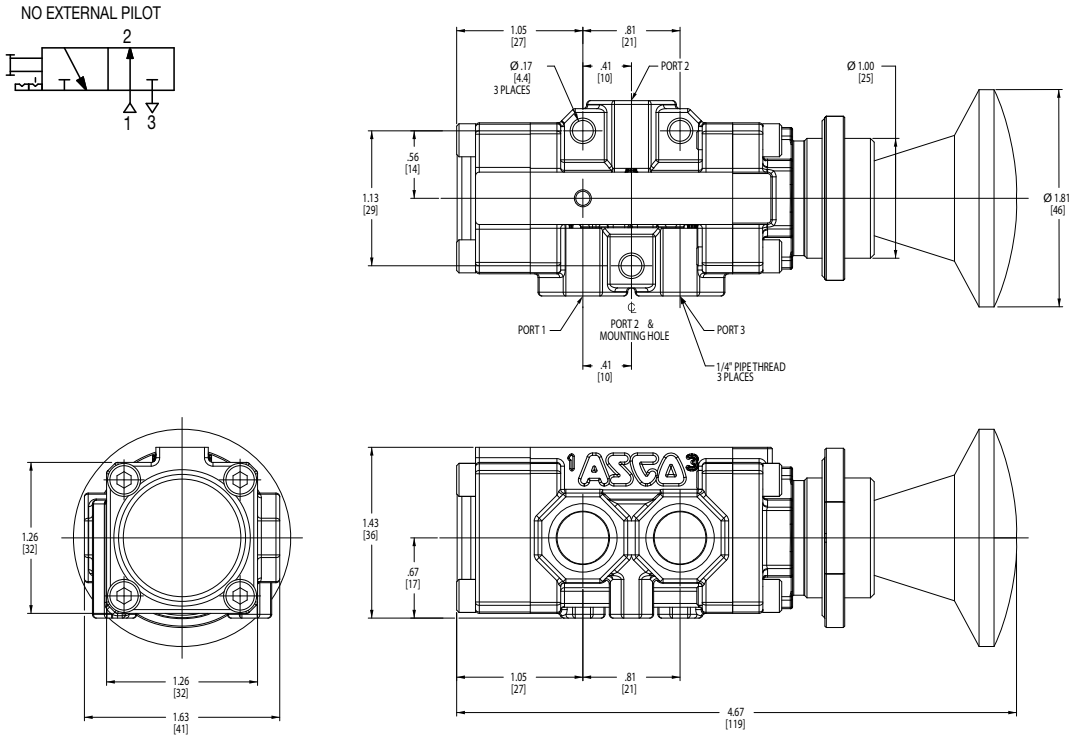
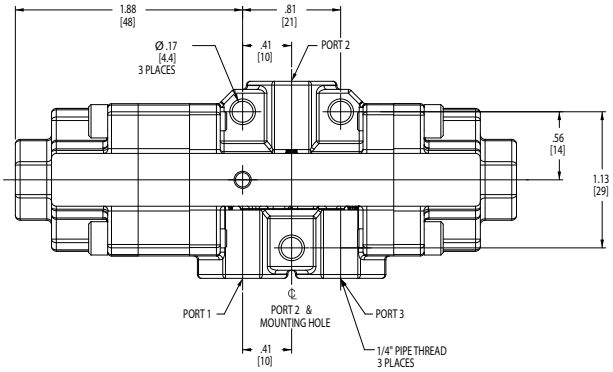
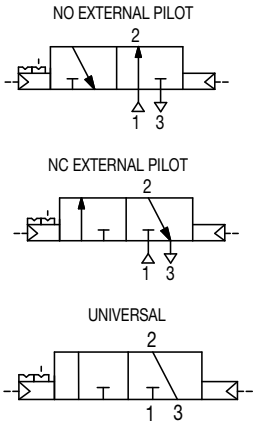


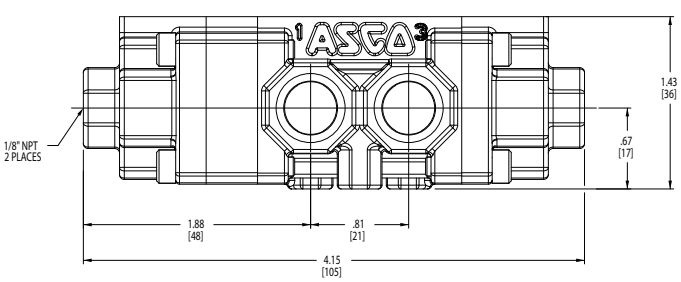
SPECIAL SERVICE PILOT

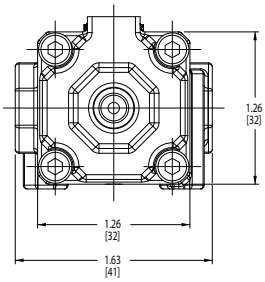
Dimensions: inches (mm)

Const. Ref. 15









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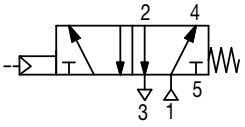
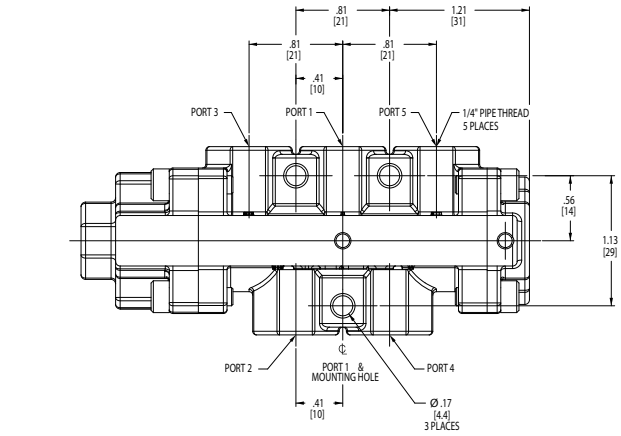
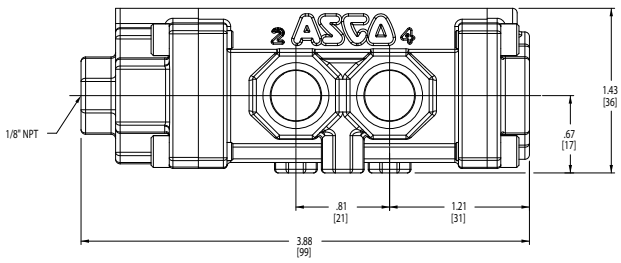
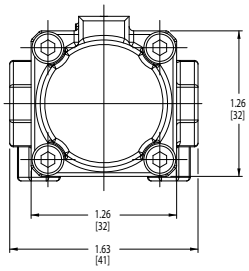




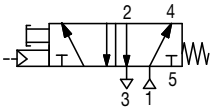


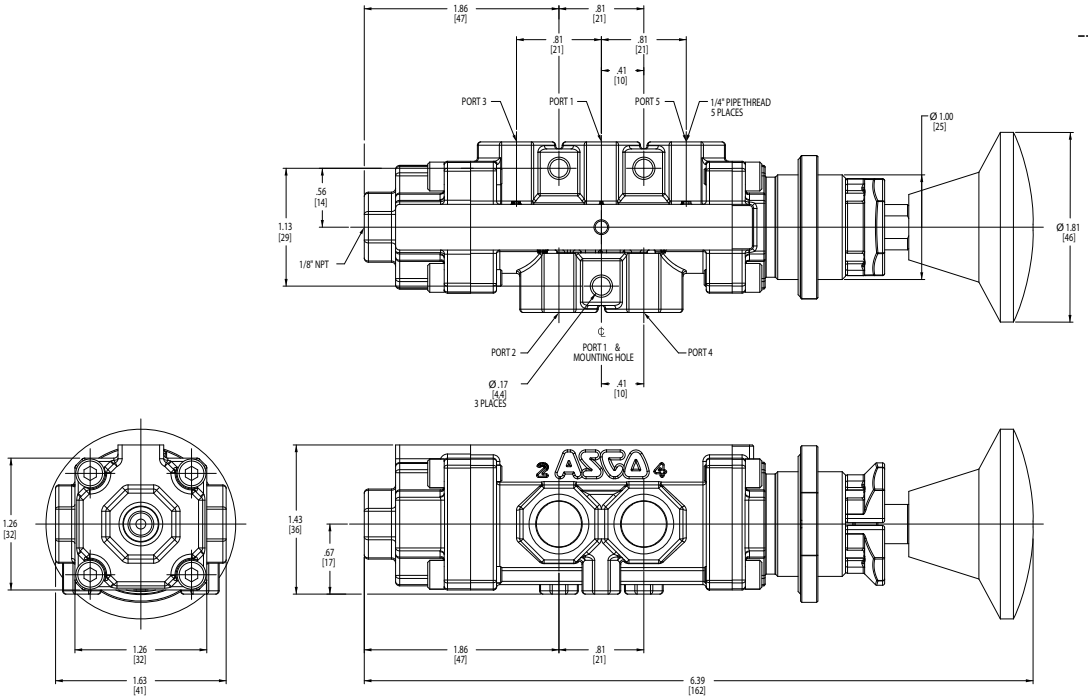


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 17





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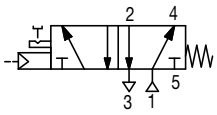
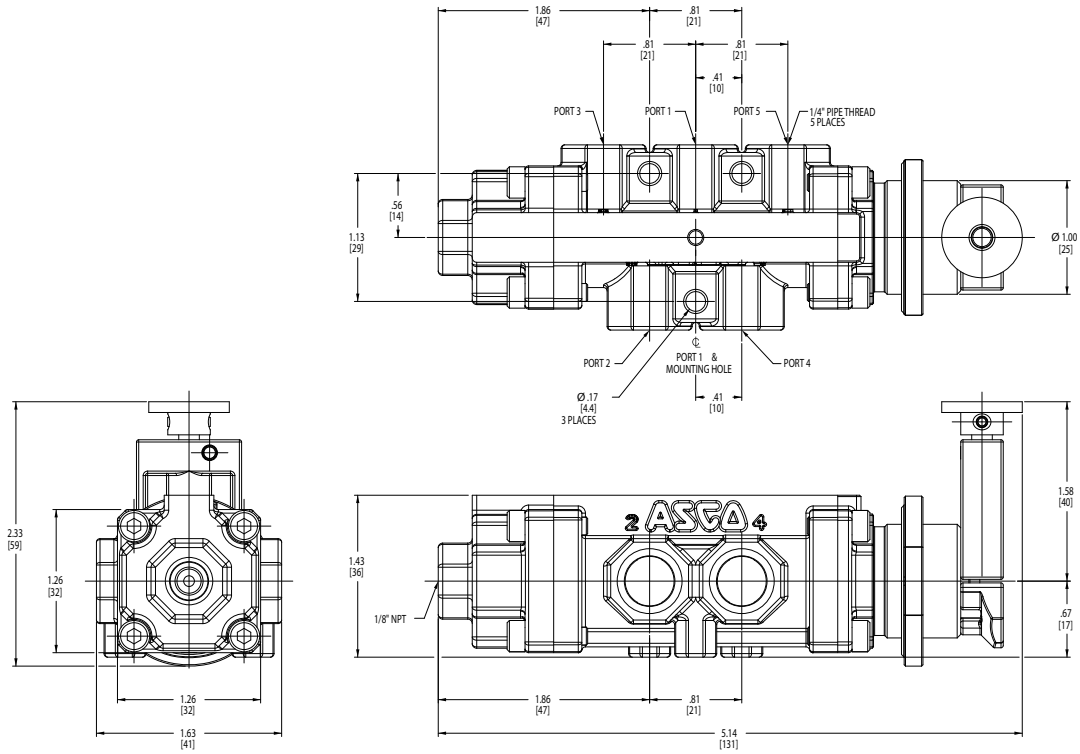
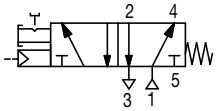


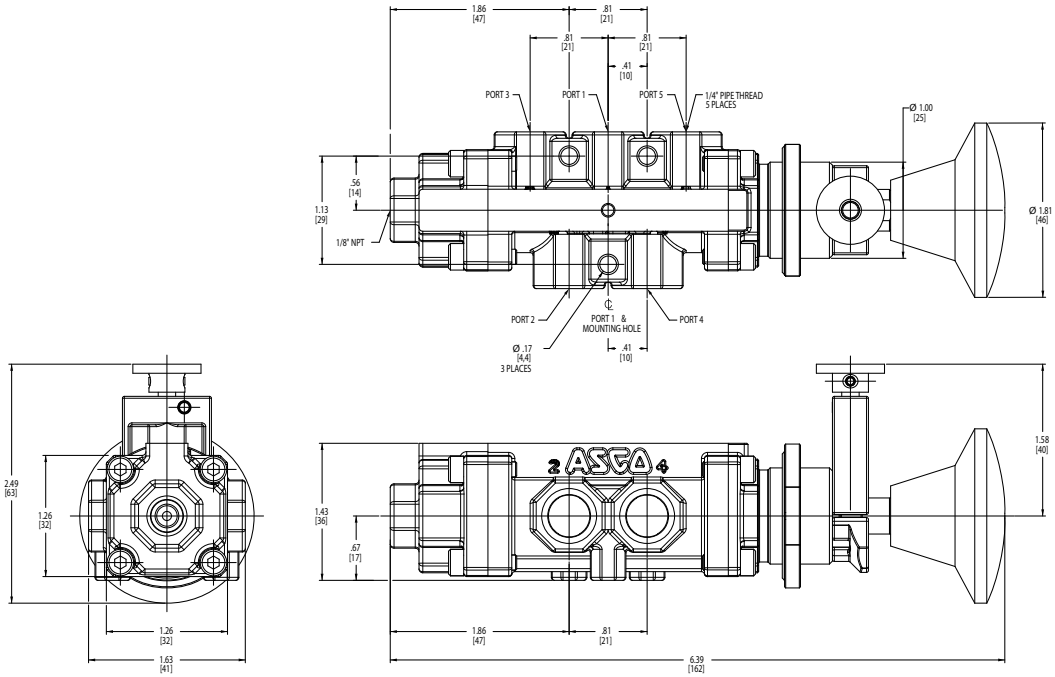


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

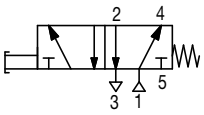
Const. Ref. 19

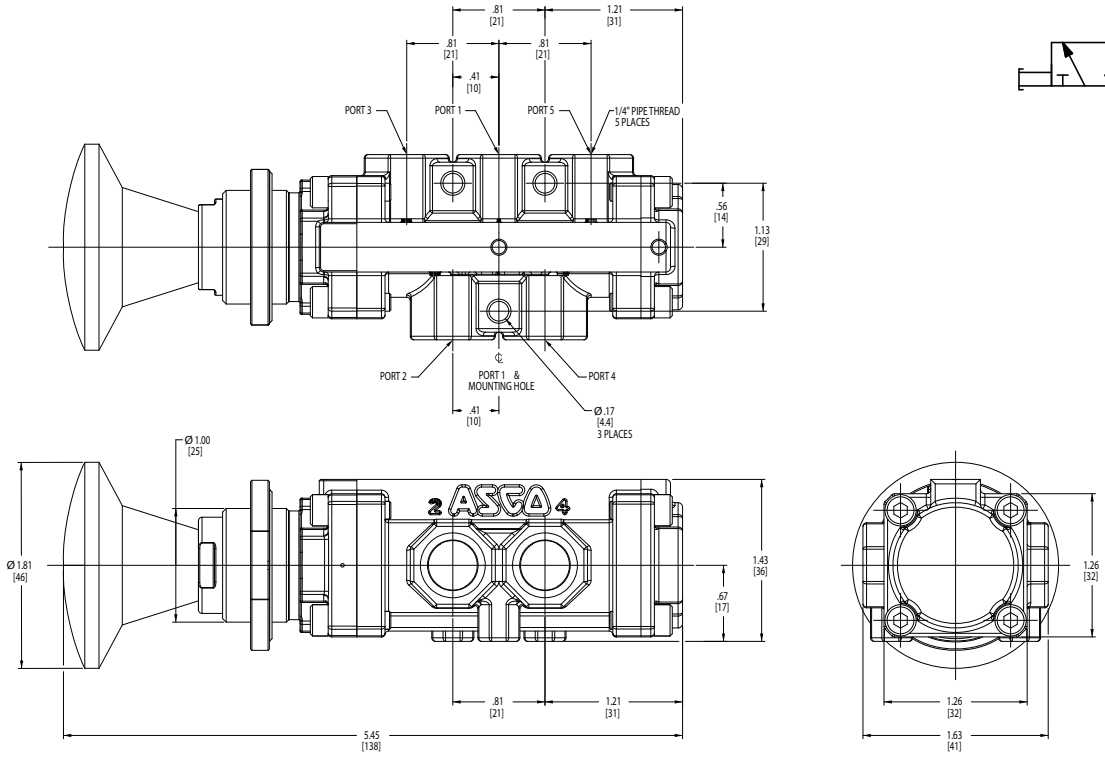




Const. Ref. 20

EXTERNAL PILOT

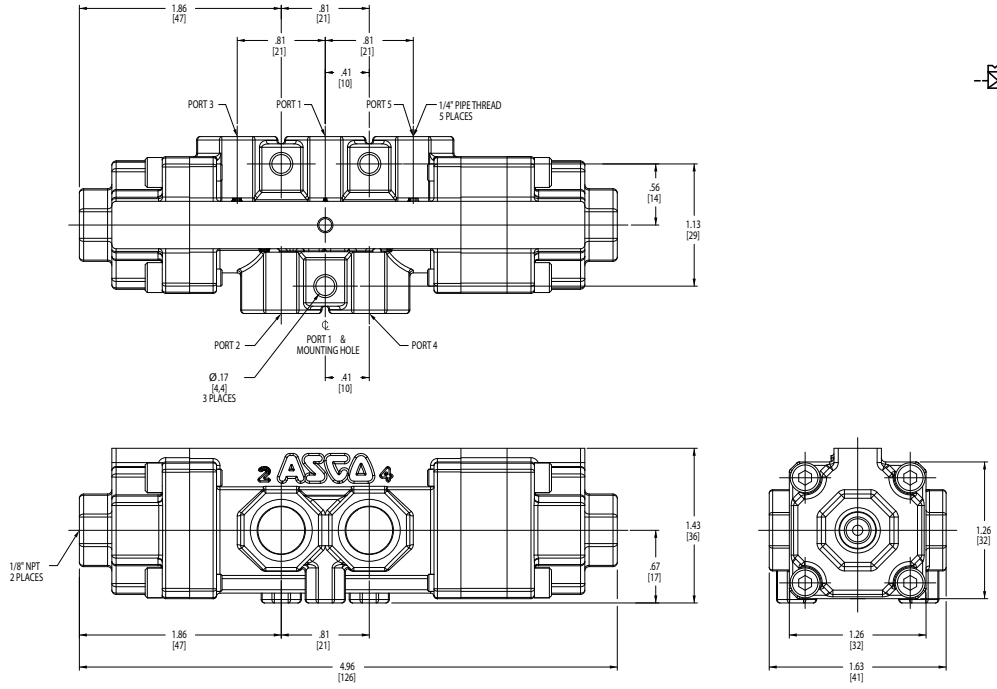


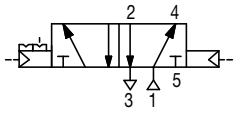


SPECIAL SERVICE PILOT

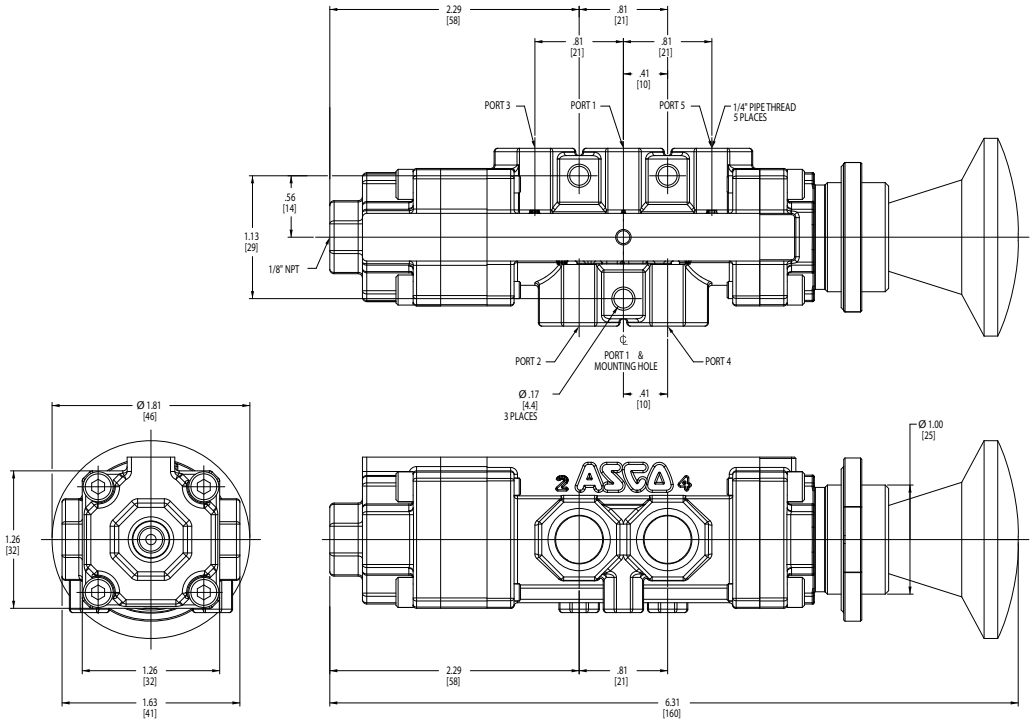
Dimensions: inches (mm)

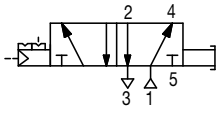
Const. Ref. 21





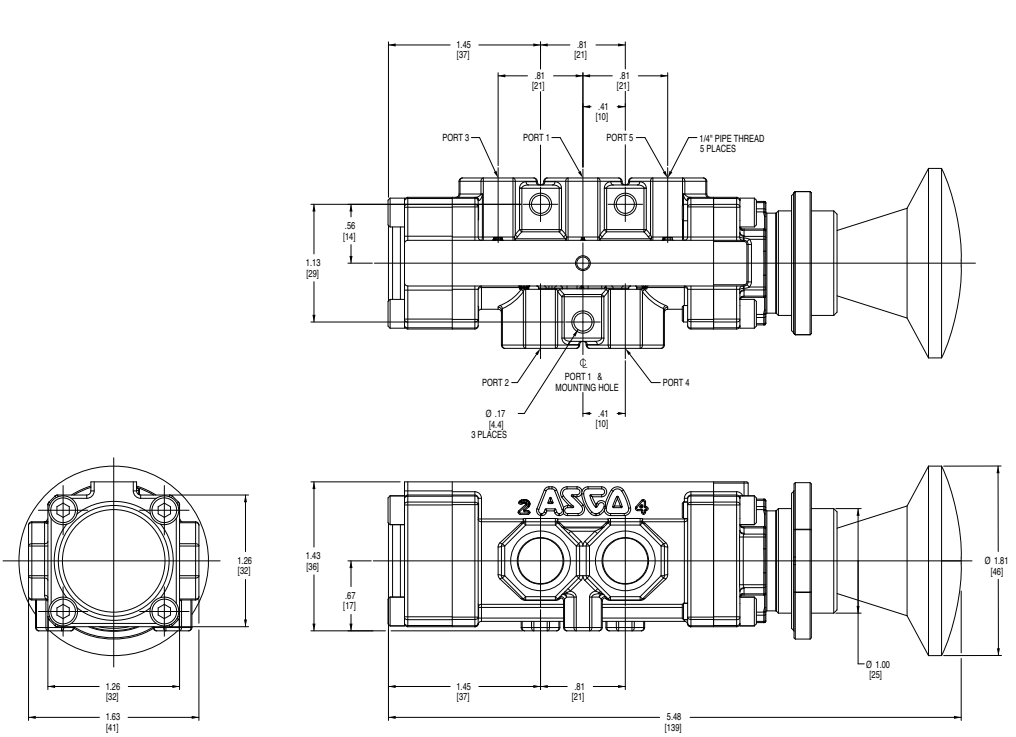
Const. Ref. 22



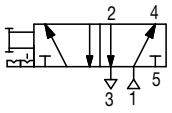


Dimensions: inches (mm)

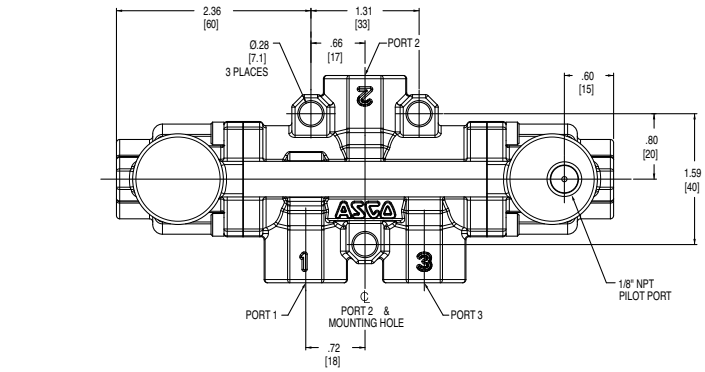
Const. Ref. 23

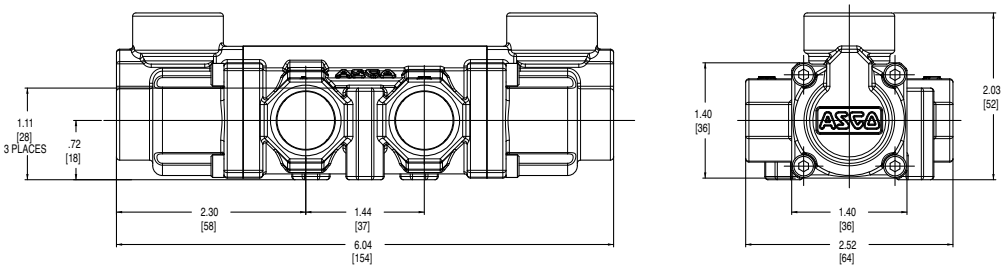


EXTERNAL PILOT

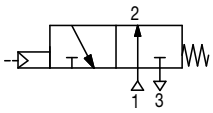


Const. Ref. 24

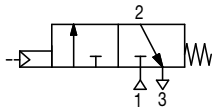




NO EXTERNAL PILOT



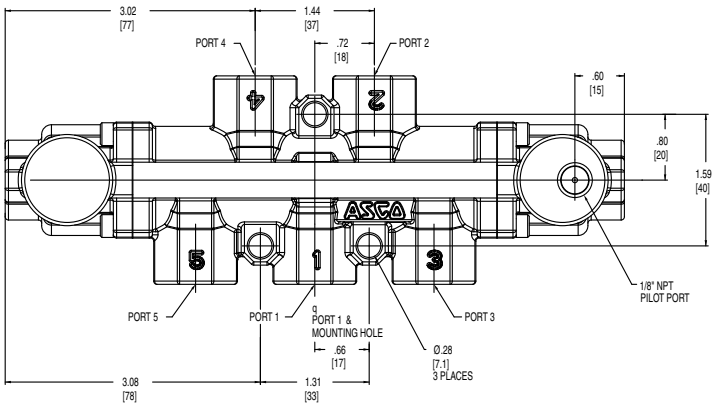
NC EXTERNAL PILOT

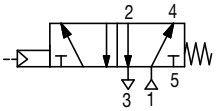


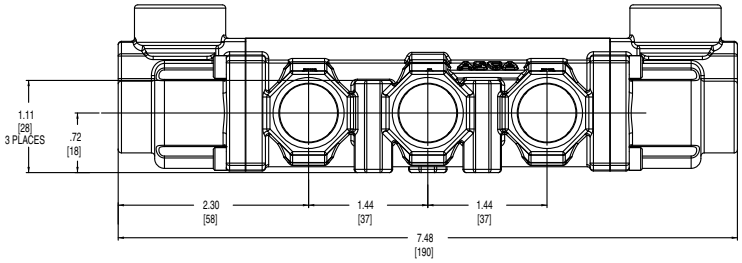
SPECIAL SERVICE PILOT

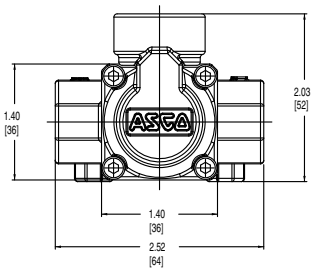
Dimensions: inches (mm)

Const. Ref. 25

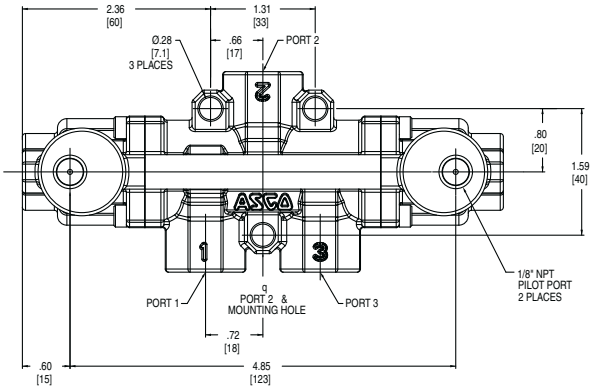


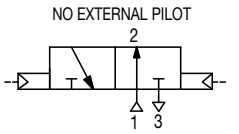


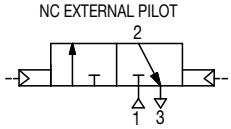


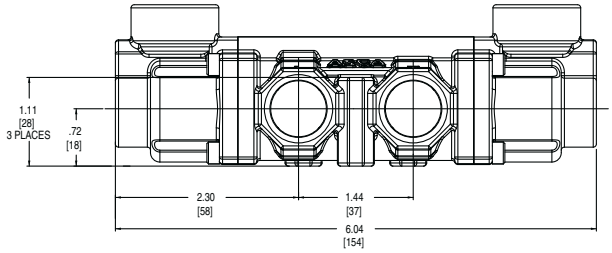


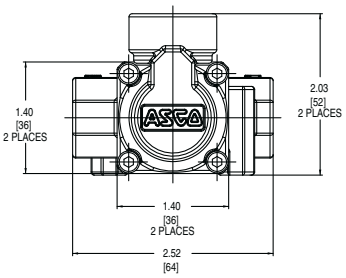
Const. Ref. 26





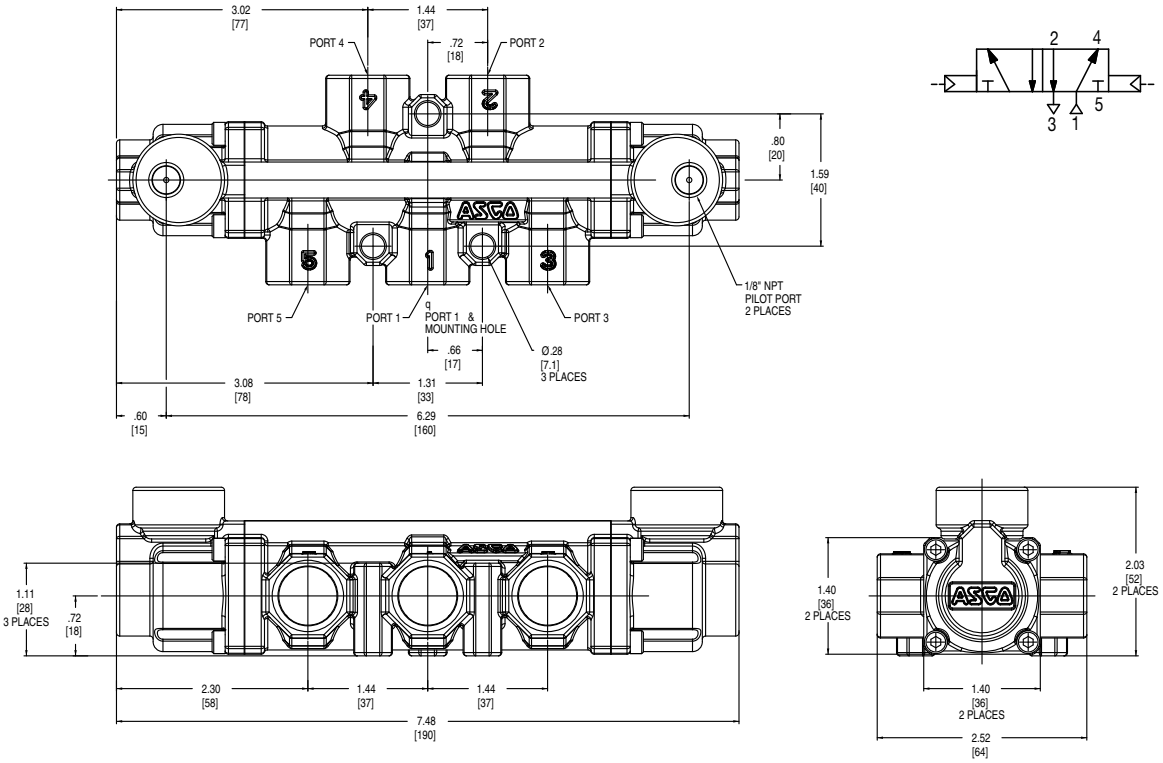




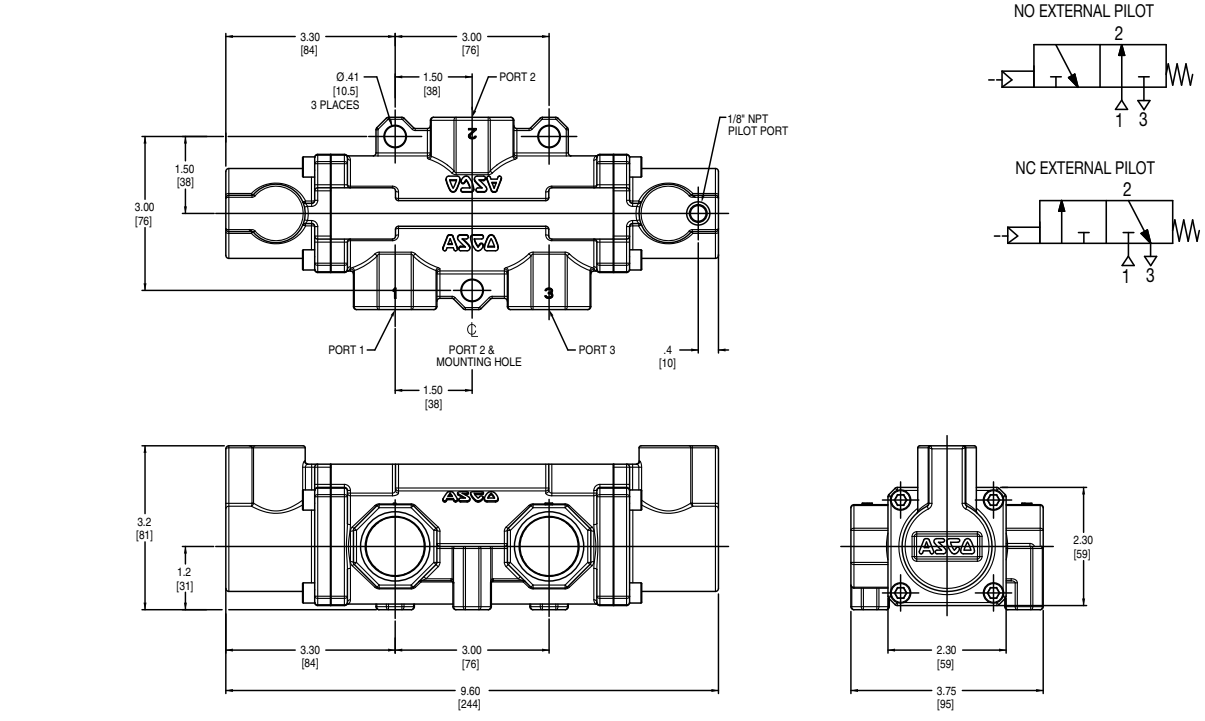


Dimensions: inches (mm)

Const. Ref. 27



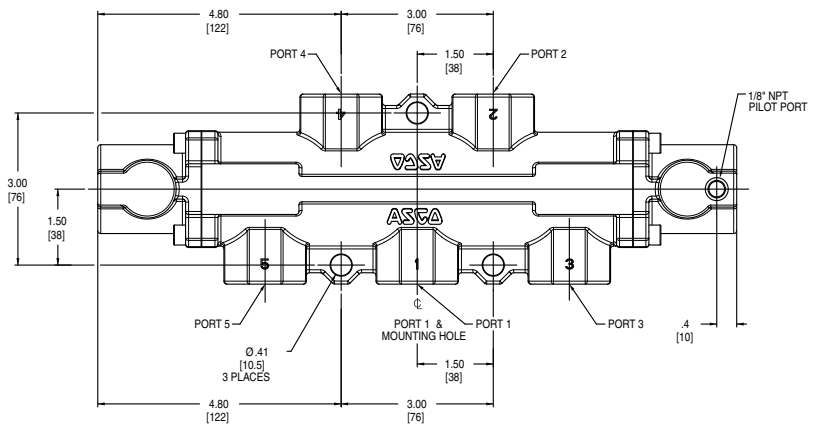
Const. Ref. 28

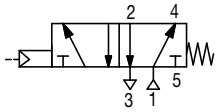


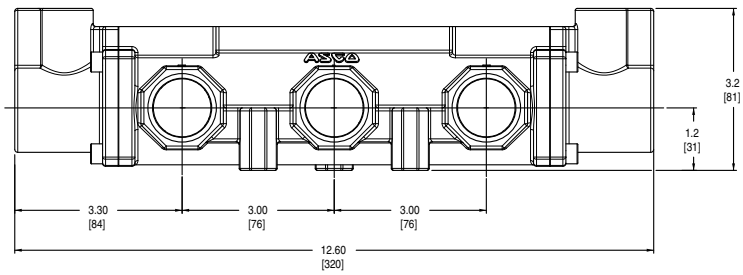
SPECIAL SERVICE PILOT

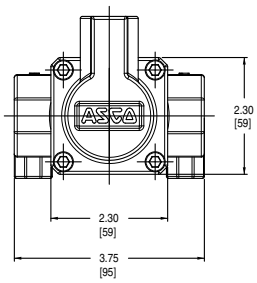
Dimensions: inches (mm)

Const. Ref. 29

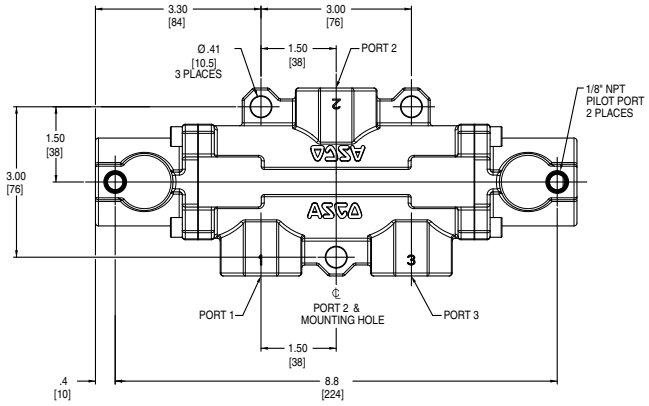


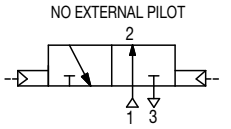


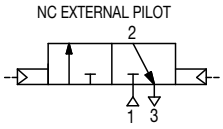


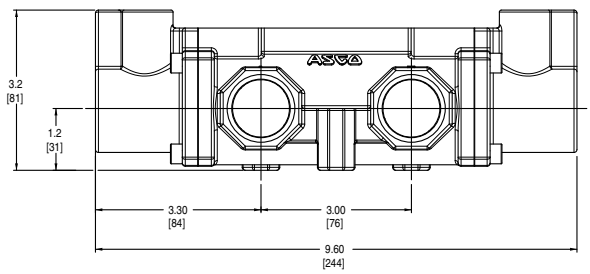


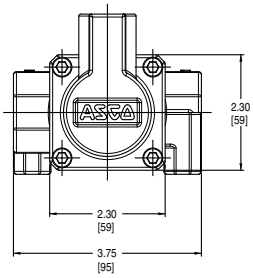
Const. Ref. 30





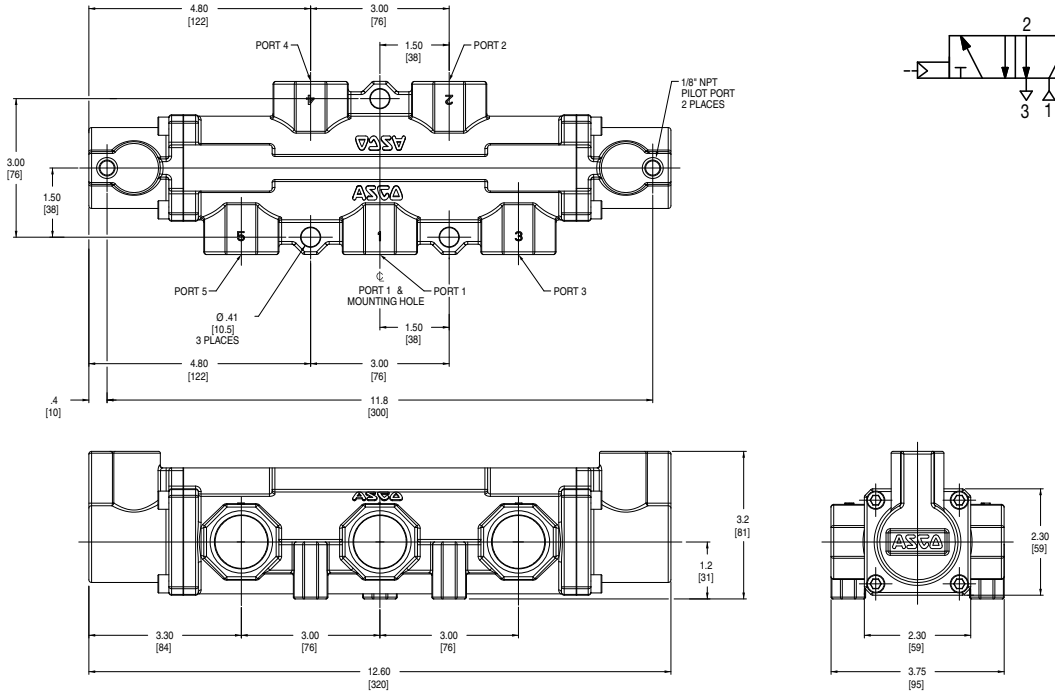




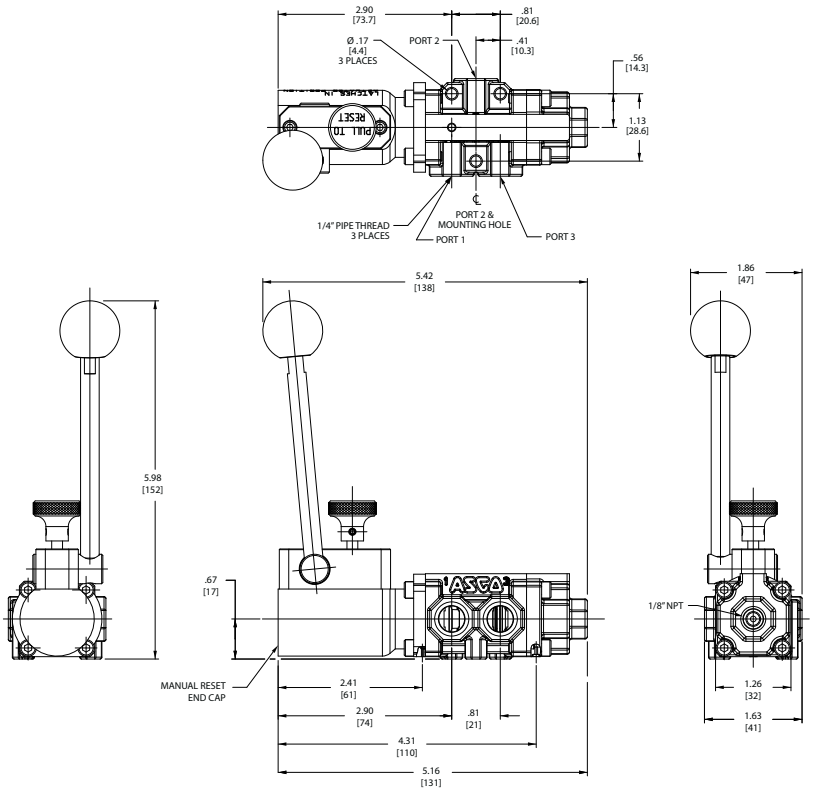


Dimensions: inches (mm)

Const. Ref. 31



Const. Ref. 32

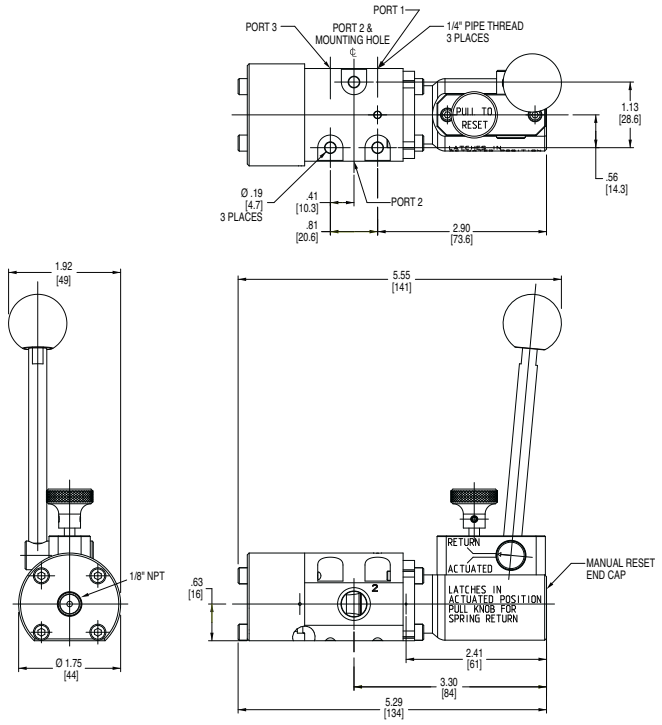


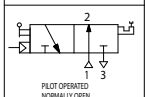
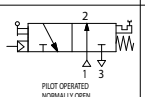
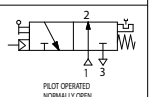
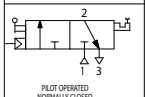
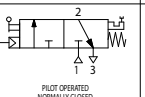
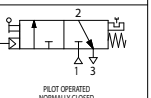
47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH
MANUAL LEVER RETURN LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN DE-ENERGIZED POSITION
PILOT OPERATED NORMALLY OPEN MANUAL RESET	PILOT OPERATED NORMALLY OPEN MANUAL RESET	PILOT OPERATED NORMALLY OPEN MANUAL RESET
PILOT OPERATED NORMALLY CLOSED MANUAL RESET	PILOT OPERATED NORMALLY CLOSED MANUAL RESET	PILOT OPERATED NORMALLY CLOSED MANUAL RESET

SPECIAL SERVICE PILOT

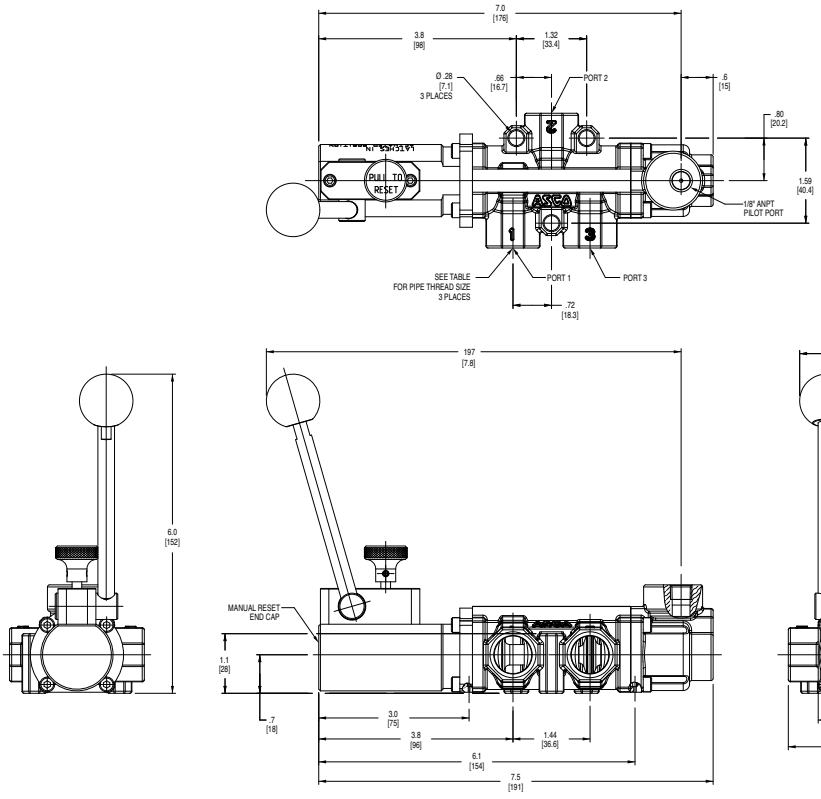
Dimensions: inches (mm)

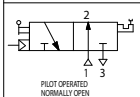
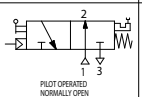
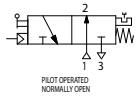
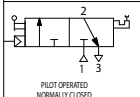
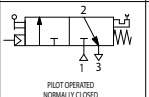
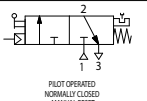
Const. Ref. 33



47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH
MANUAL LEVER RETURN LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN DE-ENERGIZED POSITION
 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET
 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET

Const. Ref. 34

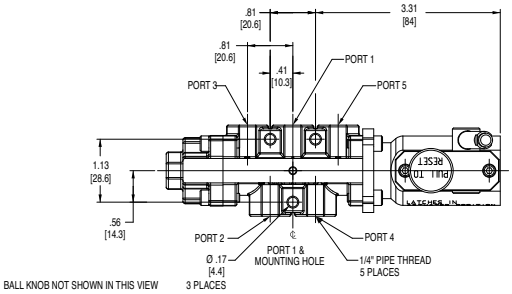


47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH
MANUAL LEVER RETURN LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN DE-ENERGIZED POSITION
 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET
 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET

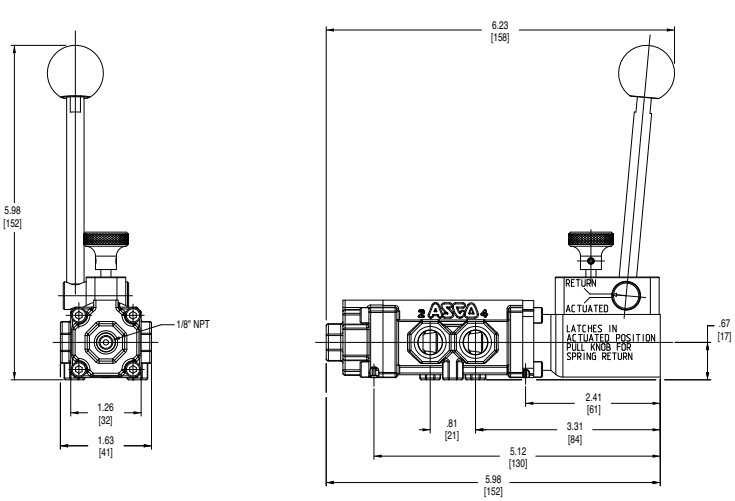
SPECIAL SERVICE
PILOT

Dimensions: inches (mm)

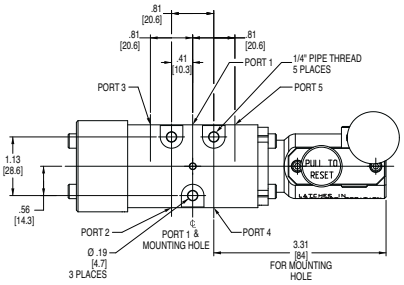
Const. Ref. 35



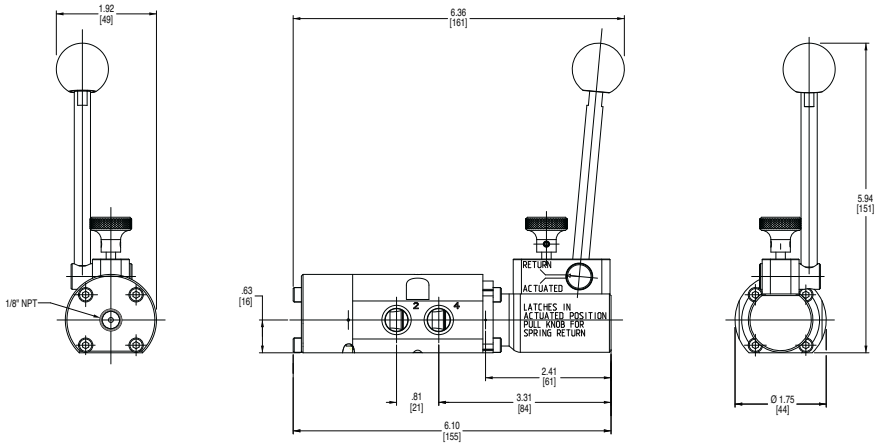
PILOT OPERATED MANUAL RESET		
47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH



Const. Ref. 36



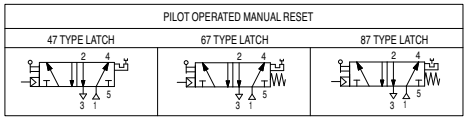
PILOT OPERATED MANUAL RESET		
47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH

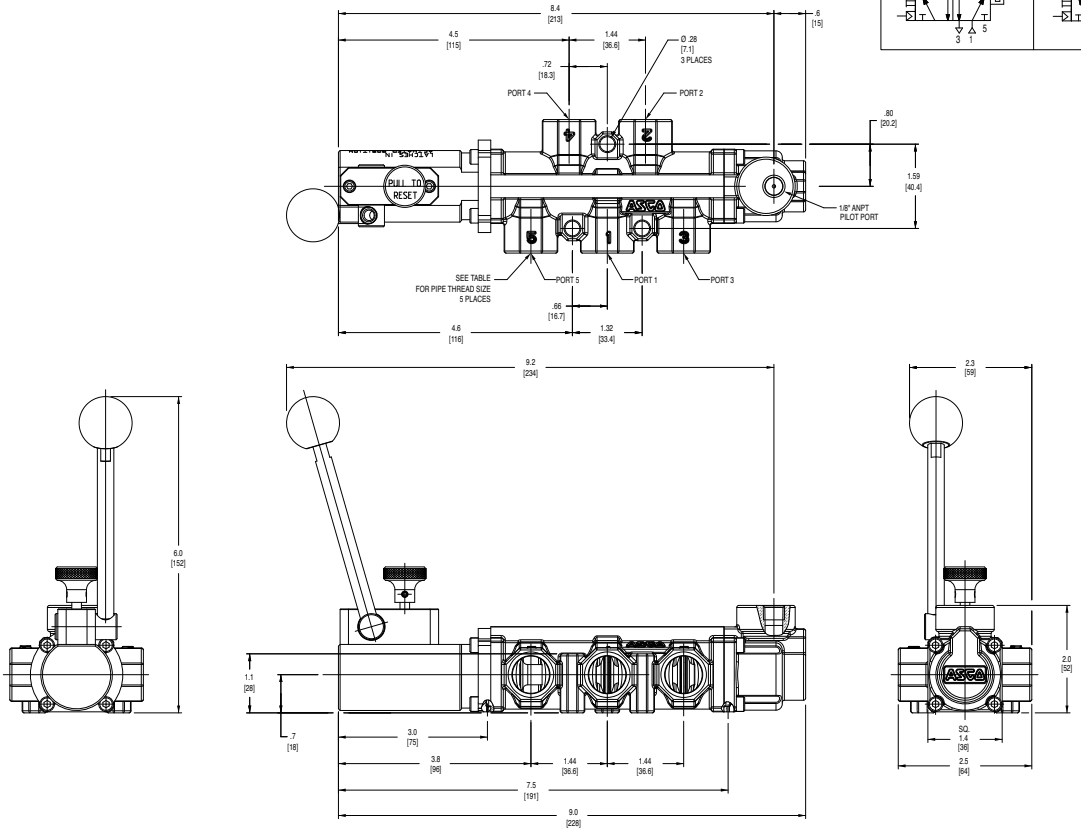


SPECIAL SERVICE PILOT

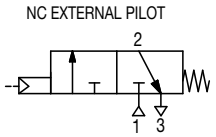
Dimensions: inches (mm)

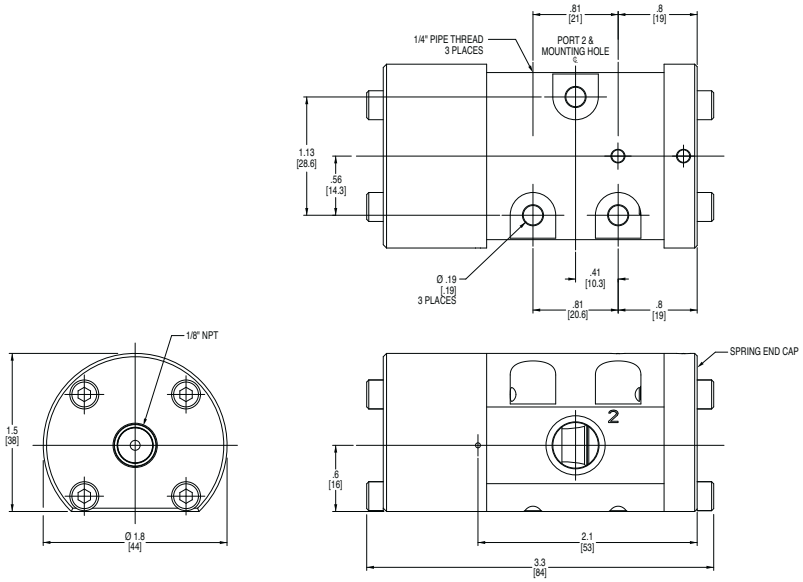
Const. Ref. 37





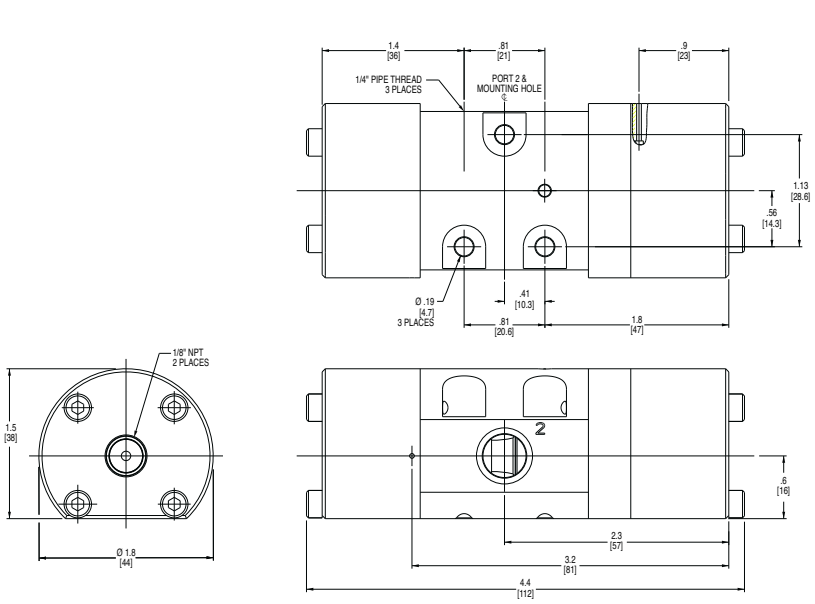
Const. Ref. 38

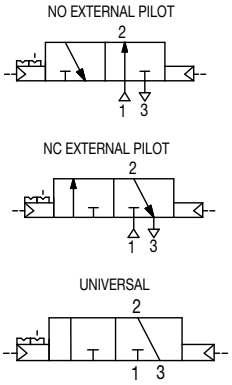




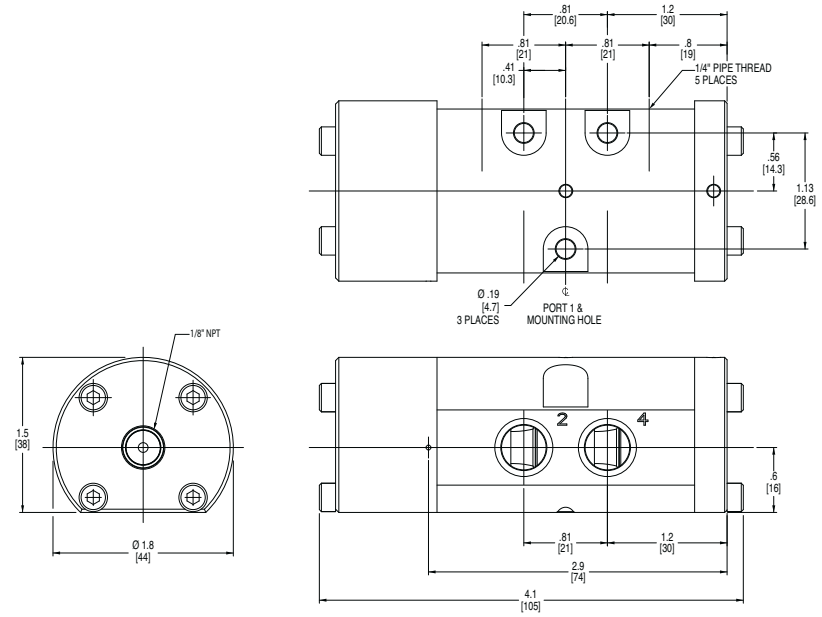
Dimensions: inches (mm)

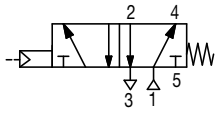
Const. Ref. 39





Const. Ref. 40

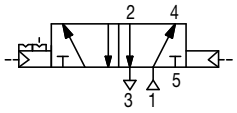


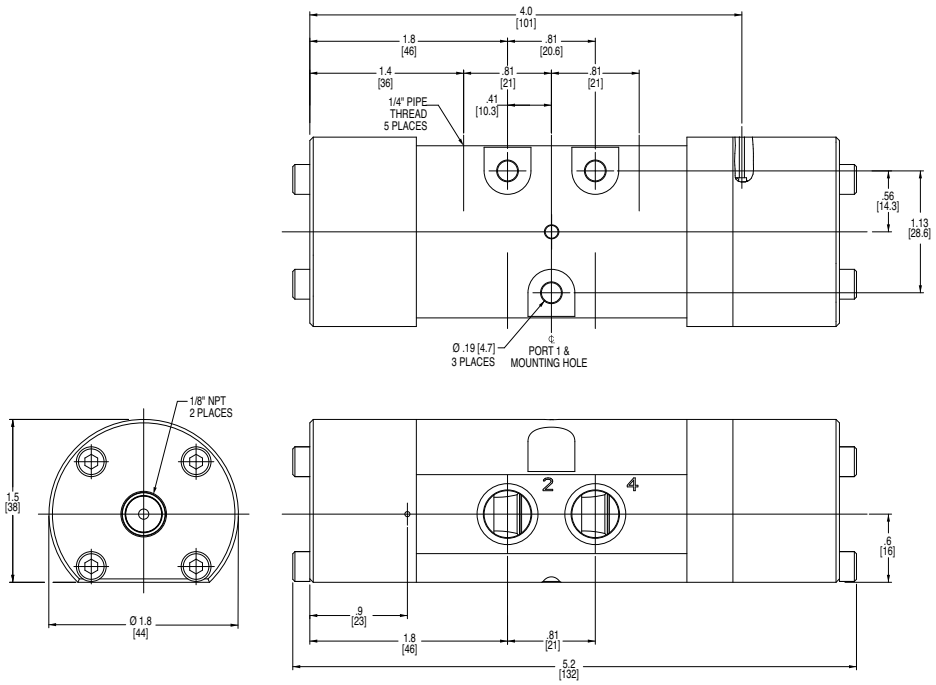


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 41





SPECIAL SERVICE PILOT

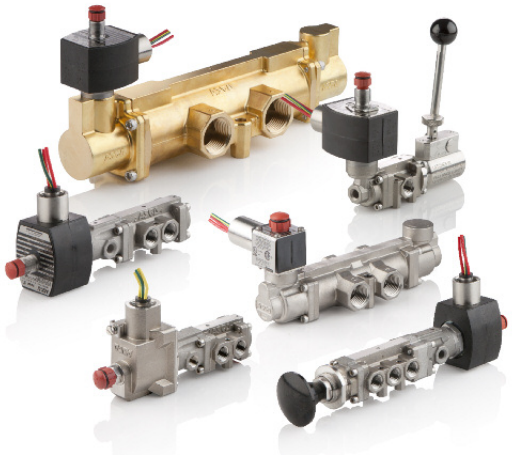
ASCO™ Spool Valves

Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

3/2 SERIES 362/562

Features

- Ideal for valve automation for the oil and gas market
- Reliable, robust design with high flow performance
- Corrosion Resistant - 316L Stainless Steel valve materials make it ideal for offshore and harsh environments
- Solenoid options with Factory Sealed Leads reduces installation time
- Explosion-proof solenoid options
- ATEX & IECEx, UL and CSA global approval options for hazardous locations
- Rated for air, inert gas and sweet dry natural gas
- SIL 3 Capable options
- Manual override option



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel, Brass
Spring	Cobalt Alloy
Seals	FKM (standard), Low Temp NBR (optional)
Core and Plugnut	430F Stainless Steel
Spool	316L Stainless Steel

Electrical

Solenoid Options	Insulation Class	Wattage	Spare Coil Part Number
Intrinsically Safe	H	0.48 W	298006
Ultra Low Power Explosionproof	F/H	0.55/0.7 W	274714/274914
Ultra Low Power General Purpose	F/H	0.55/0.7 W	238710/238910
Ultra Low Power DIN	F	0.55 W	238712
Intrinsically Safe DIN	H	0.48 W	298008
Electronically Enhanced General Purpose	H	1.2 to 1.5 W	250404
Electronically Enhanced Explosion Proof Div. 2	H	1.2 to 1.5 W	250504
Standard Low Power	F/H	1.4 W/1.8 W	274714/274914
Compact Low Power	F	1.8 W	437962
Standard AC	F/H	10.1 W	274614/274814
Standard DC	F/H	11.6 W	274714/274914
Stainless Steel Encapsulated	F	1.8 W	505434
Surge Suppression	F/F/H	0.75/1.7/2.0 W	276007/276007/523130

IMPORTANT: Supervisory & leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.

Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)	Coil Resistance at 68˚F (20˚C) (Ohms)
Ultra Low Power	0.55 W	12V	34.0	3.63	255
		24V	17.0	1.80	1025
		48V	8.5	0.91	4080
		125V	3.2	0.34	27,400
Standard Low Power	1.4 W	12 V	83.5	13.9	102
		24 V	42.0	7.0	410
Compact Low Power	1.8 W	12 V	95.0	20.0	80
		24 V	47.0	10.0	320
Stainless Steel Encapsulated	1.8 W	12 V	99.0	18.0	80
		24 V	47.0	10.0	320

Minimum Ambient/Fluid Temp.*

Brass	Stainless Steel
FKM: -4˚F (-20˚C)	-4˚F (-20˚C)
NBR: -40˚F (-40˚C)	-40˚F (-40˚C)

Note: Low Temperature option for all manual component options: -20˚F to 200˚F (-29˚C to 93˚C)

**See next page for solenoid temperature ranges.*

Solenoid Enclosures

Standard: Explosionproof and Watertight, Types 4X, 6, & 6P.

Refer to Engineering Section for fluid and temp. compatibility.

Approvals

Solenoid Only:

UL and CSA certified for Class I, Div. 1 locations - (except General Purpose and Electronically Enhanced voltage ranging)

UL and CSA certified for Class I, Div. 2 (Explosion-Proof Electronically Enhanced voltage ranging and JS2D Junction Box)

ATEX, IECEx: Ex db mb - All Solenoid except Compact Low Power and Stainless Steel Encapsulated

ATEX, IECEx: Ex db: Stainless Steel Encapsulated Solenoid

ATEX, IECEx: Ex eb mb: JS2D Junction Box

SIL 3 Capable options (Excludes manual lever reset constructions)

Refer to Engineering for details.

Important

These solenoid valves are intended for use on clean dry air, inert gas, or sweet dry natural gas filtered to 40 micron or better. The dew point of the media should be at least 10˚C (18˚F) below the minimum temperature to which any portion of the air, inert gas or sweet dry natural gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with FKM and LT NBR elastomers. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

SPECIAL SERVICE PILOT

ASCO™ Spool Valves

Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

Solenoid Derivatives

Solenoid Operator		Watts		Ambient Temp./Fluid AC		Ambient Temp./Fluid DC	
		AC	DC	Min .˚F (˚C)	Max. ˚F (˚C)	Min. ˚F (˚C)	Max. ˚F (˚C)
Solenoid							
	EV Explosion-Proof Solenoid	10.1	11.6 1.4 1.7* 0.55 0.75*	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W and 1.7 W 149 (65) For 0.55 W and 0.75 W
	EVHT High Temperature Explosion-Proof Solenoid	10.1	11.6 2.0* 1.8 0.7	-4 (-20) FKM -40 (-40) LT NBR	140 (60)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 176 (80) For 1.8 W and 2.0 W ① 176 (80) For 0.7 W
	Compact Low Power	-	1.8	-	-	-4 (-20) FKM -40 (-40) LT NBR	200 (93)
	Intrinsically Safe (IS) (Conduit)	-	0.48	-	-	-4 (-20) FKM -40 (-40) LT NBR	149 (65)
	Electronically Enhanced Voltage Ranging General Purpose	1.2 to 1.5	1.2 to 1.5	140 (60) - Max -4 (-20) FKM & -40 (-40) LT NBR - Min			
	Electronically Enhanced Voltage Ranging Explosion-Proof - Div. 2	1.2 to 1.5	1.2 to 1.5	140 (60) - Max -4 (-20) FKM & -40 (-40) LT NBR - Min			
	Intrinsically Safe DIN (ISSC)	-	0.48	-	-	-4 (-20) FKM -40 (-40) LT NBR	149 (65)
	DIN Connection General Purpose	10.1	11.6 1.4 0.55	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W 149 (65) For 0.55 W
	General Purpose Red-Hat II Solenoid (Conduit)	10.1	11.6 1.4 0.55	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W 149 (65) For 0.55 W
	General Purpose High Temperature (Class H) Red-Hat II Solenoid (Conduit)	10.1	11.6 1.8 0.7	-4 (-20) FKM -40 (-40) LT NBR	140 (60)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 176 (80) For 1.8 W 176 (80) For 0.7 W
	Stainless Steel Encapsulated 22mm coil Explosion-Proof, Div. 1	-	1.8	-	-	-4 (-20) FKM	194 (90)
Enclosures							
	JS2D Class I, Div. 2 Junction Box	10.1	11.6 1.4 1.7* 0.55 0.75	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	115 (46) (ATEX, IECEx) & 131 (55) (UL, CSA) For 11.6 W 140 (60) For 1.4 W and 1.7 W 149 (65) For 0.55 W and 0.75 W
	JSIS Intrinsically Safe - Class I, Div. 1 & 2 Junction Box	-	0.48	-	-	-4 (-20) FKM -40 (-40) LT NBR	149 (65)
	JBEF Class I, Div. 1 Junction Box	10.1	11.6 1.4 1.7* 0.55 0.75*	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W 149 (65) For 0.55 W
	JBEFHT Class I, Div. 1 (Class H) High-Temperature Junction Box	10.1	11.6 2.0* 1.8 0.7	-4 (-20) FKM -40 (-40) LT NBR	140 (60)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 165 (74) For 1.8 W and 2.0 W 176 (80) For 0.7 W

① 165 (74) (ATEX, IECEx) for LTNBR versions only. FKM - Standard version with FKM seals; LTNBR - Low Temperature NBR version. *Surge suppression.
Note: For additional constructions, please visit the 362/562 configurator at www.asco.com.

How to order

8 362 A 1 01 H1 1 1 2 F1

Connection Type
8 = NPT

Product Series
362 = 3 way for Process Automation
562 = 4 way for Process Automation

(See configurator available at www.asco.com)

Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ① Stainless Steel	Base Catalog Number ① Brass	Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ② Min.	Main Operating Pressure Differential psi (bar) ② Max.	External Pilot Pressure psi (bar) ② Min.	External Pilot Pressure psi (bar) ② Max.	Max. Fluid Temp. ③ °F (°C)	Product Weight lbs (kgs)	Const. Ref.
3/2 - Normally Closed / Internally Piloted												
1/4"	8362A101H181	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.13 (0.97)	1
1/4"	8362A102H181	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.33 (1.06)	2
1/4"	8362A104H181	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.38 (1.08)	3
1/4"	8362A105H181	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.4 (1.09)	4
1/4"	8362A102H181	-	Single Solenoid,Palm Button /Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.79 (1.27)	6
1/4"	8362A104H181	-	Single Solenoid With Latching/Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.52 (1.6)	7
1/4"	8362A105H181	-	Single Solenoid, Palm Button With Latching/Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.45 (1.57)	8
1/4"	8362A101H181	-	Single Solenoid/Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.84 (1.29)	5
1/4"	-	8362BA01H181	Single Solenoid/Spring Return	90° Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	2.02 (0.92)	49
1/4"	8362A141H181	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H181	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A161H181	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H181	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A181H181	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H181	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
3/8"	8362A201H181	-	Single Solenoid/Spring Return	90° Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.42 (1.55)	35
3/8"	8362A241H181	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A261H181	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A281H181	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H181	Single Solenoid/Spring Return	90° Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H181	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC61H181	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC81H181	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
1/2"	8362A301H181	-	Single Solenoid/Spring Return	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.36 (1.52)	35
1/2"	8362A341H181	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A361H181	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A381H181	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H181	Single Solenoid/Spring Return	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H181	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD61H181	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD81H181	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
3/4"	8362A401H181	-	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.76 (4.88)	39
3/4"	-	8362AE01H181	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.9 (5.4)	39
1"	8362A501H181	-	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.45 (4.74)	39
1"	-	8362AF01H181	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.48 (5.21)	39
3/2 - Normally Closed / Externally Piloted												
1/4"	8362A101H101	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.02 (0.92)	1
1/4"	8362A102H101	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.33 (1.06)	2
1/4"	8362A104H101	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.38 (1.08)	3
1/4"	8362A105H101	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.4 (1.09)	4
1/4"	8362A102H101	-	Single Solenoid,Palm Button /Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.79 (1.27)	6
1/4"	8362A104H101	-	Single Solenoid With Latching/Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.52 (1.6)	7
1/4"	8362A105H101	-	Single Solenoid, Palm Button With Latching/Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.45 (1.57)	8
1/4"	8362A101H101	-	Single Solenoid/Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.84 (1.29)	5
1/4"	-	8362BA01H101	Single Solenoid/Spring Return	90° Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	2.02 (0.92)	49
1/4"	8362A141H101	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H101	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A161H101	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H101	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A181H101	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H101	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
3/8"	8362A201H101	-	Single Solenoid / Spring return	90° Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.42 (1.55)	35
3/8"	8362A241H101	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A261H101	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A281H101	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.8 (4.2)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H101	Single Solenoid / Spring return	90° Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H101	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC61H101	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC81H101	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	8362A301H101	-	Single Solenoid / Spring return	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.36 (1.52)	35
1/2"	8362A341H101	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A361H101	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A381H101	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H101	Single Solenoid / Spring return	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H101	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD61H101	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD81H101	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/4"	8362A401H101	-	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.86 (4.93)	39
3/4"	-	8362AE01H101	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.9 (5.4)	39
1"	8362A501H101	-	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.58 (4.8)	39
1"	-	8362AF01H101	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.48 (5.21)	39

① Please refer to the How to Order section to complete base catalog number selection.

② MOPD values specified are for Compact Low Power versions (1.8 W). Please visit our website to obtain MOPD's per all solenoid types.

③ Maximum fluid temperature cannot exceed solenoid fluid temperature.

④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31°F (-35°C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ①		Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ②		External Pilot Pressure psi (bar) ②		Max. Fluid Temp. ③ ˚F (˚C)	Product Weight lbs (kgs)	Const. Ref.
	Stainless Steel	Brass				Min.	Max.	Min.	Max.			
3/2 - Normally Open / Internally Piloted												
1/4"	8362A101H191	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.02 (0.92)	9
1/4"	8362A102H191	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.33 (1.06)	10
1/4"	8362A104H191	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.38 (1.08)	11
1/4"	8362A105H191	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.4 (1.09)	12
1/4"	8362A102H191	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.79 (1.27)	14
1/4"	8362A104H191	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.52 (1.6)	15
1/4"	8362A105H191	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.45 (1.57)	16
1/4"	8362A101H191	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.84 (1.29)	13
1/4"	-	8362BA01H191	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	2.02 (0.92)	49
1/4"	8362A141H191	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H191	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A161H191	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H191	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A181H191	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H191	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
3/8"	8362A201H191	-	Single Solenoid/Spring Return	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.42 (1.55)	35
3/8"	8362A241H191	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A261H191	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A281H191	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H191	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H191	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
3/8"	-	8362AC61H191	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
3/8"	-	8362AC81H191	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
1/2"	8362A301H191	-	Single Solenoid/Spring Return	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.36 (1.52)	35
1/2"	8362A341H191	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A361H191	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A381H191	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H191	Single Solenoid/Spring Return	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H191	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
1/2"	-	8362AD61H191	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
1/2"	-	8362AD81H191	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
3/4"	8362A401H191	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.76 (4.88)	39
3/4"	-	8362AE01H191	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.9 (5.4)	39
1"	8362A501H191	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.45 (4.74)	39
1"	-	8362AF01H191	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.48 (5.21)	39
3/2 - Normally Open / Externally Piloted												
1/4"	8362A101H111	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.02 (0.92)	9
1/4"	8362A102H111	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.33 (1.06)	10
1/4"	8362A104H111	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.38 (1.08)	11
1/4"	8362A105H111	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.4 (1.09)	12
1/4"	8362A102H111	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.79 (1.27)	14
1/4"	8362A104H111	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.52 (1.6)	15
1/4"	8362A105H111	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.45 (1.57)	16
1/4"	8362A101H111	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.84 (1.29)	13
1/4"	-	8362BA01H111	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	2.02 (0.92)	49
1/4"	8362A141H111	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H111	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A161H111	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H111	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A181H111	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H111	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
3/8"	8362A201H111	-	Single Solenoid/Spring Return	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.42 (1.55)	35
3/8"	8362A241H111	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A261H111	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A281H111	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H111	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H111	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC61H111	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC81H111	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	8362A301H111	-	Single Solenoid/Spring Return	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.36 (1.52)	35
1/2"	8362A341H111	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A361H111	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A381H111	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H111	Single Solenoid/Spring Return	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H111	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD61H111	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD81H111	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/4"	8362A401H111	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.86 (4.93)	39
3/4"	-	8362AE01H111	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.9 (5.4)	39
1"	8362A501H111	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.58 (4.8)	39
1"	-	8362AF01H111	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.48 (5.21)	39

① Please refer to the How to Order section to complete base catalog number selection.
② MOPD values specified are for Compact Low Power versions (1.8 W).
Please visit our website to obtain MOPD's per all solenoid types.
③ Maximum fluid temperature cannot exceed solenoid fluid temperature.
④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ① Stainless Steel	Base Catalog Number ① Brass	Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ② Min.	Main Operating Pressure Differential psi (bar) ② Max.	External Pilot Pressure psi (bar) ② Min.	External Pilot Pressure psi (bar) ② Max.	Max. Fluid Temp. ③ ˚F (˚C)	Product Weight lbs (kgs)	Const. Ref.
3/2 - Normally Closed Detent/Internally Piloted												
1/4"	8362A103H1D1	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	17
1/4"	8362A103H1D1	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	18
3/2 - Normally Closed Detent/Externally Piloted												
1/4"	8362A103H141	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	17
1/4"	8362A103H141	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	18
3/2 - Normally Open Detent/Internally Piloted												
1/4"	8362A103H1E1	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	19
1/4"	8362A103H1E1	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	20
3/2 - Normally Open Detent/Externally Piloted												
1/4"	8362A103H151	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	19
1/4"	8362A103H151	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	20
3/2 - Detent/Internally Piloted												
1/4"	8362A106H1G1	-	Dual Solenoid	Straight	2.0 (1.7)	15 (1.0)	150 (10.3)	-	-	200 (93)	4.49	21
1/4"	8362A106H1G1	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	15 (1.0)	150 (10.3)	-	-	200 (93)	4.49	22
1/4"	-	8362BA06H1G1	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	15 (1.0)	150 (10.3)	-	-	200 (93)	3.67 (1.67)	51
3/2 - Detent/Externally Piloted												
1/4"	8362A106H171	-	Dual Solenoid	Straight	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	4.49	21
1/4"	8362A106H171	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	4.49	22
1/4"	-	8362BA06H1G1	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	-	-	200 (93)	3.67 (1.67)	51
5/2 - Internally Piloted												
1/4"	8562A101H1C1	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.61 (1.64)	23
1/4"	8562A102H1C1	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.92 (1.78)	24
1/4"	8562A104H1C1	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.96 (1.8)	25
1/4"	8562A105H1C1	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.99 (1.81)	26
1/4"	8562A102H1C1	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.38 (1.99)	28
1/4"	8562A104H1C1	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	5.11 (2.32)	29
1/4"	8562A105H1C1	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	5.04 (2.29)	30
1/4"	8562A101H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.43 (2.01)	27
1/4"	-	8562BA01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	N/A	N/A	200 (93)	2.55 (1.16)	50
1/4"	8562A141H1C1	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA41H1C1	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	25 (1.7)	150 (10.3)	N/A	N/A	200 (93)	3.52 (1.60)	46
1/4"	8562A161H1C1	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA61H1C1	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	N/A	N/A	200 (93)	3.52 (1.60)	46
1/4"	8562A181H1C1	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA81H1C1	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	N/A	N/A	200 (93)	3.52 (1.60)	46
3/8"	8562A201H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.98 (1.8)	36
3/8"	8562A241H1C1	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
3/8"	8562A261H1C1	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
3/8"	8562A281H1C1	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
3/8"	-	8562AC01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.72 (2.14)	36
3/8"	-	8562AC41H1C1	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC61H1C1	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC81H1C1	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
1/2"	8562A301H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.87 (1.75)	36
1/2"	8562A341H1C1	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
1/2"	8562A361H1C1	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
1/2"	8562A381H1C1	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
1/2"	-	8562AD01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.55 (2.06)	36
1/2"	-	8562AD41H1C1	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD61H1C1	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD81H1C1	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
3/4"	8562A401H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	13.92 (6.31)	40
3/4"	-	8562AE01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	15.5 (7.03)	40
1"	8562A501H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	13.41 (6.08)	40
1"	-	8562AF01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	14.82 (6.72)	40
3/8"	8362A206H1C1	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	4.56 (2.06)	37
3/8"	-	8362AC06H1C1	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.04 (2.28)	37
1/2"	8362A306H1C1	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	4.49 (2.03)	37
1/2"	-	8362AD06H1C1	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	4.93 (2.23)	37
3/8"	8562A206H1C1	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.12 (2.32)	38
3/8"	-	8562AC06H1C1	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.74 (2.6)	38
1/2"	8562A306H1C1	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.01 (2.27)	38
1/2"	-	8562AD06H1C1	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.57 (2.52)	38
3/4"	8362A406H1C1	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	11.77 (5.34)	41
3/4"	-	8362AE06H1C1	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	12.68 (5.75)	41
1"	8362A506H1C1	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	15.12 (6.86)	41
1"	-	8362AF06H1C1	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	16.71 (7.58)	41
3/4"	8562A406H1C1	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	14.61 (6.63)	42
3/4"	-	8562AE06H1C1	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	15.51 (7.04)	42
1"	8562A506H1C1	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	13.24 (6.01)	42
1"	-	8562AF06H1C1	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	14.83 (6.73)	42

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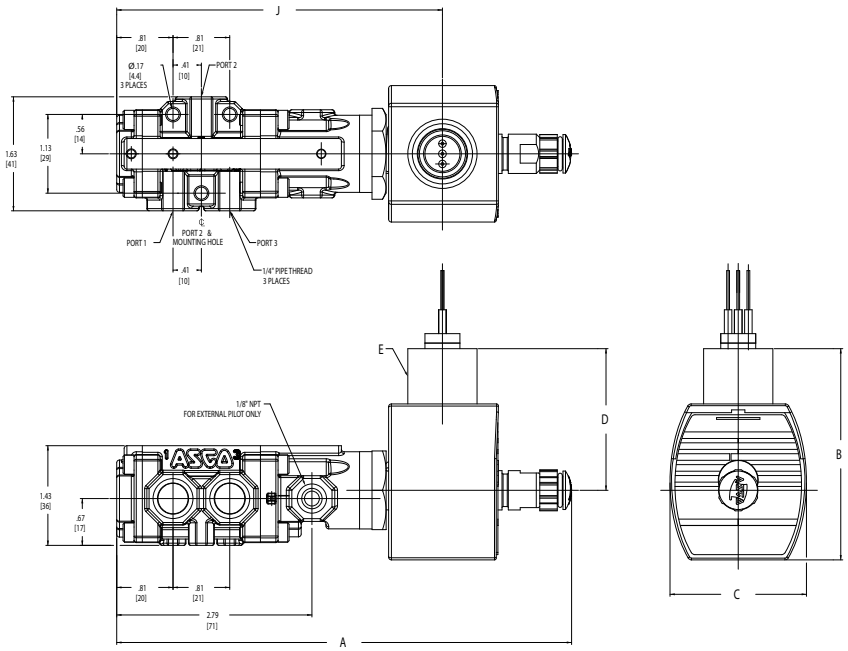
Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ①		Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ②		External Pilot Pressure psi (bar) ②		Max. Fluid Temp. ③ ˚F (˚C)	Product Weight	Const. Ref.
	Stainless Steel	Brass				Min.	Max.	Min.	Max.		lbs (kgs)	
5/2 - Externally Piloted												
1/4"	8562A101H131	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.61 (1.64)	23
1/4"	8562A102H131	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.92 (1.78)	24
1/4"	8562A104H131	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.96 (1.8)	25
1/4"	8562A105H131	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.99 (1.81)	26
1/4"	8562A102H131	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.38 (1.99)	28
1/4"	8562A104H131	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	5.11 (2.32)	29
1/4"	8562A105H131	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	5.04 (2.29)	30
1/4"	8562A101H131	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.43 (2.01)	27
1/4"	-	8562BA01H131	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	2.55 (1.16)	50
1/4"	8562A141H131	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA41H131	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.52 (1.60)	46
1/4"	8562A161H131	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA61H131	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.52 (1.60)	46
1/4"	8562A181H131	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA81H131	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.52 (1.60)	46
3/8"	8562A201H131	-	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.98 (1.8)	36
3/8"	8562A241H131	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
3/8"	8562A261H131	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
3/8"	8562A281H131	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
3/8"	-	8562AC01H131	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.72 (2.14)	36
3/8"	-	8562AC41H131	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC61H131	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC81H131	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
1/2"	8562A301H131	-	Single Solenoid/Spring Return	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.87 (1.75)	36
1/2"	8562A341H131	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
1/2"	8562A361H131	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
1/2"	8562A381H131	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
1/2"	-	8562AD01H131	Single Solenoid/Spring Return	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.55 (2.06)	36
1/2"	-	8562AD41H131	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD61H131	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD81H131	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
3/4"	8562A401H131	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	13.92 (6.31)	40
3/4"	-	8562AE01H131	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	15.5 (7.03)	40
1"	8562A501H131	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	13.41 (6.08)	40
1"	-	8562AF01H131	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	14.82 (6.72)	40
3/8"	8362A206H131	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	4.56 (2.06)	37
3/8"	-	8362AC06H131	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.04 (2.28)	37
1/2"	8362A306H131	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	4.49 (2.03)	37
1/2"	-	8362AD06H131	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	4.93 (2.23)	37
3/8"	8562A206H131	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.12 (2.32)	38
3/8"	-	8562AC06H131	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.74 (2.6)	38
1/2"	8562A306H131	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.01 (2.27)	38
1/2"	-	8562AD06H131	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.57 (2.52)	38
3/4"	8362A406H131	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	11.77 (5.34)	41
3/4"	-	8362AE06H131	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	12.68 (5.75)	41
1"	8362A506H131	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	15.12 (6.86)	41
1"	-	8362AF06H131	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	16.71 (7.58)	41
3/4"	8562A406H131	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	14.61 (6.63)	42
3/4"	-	8562AE06H131	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	16.73 (7.59)	42
1"	8562A506H131	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	14.45 (6.56)	42
1"	-	8562AF06H131	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	16.05 (7.28)	42
5/2 - Detent/Internally Piloted												
1/4"	8562A106H1G1	-	Dual Solenoid	Straight	2.0 (1.7)	15 (1.0)	150 (10.3)	N/A	N/A	200 (93)	6.08 (2.76)	31
1/4"	8562A103H1G1	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.10 (1.86)	32
1/4"	8562A106H1G1	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	15 (1.0)	150 (10.3)	N/A	N/A	200 (93)	6.08 (2.76)	33
1/4"	-	8562BA06H1G1	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	15 (1.0)	150 (10.3)	N/A	N/A	200 (93)	3.67 (1.67)	51
1/4"	8562A103H1G1	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.10 (1.86)	34
5/2 - Detent/Externally Piloted												
1/4"	8562A106H171	-	Dual Solenoid	Straight	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	6.08 (2.76)	31
1/4"	8562A103H171	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	4.10 (1.86)	32
1/4"	8562A106H171	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	6.08 (2.76)	33
1/4"	-	8562BA06H171	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	3.67 (1.67)	52
1/4"	8562A103H171	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	4.10 (1.86)	34

① Please refer to the How to Order section to complete base catalog number selection.
② MOPD values specified are for Compact Low Power versions (1.8 W).
Please visit our website to obtain MOPD's per all solenoid types.
③ Maximum fluid temperature cannot exceed solenoid fluid temperature.
④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

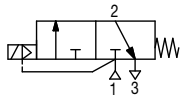
Dimensions: inches (mm)

Const. Ref. 1



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.34	136	6.3	160
A with MO	7.95	202	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	49.53	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
J	4.66	118	4.15	105	4.39	111
J with MO	6.10	155	-	-	-	-

NC INTERNAL PILOT



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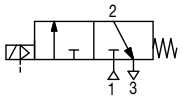
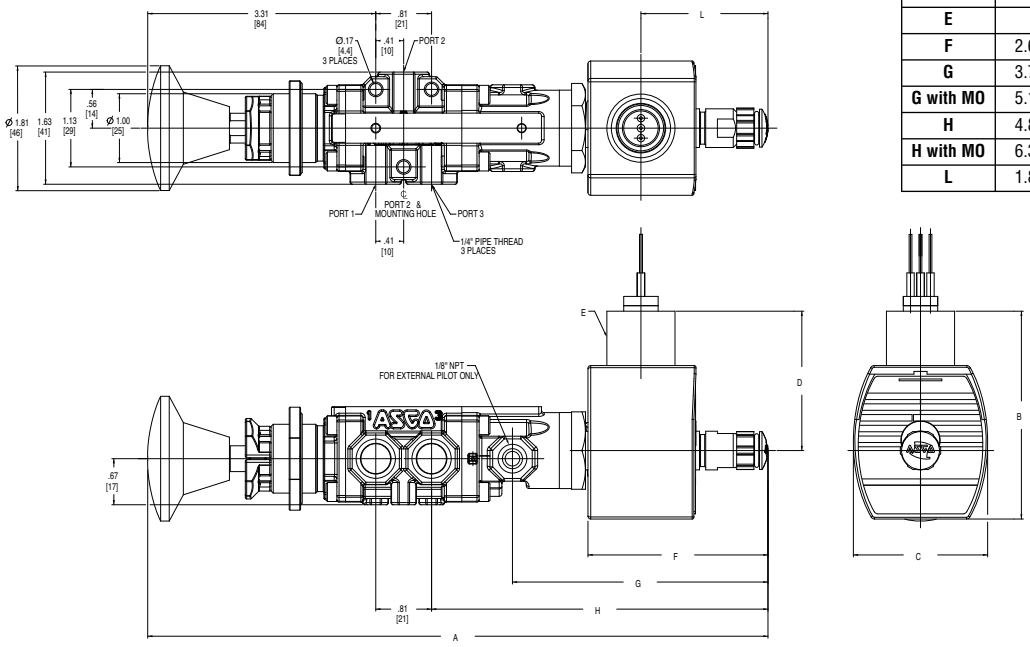


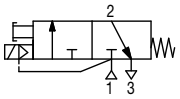
SPECIAL SERVICE PILOT

Const. Ref. 2



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49

NC INTERNAL PILOT



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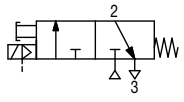
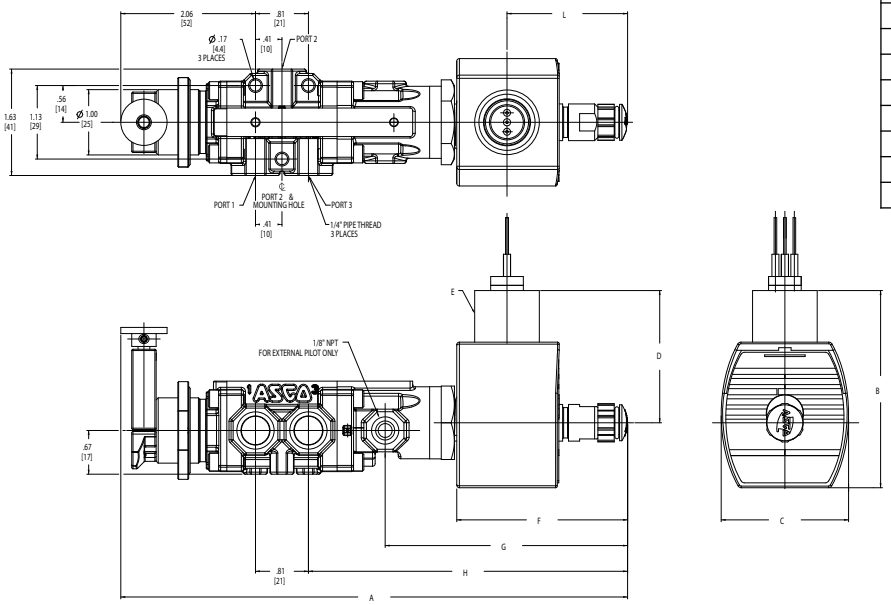


Dimensions: inches (mm)

Const. Ref. 3

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.76	197	6.60	168	7.55	192
A with MO	9.21	234	-	-	-	-
B	3.02	77	2.81	72	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49



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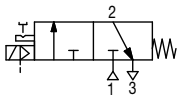

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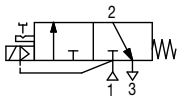
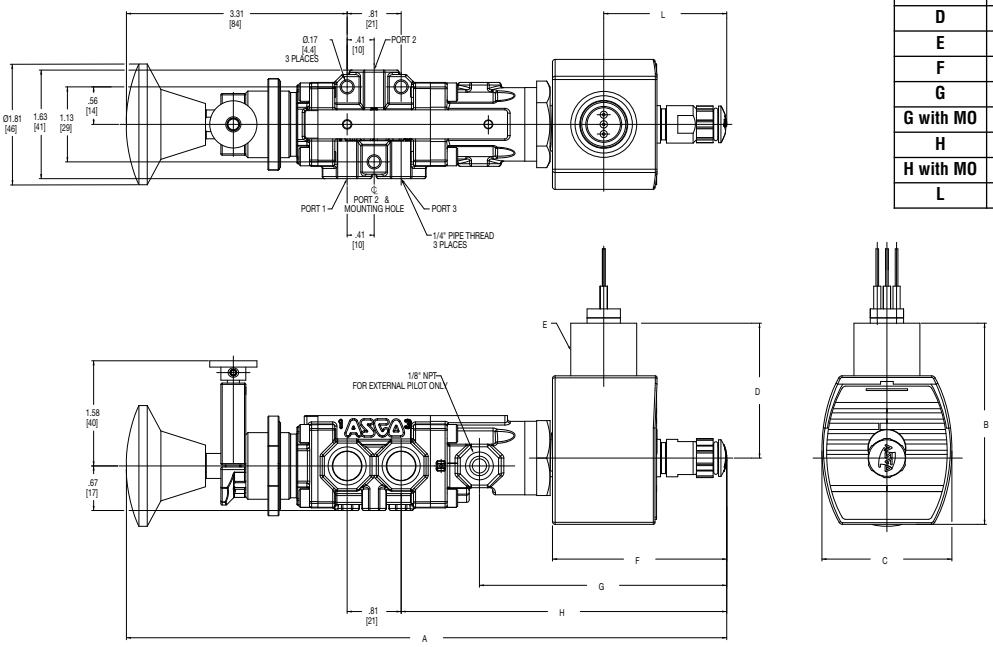


Const. Ref. 4

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49



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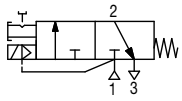

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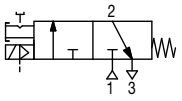
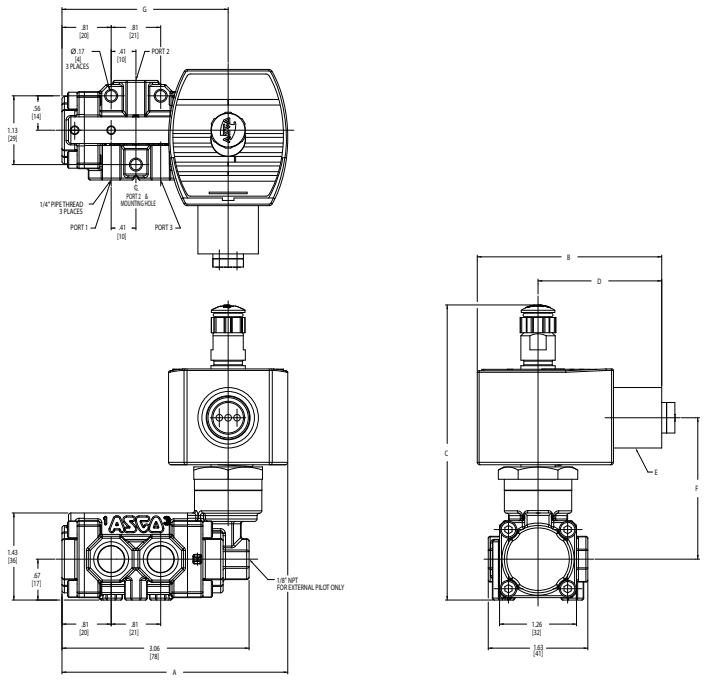


SPECIAL SERVICE PILOT

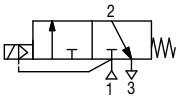
Dimensions: inches (mm)

Const. Ref. 5



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.70	94	3.35	85	3.55	90
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	2.72	69	2.72	69	2.72	69

NC INTERNAL PILOT



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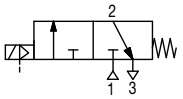
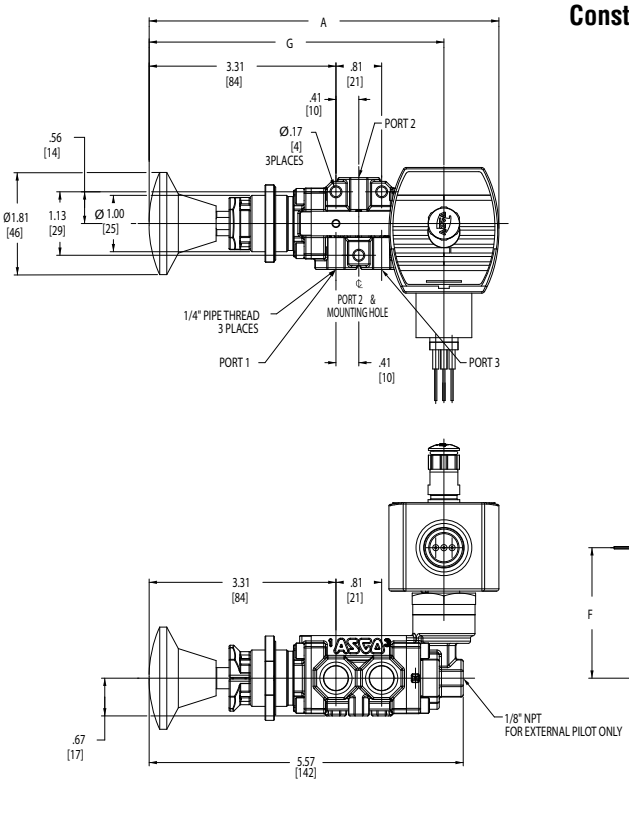


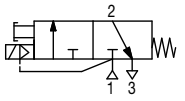
SPECIAL SERVICE PILOT

Const. Ref. 6



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.20	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133

NC INTERNAL PILOT



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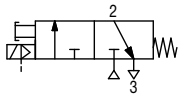
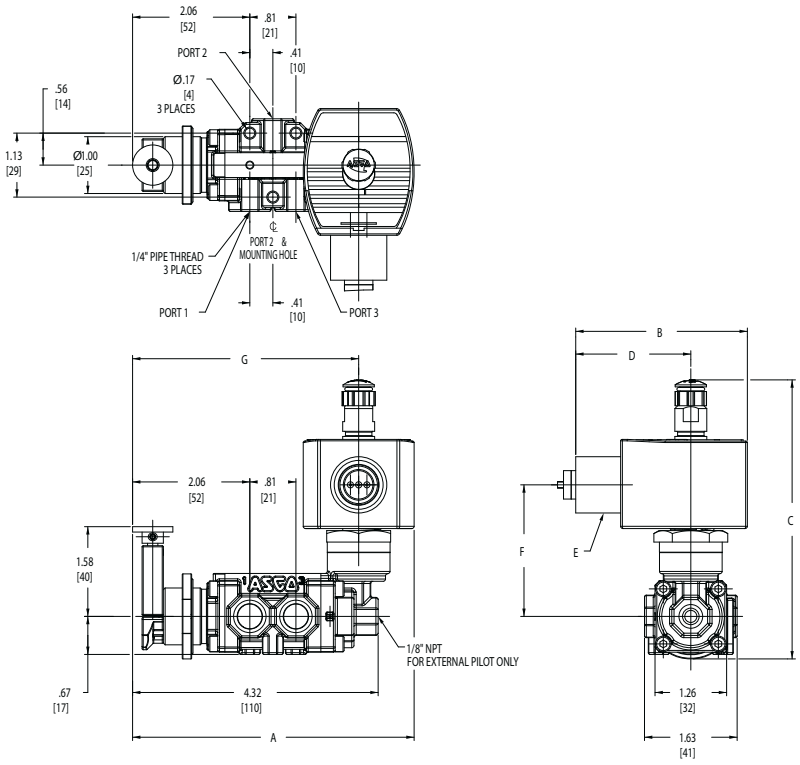


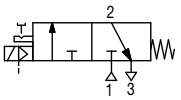
Dimensions: inches (mm)

Const. Ref. 7

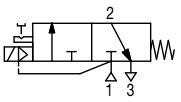


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	4.95	126	4.60	117	4.81	122
B	3.02	77	2.81	71	3.03	77
C	4.91	125	3.75	95	4.65	118
C with MO	6.38	162	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	3.98	101	3.98	101	3.98	101

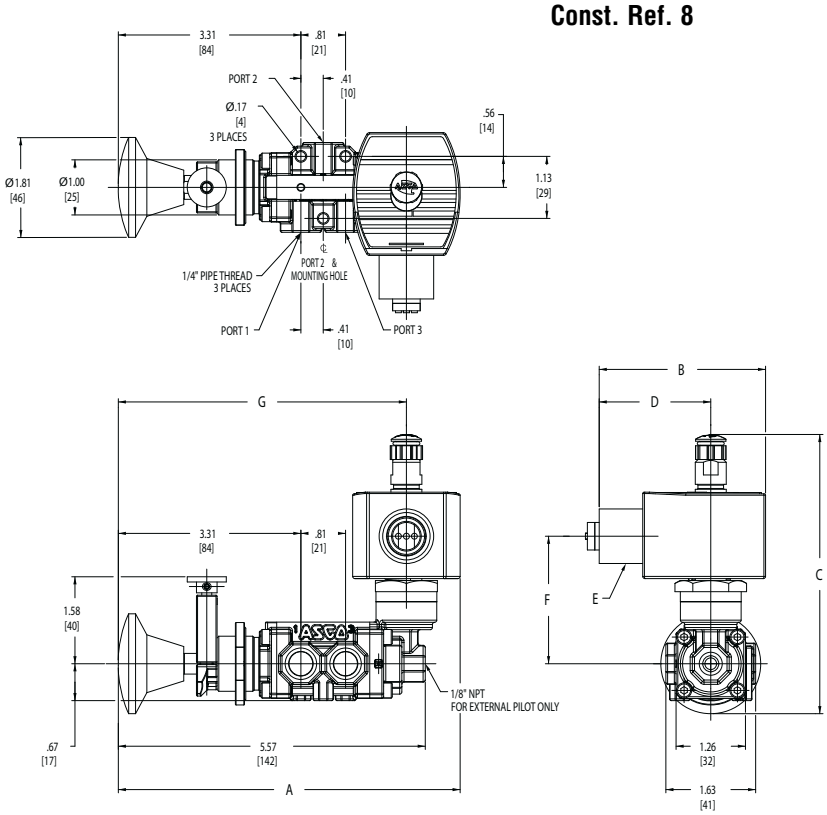
NC EXTERNAL PILOT



NC INTERNAL PILOT

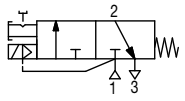


Const. Ref. 8

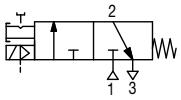


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.2	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133

NC INTERNAL PILOT



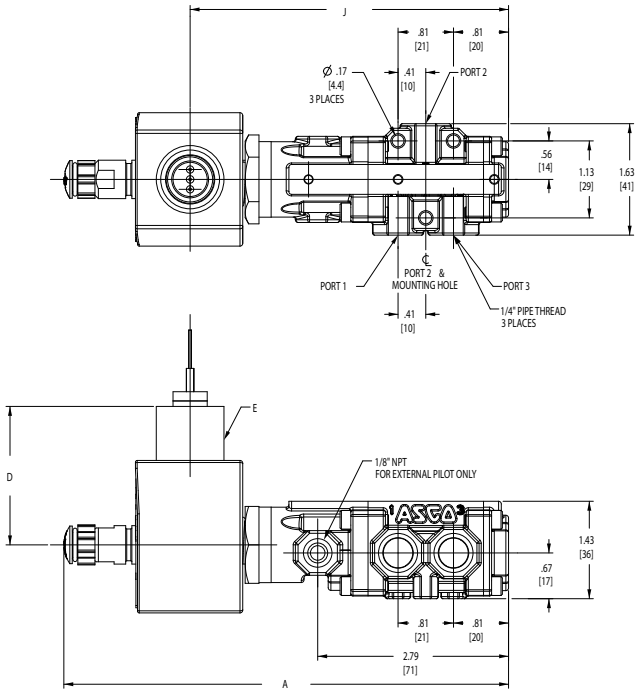
NC EXTERNAL PILOT



SPECIAL SERVICE PILOT

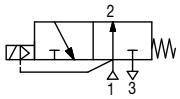
Dimensions: inches (mm)

Const. Ref. 9

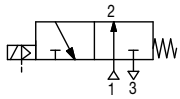


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.34	136	6.3	160
A with MO	7.95	202	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2 NPT		1/2 NPT		1/2" NPT	
F	2.62	67	1.95	45	2.63	67
G	3.71	94	2.55	65	3.5	89
H	4.89	124	4.54	95	4.68	119
J	2.22	118	4.15	105	4.39	111
J with MO	6.10	155	-	-	-	-

NO INTERNAL PILOT

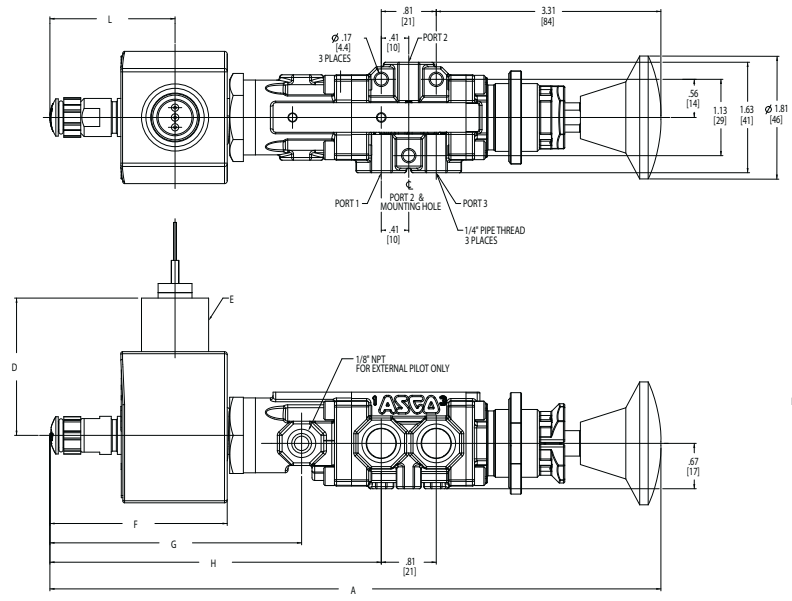


NO EXTERNAL PILOT



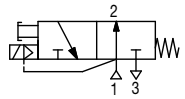
SPECIAL SERVICE PILOT

Const. Ref. 10

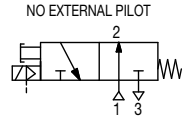


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49

NO INTERNAL PILOT

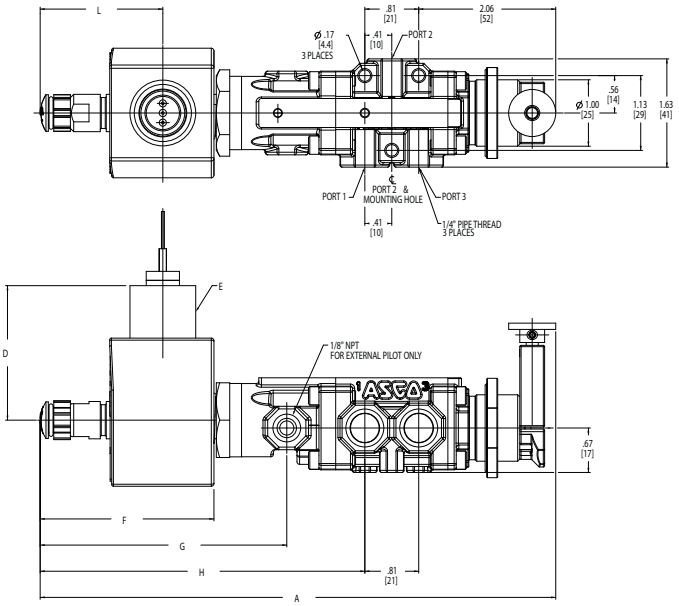


NO EXTERNAL PILOT



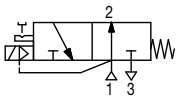
Dimensions: inches (mm)

Const. Ref. 11

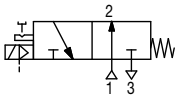


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.76	197	6.60	168	7.55	192
A with MO	9.21	234	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	42	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49

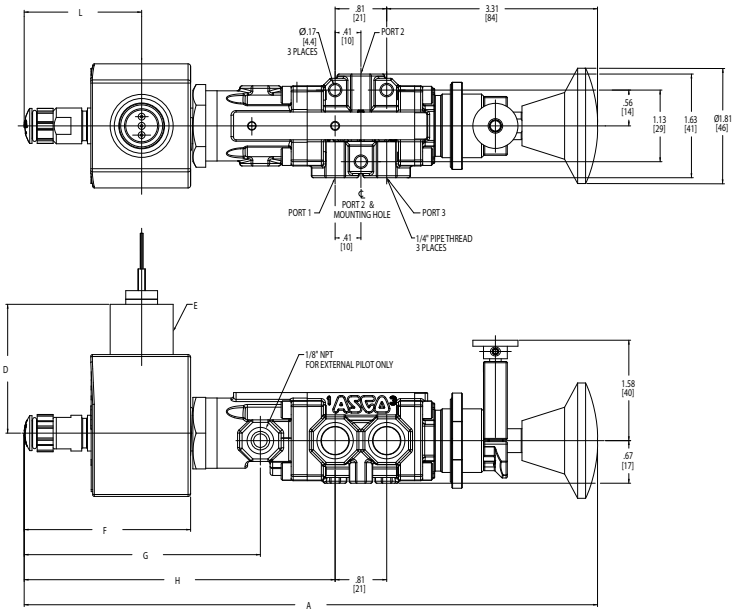
NO INTERNAL PILOT



NO EXTERNAL PILOT

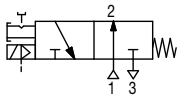


Const. Ref. 12

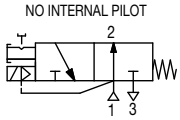


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.05	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2 NPT		1/2 NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
J	7.17	182	6.66	169	6.89	175

NO EXTERNAL PILOT



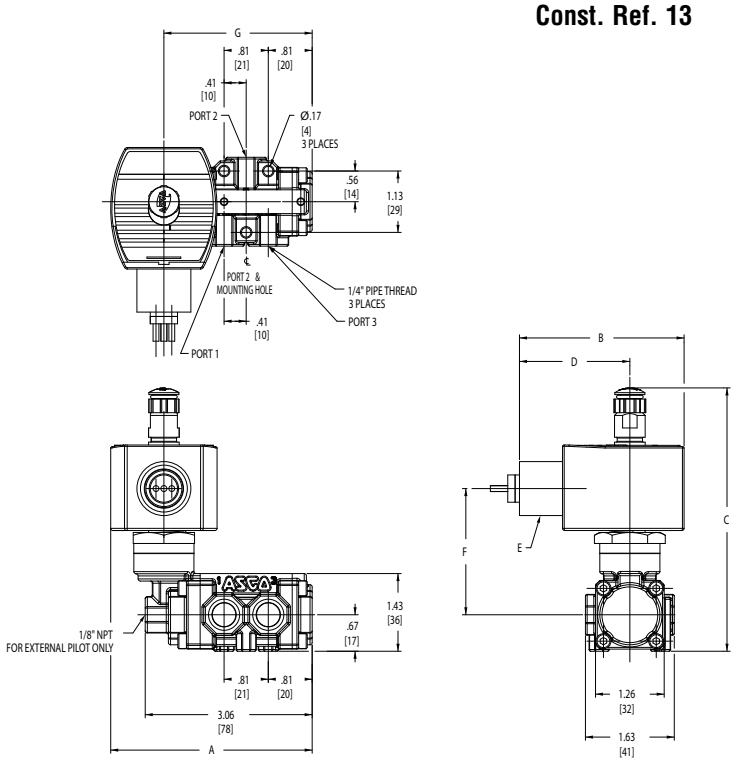
NO INTERNAL PILOT



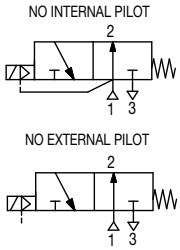
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

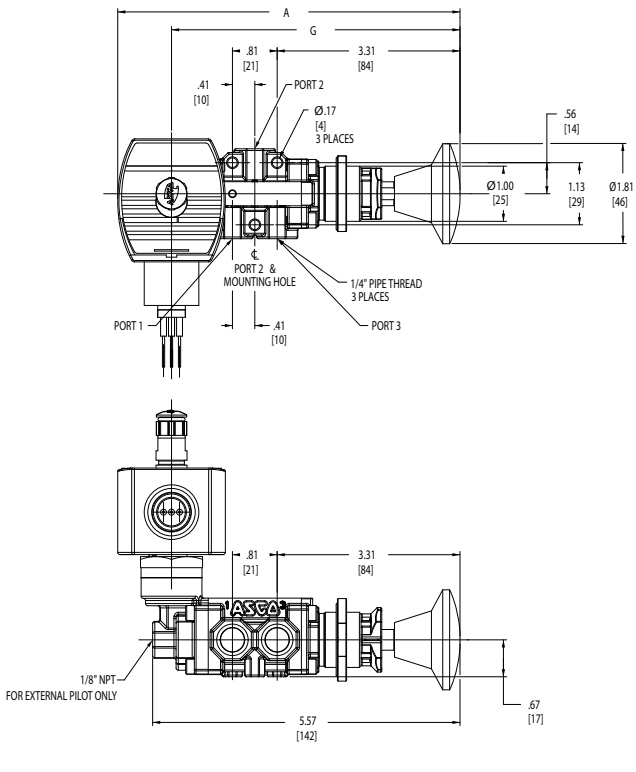
Const. Ref. 13



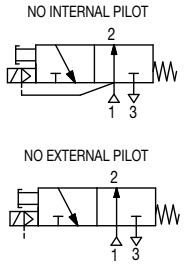
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.70	94	3.34	85	3.55	90
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	2.72	69	2.72	69	2.72	69



Const. Ref. 14



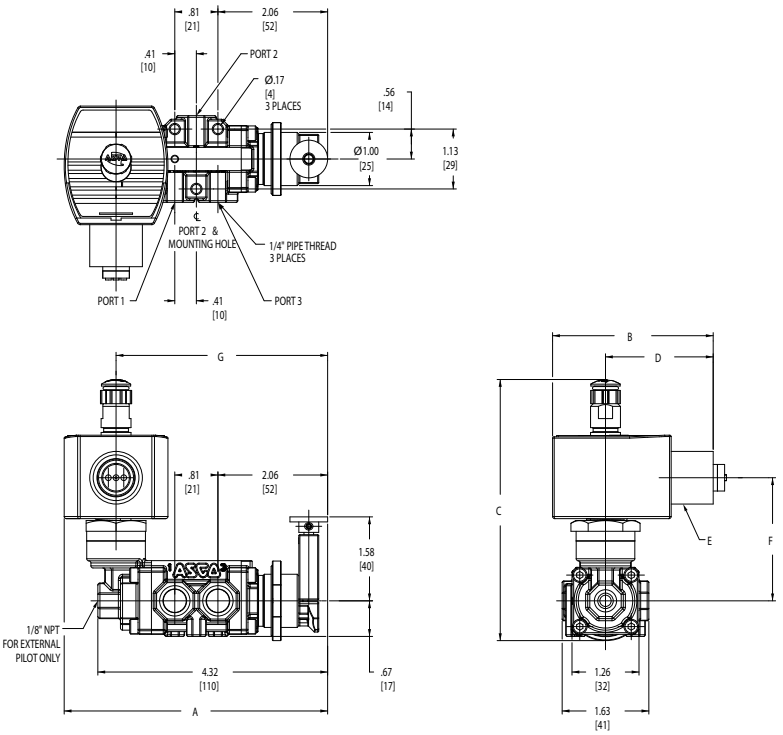
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.20	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133



SPECIAL SERVICE PILOT

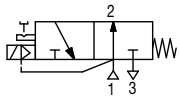
Dimensions: inches (mm)

Const. Ref. 15

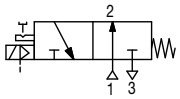


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	4.95	126	4.60	117	4.81	122
B	3.02	77	2.81	71	3.03	77
C	4.91	125	3.75	95	4.7	119
C with MO	6.38	162	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	3.98	101	3.98	101	3.98	101

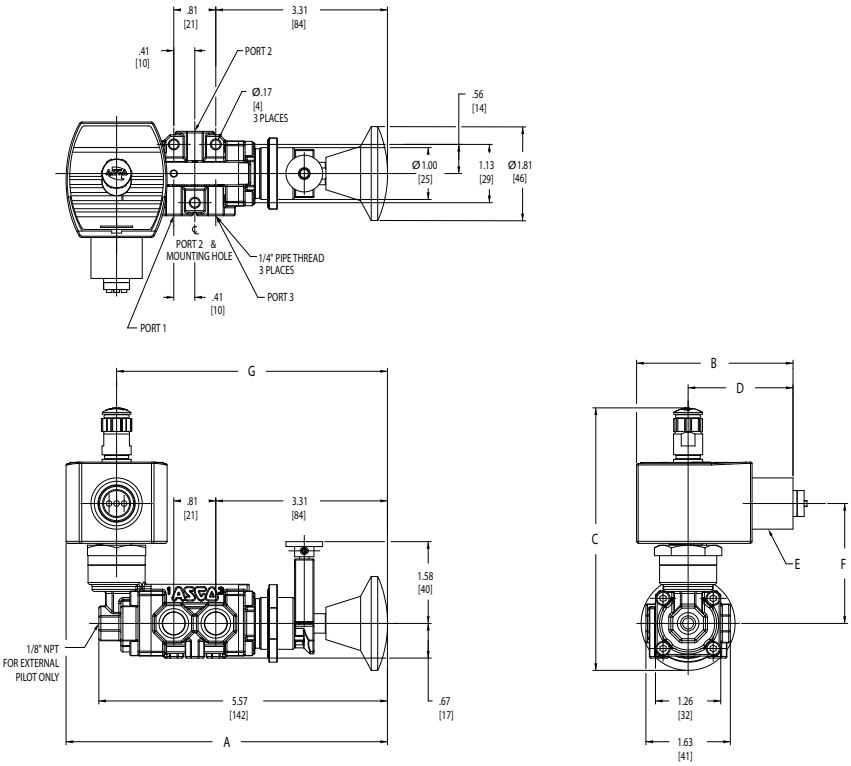
NO INTERNAL PILOT



NO EXTERNAL PILOT

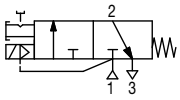


Const. Ref. 16

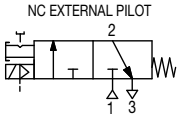


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.2	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.32	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133

NC INTERNAL PILOT



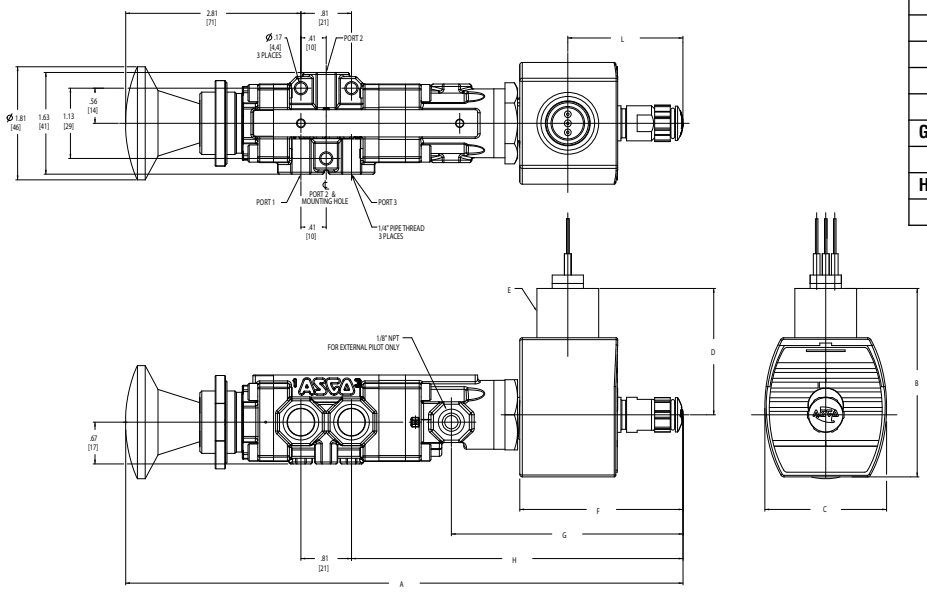
NC EXTERNAL PILOT



SPECIAL SERVICE PILOT

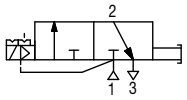
Dimensions: inches (mm)

Const. Ref. 17

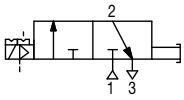


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	8.93	227	7.77	197	8.72	222
A with MO	10.39	264	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45.4457	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	106	5.1	130
H with MO	6.77	172	-	-	-	-
L	1.85	47	1.19	30	1.91	49

NC INTERNAL PILOT

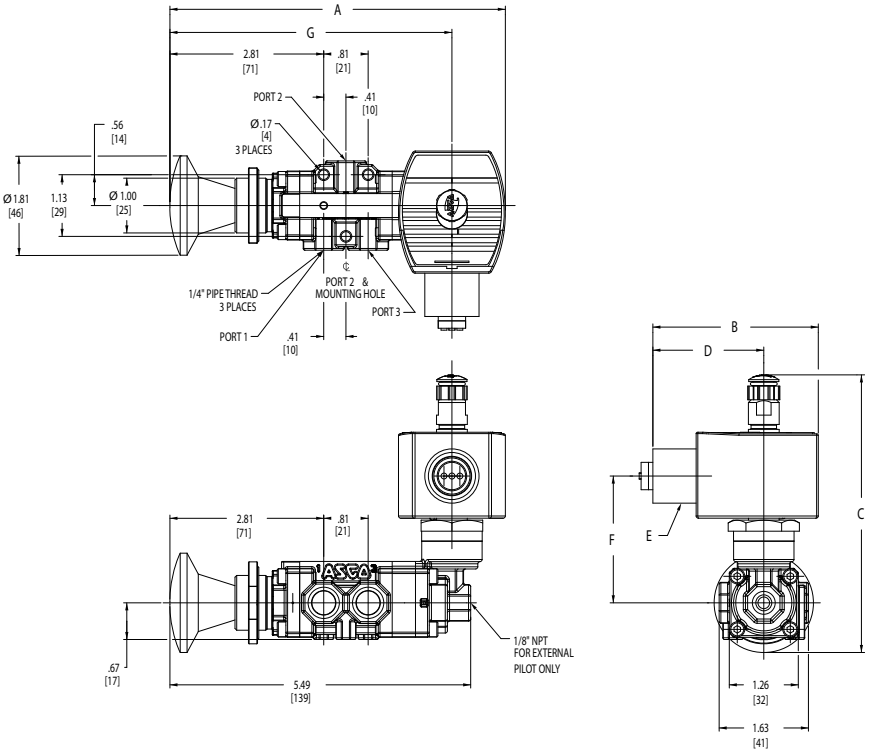


NC EXTERNAL PILOT



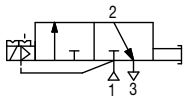
SPECIAL SERVICE PILOT

Const. Ref. 18

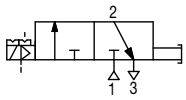


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.12	156	5.77	147	5.98	152
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.15	131	5.15	131		

NC INTERNAL PILOT

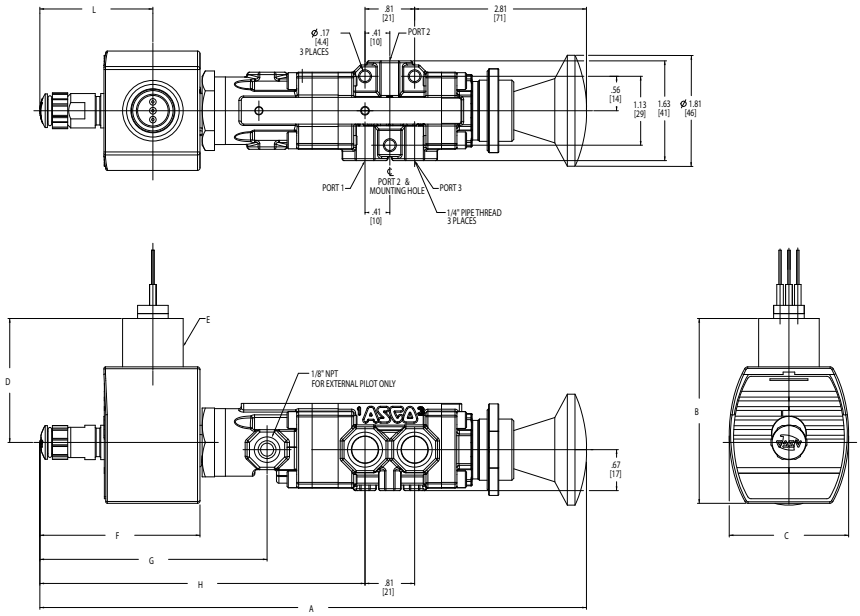


NC EXTERNAL PILOT



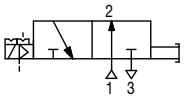
Dimensions: inches (mm)

Const. Ref. 19

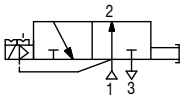


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	8.93	227	7.76	197	8.72	222
C with MO	10.39	264	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	105	5.1	130
H with MO	6.77	172	-	-	-	-
L	1.85	47	1.19	30	1.91	49

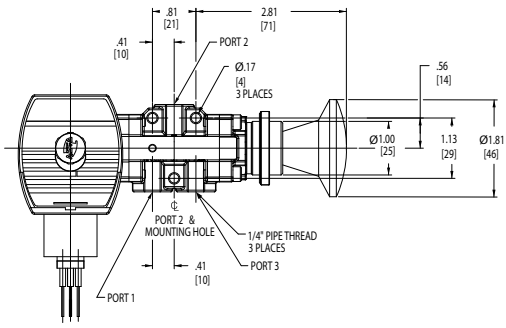
NO EXTERNAL PILOT



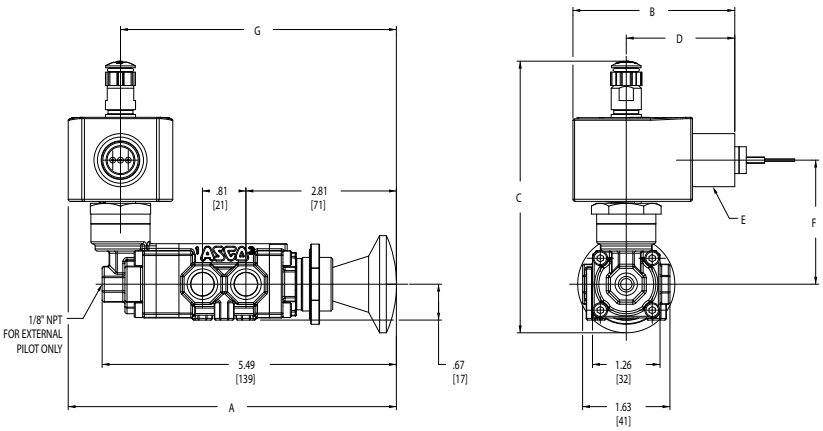
NO INTERNAL PILOT



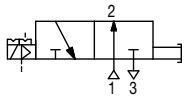
Const. Ref. 20



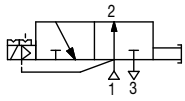
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.12	156	5.77	147	5.98	152
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.32	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.15	131	5.15	131	5.15	131



NO EXTERNAL PILOT



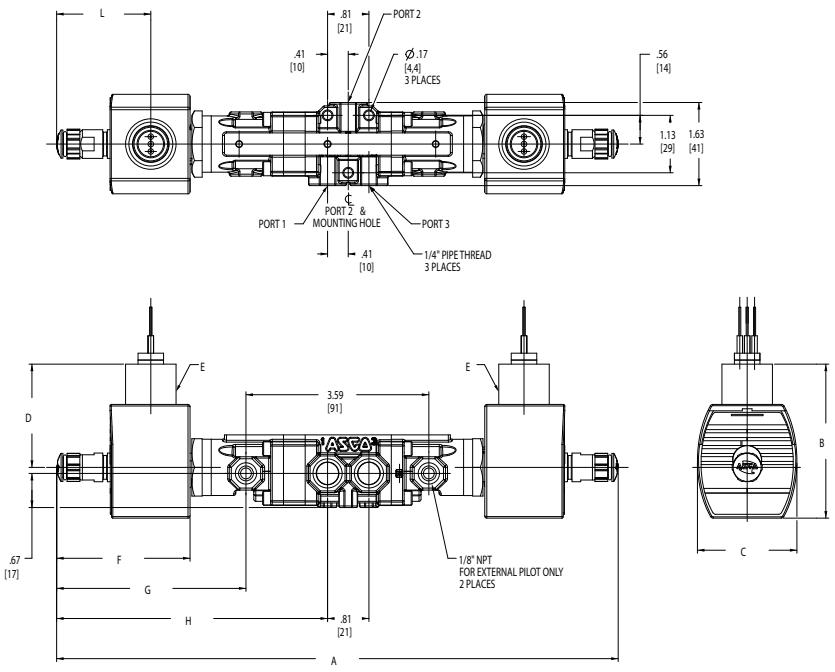
NO INTERNAL PILOT



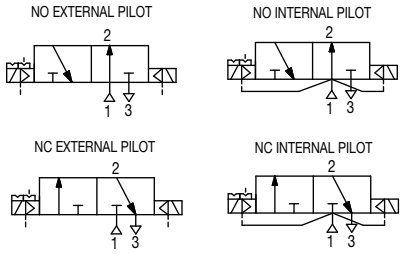
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

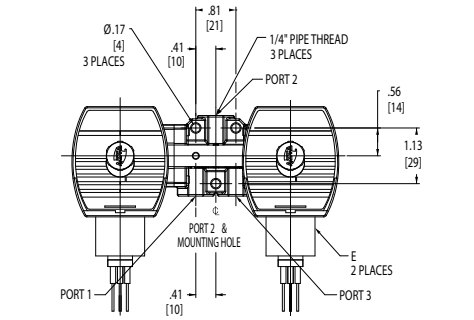
Const. Ref. 21

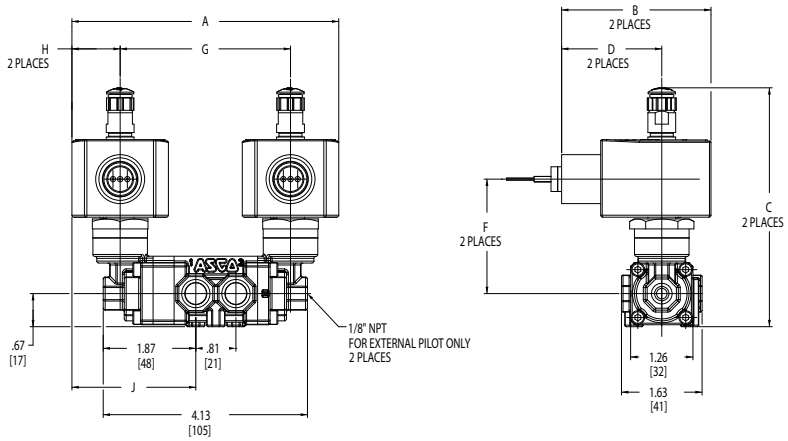


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	11.01	280	8.70	221	10.6	269
A with MO	13.94	354	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2 NPT		1/2 NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	105	5.1	130
H with MO	6.77	172	-	-	-	-

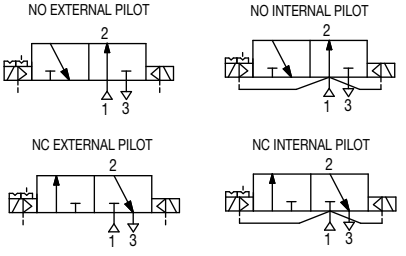


Const. Ref. 22





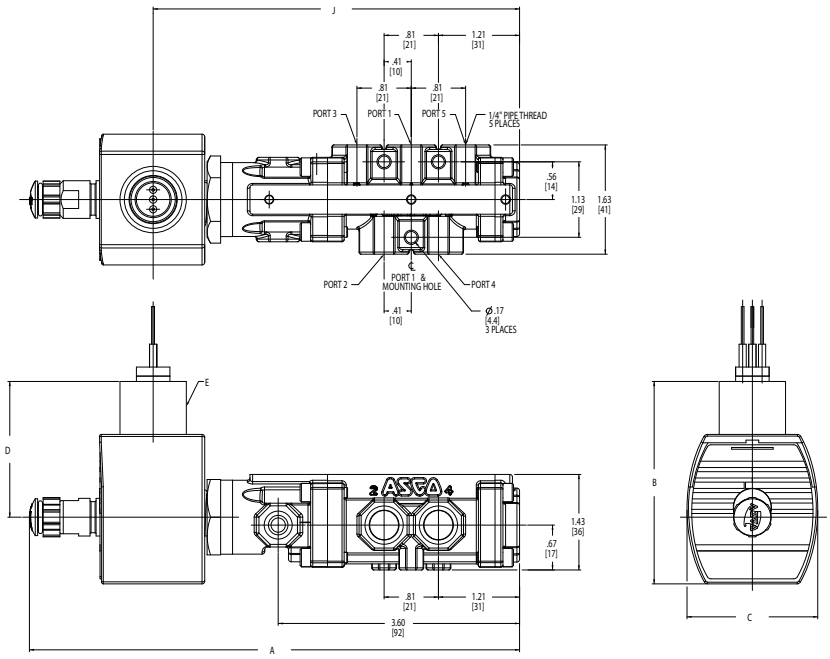
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	5.4	137	4.69	119	5.1	129
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	3.45	88	3.45	88	3.44	87
H	0.98	25	0.62	16	0.83	21
J	2.5	64	2.15	55	2.36	60



SPECIAL SERVICE PILOT

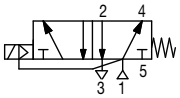
Dimensions: inches (mm)

Const. Ref. 23

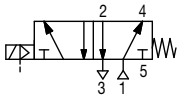


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.34	136	7.11	181
A with MO	7.95	202	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
J	4.66	118	4.15	105	5.2	132
J with MO	6.10	155	-	-	-	-

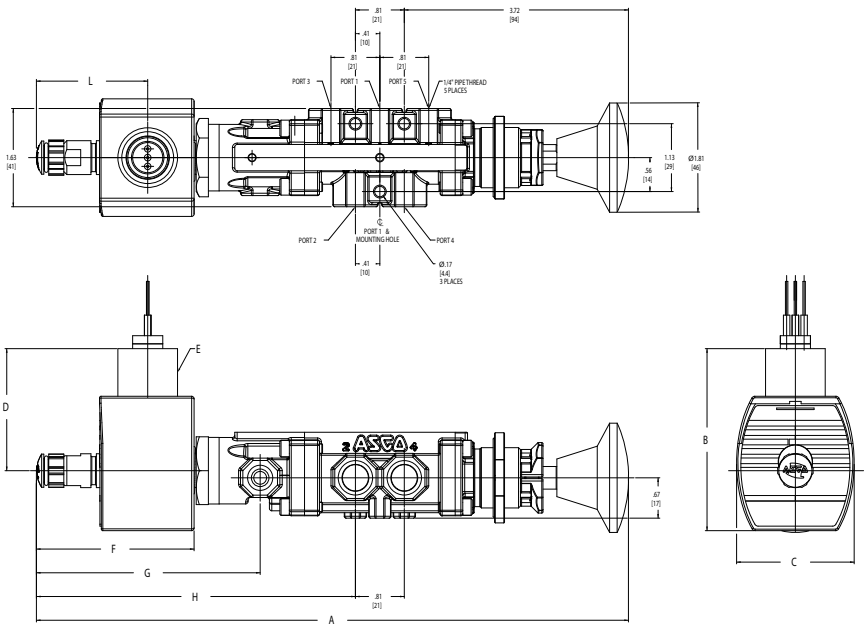
INTERNAL PILOT



EXTERNAL PILOT

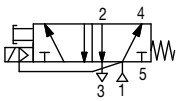


Const. Ref. 24

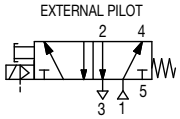


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	9.62	244
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT



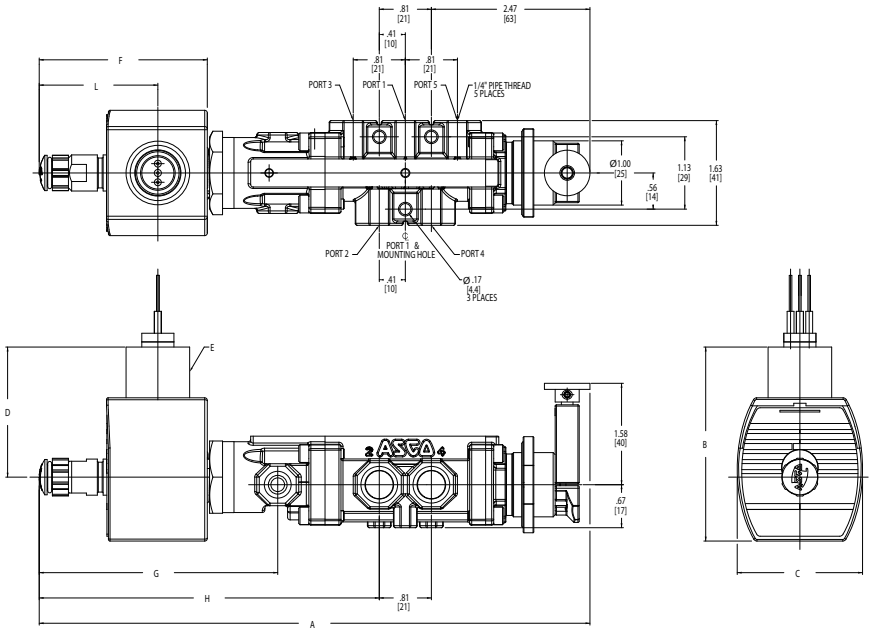
EXTERNAL PILOT



SPECIAL SERVICE PILOT

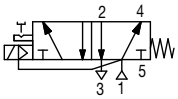
Dimensions: inches (mm)

Const. Ref. 25

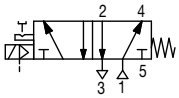


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	6.60	168	8.36	212
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT

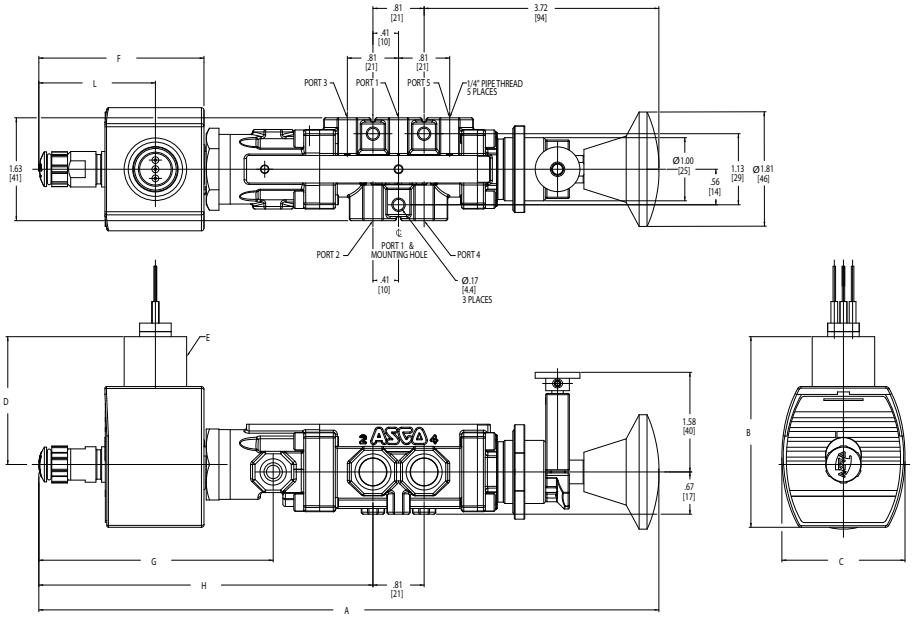


EXTERNAL PILOT



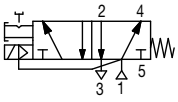
SPECIAL SERVICE PILOT

Const. Ref. 26

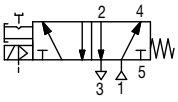


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	9.62	244
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT



EXTERNAL PILOT

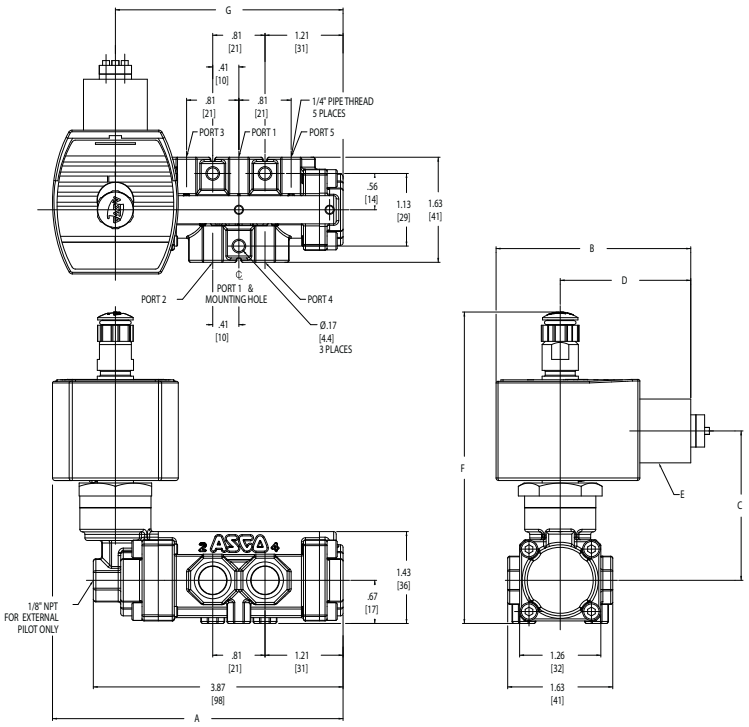


ASCO™ Spool Valves

Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

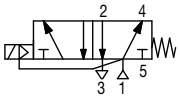
Dimensions: inches (mm)

Const. Ref. 27

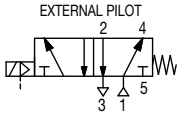


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	4.51	115	3.34	85	4.36	111
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	4.83	123	3.67	93	4.62	117
F with MO	6.30	160	-	-	-	-
G	3.53	90	2.72	69	3.53	90

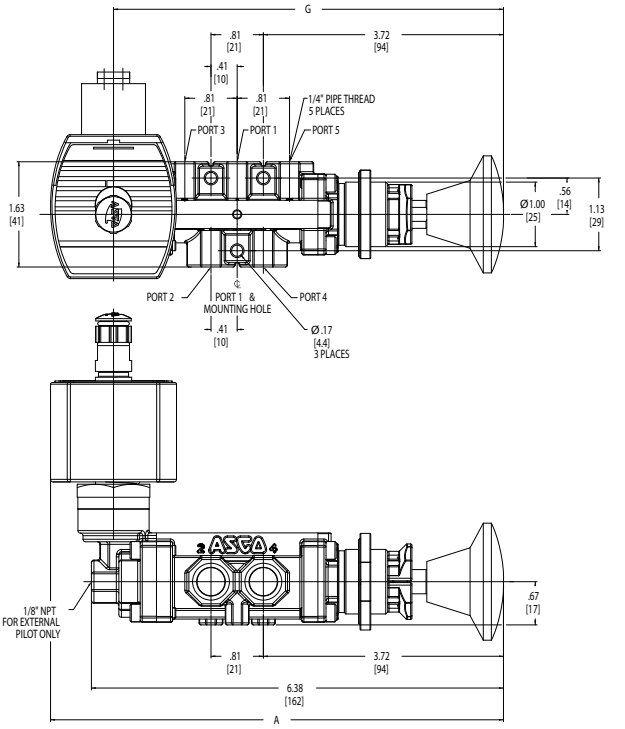
INTERNAL PILOT



EXTERNAL PILOT

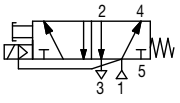


Const. Ref. 28

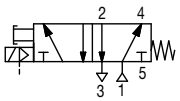


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.01	178	5.85	149	6.87	174
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	5.07	129	3.91	99	4.86	123
F with MO	6.54	166	-	-	-	-
G	6.04	153	5.23	133	6.04	153

INTERNAL PILOT

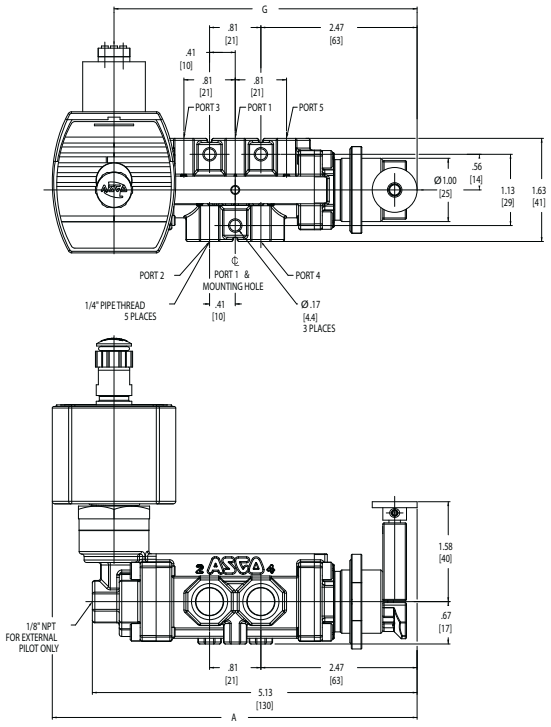


EXTERNAL PILOT



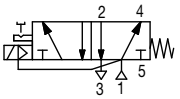
Dimensions: inches (mm)

Const. Ref. 29

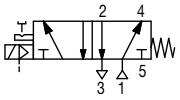


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	5.76	146	4.60	117	5.62	143
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	4.91	125	3.75	95	4.7	119
F with MO	6.38	162	-	-	-	-
G	4.79	122	3.98	101	-	-

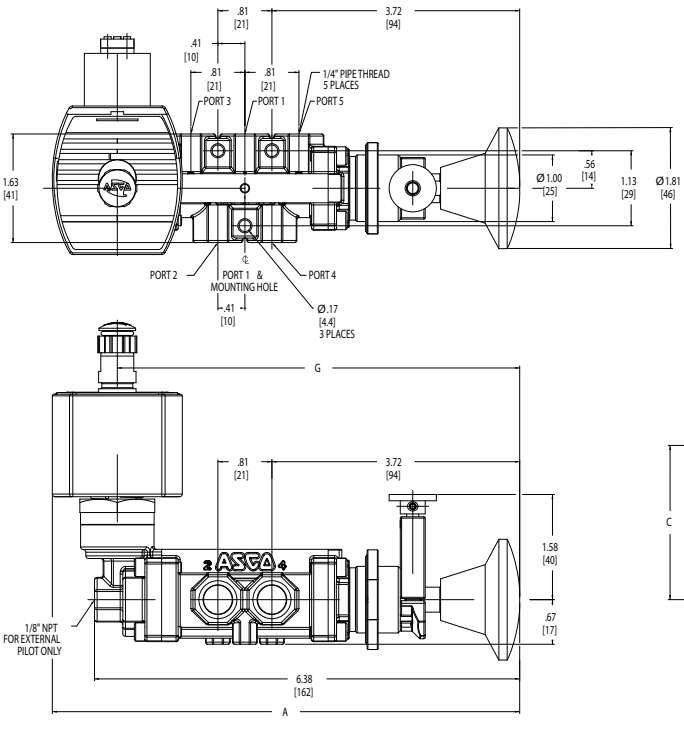
INTERNAL PILOT



EXTERNAL PILOT

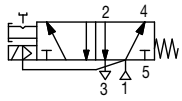


Const. Ref. 30

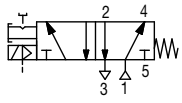


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.02	178	5.85	149	6.87	174
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	5.07	129	3.91	99	4.86	123
F with MO	6.54	166	-	-	-	-
G	6.04	153	5.23	133	-	-

INTERNAL PILOT



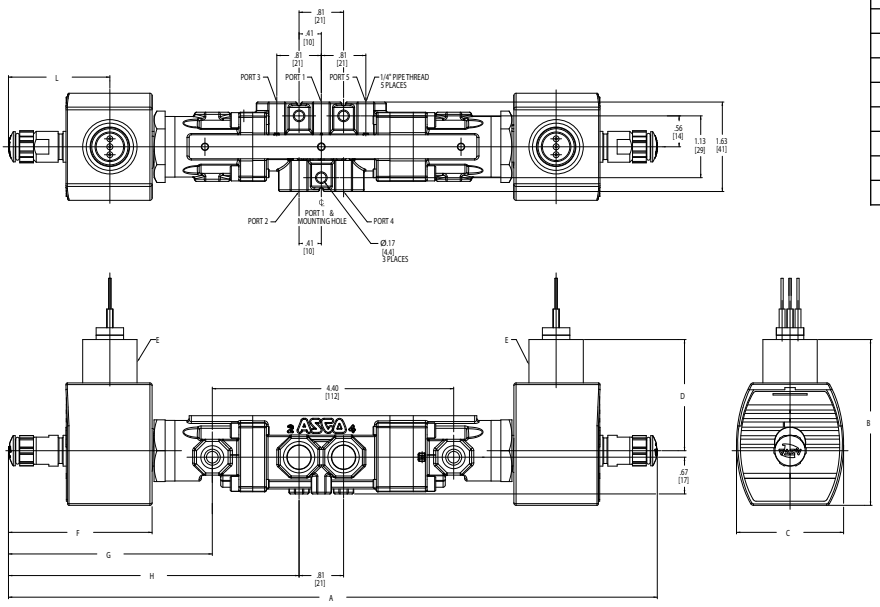
EXTERNAL PILOT



SPECIAL SERVICE PILOT

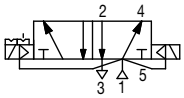
Dimensions: inches (mm)

Const. Ref. 31

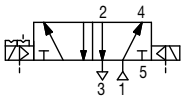


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	8.93	227	8.70	221	11.41	290
A with MO	11.85	301	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	105	5.09	129
H with MO	6.77	172	-	-	-	-
L	1.85	47	1.19	30	-	-

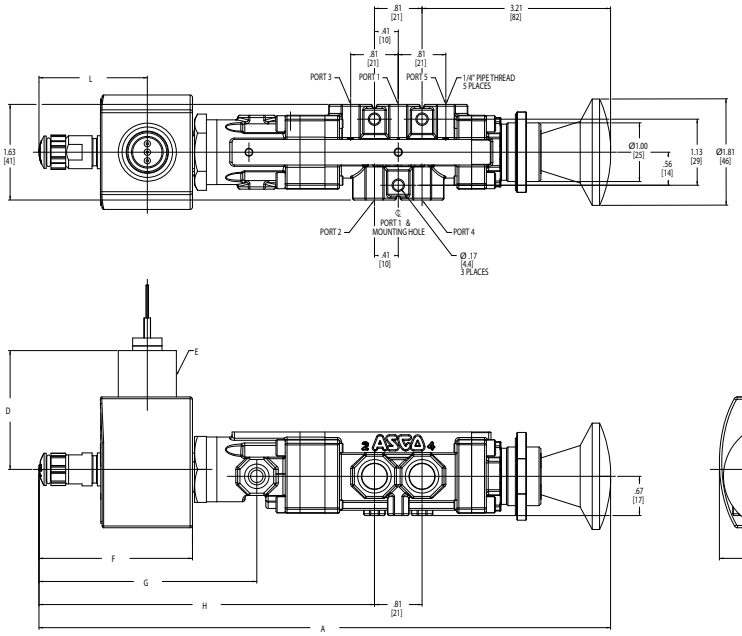
INTERNAL PILOT



EXTERNAL PILOT

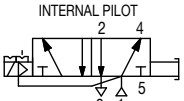


Const. Ref. 32

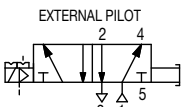


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.76	197	7.77	197	9.54	242
A with MO	9.21	234	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	3.71	94	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	4.15	105	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT

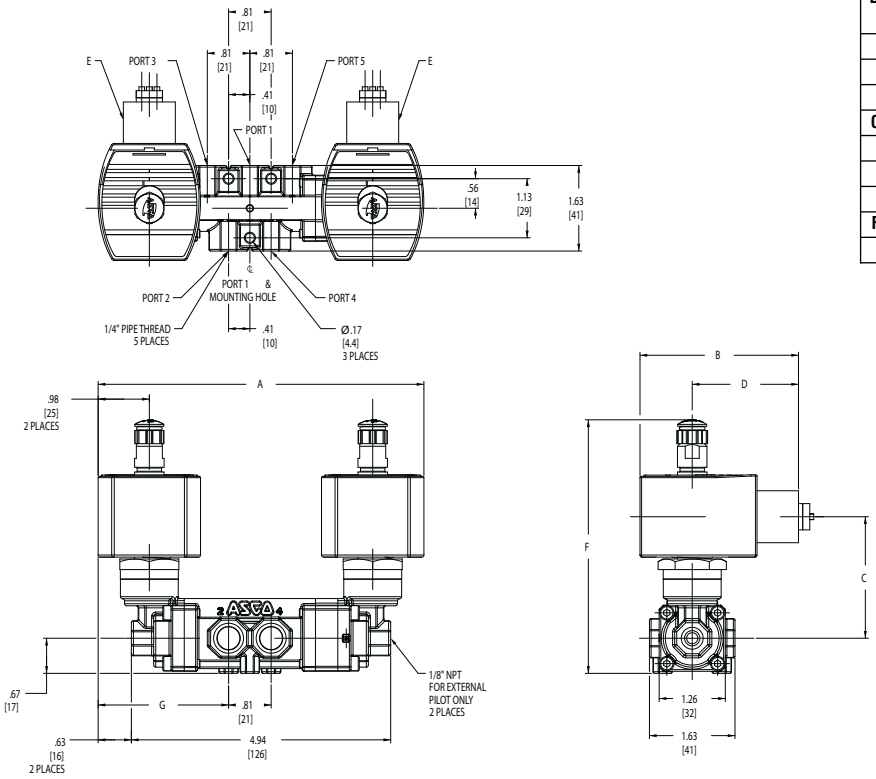


EXTERNAL PILOT

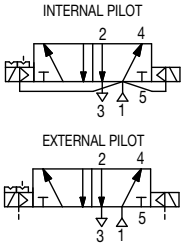


Dimensions: inches (mm)

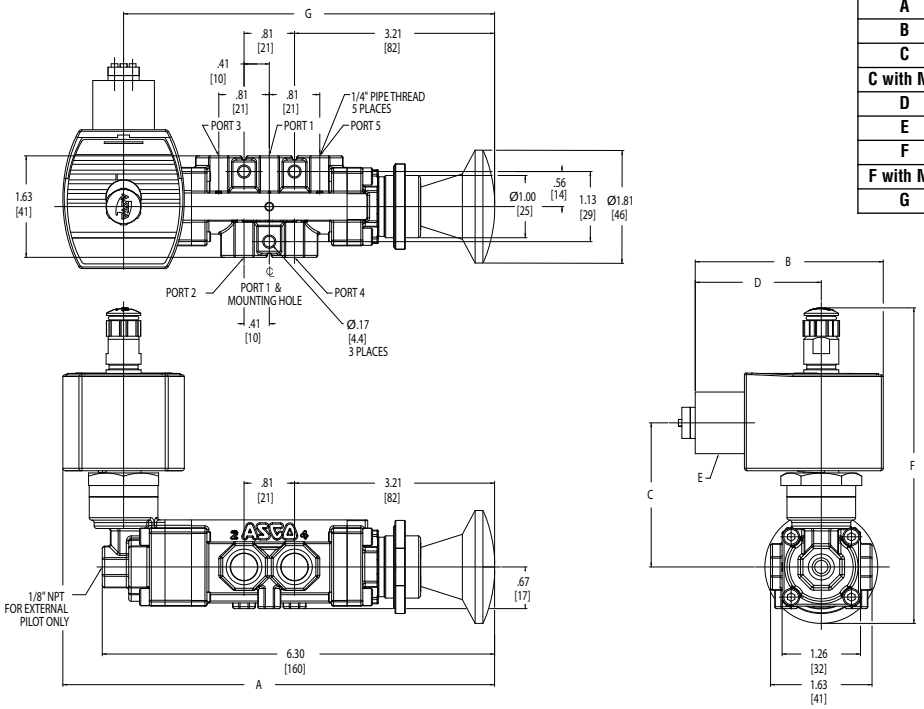
Const. Ref. 33



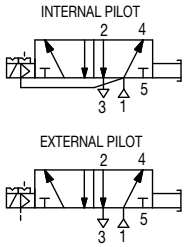
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.21	158	4.69	119	5.91	150
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	4.83	123	3.67	93	4.62	117
F with MO	6.30	160	-	-	-	-
G	2.49	63	2.15	55	2.34	59



Const. Ref. 34



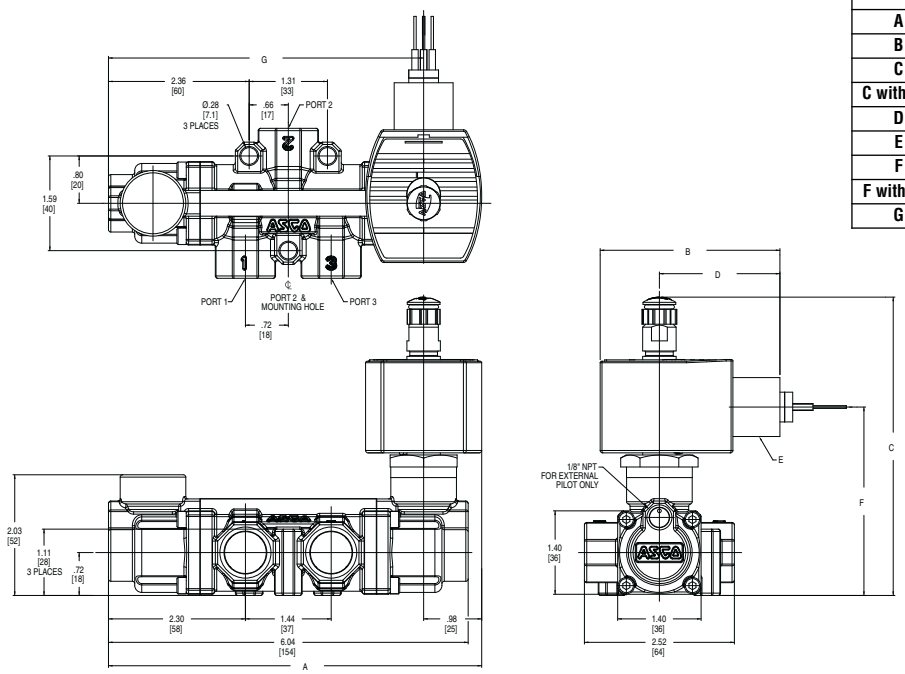
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.94	176	5.77	147	6.79	172
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	5.07	129	3.91	99	4.86	123
F with MO	6.54	166	-	-	-	-
G	5.96	151	5.15	131	5.96	151



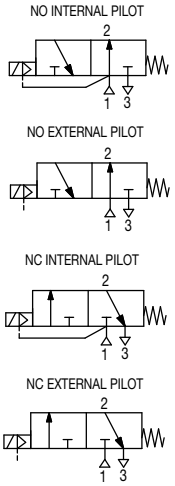
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

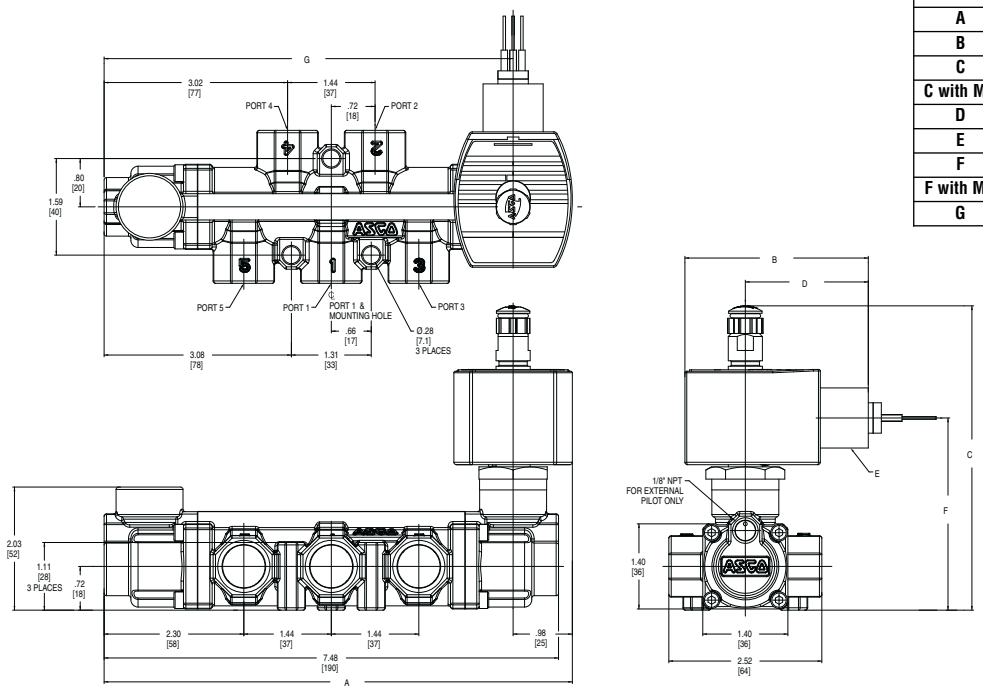
Const. Ref. 35



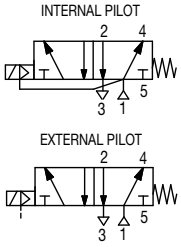
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.26	159	6.06	154	6.14	156
B	3.27	83	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.46	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-
G	5.31	135	5.31	135	5.31	135



Const. Ref. 36



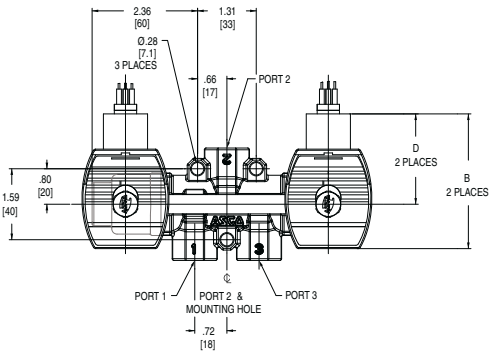
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.72	196	7.48	190	7.56	192
B	3.03	77	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.46	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-
G	6.73	171	6.73	171	6.73	171

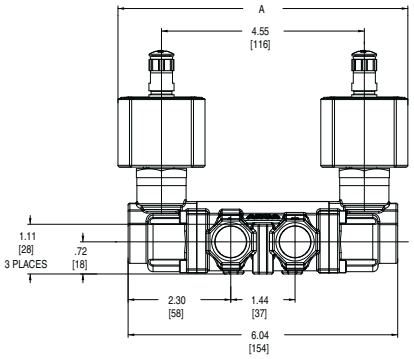


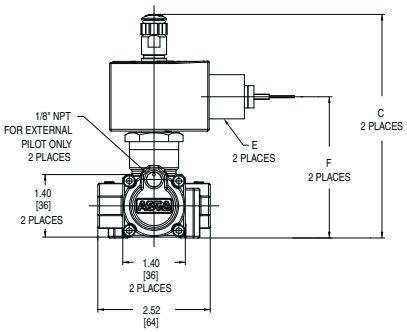
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

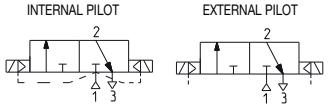
Const. Ref. 37



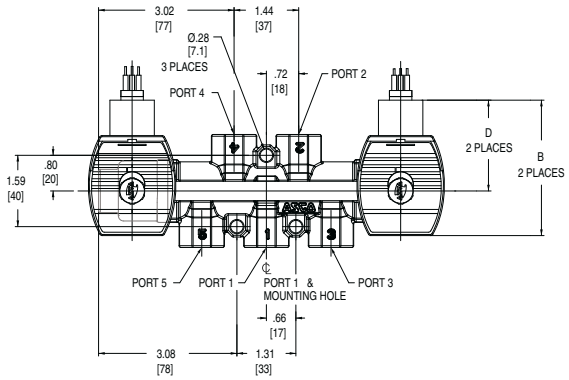


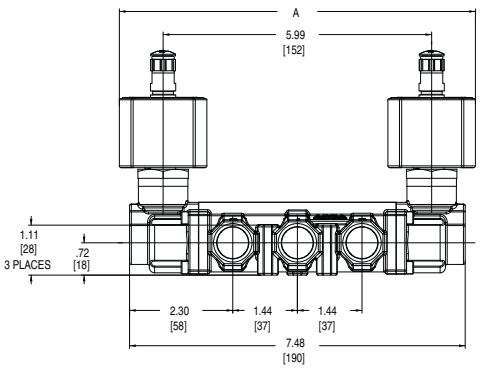


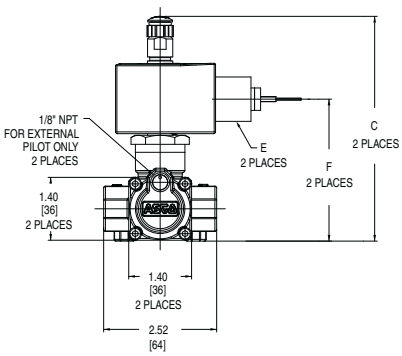
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.79	147	6.22	158
B	3.03	77	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.45	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-



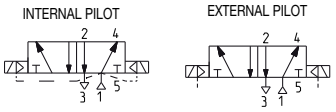
Const. Ref. 38







Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.91	201	7.24	184	7.64	194
B	3.03	77	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.45	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-



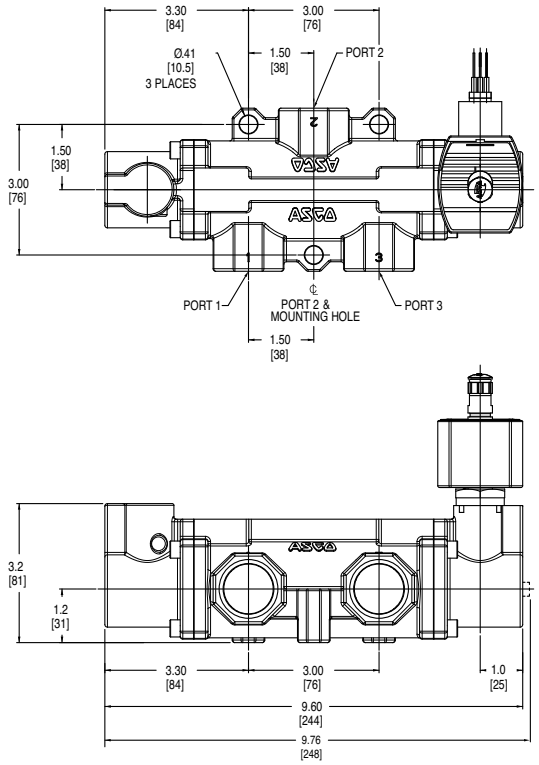
ASCO™ Spool Valves

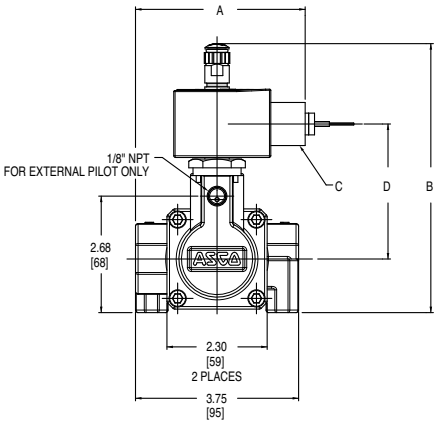
Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

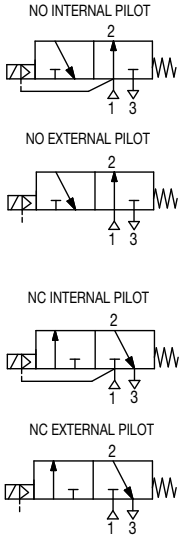
Dimensions: inches (mm)

Const. Ref. 39

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72

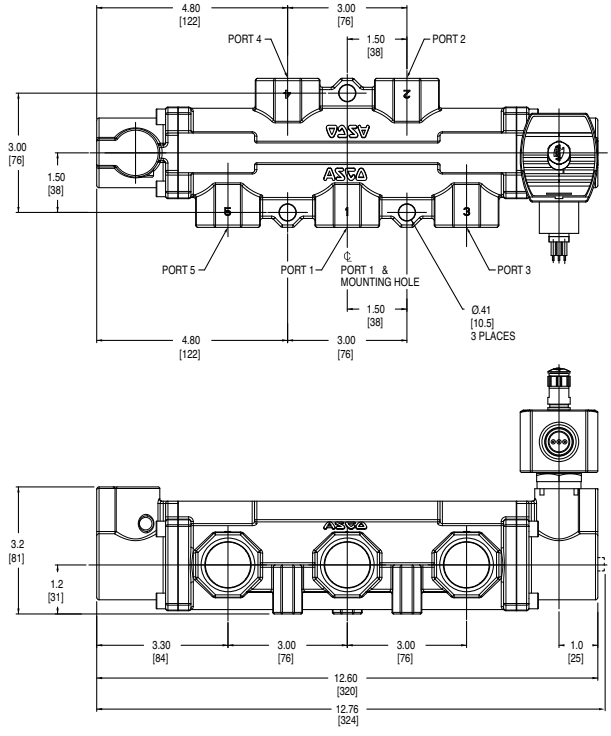


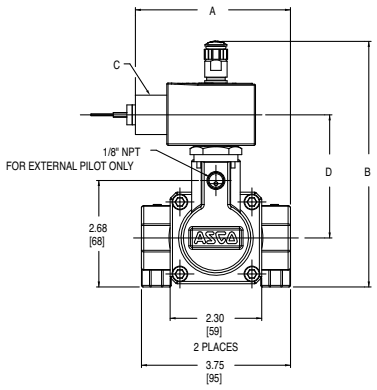


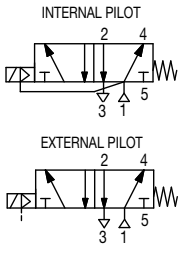


Const. Ref. 40

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72

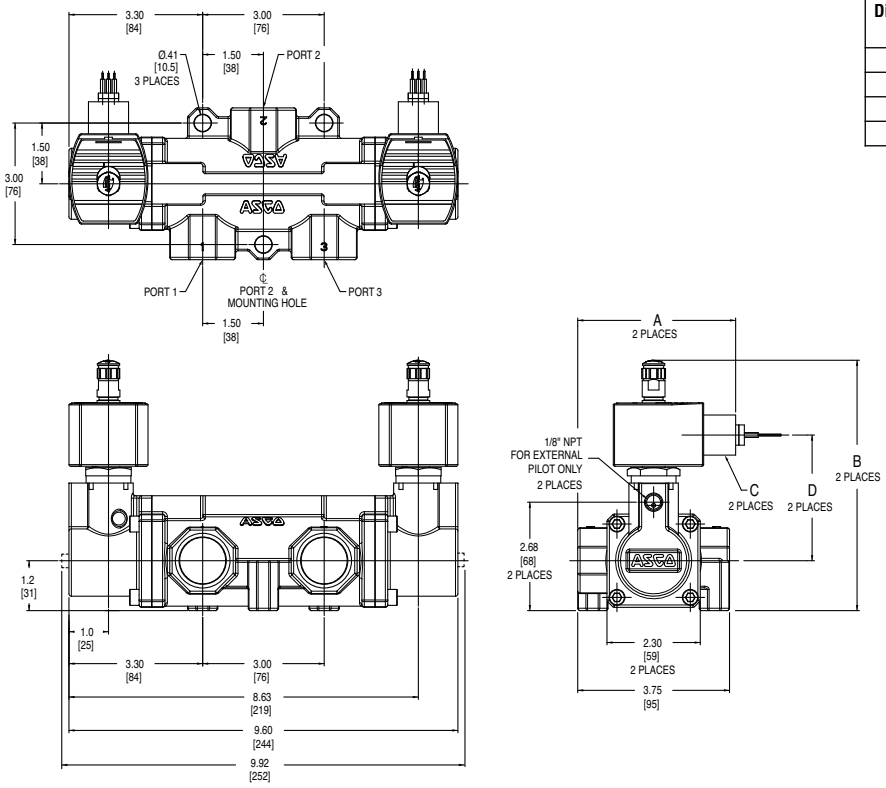




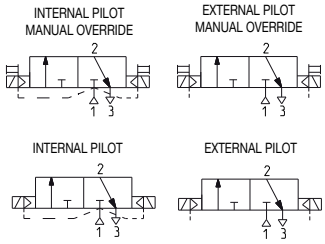


Dimensions: inches (mm)

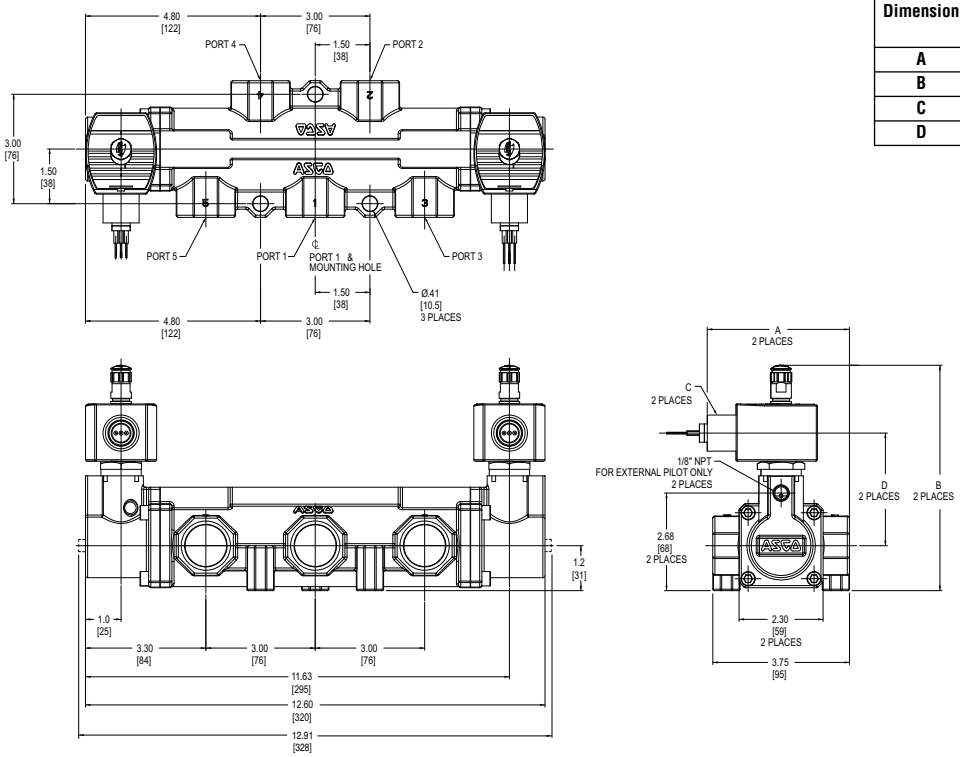
Const. Ref. 41



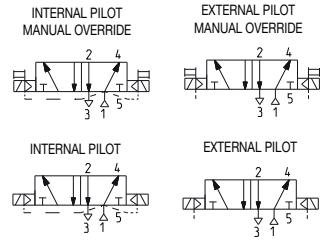
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72



Const. Ref. 42



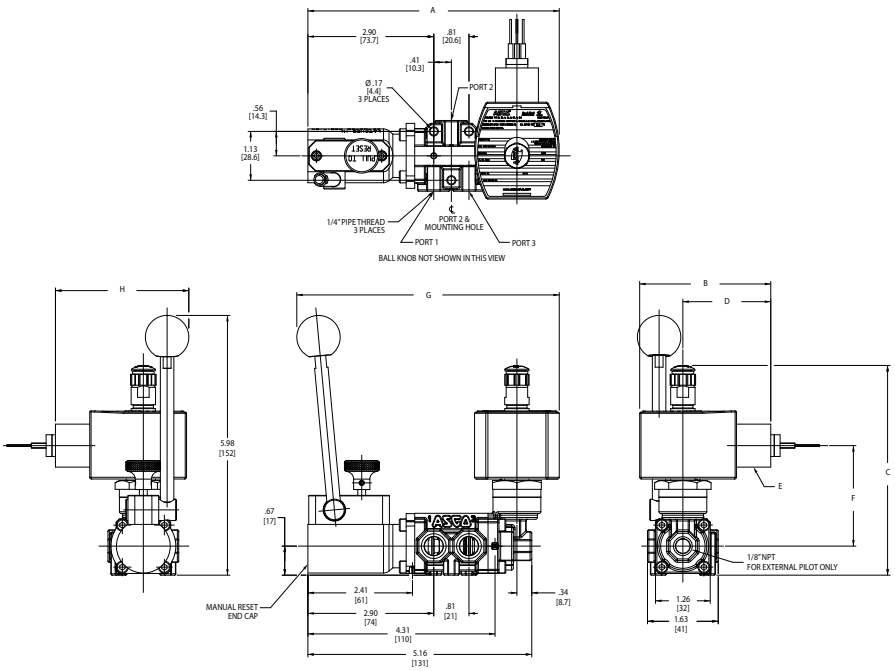
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72



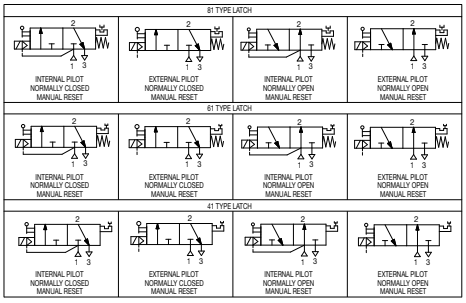
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

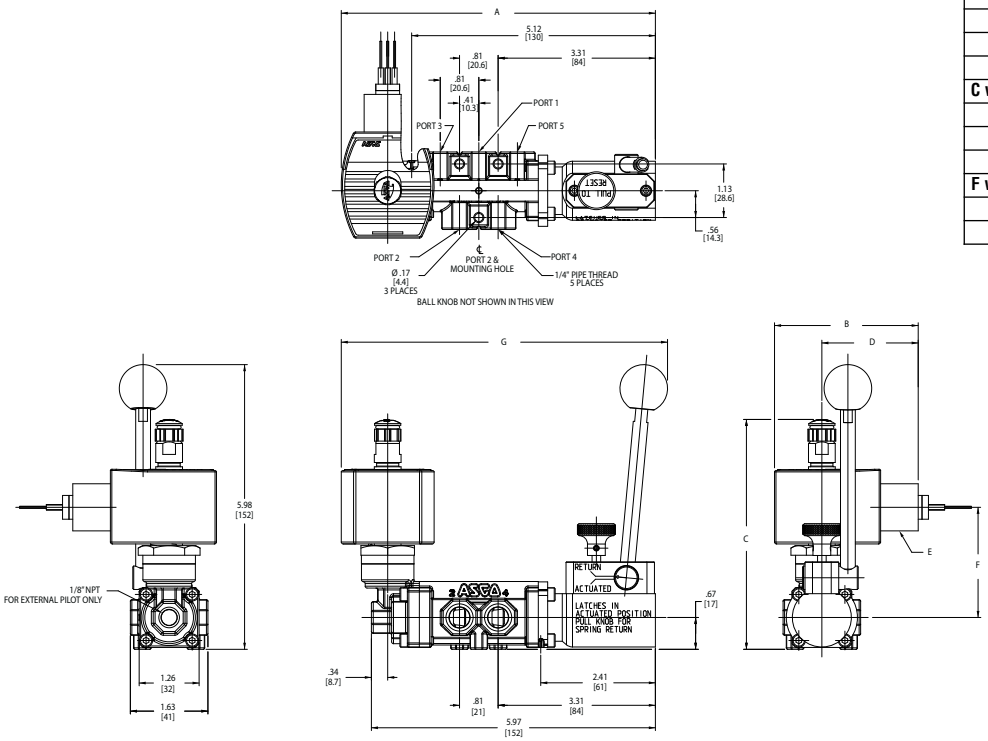
Const. Ref. 43



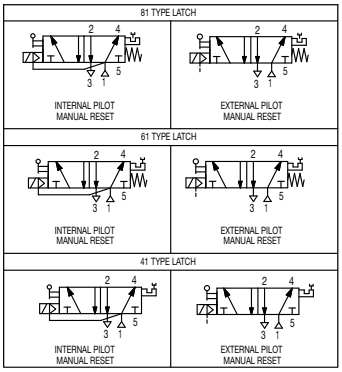
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	5.79	147	5.48	139	5.64	143
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	6.05	154	5.73	146	5.90	150
H	3.07	78	3.26	83	3.19	81



Const. Ref. 44

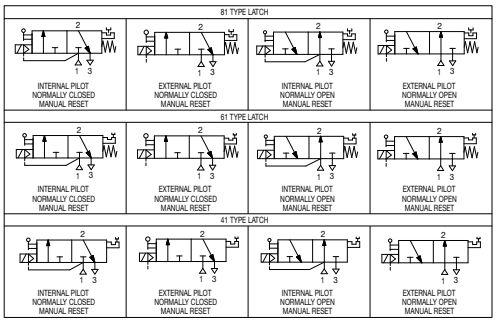


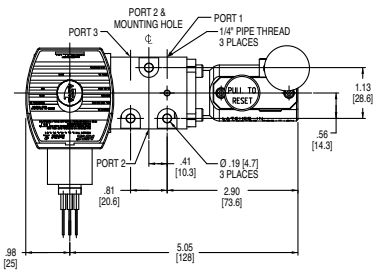
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.61	168	6.30	160	6.46	164
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	6.89	175	6.57	167	6.73	171
H	3.07	78	3.26	83	3.19	81

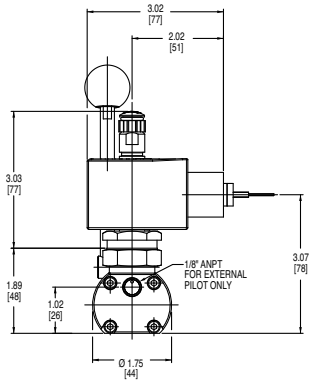


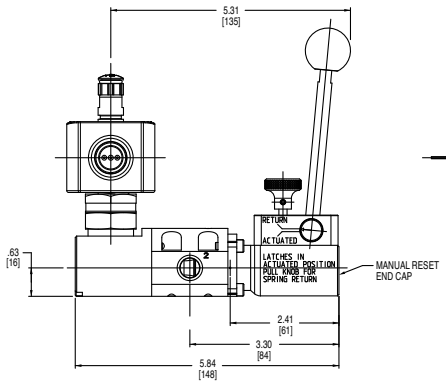
Dimensions: inches (mm)

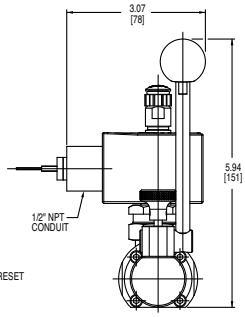
Const. Ref. 45



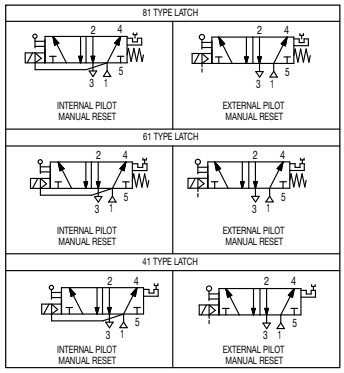


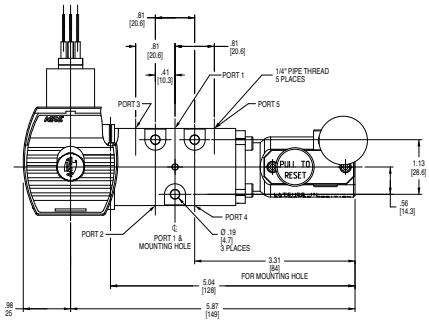


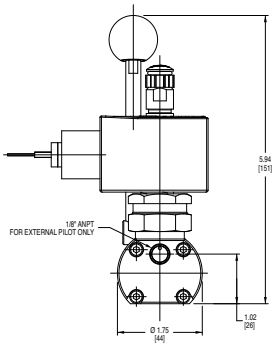


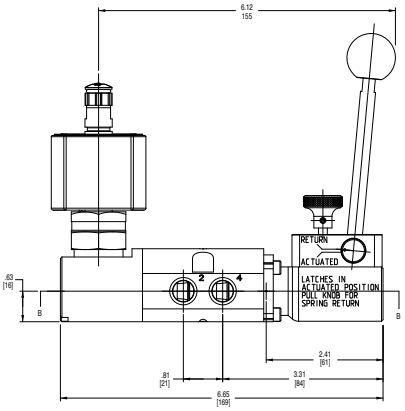


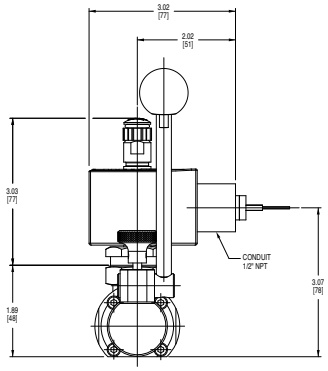
Const. Ref. 46







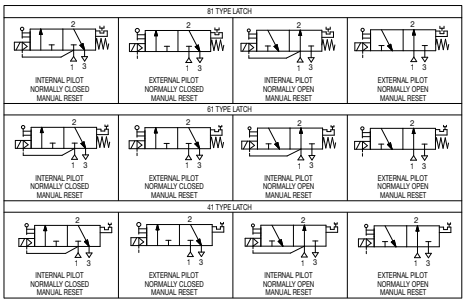


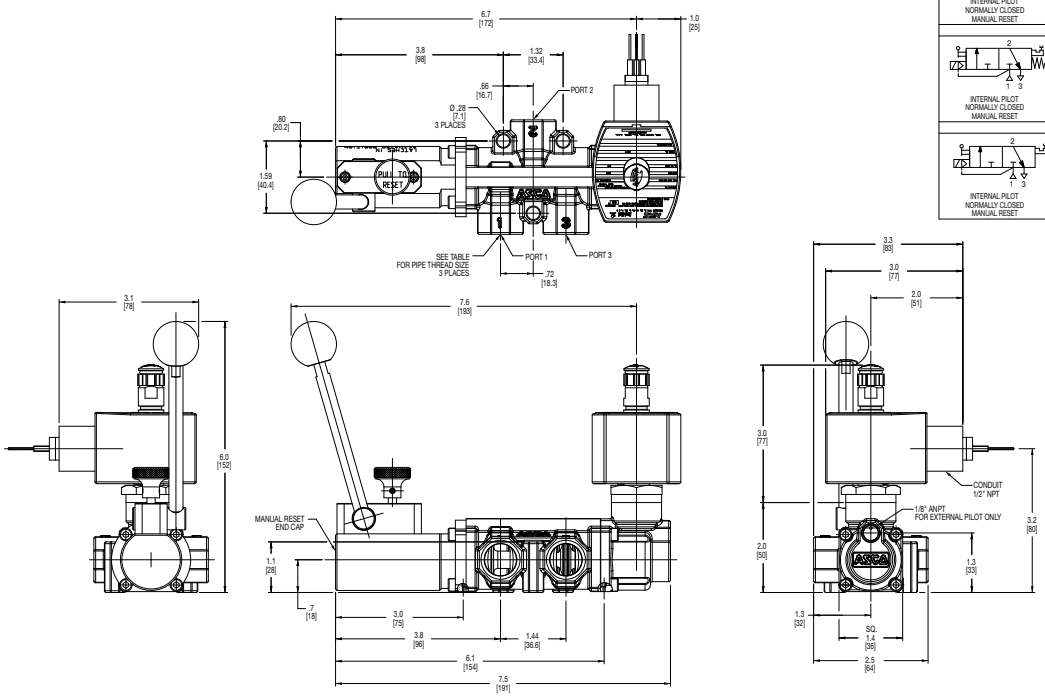


SPECIAL SERVICE PILOT

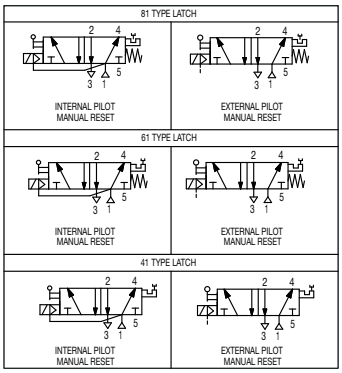
Dimensions: inches (mm)

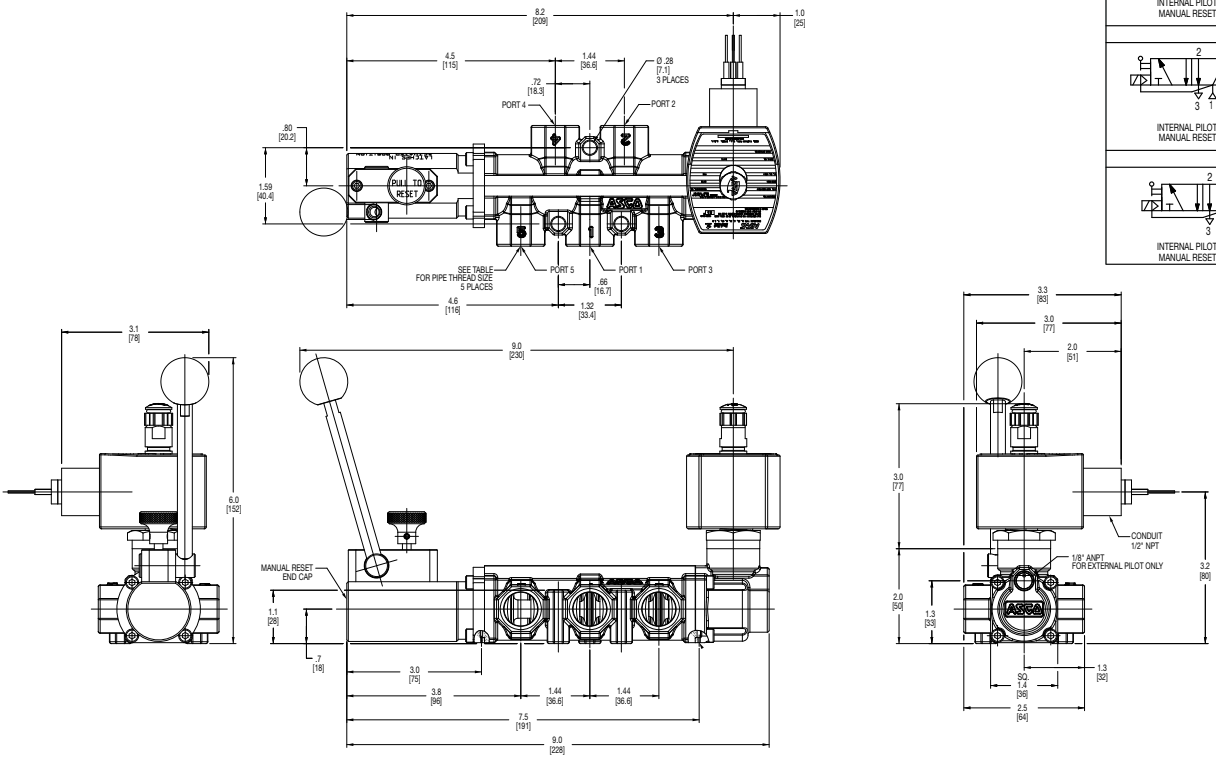
Const. Ref. 47





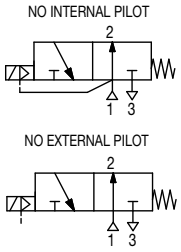
Const. Ref. 48

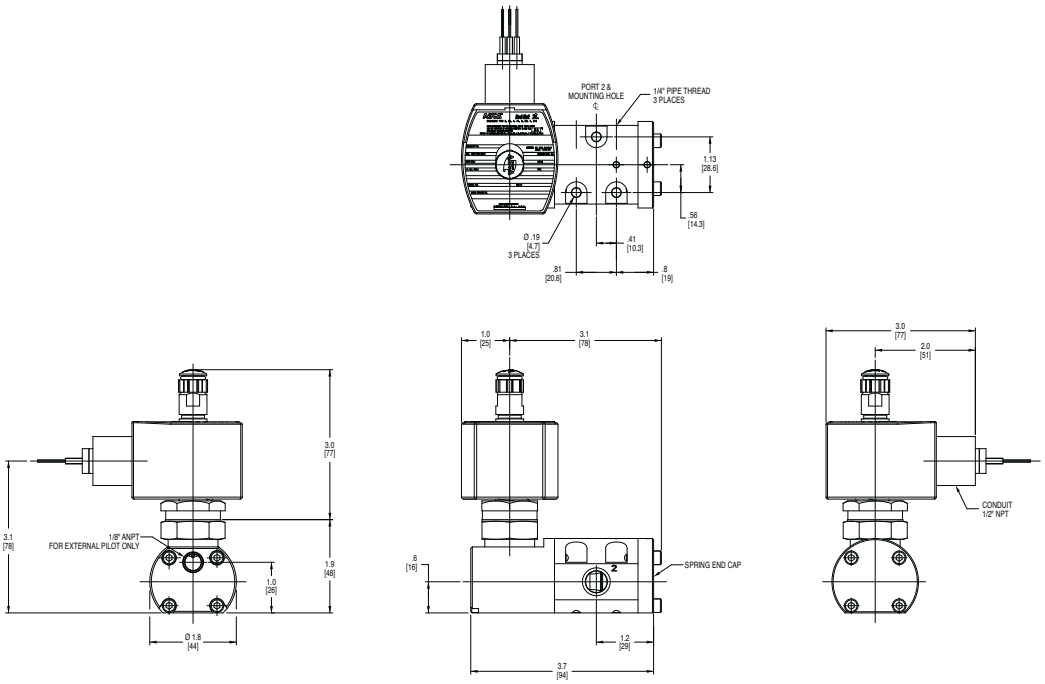




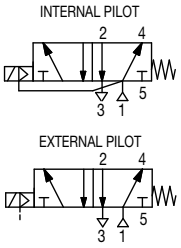
Dimensions: inches (mm)

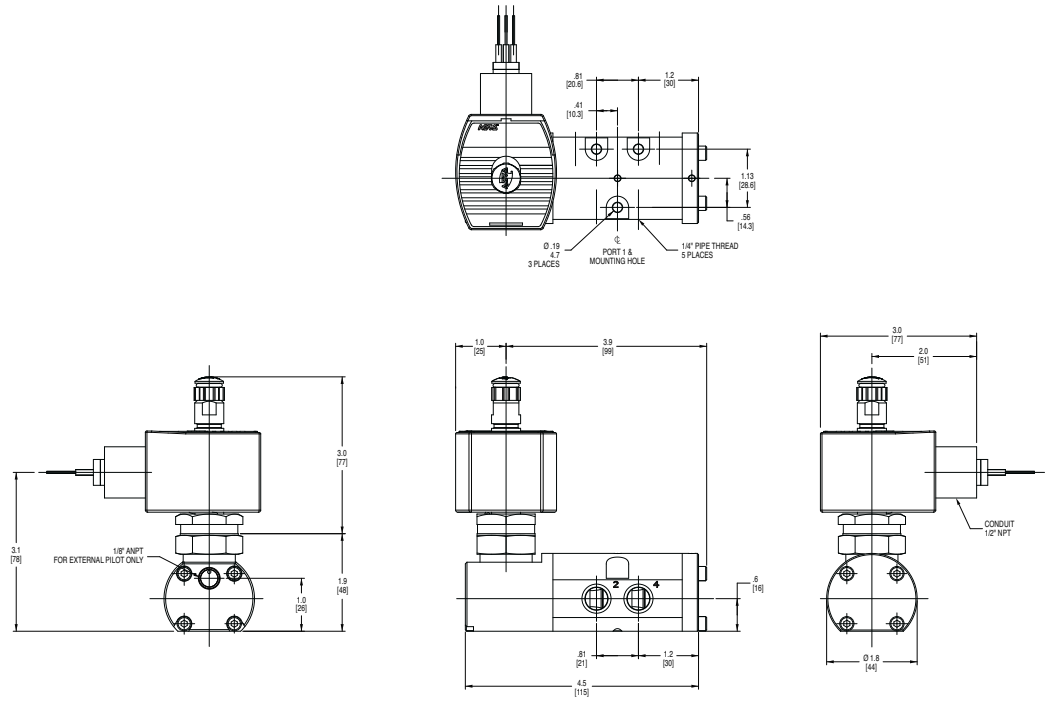
Const. Ref. 49





Const. Ref. 50

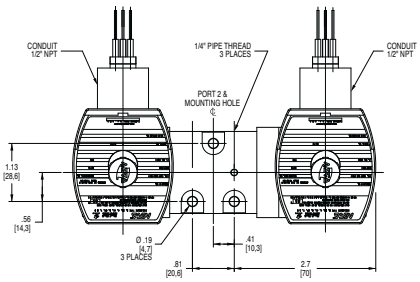


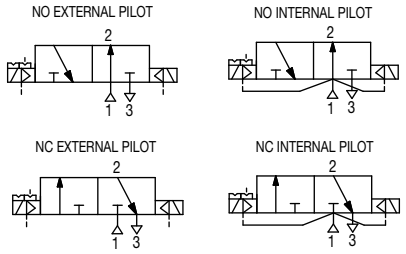


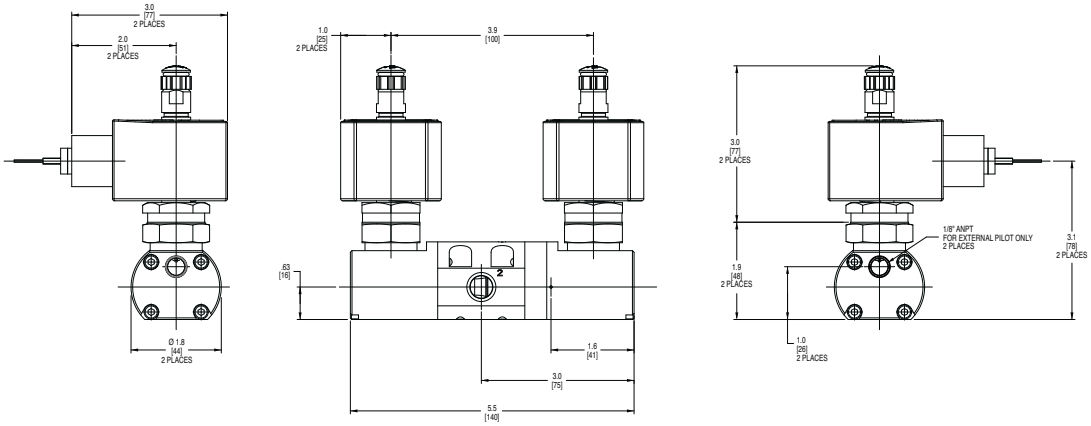
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

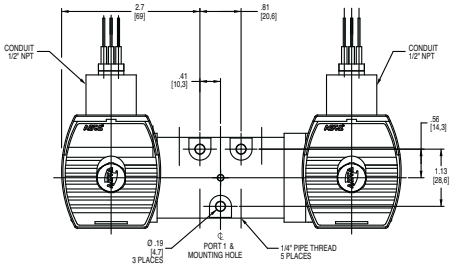
Const. Ref. 51

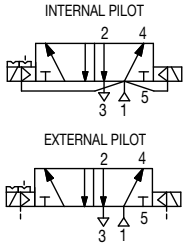


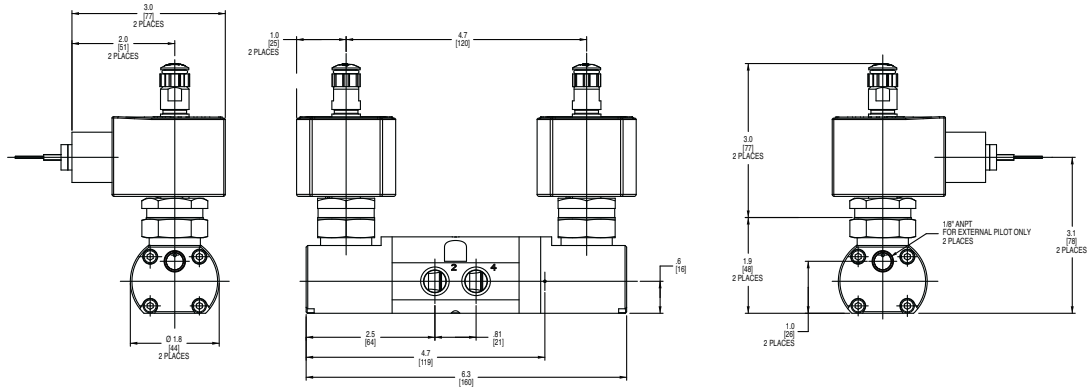




Const. Ref. 52



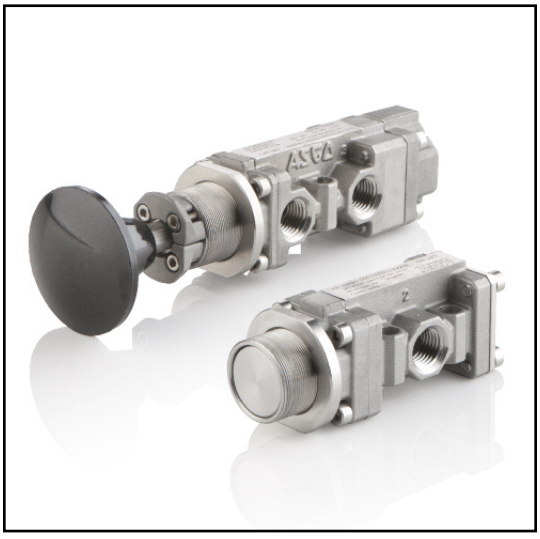




SPECIAL SERVICE PILOT

Features

- Ideal for oil and gas control panel applications
- Drop-in replacement design - compatible with most existing applications which eliminates the need to modify existing designs
- NACE compliant
- Corrosion resistant - 316L Stainless Steel valve materials make it ideal for offshore and harsh environments
- Extensive manual and pneumatic options including Main Supply Reset versions
- Rated for air, natural gas and hydraulic oil (Grade 32)



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
Spring	Ni-Co Alloy
Seals	FKM
Spool	316L Stainless Steel

Nominal Ambient Temperature Range

Air, natural gas pilot: -10°F to 203°F (-23°C to 95°C)
Hydraulic oil pilot: 14°F to 203°F (-10°C to 95°C)
Refer to Engineering Section for details.

Ordering

8364A1	13	00	1	1000

Function

07	Pilot Operated/Spring Return
13	Double Pilot
16	Button Operated (guarded)/Spring Return
17	Button Operated (unguarded)/Spring Return
18	Palm Button with Pilot/Manual Return
19	Palm Button with Pilot/Spring Return
20	Palm Button with Air Latch Pilot/Spring Return
21	Latching Palm Button with Pilot/Spring Return
22	Latching Palm Button with Remote Air Latch Pilot/Spring Return
24	Indicating Palm Button with Air Latch Pilot/Spring Return
26	Indicating, Latching Palm Button with Air Latch Pilot/Spring Return
27	Indicating, Latching Palm Button with Pilot/Spring Return
28	Indicating Palm Button with Air Latch Pilot and Loss of Pressure Trip/Spring Return
29	Latching Palm Button with Air Latch Pilot/Spring Return

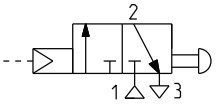
Construction / Pilot

0	Normally Closed / Externally Piloted
1	Normally Open / Externally Piloted
2	Normally Closed , Closed Center / Externally Piloted
7	Detent / Externally Piloted

Manually Operated

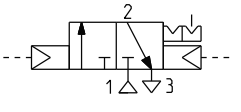
Button (guarded/unguared)/Spring Return

Palm Button with Pilot/Manual Return



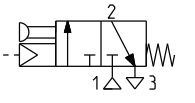
Pilot Operated/Spring Return

Double Pilot

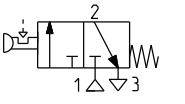


Manual Reset Options - Non Indicating

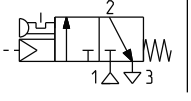
Palm Button with Air Pilot/Spring Return



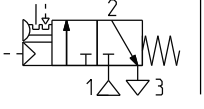
Palm Button with Air Latch Pilot/Spring Return



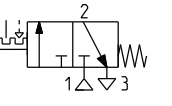
Latching Palm Button with Air Pilot/Spring Return



Latching Palm Button with Remote Air Latch Pilot/Spring Return

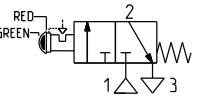


Latching Palm Button with Air Latch Pilot/Spring Return

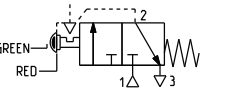


Manual Reset Options - Indicating

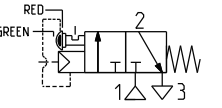
Indicating Palm Button with Air Latch Pilot/Spring Return



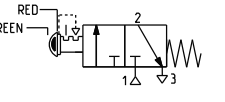
Indicating Palm Button with Air Latch Pilot and Loss of Pressure Trip/Spring Return



Indicating, Latching Palm Button with Air Pilot/Spring Return



Indicating, Latching Palm Button with Air Latch Pilot/Spring Return



Specifications English units (Metric)

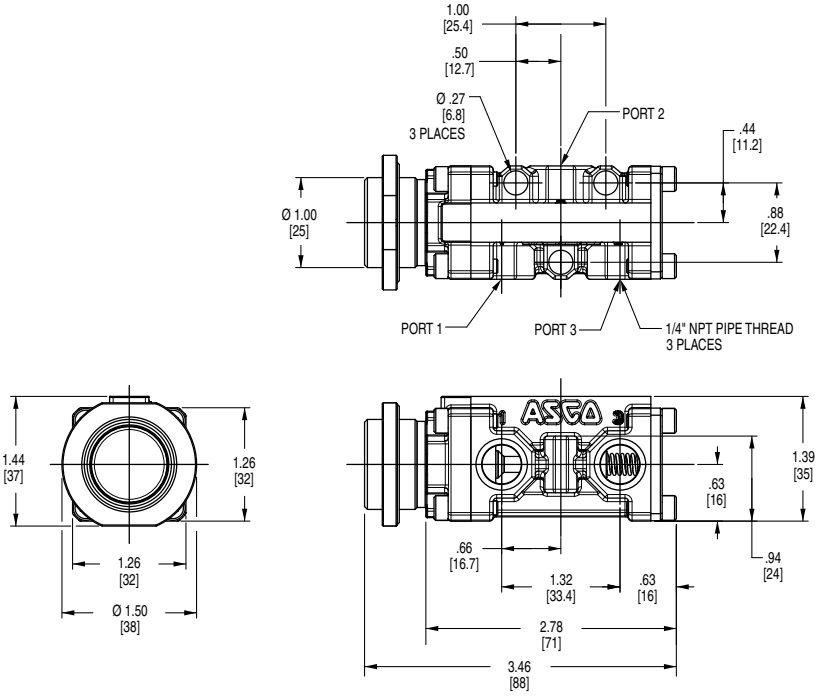
Pipe Size (in)	Flow Cv (Kv)	Base Catalog Number	Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)			Max. Fluid Temp. °F (˚C)	Function	Const. Ref.
					Min.					
			Min.	Max.	Air/Natural Gas	Hydraulic oil (Grade 32)	Max.			
Normally Open / Externally Piloted										
1/4	1.1 (0.95)	8364A1160011000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (guarded)/Spring Return	1
1/4	1.1 (0.95)	8364A1170011000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (unguarded)/Spring Return	2
1/4	1.1 (0.95)	8364A1070011000	0	200 (13.8)	36 (2.5)	-	200 (13.8)	203 (95)	Pilot Operated/Spring Return	3
Normally Closed, Closed Center / Externally Piloted										
1/4	0.8 (0.71)	8364A1160021000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (guarded)/Spring Return	4
1/4	0.8 (0.71)	8364A1070021000	0	200 (13.8)	36 (2.5)	70*/90**	200 (13.8)	203 (95)	Pilot Operated/Spring Return	5
1/4	0.8 (0.71)	8364A1180021000	0	200 (13.8)	15 (1)	70*/90**	200 (13.8)	203 (95)	Palm Button with Pilot/Manual Return	6
Normally Closed / Externally Piloted										
1/4	1.6 (1.38)	8364A1160001000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (guarded)/Spring Return	1
1/4	1.6 (1.38)	8364A1170001000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (unguarded)/Spring Return	7
1/4	1.6 (1.38)	8364A1070001000	0	200 (13.8)	36 (2.5)	-	200 (13.8)	203 (95)	Pilot Operated/Spring Return	3
1/4	1.6 (1.38)	8364A1180001000	0	200 (13.8)	15 (1)	-	200 (13.8)	203 (95)	Palm Button with Pilot/Manual Return	6
1/4	1.6 (1.38)	8364A1190001000	0	200 (13.8)	25 (1.7)	-	200 (13.8)	203 (95)	Palm Button with Pilot/Spring Return	6
1/4	1.6 (1.38)	8364A1200001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Palm Button with Air Latch Pilot/Spring Return	8
1/4	1.6 (1.38)	8364A1210001000	0	200 (13.8)	25 (1.7)	-	200 (13.8)	203 (95)	Latching Palm Button with Pilot/Spring Return	9
1/4	1.6 (1.38)	8364A1270001000	0	200 (13.8)	25 (1.7)	-	200 (13.8)	203 (95)	Indicating, Latching Palm Button with Pilot/Spring Return	10
1/4	1.6 (1.38)	8364A1240001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Indicating Palm Button with Air Latch Pilot/Spring Return	11
1/4	1.6 (1.38)	8364A1290001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Latching Palm Button with Air Latch Pilot/Spring Return	12
1/4	1.6 (1.38)	8364A1260001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Indicating, Latching Palm Button with Air Latch Pilot/Spring Return	13
1/4	1.6 (1.38)	8364A1280001000	0	75 (5.2)	40 (2.8)	-	75 (5.2)	203 (95)	Indicating Palm Button with Air Latch Pilot and Loss of Pressure Trip/Spring Return	11
1/4	1.6 (1.38)	8364A1220001000	0	200 (13.8)	50 (3.4)	-	200 (13.8)	203 (95)	Latching Palm Button with Remote Air Latch Pilot/Spring Return	14
Detent / Externally Piloted										
1/4	1.6 (1.38)	8364A1130071000	0	200 (13.8)	15 (1)	-	200 (13.8)	203 (95)	Double Pilot	15

*When Pilot Media is Air and Main Valve Media is Hydraulic Oil: Min. Pilot Pressure is 70 psi (4.8 bar)

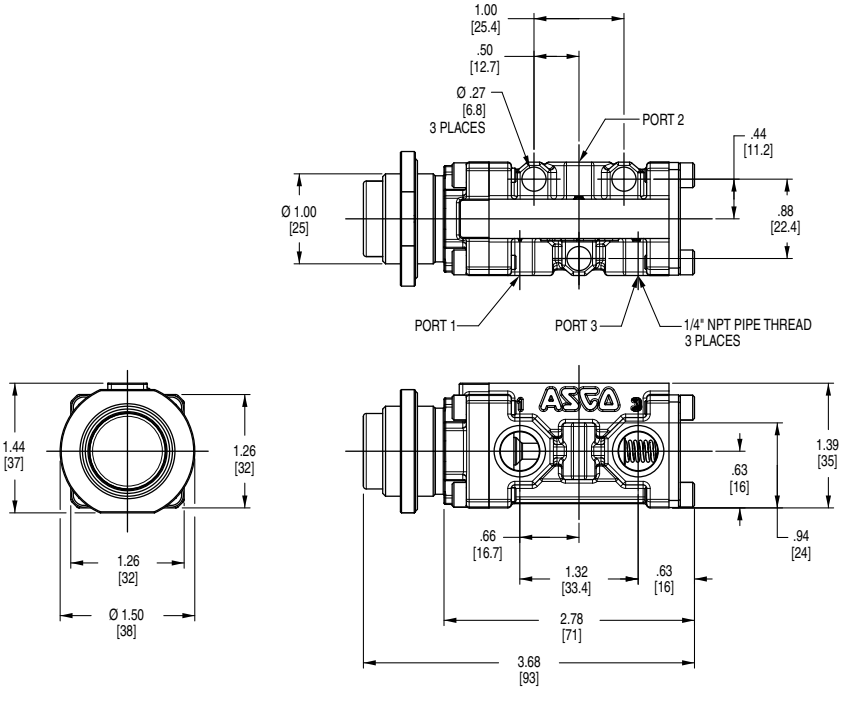
**When Pilot Media is Hydraulic Oil and Main Valve Media is Hydraulic Oil: Min. Pilot Pressure is 90 psi (6.2 bar)

Dimensions: inches (mm)

Const. Ref. 1

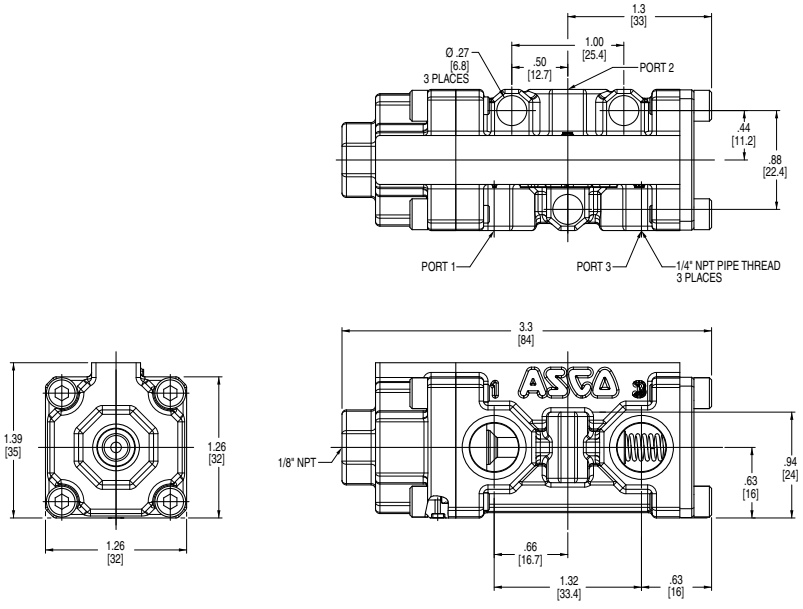


Const. Ref. 2



Dimensions: inches (mm)

Const. Ref. 3



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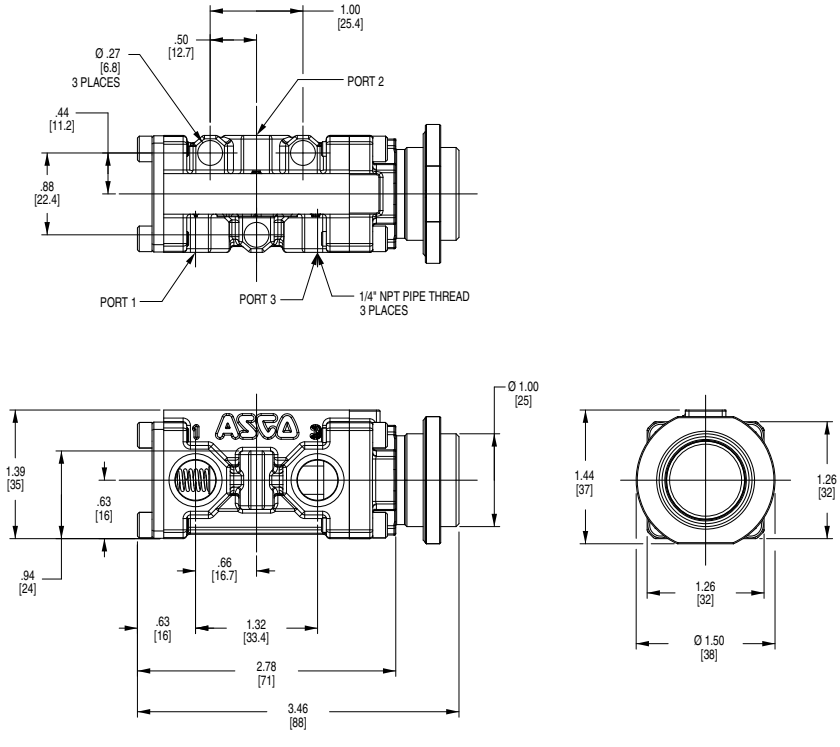
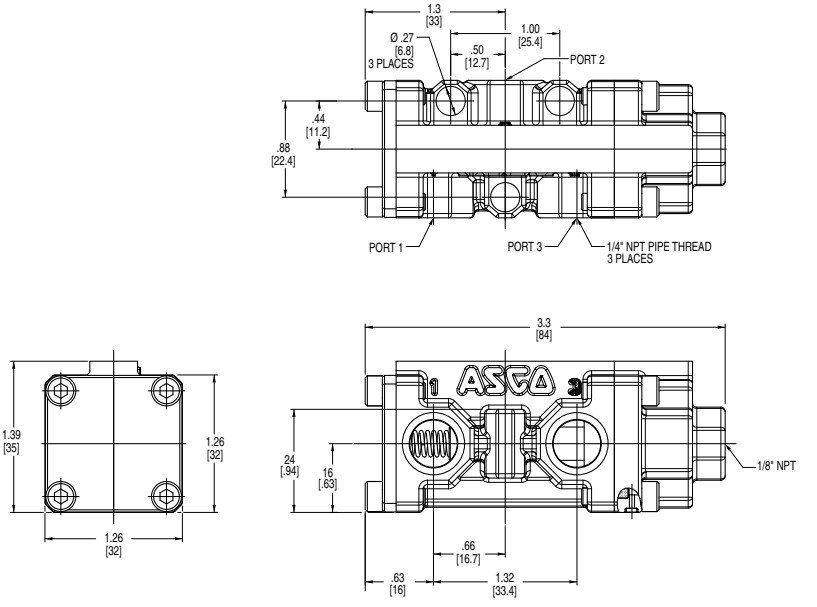


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 5



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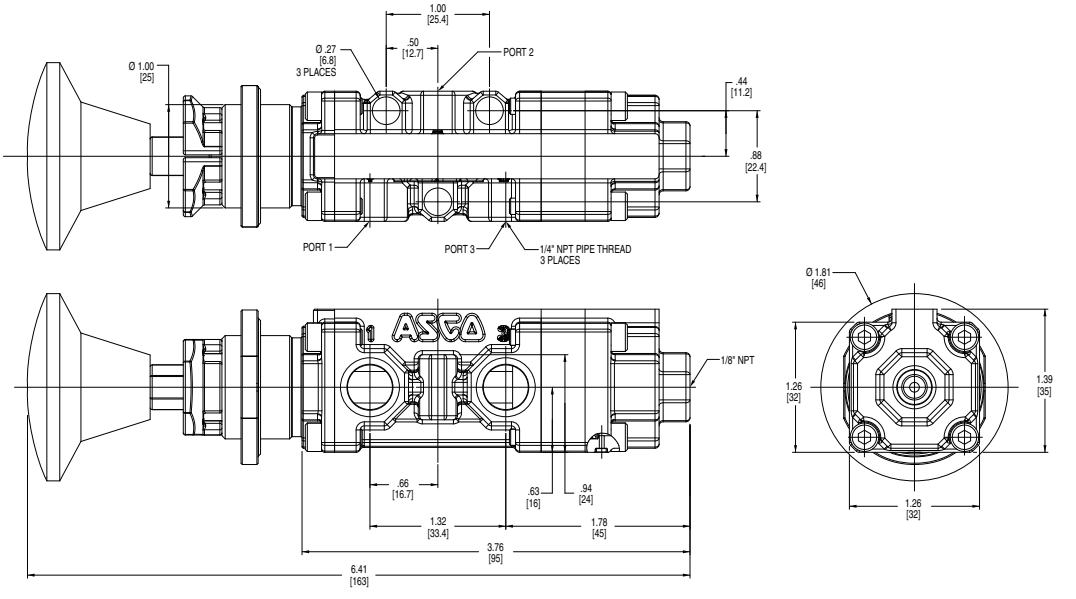
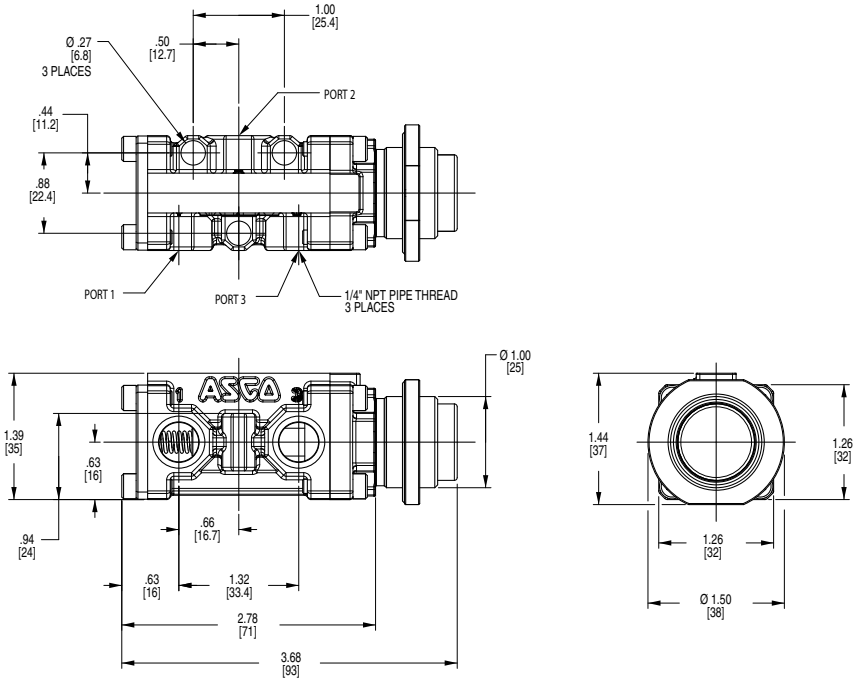


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 7



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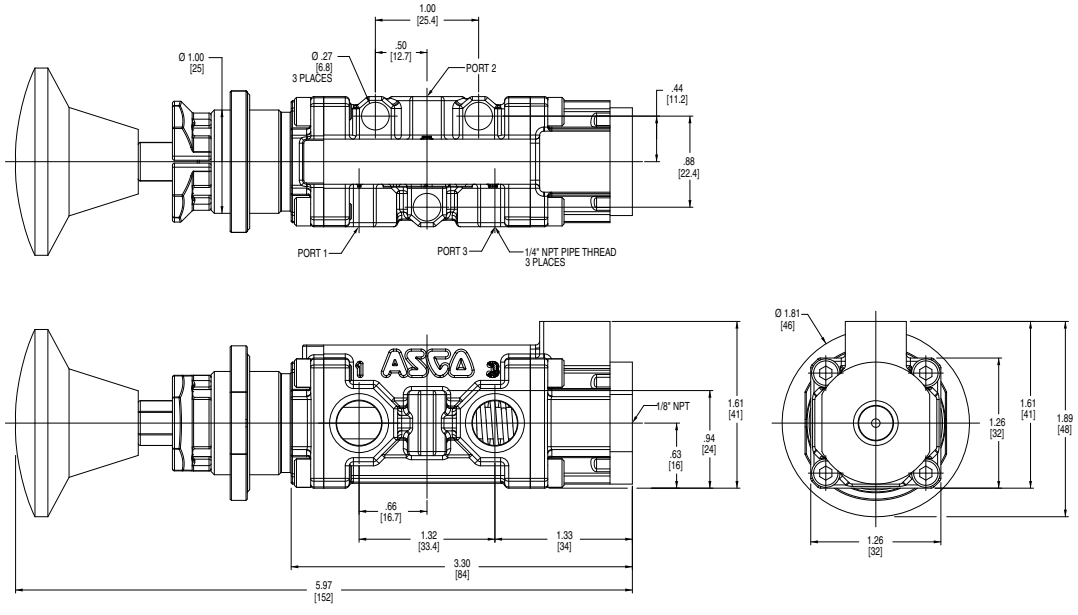
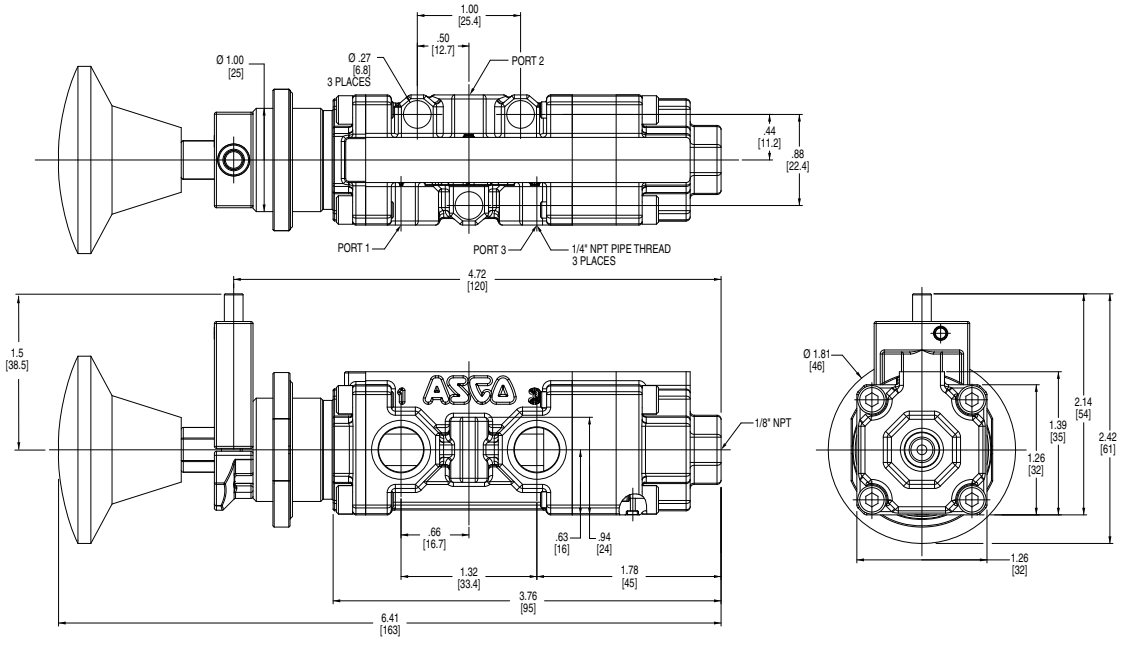


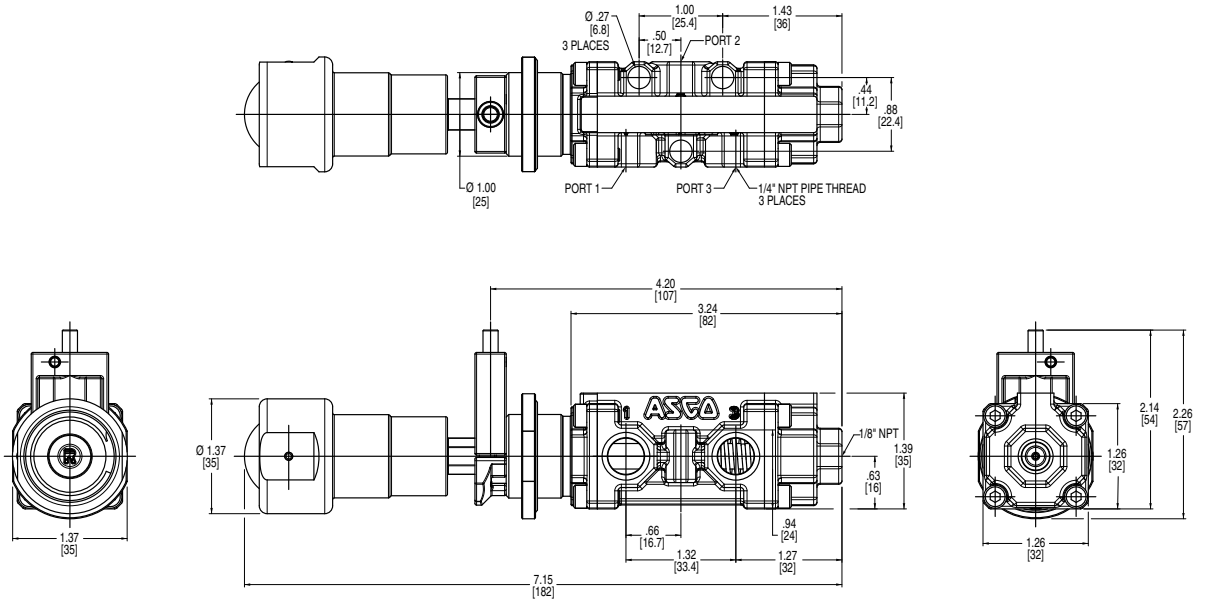
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 9

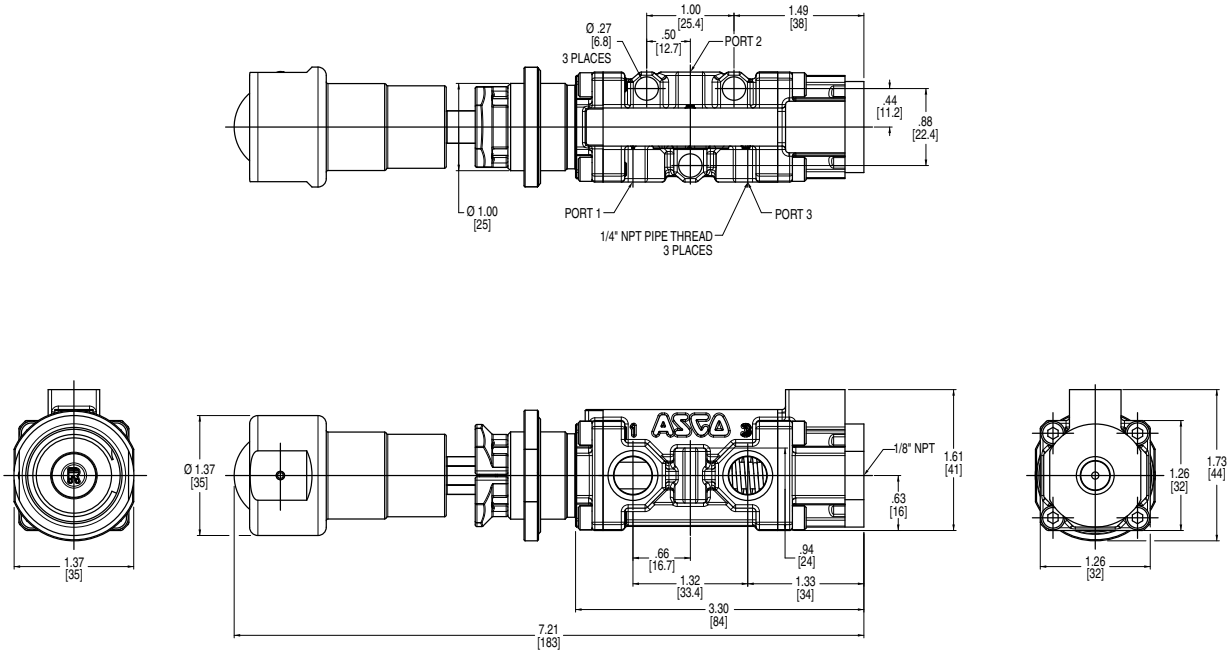


Const. Ref. 10



Dimensions: inches (mm)

Const. Ref. 11



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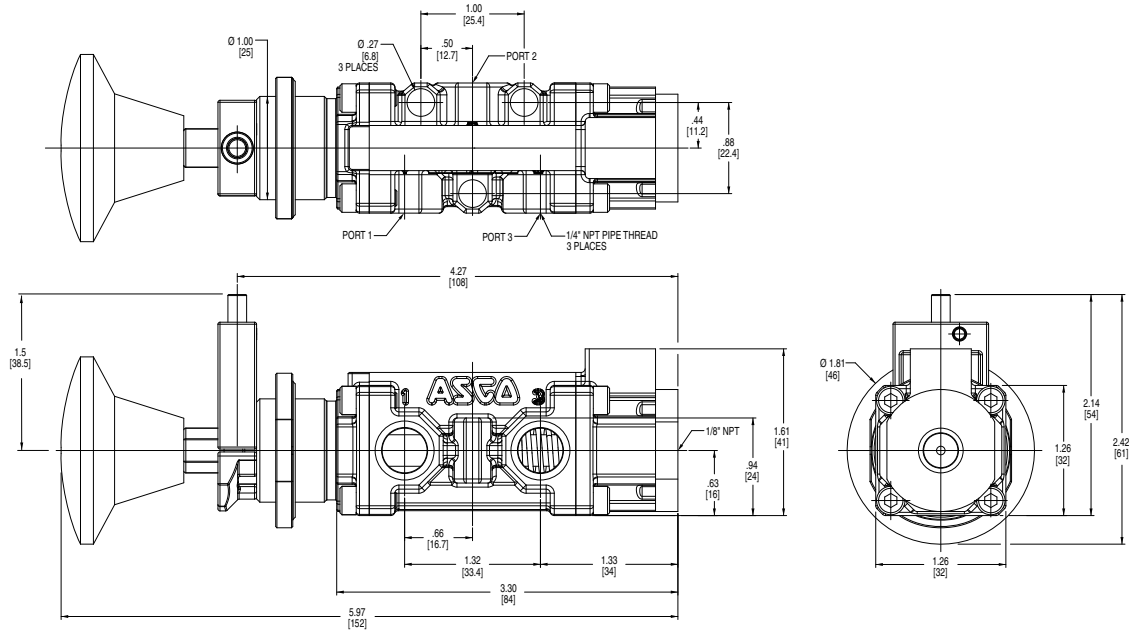
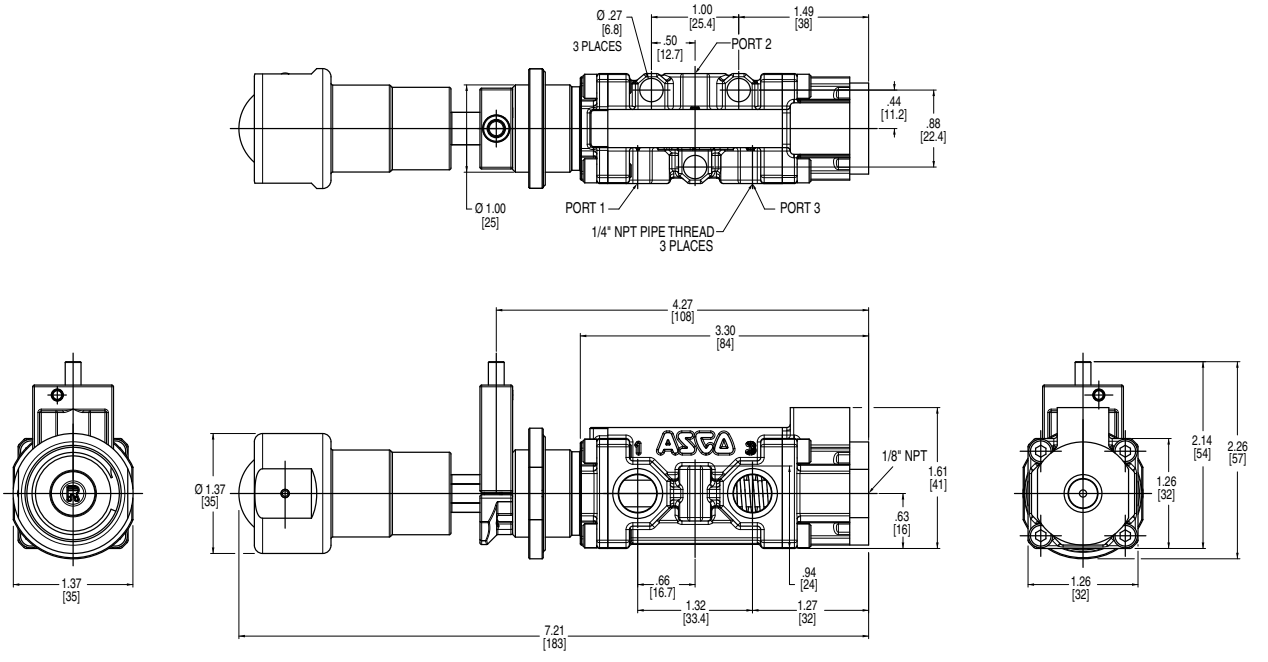


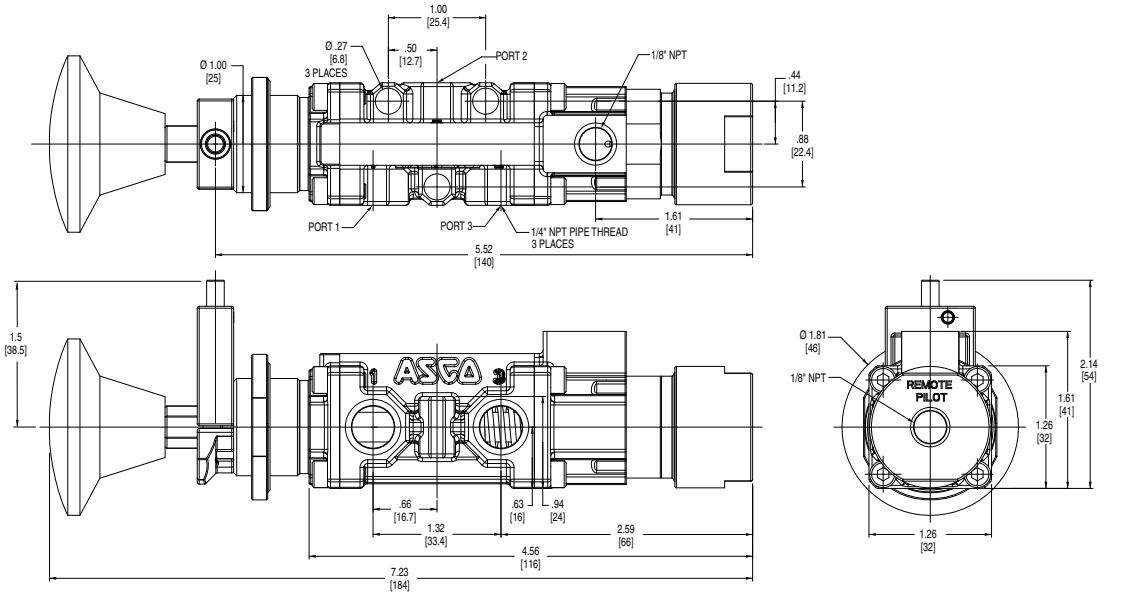
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 13

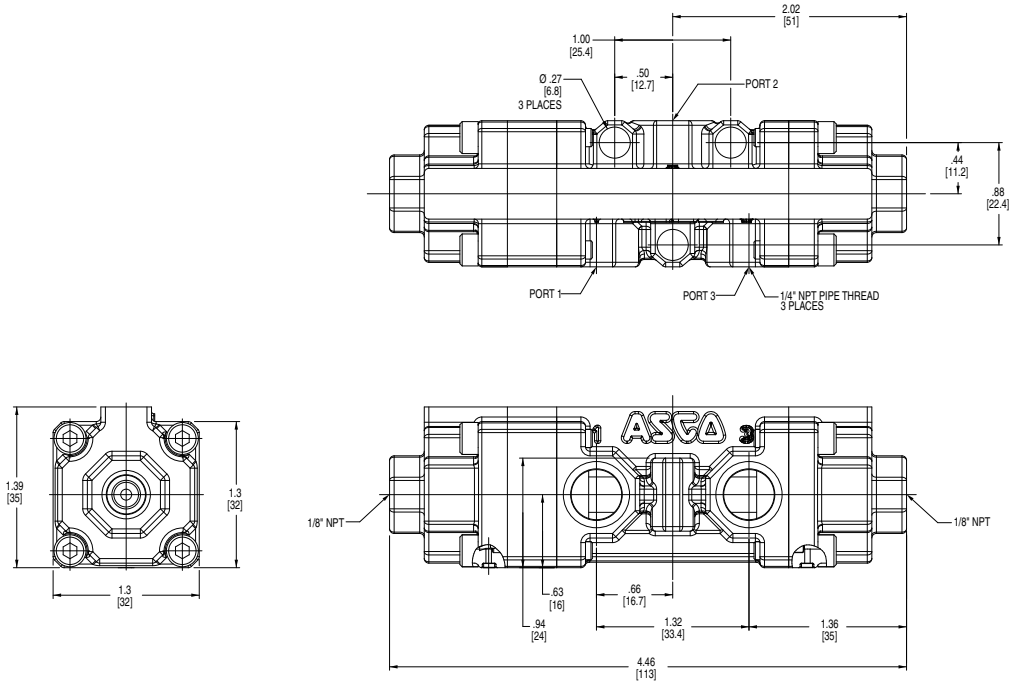


Const. Ref. 14



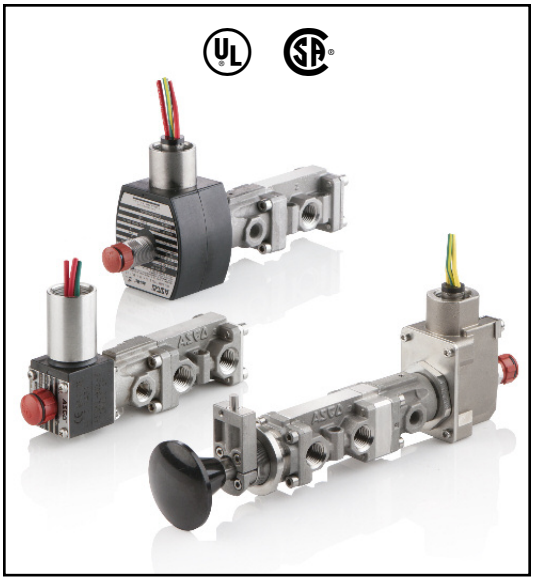
Dimensions: inches (mm)

Const. Ref. 15



Features

- Ideal for oil and gas control panel applications
- Drop-in replacement design - compatible with most existing applications which eliminates the need to modify existing designs
- Explosion-proof solenoid options
- Solenoid options with factory sealed leads reduce installation time
- ATEX/IECEx and UL/CSA approved for hazardous locations
- Corrosion Resistant - 316L Stainless Steel valve material makes it ideal for offshore and harsh environments
- Rated for air, inert gas and sweet dry natural gas



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
Spring	Ni-Co Alloy
Seals	FKM, LT NBR (Solenoid Only)
Core and Plugnut	430F Stainless Steel
Spool	316L Stainless Steel

Electrical

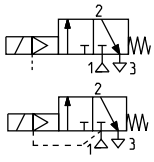
Coil Options	Insulation Class	Wattage	Spare Coil Part Number
Intrinsically Safe	H	0.48 W	298006
Ultra Low Power	F	0.55 W	274714
Standard Low Power	F	1.4 W	274714
Compact Low Power	F	1.8 W	437962
Standard AC	F	10.1 W	274614
Standard DC	F	11.6 W	274714
Stainless Steel Encapsulated	F	1.8 W	505434

IMPORTANT: Supervisory & leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.

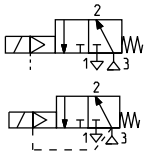
Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)	Coil Resistance at 68˚F (20˚C) (Ohms)
Ultra Low Power	0.55 W	12V	34.0	3.63	255
		24V	17.0	1.80	1025
		48V	8.5	0.91	4080
		125V	3.2	0.34	27,400
Standard Low Power	1.4 W	12 V	83.5	13.9	102
		24 V	42.0	7.0	410
Compact Low Power	1.8 W	12 V	95.0	20.0	80
		24 V	47.0	10.0	320
Stainless Steel Encapsulated	1.8 W	12 V	99.0	18.0	80
		24 V	47.0	10.0	320

Single Solenoid

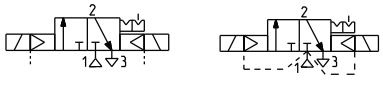
Normally Closed



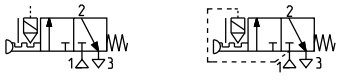
Normally Open



Dual Solenoid



Normally Closed Latching Palm Button



Nominal Ambient Temp. Ranges

Ultra Low Power, and Intrinsically Safe: -9˚F to 149˚F (-23˚C to 65˚C)
Standard Low Power: -9˚F to 140˚F (-23˚C to 60˚C)
Compact Low Power: -9˚F to 203˚F (-23˚C to 95˚C)
Standard AC: -9˚F to 125˚F (-23˚C to 52˚C)
Standard DC: -9˚F to 131˚F (-23˚C to 55˚C)
Stainless Steel Encapsulated: -9˚F to 194˚F (-23˚C to 90˚C)
Refer to Engineering Section for details.

Solenoid Enclosures

Standard: Explosionproof and Watertight, Types 4X, 6, and 6P.
Refer to Engineering Section for fluid and temperature compatibility.

Approvals

Solenoid Only:
UL and CSA Certified for Class I Div. 1 Locations
ATEX, IECEx: Ex d mb
ATEX, IECEx: Ex d
Refer to Engineering Section for details.

SPECIAL SERVICE PILOT

Important

These solenoid valves are intended for use on clean dry air, inert gas, or sweet dry natural gas filtered to 40 micron or better. The dew point of the media should be at least 10˚C (18˚F) below the minimum temperature to which any portion of the air, inert gas or sweet dry natural gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with FKM and LT NBR elastomers. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

How to order

8 3 6 4 A 1 | 0 1 | H 1 | 1 | 1 | 1 | F 1

Function

01	Single Solenoid/Spring Return
06	Dual Solenoid
23	Latching Palm Button with Solenoid Operated Air Latch Pilot

Electrical Connection Type

H1	1/2" Conduit with 18 ' Leads Harsh Enviroment Class I Div 1

Construction / Pilot

0	Normally Closed / Externally Piloted
1	Normally Open / Externally Piloted
7	Detent / Externally Piloted
8	Normally Closed / Internally Piloted
9	Normally Open / Internally Piloted
G	Detent / Internally Piloted

Solenoid Type / Orientation

1	Compact Low Power (1.8W)
2	Low Power (1.4W)
3	Stainless Steel Encapsulated (1.8 W)
4	Ultra Low Power (0.55W)
5	Intrinsically Safe Low Power (0.48W)
6	Standard AC (10.1W)
7	Standard DC (11.6W)
A	Compact Low Power (1.8W) / 90 Degree Solenoid
C	Low Power (1.4W) / 90 Degree Solenoid
D	Stainless Steel Encapsulated (1.8W) / 90 Degree Solenoid
E	Ultra Low Power (0.55W) / 90 Degree Solenoid
F	Intrinsically Safe Low Power (0.48W) / 90 Degree Solenoid
G	Standard AC (10.1W) / 90 Degree Solenoid
H	Standard DC (11.6W) / 90 Degree Solenoid

Voltages

F0	120/60, 110/50 Class F
F1	24/DC Class F
F3	12/DC Class F
H1	24/DC Class H

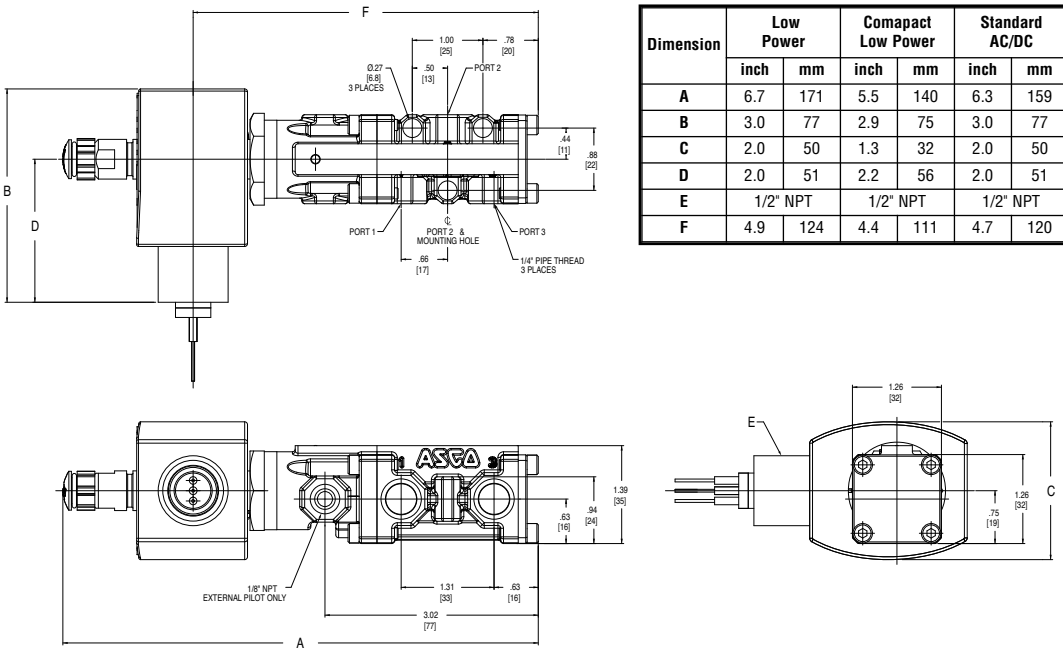
Specifications English units (Metric)

Pipe Size (in)	Pilot Orifice Size (in)	Flow Cv (Kv)	Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)		Base Catalog Number ①	Function	Solenoid Orientation	Const. Ref.
			Min.	Max.	Min.	Max.				
Normally Open / Internally Piloted										
1/4	1/16	1.1 (0.95)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H191_F1	Single Solenoid/Spring Return	Straight	1
1/4	1/16	1.1 (0.95)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H191_F1	Single Solenoid/Spring Return	90˚ Solenoid	2
Normally Open / Externally Piloted										
1/4	1/16	1.1 (0.95)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H111_F1	Single Solenoid/Spring Return	Straight	1
1/4	1/16	1.1 (0.95)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H111_F1	Single Solenoid/Spring Return	90˚ Solenoid	2
Normally Closed / Internally Piloted										
1/4	1/16	1.6 (1.38)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H181_F1	Single Solenoid/Spring Return	Straight	3
1/4	1/16	1.6 (1.38)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H181_F1	Single Solenoid/Spring Return	90˚ Solenoid	4
1/4	1/16	1.6 (1.38)	40 (2.8)	150 (10) ②	N/A	N/A	8364A123H181_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	Straight	5
1/4	1/16	1.6 (1.38)	40 (2.8)	150 (10) ②	N/A	N/A	8364A123H181_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	90˚ Solenoid	6
Normally Closed / Externally Piloted										
1/4	1/16	1.6 (1.38)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H101_F1	Single Solenoid/Spring Return	Straight	3
1/4	1/16	1.6 (1.38)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H101_F1	Single Solenoid/Spring Return	90˚ Solenoid	4
1/4	1/16	1.6 (1.38)	0	200 (13.8)	40 (2.8)	150 (10) ③	8364A123H101_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	Straight	5
1/4	1/16	1.6 (1.38)	0	200 (13.8)	40 (2.8)	150 (10) ③	8364A123H101_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	90˚ Solenoid	6
Detent Internally Piloted										
1/4	1/16	1.6 (1.38)	15 (1.0)	150 (10) ②	N/A	N/A	8364A106H1G1_F1	Dual Solenoid	Straight	7
1/4	1/16	1.6 (1.38)	15 (1.0)	150 (10) ②	N/A	N/A	8364A106H1G1_F1	Dual Solenoid	90˚ Solenoid	8
Detent Externally Piloted										
1/4	1/16	1.6 (1.38)	0	200 (13.8)	15 (1.0)	150 (10) ③	8364A106H171_F1	Dual Solenoid	Straight	7
1/4	1/16	1.6 (1.38)	0	200 (13.8)	15 (1.0)	150 (10) ③	8364A106H171_F1	Dual Solenoid	90˚ Solenoid	8

① Base Catalog Numbers are listed as 24 V versions. For 12 V DC, change last digit from a "1" to a "3"
② Maximum Operating Pressure for Intrinsically Safe and Ultra Low Power Versions is 130 psi (9 bar) and 200 psi (13.8 bar)for Standard AC
③ Maximum Pilot Pressure for Intrinsically Safe and Ultra Low Power Versions is 130 psi (9 bar) and 200 psi (13.8 bar)for Standard AC

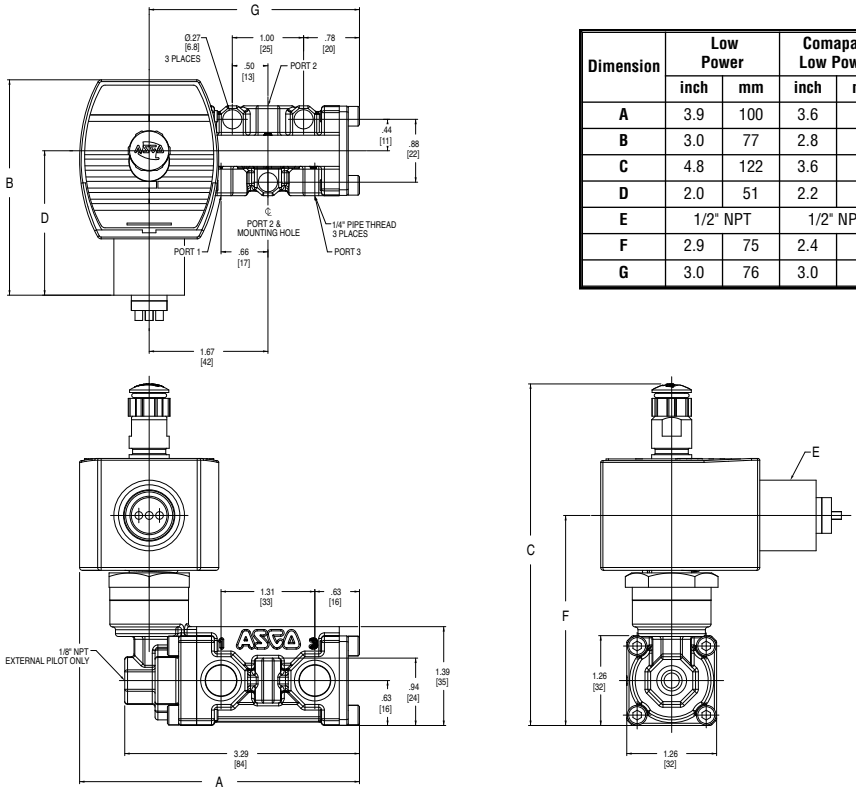
Dimensions: inches (mm)

Const. Ref. 1



Dimension	Low Power		Comapact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	6.7	171	5.5	140	6.3	159	6.7	171
B	3.0	77	2.9	75	3.0	77	3	77
C	2.0	50	1.3	32	2.0	50	2	50
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	4.9	124	4.4	111	4.7	120	4.9	124

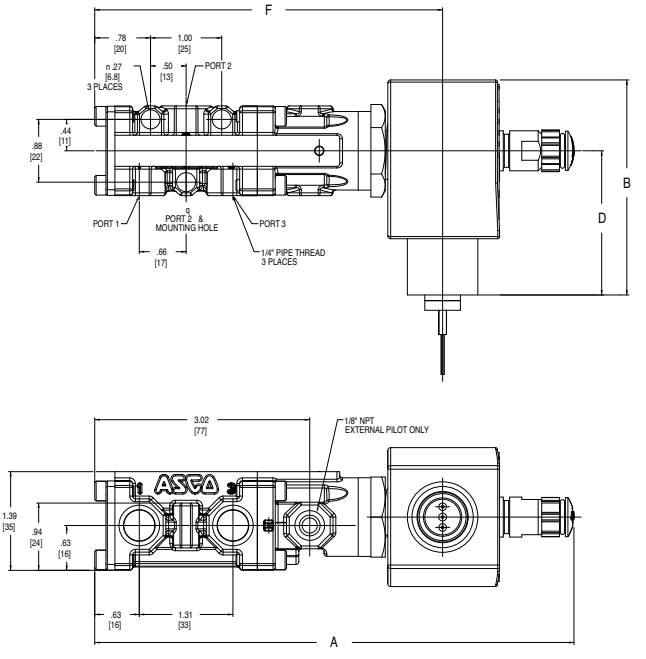
Const. Ref. 2

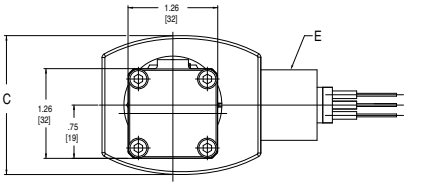


Dimension	Low Power		Comapact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	3.9	100	3.6	91	3.9	100	3.9	100
B	3.0	77	2.8	72	3.0	77	3	77
C	4.8	122	3.6	90	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	2.9	75	2.4	62	2.8	71	2.9	75
G	3.0	76	3.0	75	3.0	76	2.9	75

Dimensions: inches (mm)

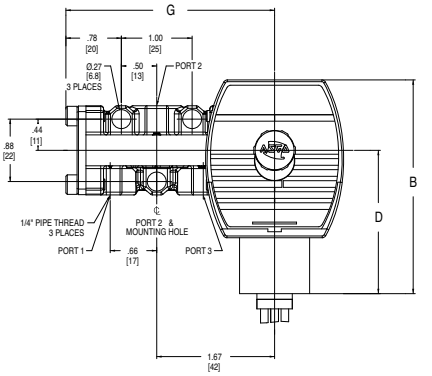
Const. Ref. 3

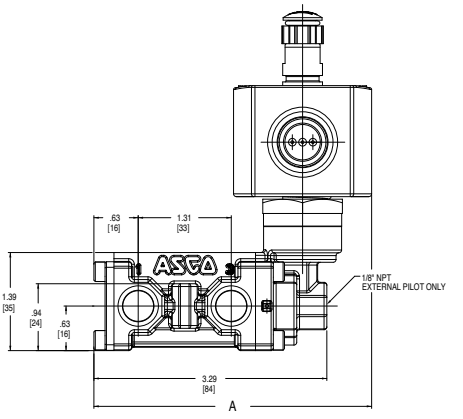


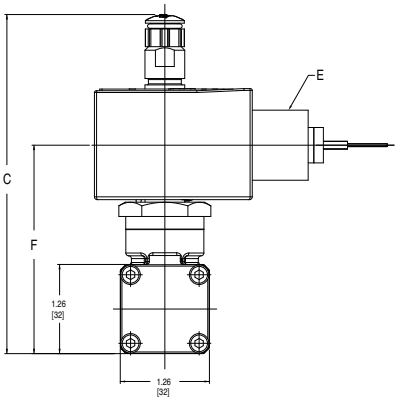


Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	6.7	171	5.5	140	6.3	159	6.7	171
B	3.0	77	2.9	75	3.0	77	3	77
C	2.0	50	1.3	32	2.0	50	2	50
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	4.9	124	4.4	111	4.7	119	4.9	124

Const. Ref. 4



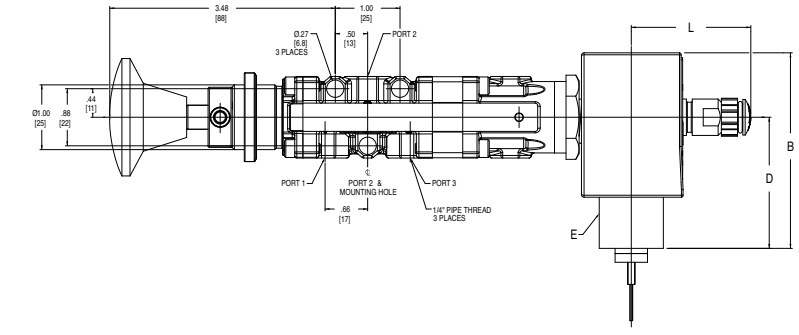


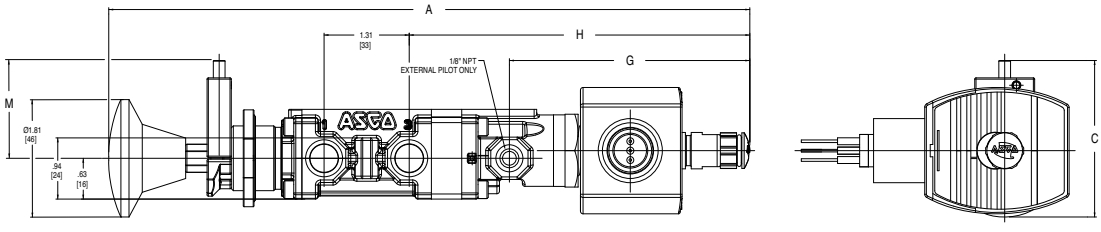


Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	3.9	100	3.6	91	3.9	100	3.9	100
B	3.0	77	2.8	72	3.0	77	3	77
C	4.8	122	3.6	90	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	2.9	75	2.4	62	2.8	72	2.9	75
G	3.0	76	3.0	75	3.0	76	2.9	75

Dimensions: inches (mm)

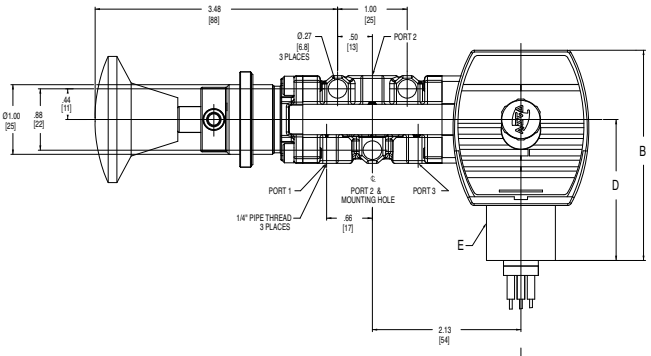
Const. Ref. 5

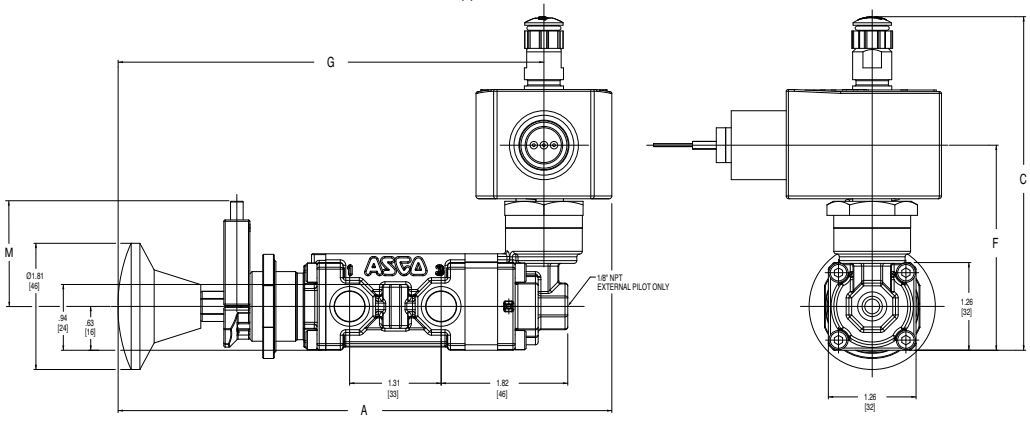




Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	9.9	251	8.7	220	9.4	239	9.9	251
B	3.0	77	2.8	71	3.0	77	3	77
C	2.4	61	3.5	89	2.4	61	2.4	61
D	2.0	51	1.3	32	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
G	3.7	94	2.5	63	3.2	82	3.7	94
H	5.3	134	4.0	102	4.8	121	5.3	134
L	1.9	47	1.1	28	1.5	39	1.9	47
M	1.5	39	1.5	39	1.5	39	-	-

Const. Ref. 6

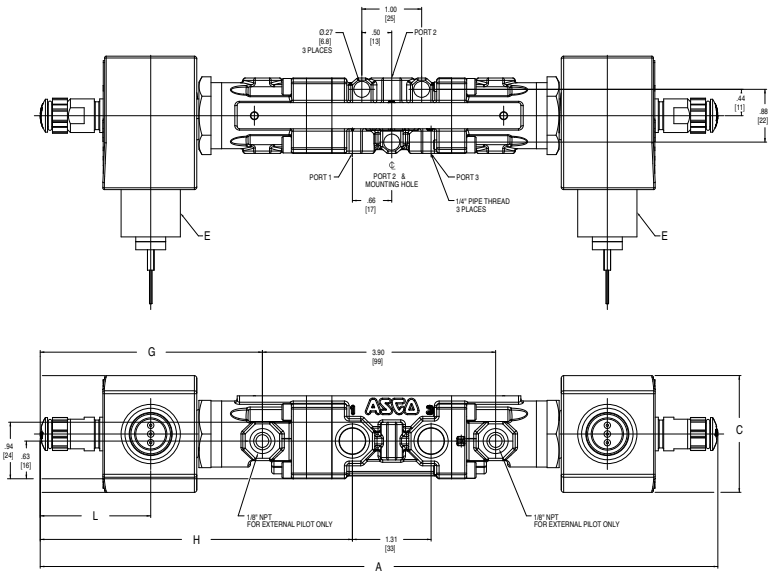




Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	7.1	180	6.7	171	7.1	180	7.1	180
B	3.0	77	2.8	71	3.0	77	3	77
C	4.8	122	3.5	88	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	3.0	75	2.4	62	2.8	71	2.9	75
G	6.0	151	6.0	151	6.0	151	6.1	155
M	1.5	39	1.5	39	1.5	39	-	-

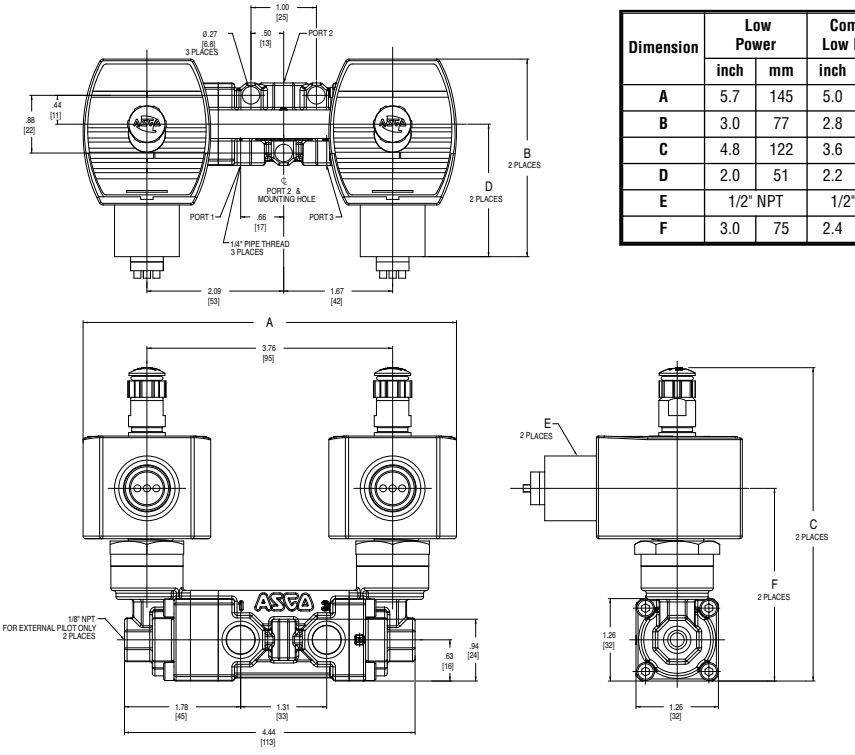
Dimensions: inches (mm)

Const. Ref. 7



Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	11.3	288	8.9	225	10.4	263	11.3	288
B	3.0	77	2.9	75	3.0	77	3	77
C	2.0	50	2.9	75	2.0	50	2	50
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
G	3.7	94	2.5	63	3.2	82	3.7	94
H	5.2	133	4.0	101	4.7	120	5.2	133
L	1.8	47	1.1	28	1.5	39	1.8	47

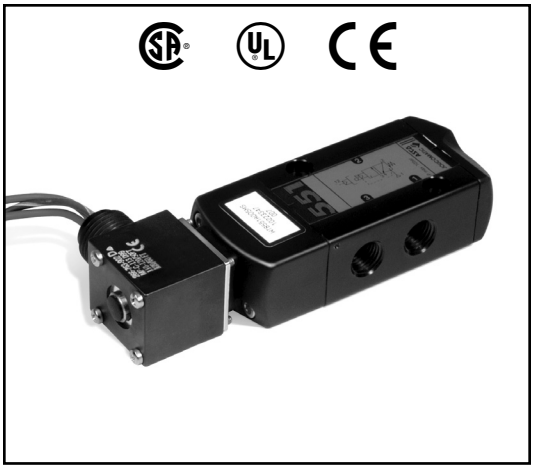
Const. Ref. 8

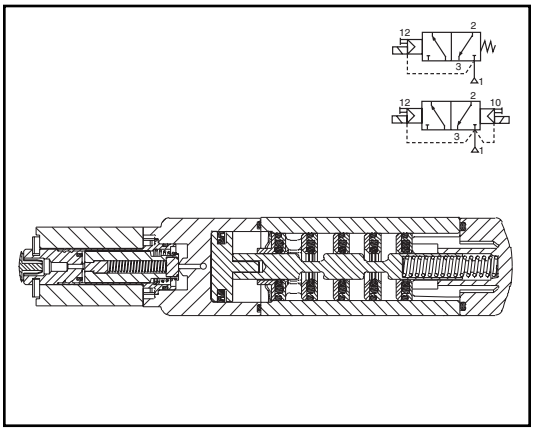


Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	5.7	145	5.0	127	5.7	145	5.7	145
B	3.0	77	2.8	72	3.0	77	3	77
C	4.8	122	3.6	90	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	3.0	75	2.4	62	2.8	71	2.9	75

Features

- Compact spool valve with threaded port connections
- All exhaust ports are pipable, providing better protection against harsh environments
- Standard manual operator
- DIN, Watertight and Explosionproof solenoids available
- Single and dual solenoid constructions
- Mountable in any position





Construction

Valve Parts in Contact with Fluids	
Body	Black Anodized Aluminum
Spring	Phosphate Treated Black Steel
Shading Coil	Copper
Seals	NBR + PUR
Core and Core Tube	Stainless Steel/Brass
End Covers	6/6 Glass Filled PA/FG
Spool	Aluminum
Internal Parts	Zamak, Steel, CA, Aluminum

Electrical

Standard Coil and Class of Insulation	Enclosure Type	Watt Rating and Power Consumption				Spare Coil Part Number	
		DC Watts	AC Watts	VA Holding	VA Inrush	AC	DC
F	SC	3	2.5	3.5	6	400127	400127
F	SC	6.9	5	7	15	400727	400727
F	EF	6.9	6.3	7	10.1	266762	270007
F	WT	6.9	6.3	7	10.1	266763	270008

Standard Voltages: SC: 24, 120, 240 Volts AC, 50-60 Hz; 12, 24, 120 Volts DC.
WT and EF: 24/50-60HZ, (120/60, 110-120/50)①, (240/60, 220-240/50)② Volts AC; 6, 12, 24, 120 Volts DC.
① Order as 120/60, 110/50
② Order as 240/60, 220/50

Solenoid Enclosures

Standard: - Prefix

SC = IP65 type DIN (open frame) per 46244

WT = Combination General Purpose and Watertight Types 1, 2, 3, 3S, 4, and 4X

EF = Combination Explosionproof and Watertight Types 3, 3S, 4, 4X, 6, 6P, 7, 9 Class I, Div. 1 (Groups A - D) and Class II, Div. 1 Type 9 (Groups E-G)

Nominal Ambient Temp. Ranges

SC: AC/DC: 5˚F to +140˚F (-15˚C to 60˚C)

EF: AC: 5˚F to +104˚F (-15˚C to 40˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

WT: AC: 5˚F to +140˚F (-15˚C to 60˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

Note: For temperatures below 32˚F (0˚C) moisture-free air must be used.

Refer to Engineering Section for details.

Approvals

SC (2.5W and 3W only) UL recognized component, CSA certified. (Series 8551 only)

WT: UL listed, CSA certified. (Series 8551 only)

EF: UL and CSA listed solenoid.
Meets applicable CE directives.

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

Refer to Engineering Section for details.

Note

When mounting inline 8551 valves with WT & EF solenoids (6.3 & 6.9 watts), ASCO recommends using two (2) 1/8" thick washers under the valve body to provide clearance for the solenoid coil.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Fluid Temp.˚F (for single and dual solenoid)			Single Solenoid $PFD_{AVG} = 3.3 \times 10^{-3}$	Dual Solenoid	Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Catalog Number	AC	DC
OPEN FRAME DIN COIL											
1/4	1/4	.86	30	150	5	140	140	SC8551A005MS	SC8551A006MS	2.5	3
1/2	1/2	3.7	30	150	-15	140	140	SC8553A005MS	SC8553A006MS	5	6.9
WATERTIGHT ENCLOSURE											
1/4	1/4	.86	30	150	5	140	77	WT8551A005MS	WT8551A006MS	6.3	6.9
1/2	1/2	3.7	30	150	-15	140	77	WT8553A005MS	WT8553A006MS	6.3	6.9
EXPLOSIONPROOF ENCLOSURE											
1/4	1/4	.86	30	150	5	104	77	EF8551A005MS	EF8551A006MS	6.3	6.9
1/2	1/2	3.7	30	150	-15	104	77	EF8553A005MS	EF8553A006MS	6.3	6.9

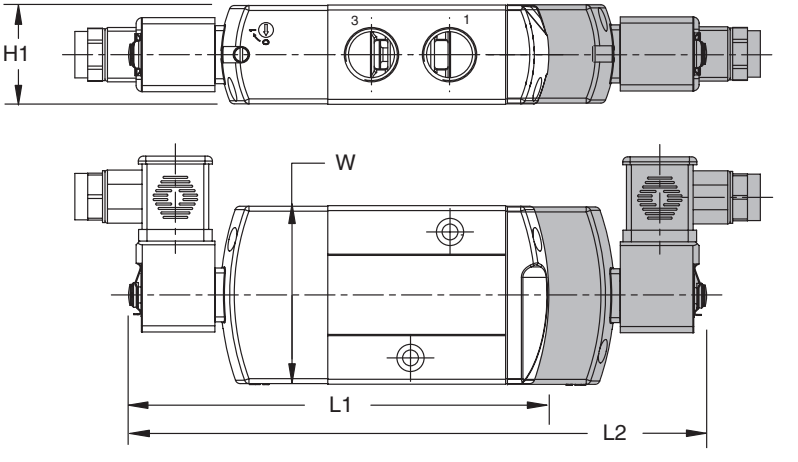
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Fluid Temp.˚C (for single and dual solenoid)			Single Solenoid $PFD_{AVG} = 3.3 \times 10^{-3}$	Dual Solenoid	Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Catalog Number	AC	DC
OPEN FRAME DIN COIL											
1/4	6	.75	2	10	-15	60	60	SC8551A005MS	SC8551A006MS	2.5	3
1/2	13	3.2	2	10	-25	60	60	SC8553A005MS	SC8553A006MS	5	6.9
WATERTIGHT ENCLOSURE											
1/4	6	.75	2	10	-15	60	25	WT8551A005MS	WT8551A006MS	6.3	6.9
1/2	13	3.2	2	10	-25	60	25	WT8553A005MS	WT8553A006MS	6.3	6.9
EXPLOSIONPROOF ENCLOSURE											
1/4	6	.75	2	10	-15	40	25	EF8551A005MS	EF8551A006MS	6.3	6.9
1/2	13	3.2	2	10	-25	40	25	EF8553A005MS	EF8553A006MS	6.3	6.9

Dimensions inches (mm)

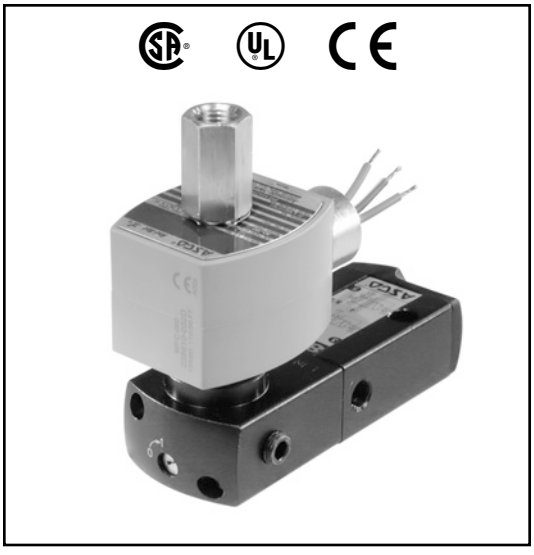
Series	8551	8553
NPT	1/4	1/2
L1	5.69 (145)	6.70 (170)
L2	7.79 (198)	9.18 (233)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

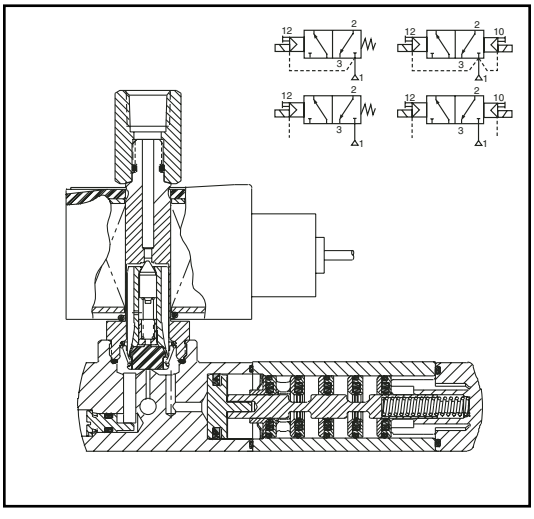
NOTE: Valve shown with CM22 DIN terminal coil and connector. Connector sold separately.



Features

- Compact Spool Valve
- Single and dual solenoid constructions available
- Unique design combines hard T-seals and flexible o-rings, provides bubble-tight shutoff, resistance to dirt and multimillion cycle life controlling air or inert gas
- Low Power and Intrinsically Safe construction available *See Special Service Pilot Valve Section for details*





Construction

Valve Parts in Contact with Fluids			
Body	Aluminum, Black Anodized	Brass	316L Stainless Steel
End Cover (Spring end)	Glass-filled Polyamide	Brass	316L Stainless Steel
Spool Valve Internals	Zamak, Stainless Steel, Acetal (POM), Aluminum	Brass, Acetal (POM), Delrin	
Pilot End Covers	Aluminum, Black Anodized	Brass	316L Stainless Steel
Core Tube	Stainless Steel		
Core and Plugnut	Stainless Steel		
Springs	Stainless Steel		
Seals and Discs	NBR		
Top Disc	Nylon (PA)		
Core Guide	Acetal		
Seat and Seat Insert	Brass, Acetal		
Shading Coil	Copper		
Rider Ring (low power)	PTFE		

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	238614	238714

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (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

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" or ("EV" for stainless steel) to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Body Material	Description
Aluminum	AC: 5˚F to 125˚F (-15˚C to 52˚C) DC: 5˚F to 104˚F (-15˚C to 40˚C)
Brass	AC: -40˚F to 125˚F (-40˚C to 52˚C) DC: -40˚F to 104˚F (-40˚C to 40˚C)
Stainless Steel	

Approvals

UL/CSA approvals for aluminum constructions pending. EF and EV are UL listed solenoids. CSA certified. Meet applicable CE directives.
SIL 3 capable per IEC 61508 on normally closed single solenoid. Third party certification provided by EXIDA.

Refer to Engineering Section for details.

Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – PFD_{AVG} = 3.3 x 10^{-3}							Dual Solenoid							
				Operating Pressure Differential (psi) Air-Inert Gas			Max. Fluid Temp.˚F		Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas			Max. Fluid Temp.˚F		Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
				Min.	Max. AC	Max. DC	AC	DC			Min.	Max. AC	Max. DC	AC	DC			AC	DC
Aluminum	1/4	1/4	.86	30	145	120	140	120	8551G405	1	30	145	120	140	120	8551G406	1	10.1/F	11.6/F
Brass									EF8551G407 ①							EF8551G408 ①			
316L Stainless Steel									EV8551G413 ②							EV8551G414 ②			
Aluminum	1/2	1/2	3.7						8553G405							8553G406			
316L Stainless Steel									EV8553G413 ②							EV8553G414 ②			

① Brass construction supplied standard with EF solenoid. ② Stainless steel construction supplied standard with EV solenoid.

Specifications (Metric units)

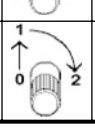
Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Single Solenoid – PFD_{AVG} = 3.3 x 10^{-3}							Dual Solenoid							
				Operating Pressure Differential (bar) Air-Inert Gas			Max. Fluid Temp.˚C		Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas			Max. Fluid Temp.˚C		Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
				Min.	Max. AC	Max. DC	AC	DC			Min.	Max. AC	Max. DC	AC	DC			AC	DC
Aluminum	1/4	6.4	.75	2	10	8.2	60	48	8551G405	1	2	10	8.2	60	48	8551G406	1	10.1/F	11.6/F
Brass									EF8551G407 ①							EF8551G408 ①			
316L Stainless Steel									EV8551G413 ②							EV8551G414 ②			
Aluminum	1/2	13	3.2						8553G405							8553G406			
316L Stainless Steel									EV8553G413 ②							EV8553G414 ②			

① Brass construction supplied standard with EF solenoid. ② Stainless steel construction supplied standard with EV solenoid.

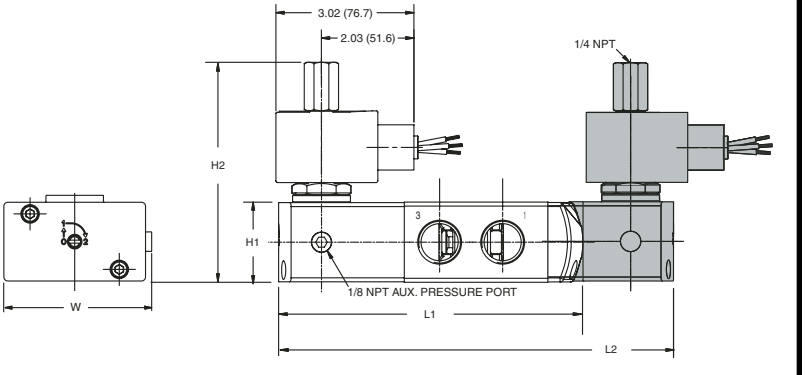
Dimensions inches (mm)

Series	8551	8553
NPT	1/4	1/2
L1 ①	5.12 (132)	6.00 (153)
L2 ①	6.73 (171)	7.80 (198)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 1



4-Way/2 and 3 Position Valves

Four-ported valves are generally used to operate double-acting cylinders or actuators.

They have four or five pipe connections, commonly called ports:

- One pressure inlet.
- Two cylinder ports providing pressure to the double-acting cylinder or actuator.
- One or two outlets to exhaust pressure from the cylinders.

In a de-energized position, pressure is connected to one cylinder port; the other port is connected to the exhaust. In an energized position, pressure and exhaust are reversed.

Four ports means less piping is required. With five ports, independent speed controls can be mounted in each port.

Three Types of Constructions Apply

Single Solenoid

When the solenoid is energized, the valve shifts, then returns to the original position when de-energized.

Dual Solenoid

When one solenoid is energized, the valve shifts, then returns when the other solenoid is energized. They may be energized momentarily or continuously, but never concurrently. Some valves, both single and dual solenoid, may change position on loss of fluid pressure.

Single Air Operator

When the operator is pressurized, the valve shifts, then returns when the pressure is removed.

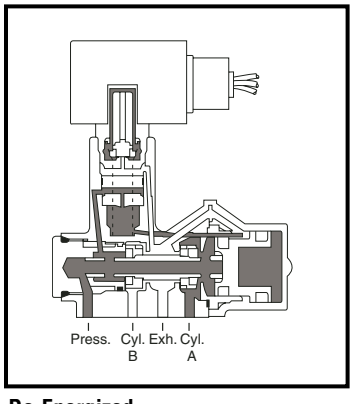
See Engineering Section for further details.

Standard and Optional Features

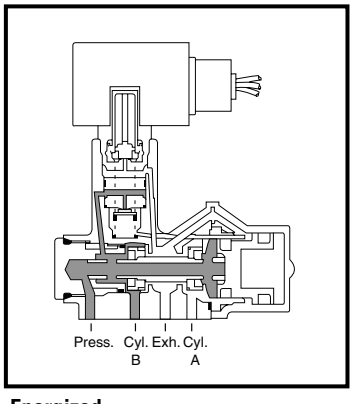
Solenoid valves are supplied, as listed, with either RedHat II molded epoxy solenoids or RedHat solenoids with metal enclosures (except for Series 8401). RedHat II valves are identified by the letter "G" or "H" in their catalog numbers; e.g., 8344**G**027. Many optional features may be added to your valves; e.g., high-temperature Class H molded coils and manual operators.

See the Optional Features Section for details..

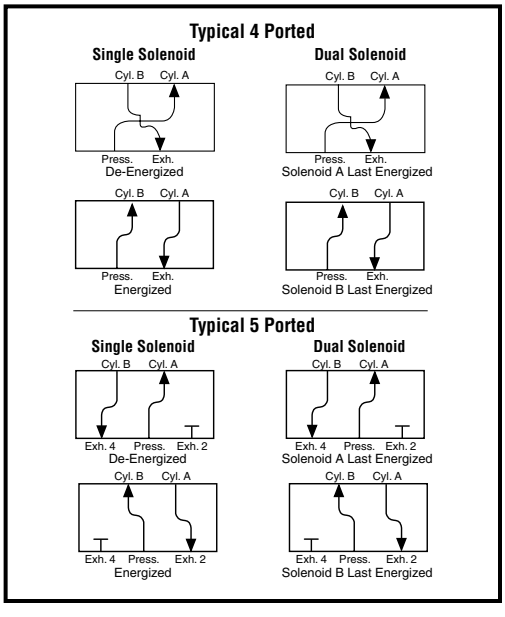
4 and 5-Ported Valves Flow Diagrams



De-Energized



Energized



Index

Series	General Description	Pipe Size (NPT)	Page
8340	Air Only	1/4"	83
8342	General Service	1/4" and 3/8"	87
8344	Piston/Poppet	1/4" - 1"	89
8345	General Service	1/4"	93
8401/8402	Slide Valve	1/4"	95
8551/8553	Inline Spool Valve	1/4" and 1/2"	99
8551/8553	RedHat II Spool Valve	1/4" and 1/2"	101

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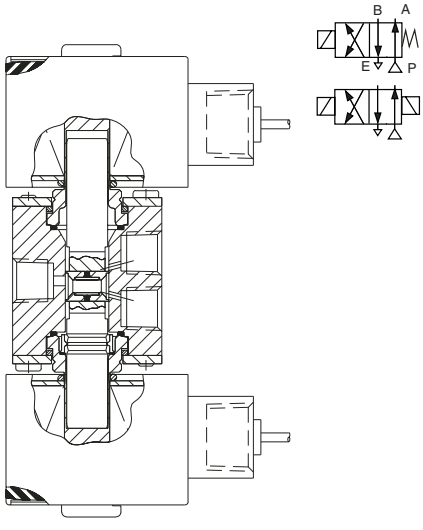
Features

- Air-only design for cylinder control
- Up to eight single and dual solenoid valves, in any combination, can be manifolded
- Sub-base constructions have separate cylinder connections and common pressure and exhaust connections at each end. Can be assembled in the field by simply inserting tie rods through holes in base
- Group-mounted constructions have common pressure connections at each end and separate cylinder and exhaust connections
- Can be factory assembled or grouped in the field with strong snap-on clamps, supplied



Construction

Valve Parts in Contact with Fluids	
Body	Hard Anodized Aluminum
Disc	PE
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Spring	302 Stainless Steel
Shading Coil	Copper
Seals	NBR
Miscellaneous	PA, CA

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	10.5	24	65	64982	-	64982	-
F	19.7	16.7	36	85	64982	66611	64982	66611
F	-	10.1	25	70	238610	-	238614	-
F	22.6	17.1	40	93	238610	238710	238614	238714

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 available when required.

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9 (For 8340G001 and 8340G002 only); RedHat - Types 3, 4, 4X, 7, and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 77˚F (0˚C to 25˚C)(104˚F/40˚C occasionally)

Refer to Engineering Section for details.

Leakage

Break-in leakage rate of 2 SCFH is reduced to a very slight amount as the valve wears in.

Approvals

CSA certified. AC is UL listed as General Purpose Valve. RedHat II meets applicable CE directives.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Max. AC Air-Inert Gas	Operating Pressure Differential (psi) Max. DC Air-Inert Gas	Max. Fluid Temp. ˚F AC	Max. Fluid Temp. ˚F DC	Aluminum Body Catalog Number	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
SINGLE VALVE CONSTRUCTION - Single Solenoid									
1/4	5/64	.10	150	100	104	95	8340G001	17.1/F	22.6/F
SINGLE VALVE CONSTRUCTION - Dual Solenoid									
1/4	5/64	.10	150	100	104	95	8340G002	10.1/F	22.6/F
GROUP MOUNTED CONSTRUCTION - Single Solenoid									
1/4	5/64	.10	150	100	104	95	8340A003	16.7/F	19.7/F
GROUP MOUNTED CONSTRUCTION - Dual Solenoid									
1/4	5/64	.10	150	100	104 ①	95 ①	8340A008	10.5/F	19.7/F
SUB-BASE MOUNTED CONSTRUCTION - Single Solenoid									
1/4	5/64	.08	150	100	104	95	8340A004	16.7/F	19.7/F
SUB-BASE MOUNTED CONSTRUCTION - Dual Solenoid									
1/4	5/64	.08	150	100	104 ①	95 ①	8340A005	10.5/F	19.7/F

① Rating shown for individual mounted valves; when group mounted, maximum UL allowable fluid and ambient temperature is 86°F.

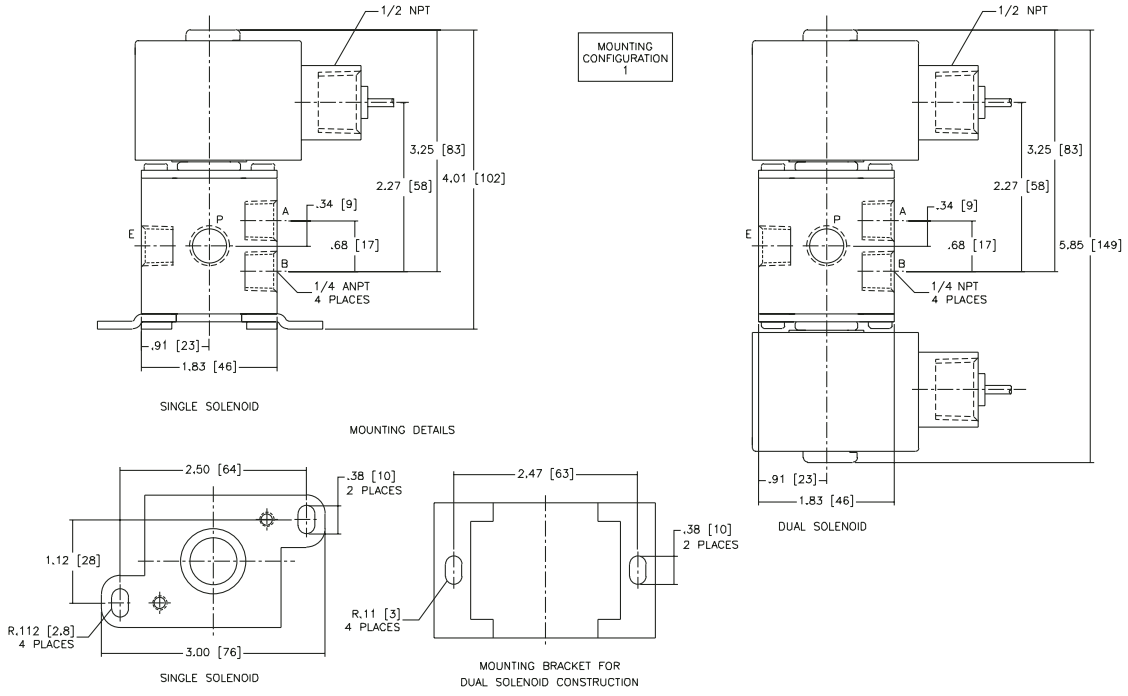
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Max. AC Air-Inert Gas	Operating Pressure Differential (bar) Max. DC Air-Inert Gas	Max. Fluid Temp. ˚C AC	Max. Fluid Temp. ˚C DC	Aluminum Body Catalog Number	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
SINGLE VALVE CONSTRUCTION - Single Solenoid									
1/4	2.0	.09	10	7	40	35	8340G001	17.1/F	22.6/F
SINGLE VALVE CONSTRUCTION - Dual Solenoid									
1/4	2.0	.09	10	7	40	35	8340G002	10.1/F	22.6/F
GROUP MOUNTED CONSTRUCTION - Single Solenoid									
1/4	2.0	.09	10	7	40	35	8340A003	16.7/F	19.7/F
GROUP MOUNTED CONSTRUCTION - Dual Solenoid									
1/4	2.0	.09	10	7	40 ①	35 ①	8340A008	10.5/F	19.7/F
SUB-BASE MOUNTED CONSTRUCTION - Single Solenoid									
1/4	2.0	.07	10	7	40	35	8340A004	16.7/F	19.7/F
SUB-BASE MOUNTED CONSTRUCTION - Dual Solenoid									
1/4	2.0	.07	10	7	40 ①	35 ①	8340A005	10.5/F	19.7/F

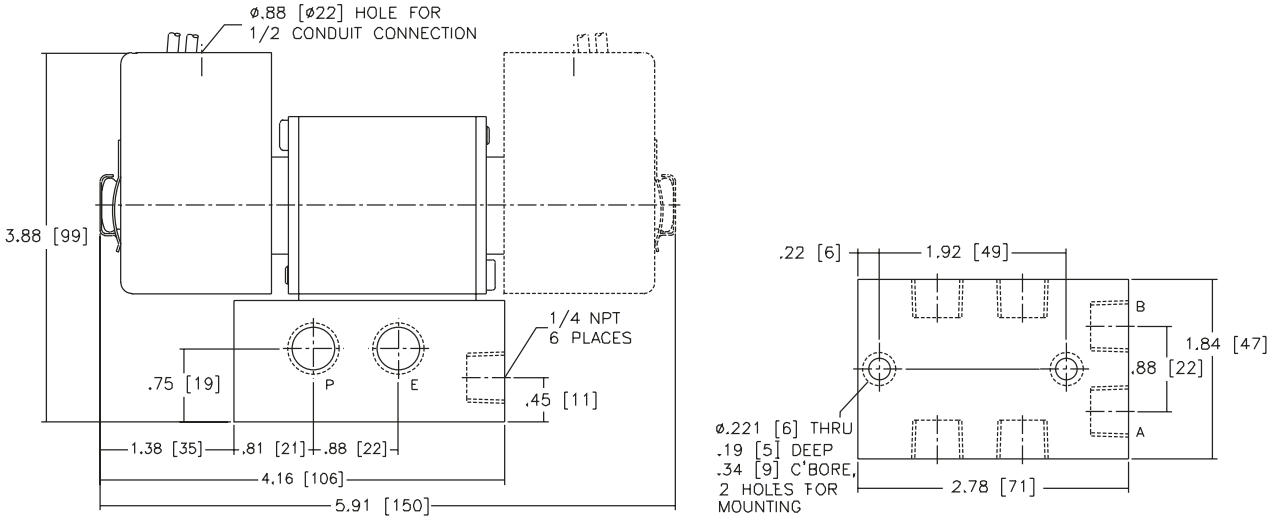
① Rating shown for individual mounted valves; when group mounted, maximum UL allowable fluid and ambient temperature is 30°C.

Dimensions: inches (mm)

Single Valve Construction - Single And Dual Solenoids



Sub-Base Mounted Single and Dual Solenoid Cconstruction



Note: Dual solenoid shown dotted in.

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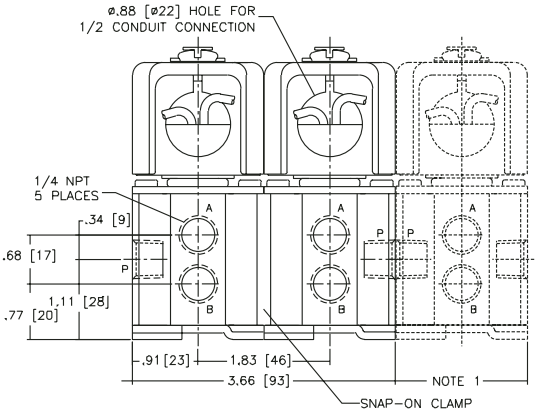
Dimensions: inches (mm)

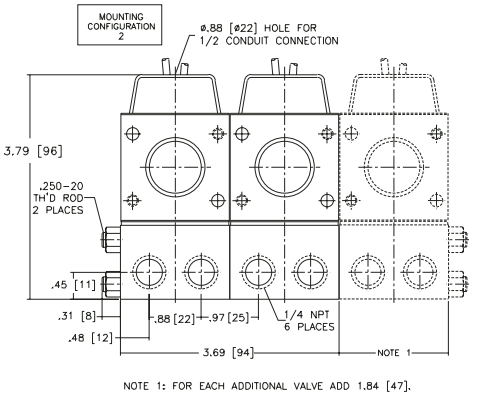
Mounting Brackets		
Catalog Number	**With General Purpose Solenoid Enclosure**	**When Manual Operator is Used**
8340G001	Mounting Holes on Body	Order Kit No. 206-737
8340G002	Standard	NA
8340A003	Mounting Holes on Body	Order Kit No. 206-554
8340A004	Mounting Holes on Body	NA
8340A005	Mounting Holes on Body	NA
8340A008	Standard when factory assembled, but must order Kit No. 206-554 for Individual valves.	NA
NA - Not Available		

Group-Mounted Construction Single Solenoid

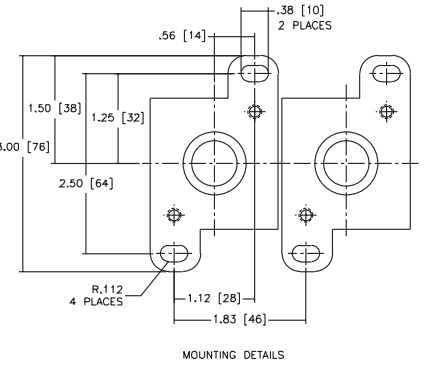


NOTE 1: FOR EACH ADDITIONAL VALVE ADD 1.83 [46].

Sub-Base Mounted Construction (Shown As Group-Mounted)

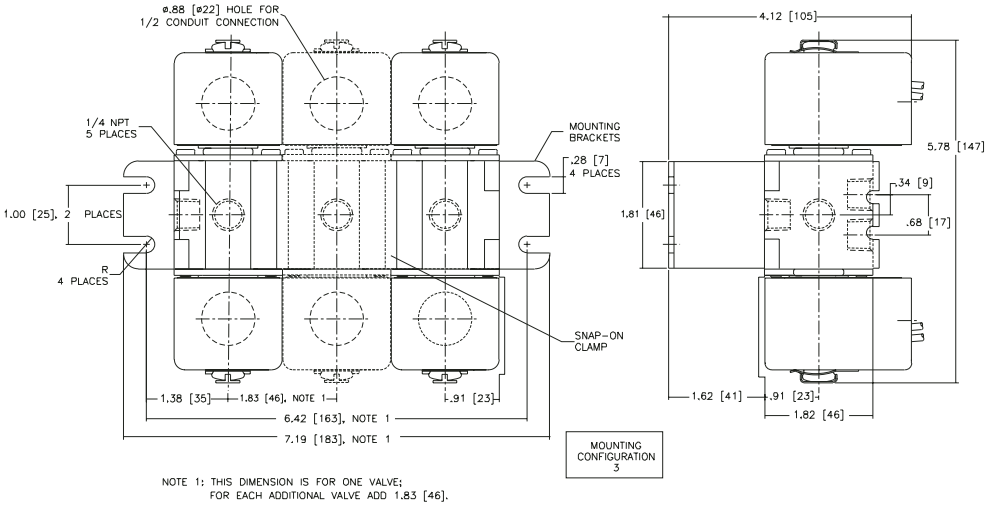


NOTE 1: FOR EACH ADDITIONAL VALVE ADD 1.84 [47].



MOUNTING DETAILS

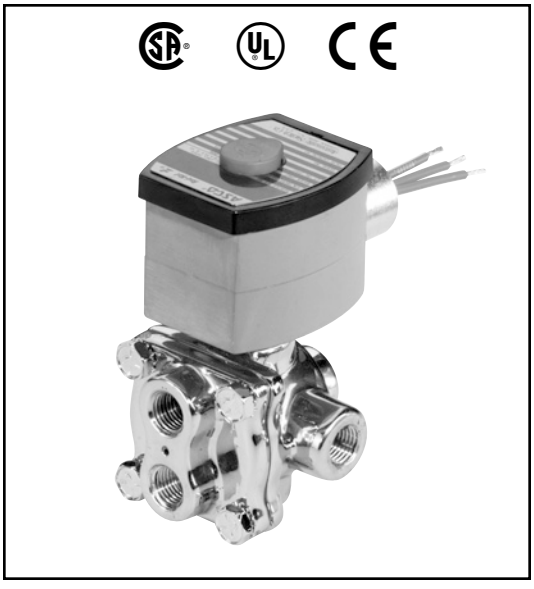
Group-Mounted Construction - Dual Solenoid

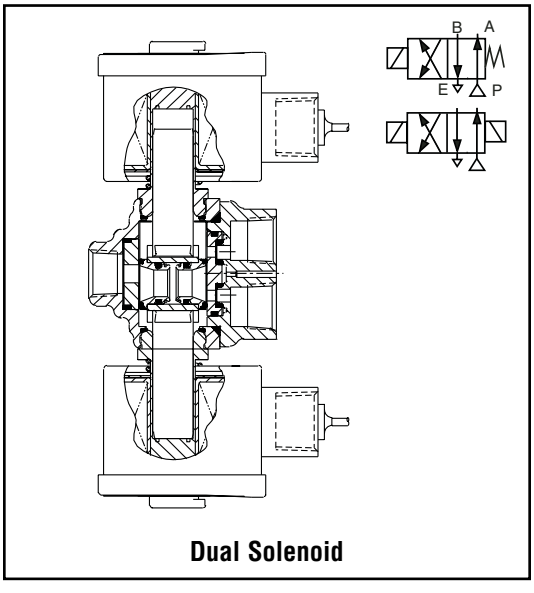


NOTE 1: THIS DIMENSION IS FOR ONE VALVE;
FOR EACH ADDITIONAL VALVE ADD 1.83 [46].

Features

- Direct acting operation and high flow construction
- Direct acting, high flow slide-style valve
- Optional flow control regulates cylinder speed independently, in either direction
- Mechanical detent on dual solenoids holds last position, even after loss of electric power, pneumatics or pressure
- No Minimum Operating Pressure Differential required to shift valve
- Dual solenoid operation: solenoid may be energized momentarily (1/10 second) or continuously
- Mountable in any position





Dual Solenoid

Construction

Valve Parts in Contact with Fluids		
Body	Brass	304 Stainless Steel
Seals and Discs	NBR and FKM	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel / 17-7 PH Stainless Steel	
Shading Coil	Copper	
Sleeve	PA	
Seats	Graphite-filled PTFE	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part Number	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	16.1	35	115	272610	272614
F	20.1	45	140	272610	272614

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 24, 110, 115, 220, 230 volts AC, 50 Hz. Other voltages are available when required.

Note: No combination 120/60, 110/50 coil available.
Must order either 120/60 or 110/50, etc.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Standard Class F insulation: 32˚F to 125˚F (0˚C to 52˚C)
Optional Class H insulation: 32˚F to 140˚F (0˚C to 60˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed as General Purpose Valves.
Meets applicable CE directives.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor ①	Operating Pressure Differential (psi) Max. AC			Max. Fluid Temp.°F	Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation
			Air-Inert Gas	Water	Lt. Oil @ 300 SSU	AC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC
SINGLE SOLENOID CONSTRUCTION											
1/4	3/16	.70	125	100	100	160	8342G001	1	8342G701	2	20.1/F
3/8	3/16	.70	125	100	100	160	8342G003	1	8342G703	2	20.1/F
DUAL SOLENOID CONSTRUCTION											
1/4	3/16	.70	125	125	125	160	8342G020	3	8342G720	4	16.1/F
3/8	3/16	.70	125	125	125	160	8342G022	3	8342G722	4	16.1/F

① With built-in flow control (Suffix "M"), the Cv is 0.44 and an 0.5 psi minimum operating pressure is required.

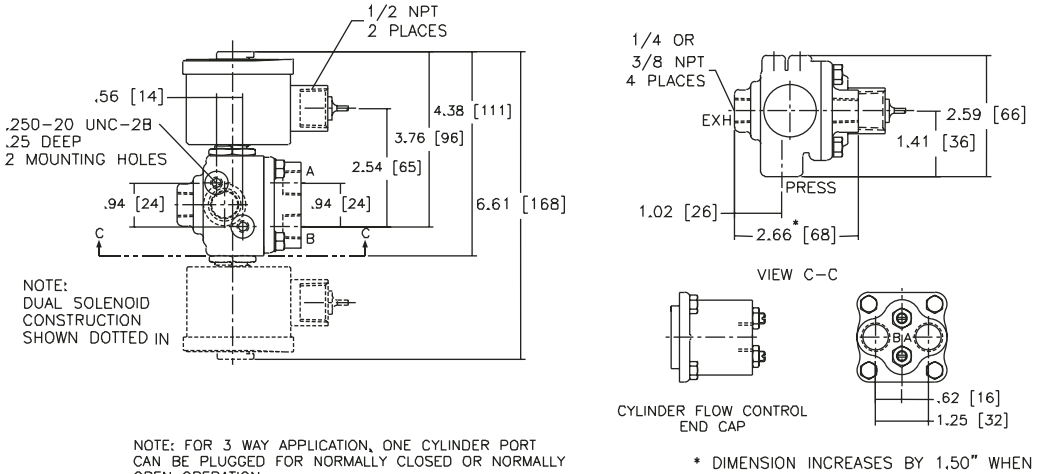
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h) ①	Operating Pressure Differential (bar) Max. AC			Max. Fluid Temp.°C	Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation
			Air-Inert Gas	Water	Lt. Oil @ 300 SSU	AC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC
SINGLE SOLENOID CONSTRUCTION											
1/4	4.8	.60	9	7	7	71	8342G001	1	8342G701	2	20.1/F
3/8	4.8	.60	9	7	7	71	8342G003	1	8342G703	2	20.1/F
DUAL SOLENOID CONSTRUCTION											
1/4	4.8	.60	9	9	9	71	8342G020	3	8342G720	4	16.1/F
3/8	4.8	.60	9	9	9	71	8342G022	3	8342G722	4	16.1/F

① With built-in flow control (Suffix "M"), the Kv is 0.38 and an 0.03 bar minimum operating pressure is required.

Dimensions inches (mm)

Const. Ref. 1, 2, 3, 4

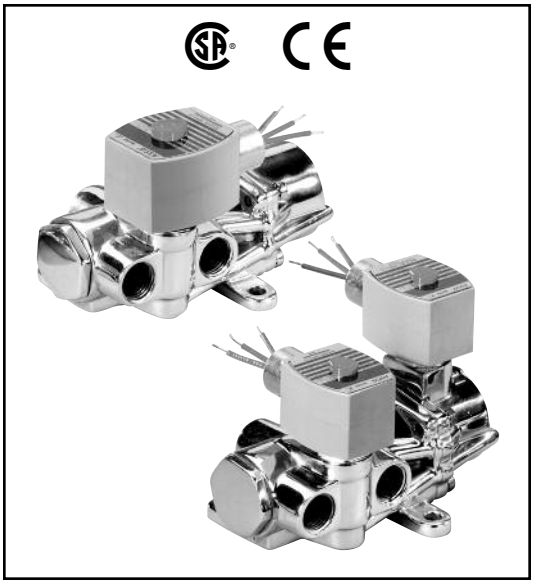


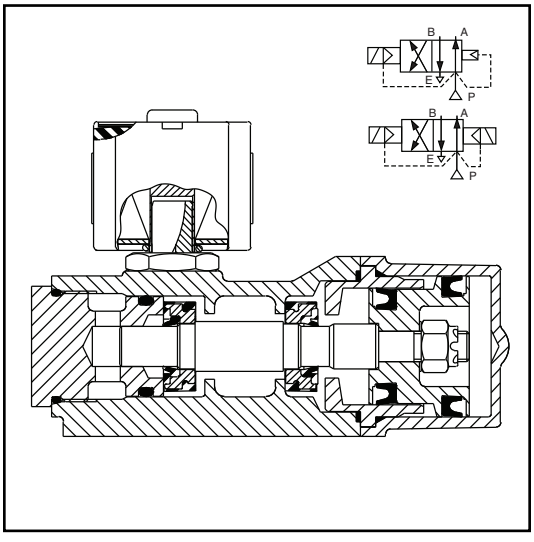
NOTE: FOR 3 WAY APPLICATION, ONE CYLINDER PORT CAN BE PLUGGED FOR NORMALLY CLOSED OR NORMALLY OPEN OPERATION.

* DIMENSION INCREASES BY 1.50" WHEN CYLINDER FLOW CONTROL IS USED, BY .12" ON STAINLESS STEEL VALVE.

Features

- Sturdy, robust construction
- Piston-operated poppet design provides high flow
- For use with air or water
- Wide range of sizes and flow rates
- Single or dual solenoid constructions
- Dual solenoid can be shifted with a momentary signal and remain in position even if electrical power is lost
- Mountable in any position





Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel / 17-7PH Stainless Steel
Shading Coil	Copper
Pilot Seat Cartridge and Disc-Holder	CA
Shaft Gasket	PA

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	11.6	10.1	25	50	238610	238710	238614	238714
F	22.6	17.1	40	70	238610	238710	238614	238714

Dual Solenoid Operation: Minimum coil on-time for dual solenoid valves is 0.3 seconds on air service and 1.0 seconds on liquids.

Caution: Do not energize both solenoids simultaneously.
Refer to Engineering Section for details.

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

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. Meets applicable CE directives.

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

Important

A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

• Loss of air pressure may allow valve to shift on dual solenoid constructions.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.˚F		Brass Body		Watt Rating/ Class of Coil Insulation	
				①	Max. AC			Max. DC								
		Press.	Exh.	Min.	Air-Inert Gas	Water ④	Lt. Oil @ 300 SSU	Air-Inert Gas	Water ④	Lt. Oil @ 300 SSU	AC	DC	Catalog Number	Const. Ref.	AC	DC
SINGLE SOLENOID																
1/4	1/4	.80	1.0	10	150	125	125	125	125	125	180	150	8344G070 ⑤	1	10.1/F	11.6/F
1/4	1/4	.80	1.0	10	250 ②	250 ②	250 ②	250 ②	250 ②	250 ②	180	180	8344G000	1	17.1/F	22.6/F
3/8	3/8	1.4	2.2	10	150	125	125	125	125	125	180	150	8344G072	2	10.1/F	11.6/F
3/8	1/4	.80	1.0	10	250 ②	250 ②	250 ②	250 ②	250 ②	250 ②	180	180	8344G001	1	17.1/F	22.6/F
1/2	3/8	1.4	2.2	10	150	125	125	125	125	125	180	150	8344G074	2	10.1/F	11.6/F
1/2	3/8	1.4	2.2	10	250 ②	250 ②	250 ②	250 ②	250 ②	250 ②	180	180	8344G027	2	17.1/F	22.6/F
3/4	3/4	5.2	5.6	10	150	125	125	125	125	125	180	150	8344G076	3	10.1/F	11.6/F
3/4	3/4	5.2	5.6	10	250 ②	250 ②	250 ②	250 ②	250 ②	250 ②	180	180	8344G029	3	17.1/F	22.6/F
1	3/4	5.2	5.6	10	150	125	125	125	125	125	180	150	8344G078	3	10.1/F	11.6/F
1	3/4	5.2	5.6	10	250 ②	250 ②	250 ②	250 ②	250 ②	250 ②	180	180	8344G031	3	17.1/F	22.6/F
DUAL SOLENOID ③																
1/4	1/4	.80	1.0	10	250	200	125	125	125	100	180	120	8344G044	4	6.1/F	10.6/F
3/8	3/8	1.4	2.2	10	250	200	125	125	125	100	180	120	8344G080	6	6.1/F	10.6/F
3/8	3/8	1.4	2.2	10	300	300	200	-	-	-	180	-	8344G050	7	10.1/F	-
1/2	3/8	1.4	2.2	10	250	200	125	125	125	100	180	120	8344G082	6	6.1/F	10.6/F
3/4	3/4	5.2	5.6	10	300	300	200	125	125	100	180	120	8344G054	8	10.1/F	10.6/F
1	3/4	5.2	5.6	10	300	300	200	125	125	100	180	120	8344G056	8	10.1/F	10.6/F

① 25 psi (1.7 bar) minimum on light oil service. ② For best results, do not use valve rated 250 psi (17 bar) on mainline pressure of less than 125 psi (9 bar).
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts. ④ Water rating, CSA certified up to 232 psi. ⑤ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

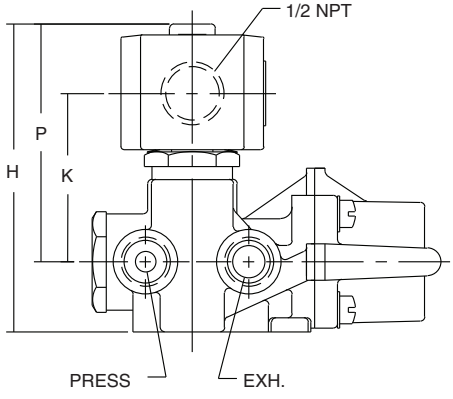
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)		Operating Pressure Differential (bar)							Max. Fluid Temp.˚C		Brass Body		Watt Rating/ Class of Coil Insulation	
				①	Max. AC			Max. DC								
		Press.	Exh.	Min.	Air-Inert Gas	Water ④	Lt. Oil @ 300 SSU	Air-Inert Gas	Water ④	Lt. Oil @ 300 SSU	AC	DC	Catalog Number	Const. Ref.	AC	DC
SINGLE SOLENOID																
1/4	6	.69	.86	0.7	10	9	9	9	9	9	82	65	8344G070 ⑤	1	10.1/F	11.6/F
1/4	6	.69	.86	0.7	17 ②	17 ②	17 ②	17 ②	17 ②	17 ②	82	82	8344G000	1	17.1/F	22.6/F
3/8	10	1.2	1.89	0.7	10	9	9	9	9	9	82	65	8344G072	2	10.1/F	11.6/F
3/8	6	.69	.86	0.7	17 ②	17 ②	17 ②	17 ②	17 ②	17 ②	82	82	8344G001	1	17.1/F	22.6/F
1/2	10	1.2	1.89	0.7	10	9	9	9	9	9	82	65	8344G074	2	10.1/F	11.6/F
1/2	10	1.2	1.89	0.7	17 ②	17 ②	17 ②	17 ②	17 ②	17 ②	82	82	8344G027	2	17.1/F	22.6/F
3/4	19	4.5	4.80	0.7	10	9	9	9	9	9	82	65	8344G076	3	10.1/F	11.6/F
3/4	19	4.5	4.80	0.7	17 ②	17 ②	17 ②	17 ②	17 ②	17 ②	82	82	8344G029	3	17.1/F	22.6/F
1	19	4.5	4.80	0.7	10	9	9	9	9	9	82	65	8344G078	3	10.1/F	11.6/F
1	19	4.5	4.80	0.7	17 ②	17 ②	17 ②	17 ②	17 ②	17 ②	82	82	8344G031	3	17.1/F	22.6/F
DUAL SOLENOID ③																
1/4	6	.80	.86	0.7	17	14	9	9	9	7	82	49	8344G044	4	6.1/F	10.6/F
3/8	10	1.4	1.89	0.7	17	14	9	9	9	7	82	49	8344G080	6	6.1/F	10.6/F
3/8	10	1.4	1.89	0.7	21	21	14	-	-	-	82	-	8344G050	7	10.1/F	-
1/2	10	1.4	1.89	0.7	17	14	9	9	9	7	82	49	8344G082	6	6.1/F	10.6/F
3/4	19	5.2	4.80	0.7	21	21	14	9	9	7	82	49	8344G054	8	10.1/F	10.6/F
1	19	5.2	4.80	0.7	21	21	14	9	9	7	82	49	8344G056	8	10.1/F	10.6/F

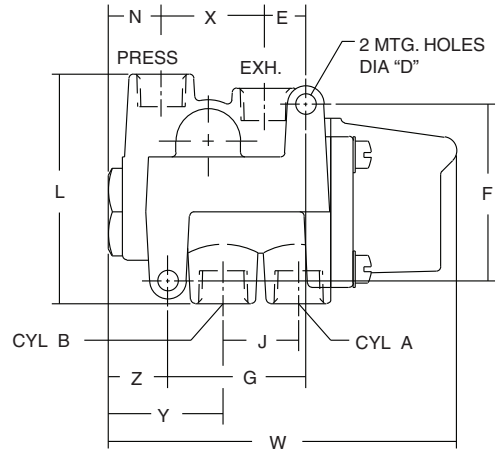
① 25 psi (1.7 bar) minimum on light oil service. ② For best results, do not use valve rated 250 psi (17 bar) on mainline pressure of less than 125 psi (9 bar).
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts. ④ Water rating, CSA certified up to 16 bar. ⑤ ATEX/IECEx certified with prefix "EV".

Dimensions inches (mm)

Const. Ref.		ØD	E	F	G	H	J	K	L	N	P	W	X	Y	Z	Exhaust Pipe Size
1	in	Ø .28	.56	2.41	1.88	4.08	1.03	2.15	3.13	.72	3.12	4.75	1.41	1.56	.81	3/8
	mm	Ø 7.1	14	61	48	104	26	55	80	18	79	121	36	40	21	3/8
2	in	Ø .34	.75	3.12	2.63	4.06	1.50	1.97	3.18	.83	2.94	6.06	1.88	1.90	.84	1/2
	mm	Ø 8.6	19	79	67	103	38	50	81	21	75	154	47	48	21	1/2
3	in	Ø .34	1.34	3.81	3.88	4.86	2.09	2.34	4.56	1.56	3.31	8.25	2.12	2.63	1.16	1
	mm	Ø 8.6	34	97	99	123	53	59	116	39	84	210	54	67	30	1
4	in	Ø .28	.56	2.41	1.88	4.34	1.03	2.52	3.13	.72	3.38	4.81	1.41	1.56	.81	3/8
	mm	Ø 7.1	14	61	48	110	26	64	80	18	86	122	36	40	21	3/8
6	in	Ø .34	.75	3.12	2.63	4.50	1.50	2.52	3.18	.83	3.38	6.06	1.88	1.90	.84	1/2
	mm	Ø 8.6	19	79	67	114	38	64	81	21	86	154	47	48	21	1/2
7	in	Ø .34	.75	3.12	2.63	4.68	1.50	2.59	3.18	.83	3.56	6.06	1.88	1.90	.84	1/2
	mm	Ø 8.6	19	79	67	119	38	66	81	21	90	154	47	48	21	1/2
8	in	Ø .34	1.34	3.81	3.88	5.56	2.09	3.03	4.56	1.55	4.00	8.25	2.12	2.63	1.16	1
	mm	Ø 8.6	34	97	99	141	53	77	116	39	102	210	54	67	30	1

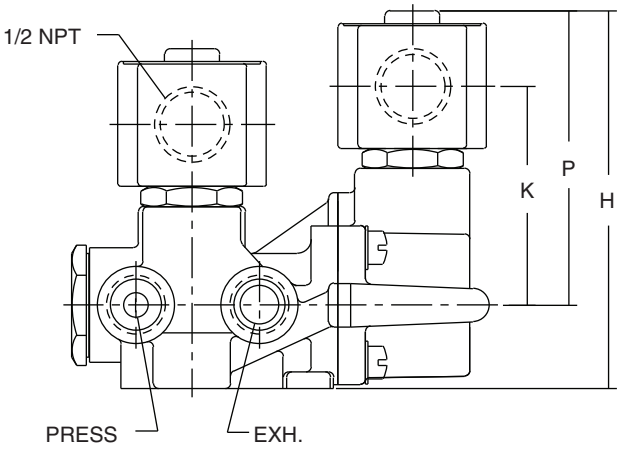
Const. Ref 1 - 3

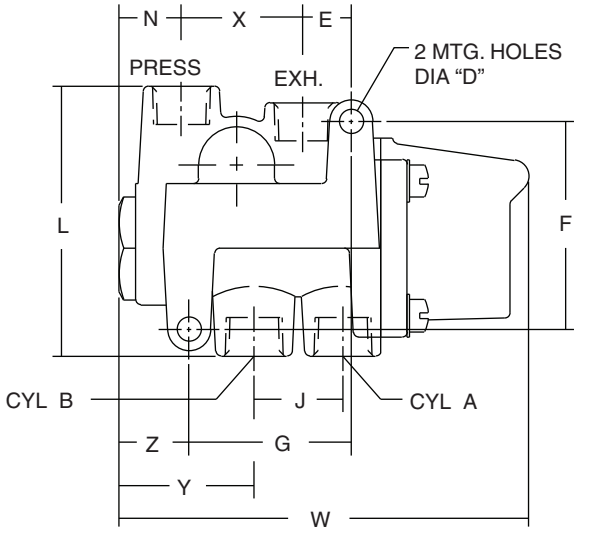




Dimensions inches (mm)

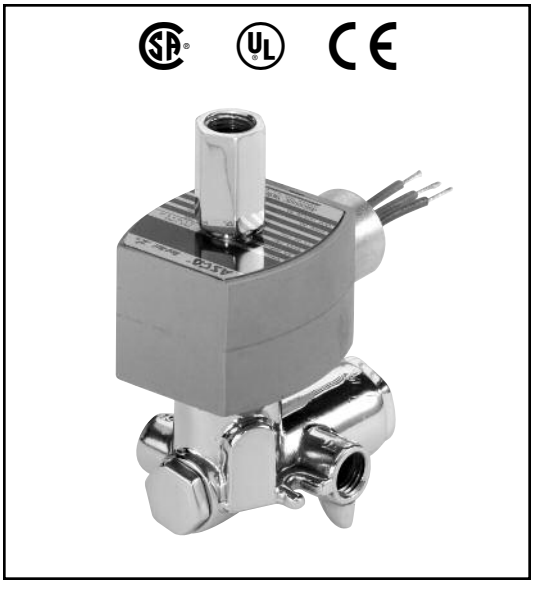
Const. Ref. 4 - 8

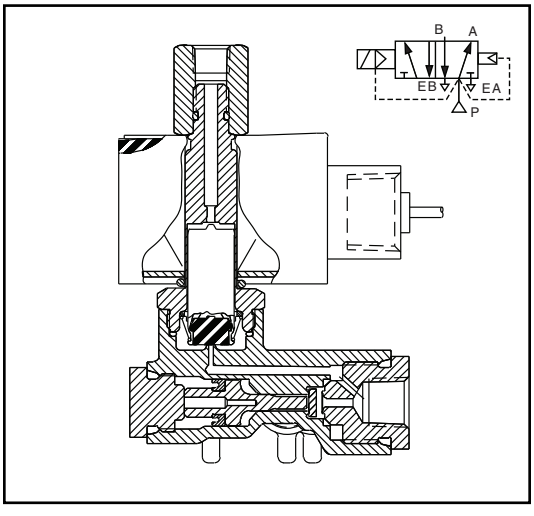




Features

- Compact valves for general service applications
- Low-cost, 4-way valve when low flow is sufficient
- Mountable in any position





Construction

Valve Parts in Contact with Fluids		
Body	Brass	316 Stainless Steel
Seals and Disc	NBR and PA	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Piston	PA	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number					
		AC			General Purpose		Explosionproof (EF)		Explosionproof (EV)	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	238614	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

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" or, for Explosionproof Stainless Steel trim and hub on Brass-Bodied valves, add "EV" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed as General Purpose Valve.
EV8345G081 solenoid only UL approved.
Meets applicable CE directives.
Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed.
Refer to Optional Features Electrical Section for details.

Important

A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp. ˚F		Brass Body	Stainless Steel Body		Watt Rating/ Class of Coil Insulation	
					Max. AC				Max. DC									
	Press.	Exh.	Inlet	Exh.	Min.	Air-Inert Gas	Water	Lt. Oil @ 50 SSU	Air-Inert Gas	Water	Lt. Oil @ 50 SSU	AC	DC	Catalog Number	Catalog Number	Const. Ref.	AC	DC
SINGLE SOLENOID																		
1/4	1/16	3/32	.09	.09	10	150	150	150	100	100	100	180	104	8345G001 ①	EV8345G081 ①	1	10.1/F	11.6/F
SINGLE SOLENOID AIR-ONLY CONSTRUCTION - Exhaust to Atmosphere																		
1/4	1/16	3/32	.09	.09	10	150	-	-	100	-	-	180	104	8345H003	-	1	10.1/F	11.6/F

① ATEX/IECEx certified with prefix "EV".

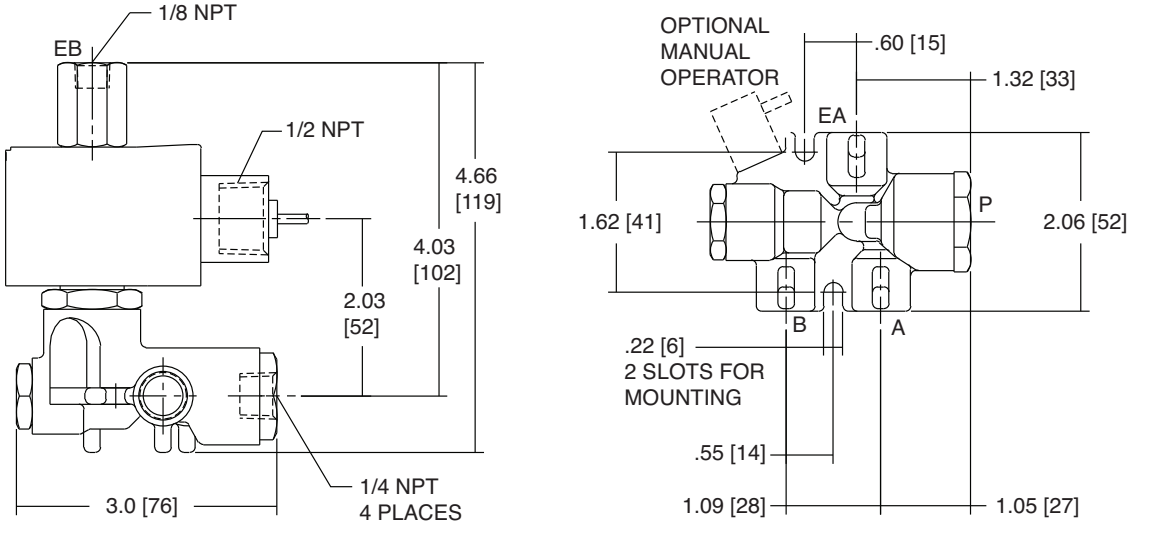
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)		Kv Flow Factor (m^3/h)		Operating Pressure Differential (bar)							Max. Fluid Temp. ˚C		Brass Body	Stainless Steel Body		Watt Rating/ Class of Coil Insulation	
					Max. AC				Max. DC									
	Press.	Exh.	Inlet	Exh.	Min.	Air-Inert Gas	Water	Lt. Oil @ 50 SSU	Air-Inert Gas	Water	Lt. Oil @ 50 SSU	AC	DC	Catalog Number	Catalog Number	Const. Ref.	AC	DC
SINGLE SOLENOID																		
1/4	2	2	.08	.08	0.7	10	10	10	7	7	7	82	40	8345G001 ①	EV8345G081 ①	1	10.1/F	11.6/F
SINGLE SOLENOID AIR-ONLY CONSTRUCTION - Exhaust to Atmosphere																		
1/4	2	2	.08	.08	0.7	10	-	-	7	-	-	82	40	8345H003	-	1	10.1/F	11.6/F

① ATEX/IECEx certified with prefix "EV".

Dimensions inches (mm)

Const. Ref. 1



ASCO™ Spool Valves

Manual & Pilot Operated | 1/4" - 1" NPT

3/2 SERIES 362/562

Features

- Ideal for valve automation for the oil and gas market
- Reliable, robust design with high flow performance
- Low temperature options
- Stainless steel constructions are NACE MR0175-2003 compliant
- Corrosion resistant - 316L Stainless Steel valve materials make it ideal for offshore and harsh environments
- Extensive manual and pneumatic options
- Rated for air, inert gas, and sweet dry natural gas
- SIL 3 Capable options

SPECIAL SERVICE PILOT

Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel, Brass
Spring	Cobalt Alloy
Seals	FKM (standard), Low Temp NBR (optional)
Spool	316L Stainless Steel

Minimum Ambient/Fluid Temperature

Brass	Stainless Steel
FKM: -4˚F (-20˚C)	-4˚F (-20˚C)
NBR: -40˚F (-40˚C)	-40˚F (-40˚C)

Note: Low Temperature option for all manual component options: -20˚F to 200˚F (-29˚C to 93˚C)

Approvals

SIL 3 Capable options

Refer to Engineering for details.

Important

These solenoid valves are intended for use on clean dry air, inert gas, or sweet dry natural gas filtered to 40 micron or better. The dew point of the media should be at least 10˚C (18˚F) below the minimum temperature to which any portion of the air, inert gas or sweet dry natural gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with FKM and LT NBR elastomers. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

How to order

8	362	A	4	10	00	1	1	0	00

Connection Type
8 = NPT

Product Series
362 = 3 way for Process Automation
562 = 4 way for Process Automation

Select version from Specification Tables on following pages.
(Configurator available at www.asco.com)

Voltage
00 = Pilot or Manually Actuated

Solenoid Type/Orientation
0 = None

Elastomer/Manual Override
1 = FKM
3 = Low Temperature NBR

Specifications English (Metric)

Pipe Size (in)	Base Catalog Number ①		Function ②	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)		Product Weight lbs (kg)	Const. Ref.
	Stainless Steel	Brass			Min.	Max.	Min.	Max.		
Normally Closed / Externally Piloted										
1/4"	8362A108000	-	Pilot,Palm Button /Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.19 (0.54)	2
1/4"	8362A110000	-	Pilot With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.23 (0.56)	3
1/4"	8362A112000	-	Pilot, Palm Button With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.25 (0.57)	4
1/4"	8362A114000	-	Palm Button/Spring Return	2.0 (1.7)	0	150 (10.3)	-	-	1.19 (0.54)	5
1/4"	8362A107000	-	Pilot Operated/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	0.9 (0.41)	1
1/4"	-	8362BA07000	Pilot Operated/Spring Return	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	1.65 (0.75)	38
1/4"	8362A147000	-	Manual Lever Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA47000	Manual Lever Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A167000	-	Spring Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA67000	Spring Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A187000	-	Spring Return, Latches In De-energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA87000	Spring Return, Latches In De-energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
3/8"	8362A207000	-	Pilot Operated/Spring Return	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.37 (1.07)	24
3/8"	8362A247000	-	Manual Lever Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	8362A267000	-	Spring Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	8362A287000	-	Spring Return, Latches In De-energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	-	8362AC07000	Pilot Operated/Spring Return	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.98 (1.35)	24
3/8"	-	8362AC47000	Manual Lever Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/8"	-	8362AC67000	Spring Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/8"	-	8362AC87000	Spring Return, Latches In De-energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	8362A307000	-	Pilot Operated/Spring Return	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.30 (1.04)	24
1/2"	8362A347000	-	Manual Lever Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	8362A367000	-	Spring Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	8362A387000	-	Spring Return, Latches In De-energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	-	8362AD07000	Pilot Operated/Spring Return	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.87 (1.3)	24
1/2"	-	8362AD47000	Manual Lever Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	-	8362AD67000	Spring Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	-	8362AD87000	Spring Return, Latches In De-energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/4"	8362A407000	-	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.44 (9.78)	28
3/4"	-	8362AE07000	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.90 (10.80)	28
1"	8362A507000	-	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.31 (9.78)	28
1"	-	8362AF07000	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.71 (10.39)	28
Normally Open / Externally Piloted										
1/4"	8362A108001	-	Pilot,Palm Button /Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.19 (0.54)	7
1/4"	8362A110001	-	Pilot With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.23 (0.56)	8
1/4"	8362A112001	-	Pilot, Palm Button With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.25 (0.57)	9
1/4"	8362A114001	-	Palm Button/Spring Return	2.0 (1.7)	0	150 (10.3)	-	-	1.19 (0.54)	10
1/4"	8362A107001	-	Pilot Operated/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	0.9 (0.41)	6
1/4"	-	8362BA07001	Pilot Operated/Spring Return	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	1.65 (0.75)	38
1/4"	8362A147001	-	Manual Lever Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA47001	Manual Lever Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A167001	-	Spring Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA67001	Spring Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
1/4"	8362A187001	-	Spring Return, Latches In De-energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.94 (0.88)	32
1/4"	-	8362BA87001	Spring Return, Latches In De-energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.67 (1.21)	33
3/8"	8362A207001	-	Pilot Operated/Spring Return	4.8 (4.1)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.37 (1.07)	24
3/8"	8362A247001	-	Manual Lever Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.37 (1.07)	34
3/8"	8362A267001	-	Spring Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	8362A287001	-	Spring Return, Latches In De-energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
3/8"	-	8362AC07001	Pilot Operated/Spring Return	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	24
3/8"	-	8362A247001	Manual Lever Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.98 (1.35)	34
3/8"	-	8362A267001	Spring Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/8"	-	8362A287001	Spring Return, Latches In De-energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	8362A307001	-	Pilot Operated/Spring Return	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	24
1/2"	8362A347001	-	Manual Lever Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.30 (1.04)	34
1/2"	8362A367001	-	Spring Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	8362A387001	-	Spring Return, Latches In De-energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	34
1/2"	-	8362AD07001	Pilot Operated/Spring Return	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.24 (1.47)	24
1/2"	-	8362AD47001	Manual Lever Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.87 (1.3)	34
1/2"	-	8362AD67001	Spring Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
1/2"	-	8362AD87001	Spring Return, Latches In De-energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.80 (1.72)	34
3/4"	8362A407001	-	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.44 (9.78)	28
3/4"	-	8362AE07001	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.90 (10.80)	28
1"	8362A507001	-	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.31 (9.78)	28
1"	-	8362AF07001	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	4.71 (10.39)	28
Normally Closed Detent/Externally Piloted										
1/4"	8362A109004	-	Pilot, Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.36 (0.62)	11
1/4"	8362A115004	-	Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	-	-	1.36 (0.62)	12
Normally Open Detent/Externally Piloted										
1/4"	8362A109005	-	Pilot, Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.36 (0.62)	13
1/4"	8362A115005	-	Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	-	-	1.36 (0.62)	14
Detent / Externally Piloted										
1/4"	8362A113007	-	Double Pilot	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	1.21 (0.55)	15
1/4"	-	8362BA13007	Double Pilot	1.8 (1.55)	0	150 (10.3)	15 (1.0)	150 (10.3)	2.32 (1.05)	35

① Please refer to How to Order section to complete base catalog number selection.
② 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

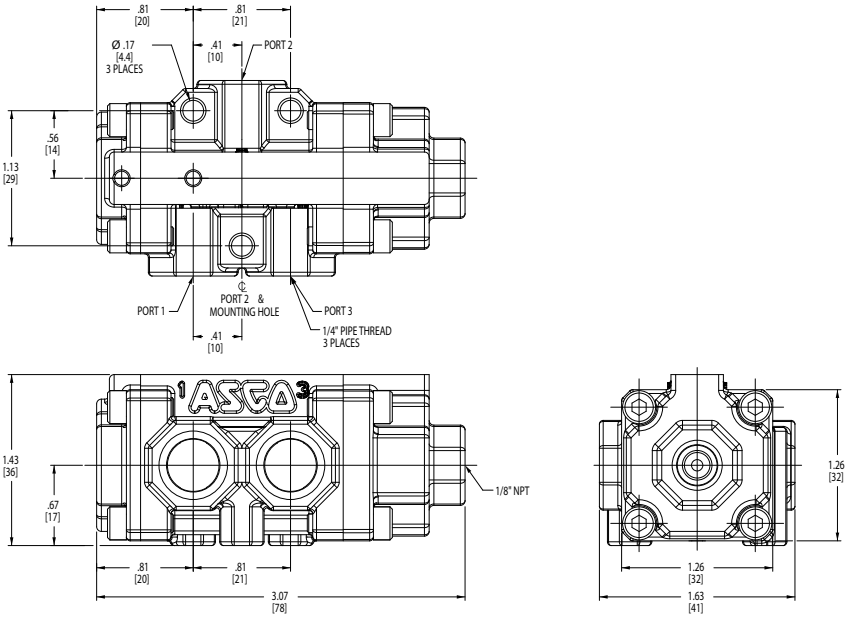
Specifications English (Metric)

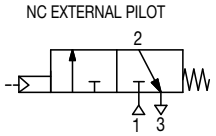
Pipe Size (in)	Base Catalog Number ①		Function ②	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)		Product Weight lbs (kg)	Const. Ref.
	Stainless Steel	Brass			Min.	Max.	Min.	Max.		
Externally Piloted										
1/4"	8562A108003	-	Pilot,Palm Button/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.36 (0.62)	17
1/4"	8562A110003	-	Pilot With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.43 (0.65)	18
1/4"	8562A112003	-	Pilot, Palm Button With Latching Reset/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.45 (0.66)	19
1/4"	8562A114003	-	Palm Button,/Spring Return	2.0 (1.7)	0	150 (10.3)	-	-	1.38 (0.63)	20
1/4"	8562A107003	-	Pilot Operated/Spring Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.08 (0.49)	16
1/4"	-	8562BA07003	Pilot Operated/Spring Return	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	2.07 (0.94)	40
1/4"	8562A147003	-	Manual Lever Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	2.12 (0.96)	35
1/4"	-	8562BA47003	Manual Lever Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	3.06 (1.39)	36
1/4"	8562A167003	-	Spring Return, Latches In Energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	2.12 (0.96)	35
1/4"	-	8562BA67003	Spring Return, Latches In Energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	3.06 (1.39)	36
1/4"	8562A187003	-	Spring Return, Latches In De-energized Position	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	2.12 (0.96)	35
1/4"	-	8562BA87003	Spring Return, Latches In De-energized Position	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	3.06 (1.39)	38
3/8"	8562A207003	-	Pilot Operated/Spring Return	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.93 (1.33)	25
3/8"	8562A247003	-	Manual Lever Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.93 (1.33)	37
3/8"	8562A267003	-	Spring Return, Latches In Energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
3/8"	8562A287003	-	Spring Return, Latches In De-energized Position	4.8 (4.2)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
3/8"	-	8562AC07003	Pilot Operated/Spring Return	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	25
3/8"	-	8562AC47003	Manual Lever Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
3/8"	-	8562AC67003	Spring Return, Latches In Energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
3/8"	-	8562AC87003	Spring Return, Latches In De-energized Position	4.0 (3.4)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
1/2"	8562A307003	-	Pilot Operated/Spring Return	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	2.82 (1.28)	25
1/2"	8562A347003	-	Manual Lever Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
1/2"	8562A367003	-	Spring Return, Latches In Energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
1/2"	8562A387003	-	Spring Return, Latches In De-energized Position	5.6 (4.8)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.81 (1.73)	37
1/2"	-	8562AD07003	Pilot Operated/Spring Return	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	3.50 (1.59)	25
1/2"	-	8562AD47003	Manual Lever Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
1/2"	-	8562AD67003	Spring Return, Latches In Energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
1/2"	-	8562AD87003	Spring Return, Latches In De-energized Position	5.0 (4.3)	0	200 (13.8)	40 (2.8)	200 (13.8)	4.65 (2.11)	37
3/4"	8562A407003	-	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	12.84 (5.82)	29
3/4"	-	8562AE07003	Pilot Operated/Spring Return	13.0 (11.2)	0	200 (13.8)	50 (3.4)	200 (13.8)	12.84 (5.82)	29
1"	8562A507003	-	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	12.33 (5.59)	29
1"	-	8562AF07003	Pilot Operated/Spring Return	15.5 (13.4)	0	200 (13.8)	50 (3.4)	200 (13.8)	13.73 (6.23)	29
3/8"	8362A213003	-	Double Pilot	4.8 (4.1)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.46 (1.11)	26
3/8"	-	8362AC13003	Double Pilot	4.0 (3.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.95 (1.34)	26
3/8"	8562A213003	-	Double Pilot	4.8 (4.1)	0	200 (13.8)	20 (1.4)	200 (13.8)	3.02 (1.37)	27
3/8"	-	8562AC13003	Double Pilot	4.0 (3.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	3.66 (1.66)	27
1/2"	8362A313003	-	Double Pilot	5.6 (4.8)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.39 (1.08)	26
1/2"	-	8362AD13003	Double Pilot	5.0 (4.3)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.85 (1.29)	26
1/2"	8562A313003	-	Double Pilot	5.6 (4.8)	0	200 (13.8)	20 (1.4)	200 (13.8)	2.91 (1.32)	27
1/2"	-	8562AD13003	Double Pilot	5.0 (4.3)	0	200 (13.8)	20 (1.4)	200 (13.8)	3.48 (1.58)	27
3/4"	8362A413003	-	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	9.91 (4.50)	30
3/4"	-	8362AE13003	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	10.93 (4.96)	30
3/4"	8562A413003	-	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	12.97 (5.88)	31
3/4"	-	8562AE13003	Double Pilot	13.0 (11.2)	0	200 (13.8)	20 (1.4)	200 (13.8)	14.54 (6.60)	31
1"	8362A513003	-	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	9.62 (4.37)	30
1"	-	8362AF13003	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	10.51 (4.77)	30
1"	8562A513003	-	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	12.46 (5.65)	31
1"	-	8562AF13003	Double Pilot	15.5 (13.4)	0	200 (13.8)	20 (1.4)	200 (13.8)	13.86 (6.29)	31
Detent / Externally Piloted										
1/4"	8562A113007	-	Double Pilot	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	1.38 (0.63)	21
1/4"	-	8562BA13007	Double Pilot	1.8 (1.55)	0	150 (10.3)	15 (1.0)	150 (10.3)	2.73 (1.24)	41
1/4"	8562A109007	-	Pilot, Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	1.56 (0.71)	22
1/4"	8562A115007	-	Palm Button/Manual Return	2.0 (1.7)	0	150 (10.3)	-	-	1.52 (0.69)	23

① Please refer to How to Order section to complete base catalog number selection.
② 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

Dimensions: inches (mm)

Const Ref. 1





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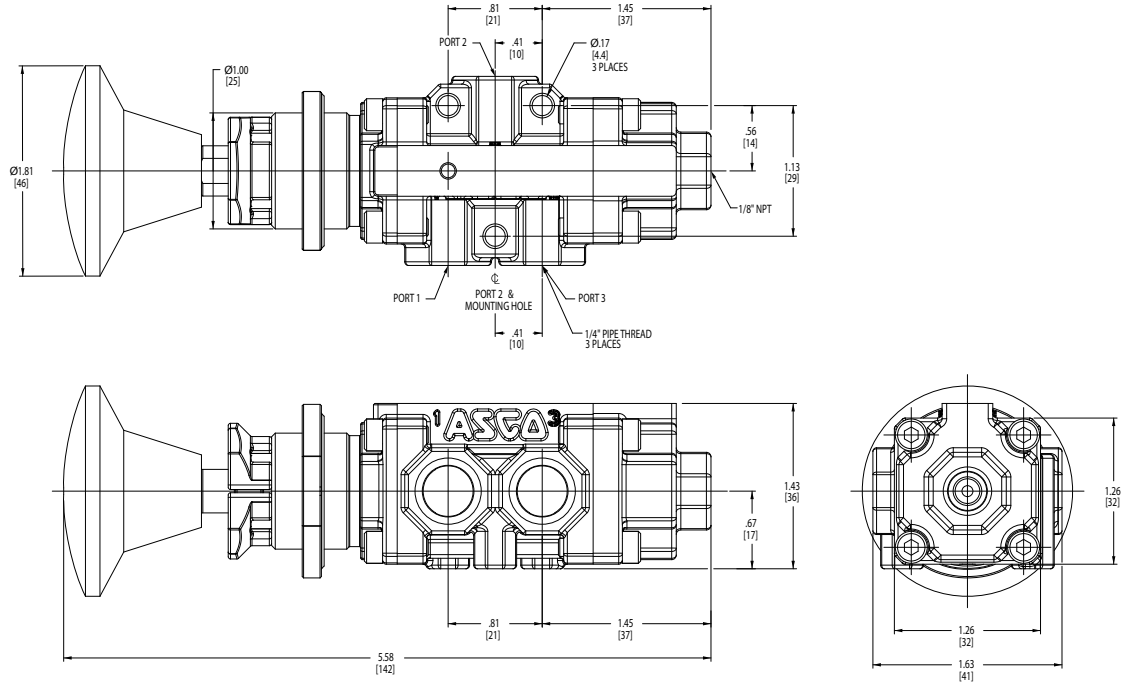
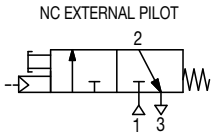
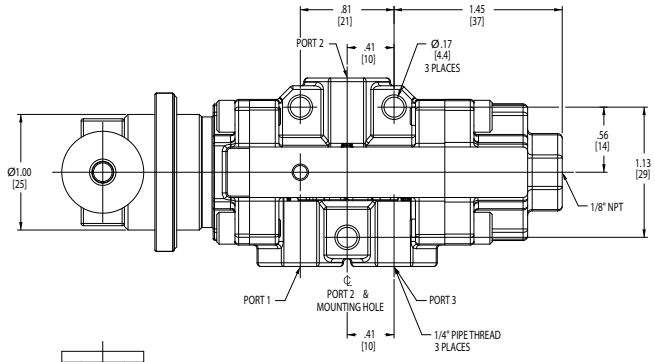


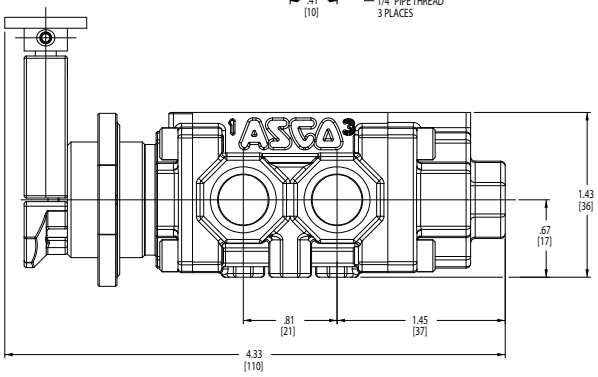


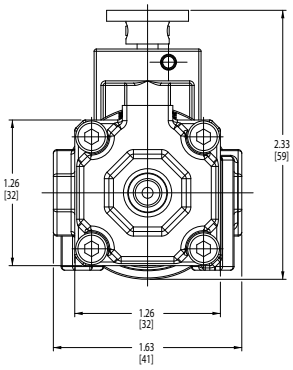
SPECIAL SERVICE PILOT

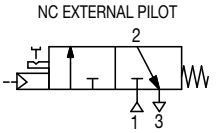
Dimensions: inches (mm)

Const. Ref. 3



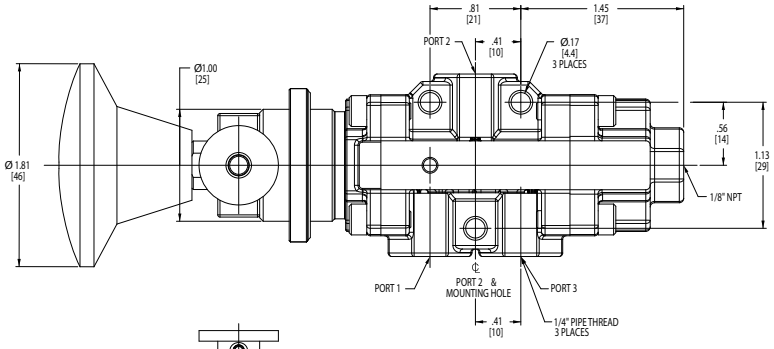


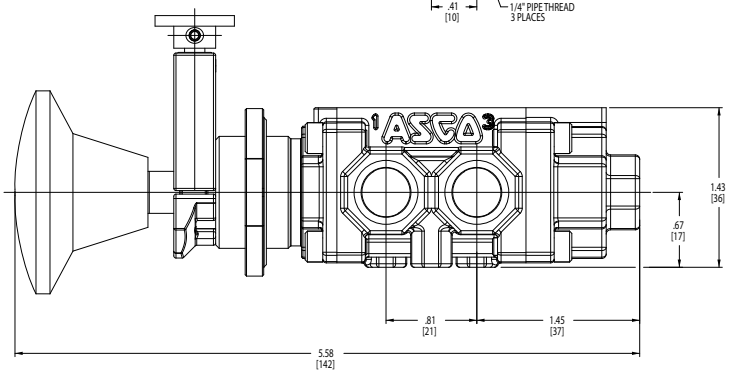


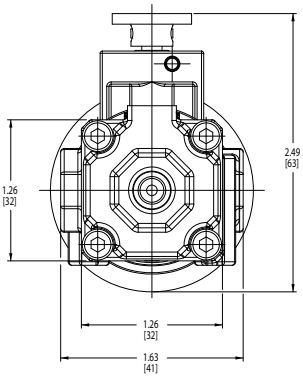


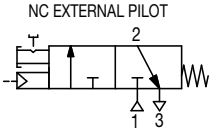
SPECIAL SERVICE PILOT

Const. Ref. 4









Dimensions: inches (mm)

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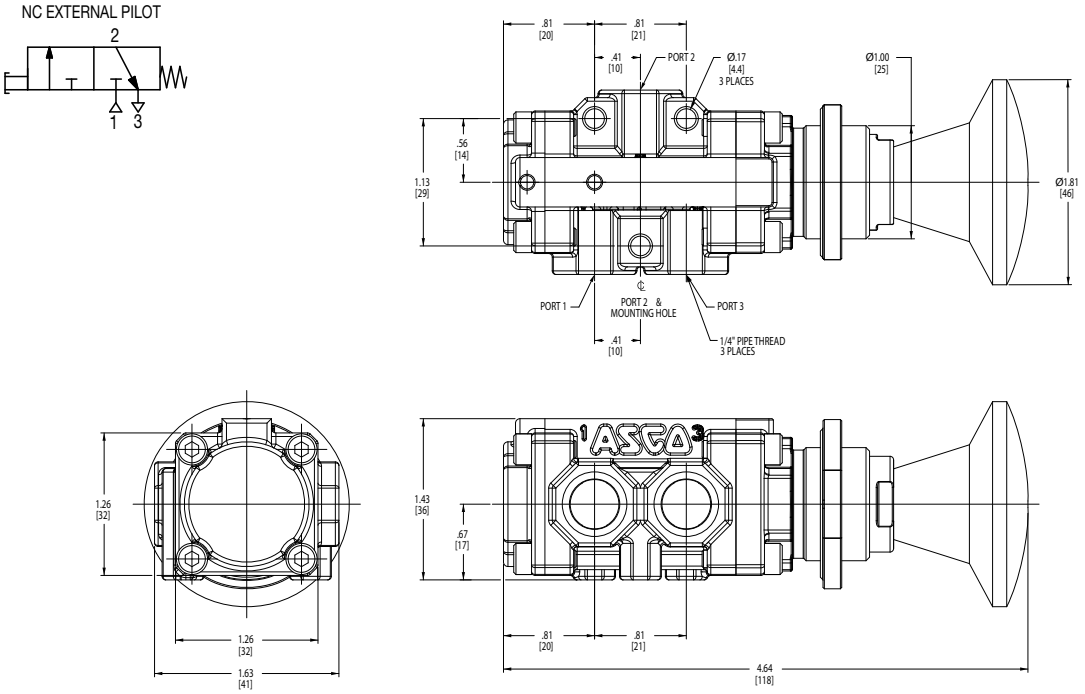

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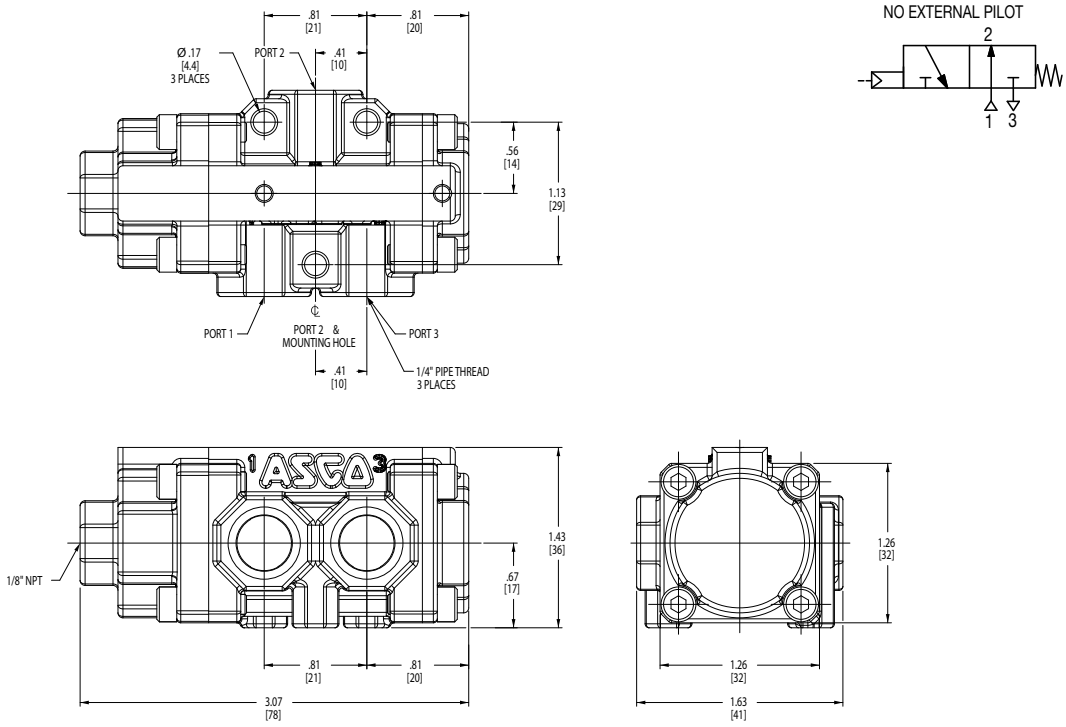

Dimensions: inches (mm)

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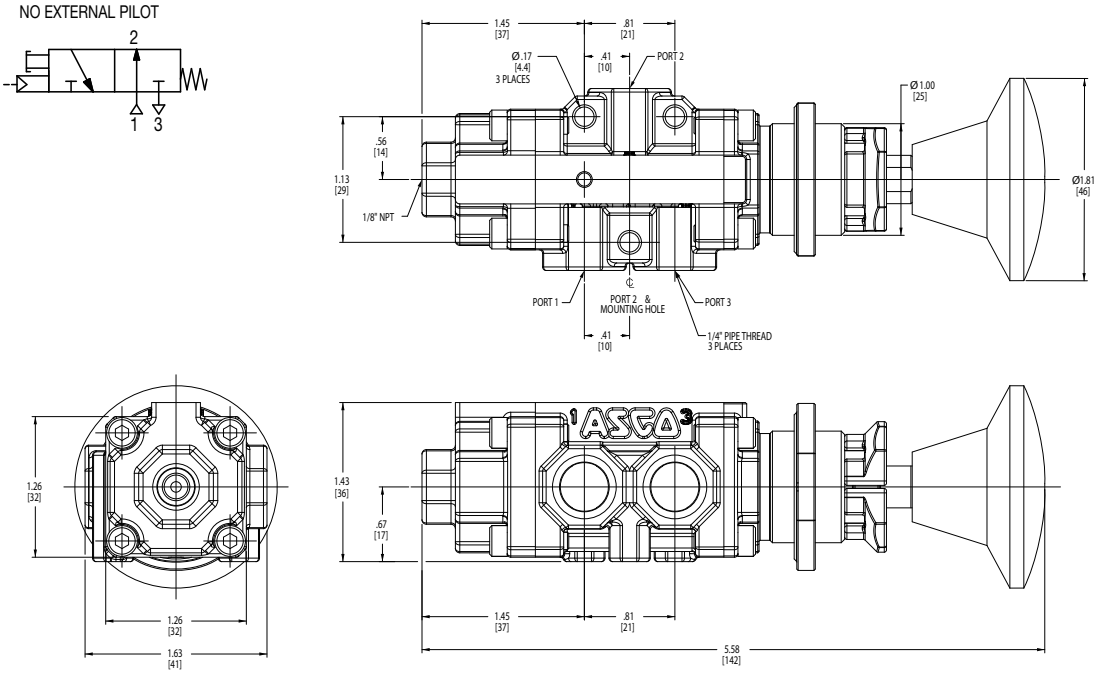

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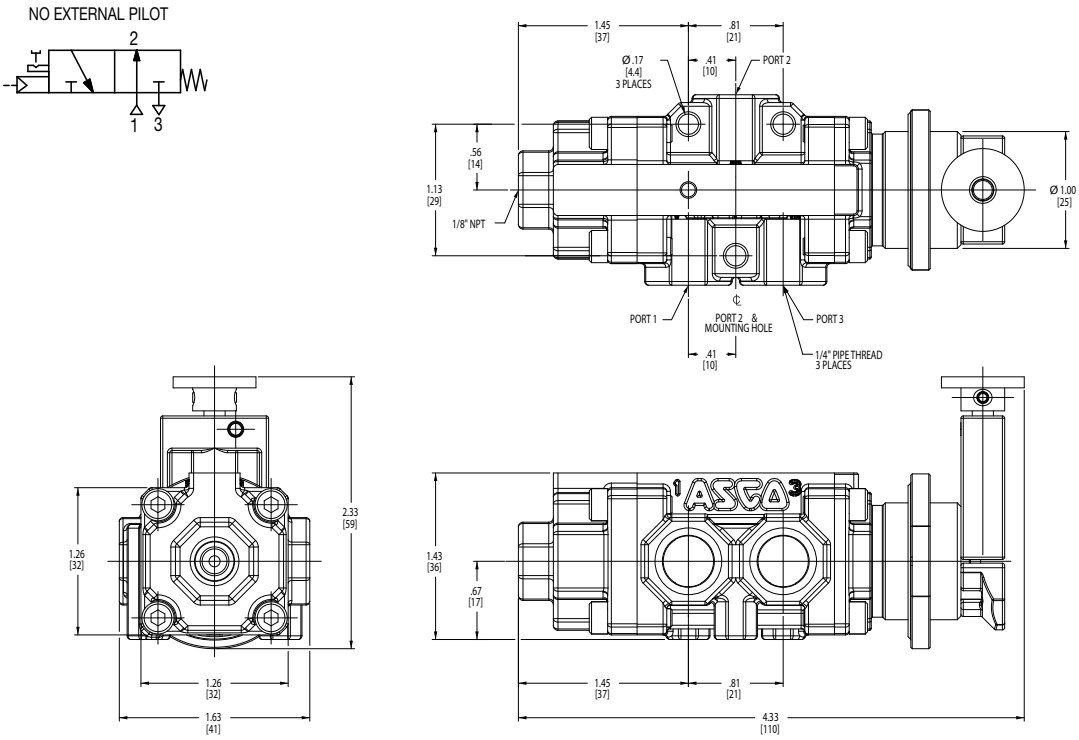
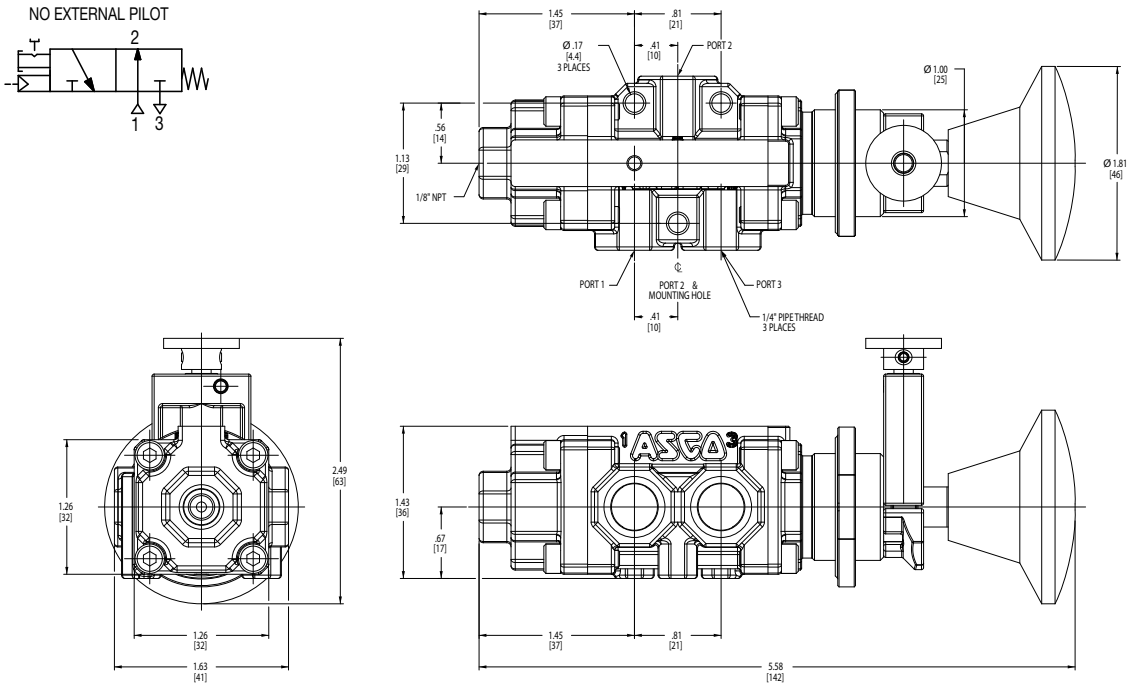


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 9



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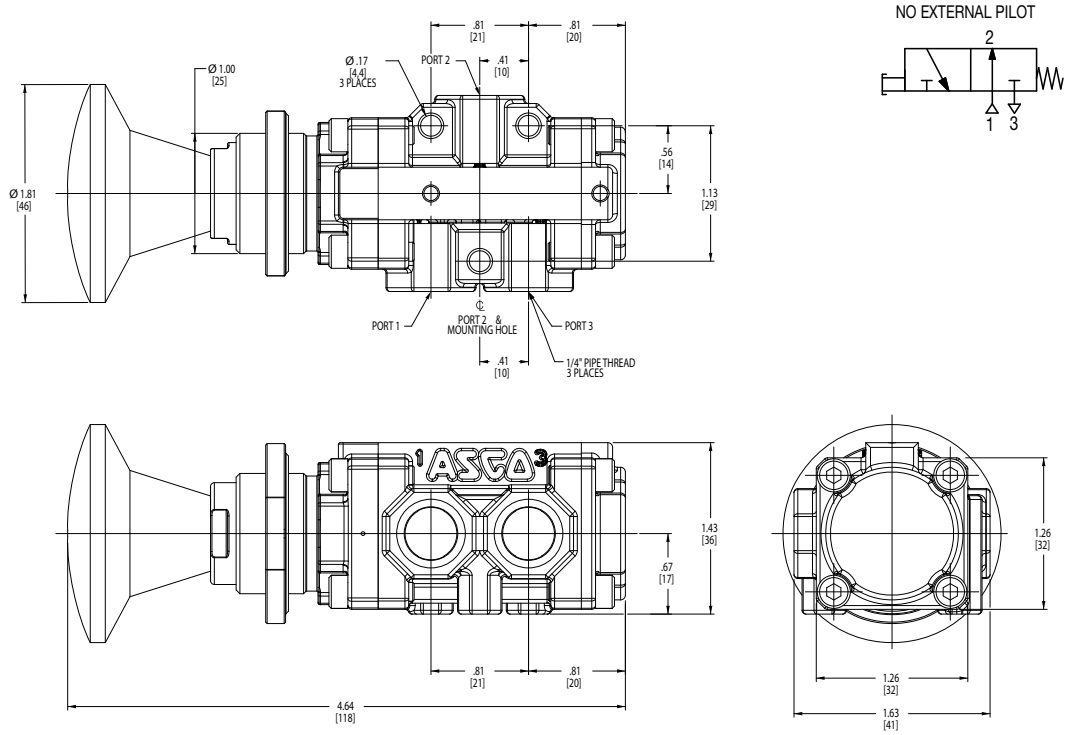
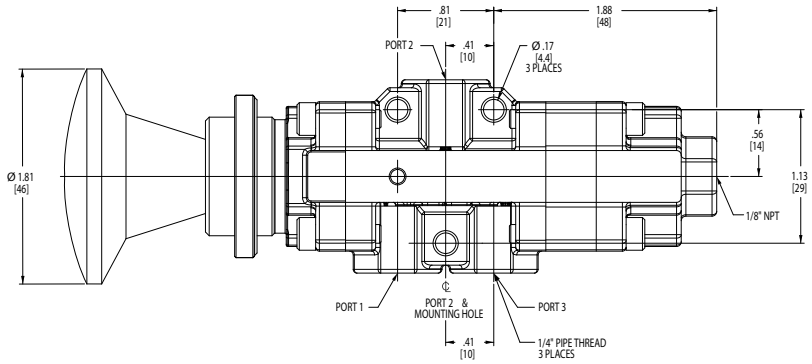
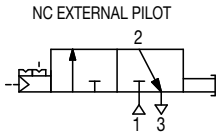


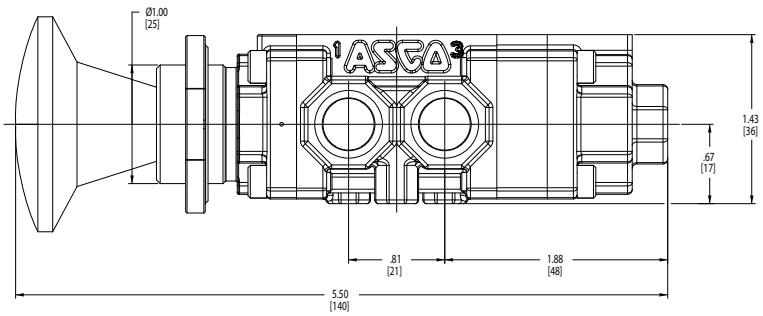
SPECIAL SERVICE PILOT

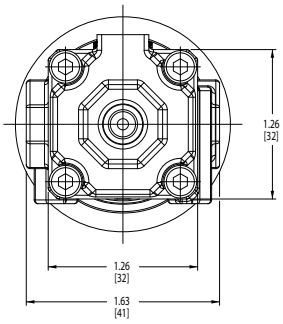
Dimensions: inches (mm)

Const. Ref.11









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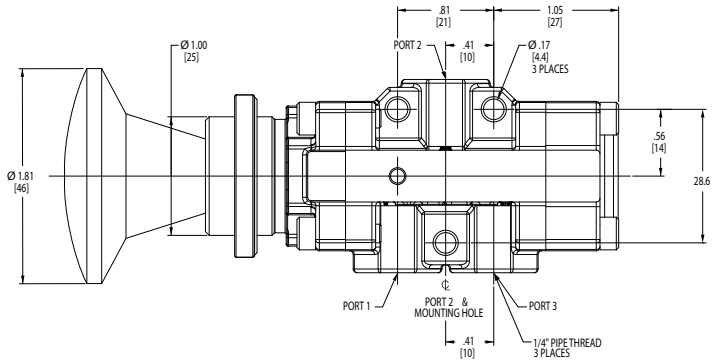
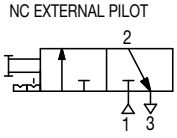
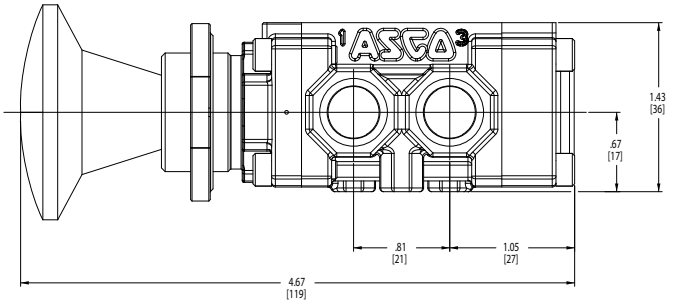
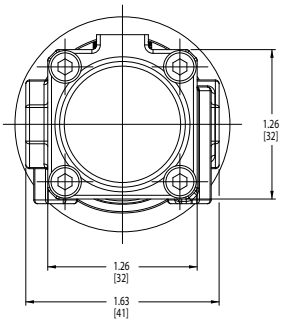




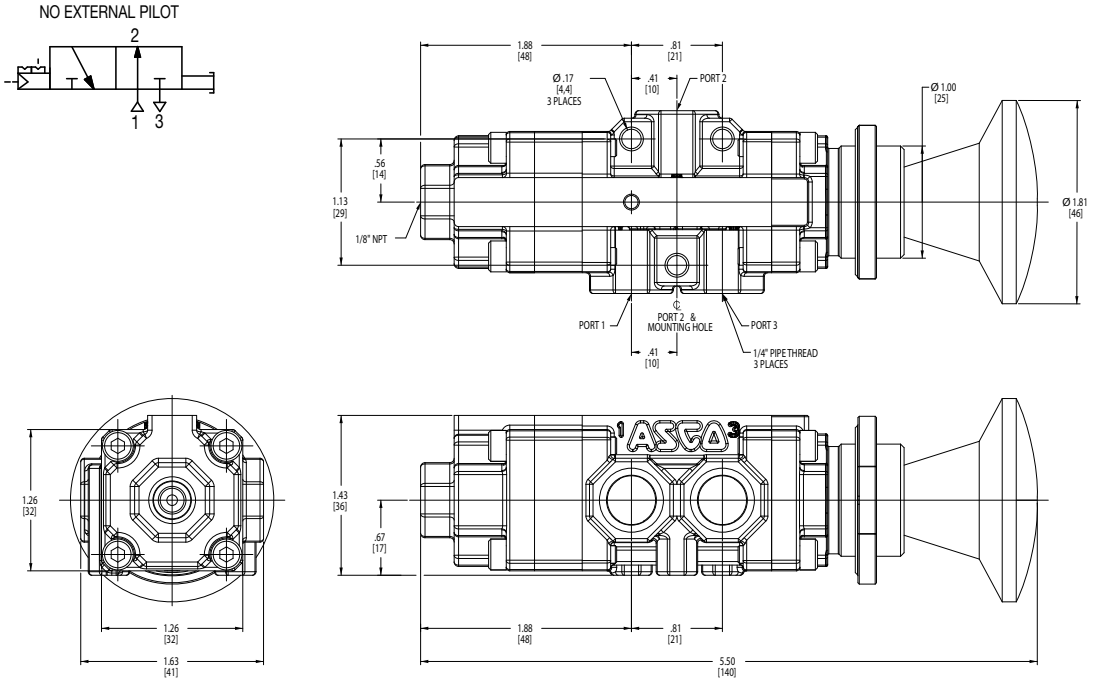




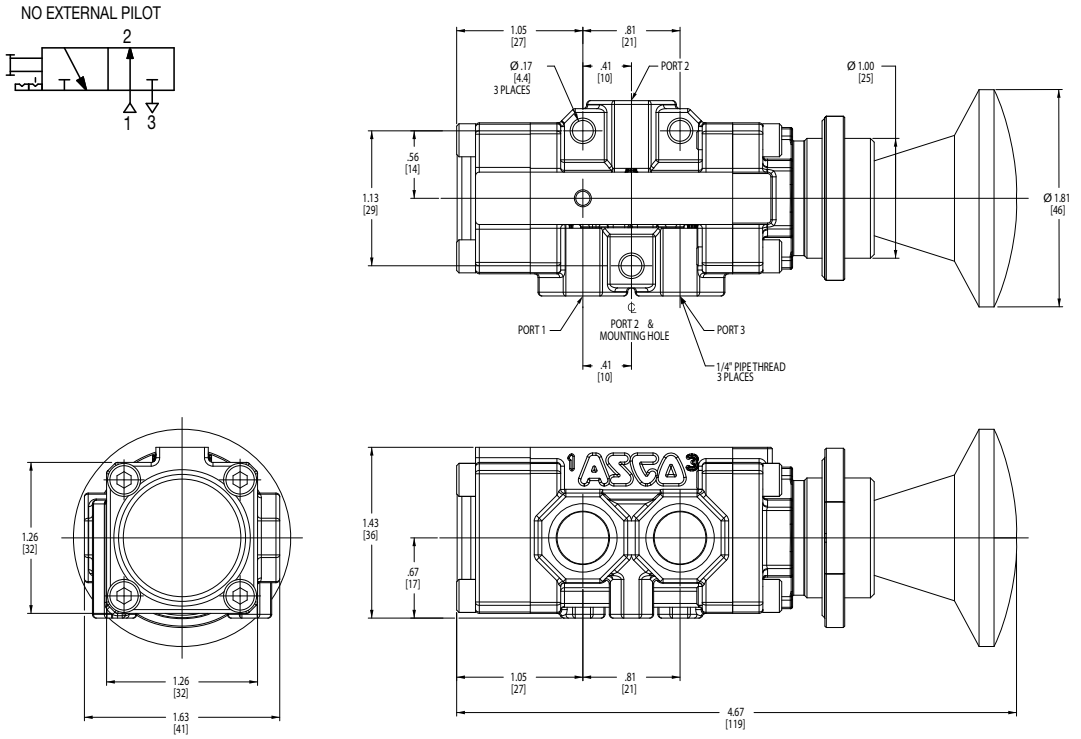
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 13



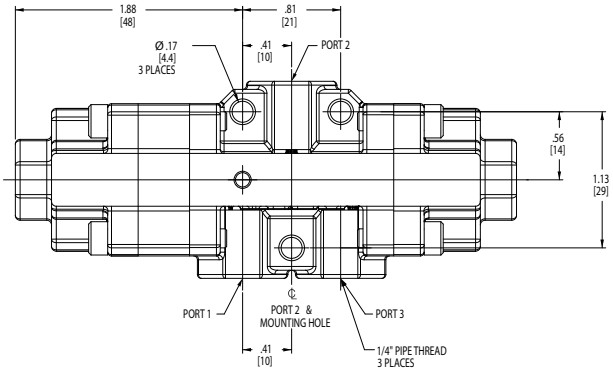
Const. Ref. 14

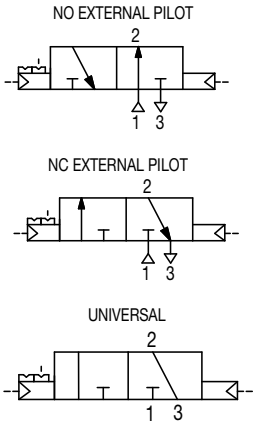


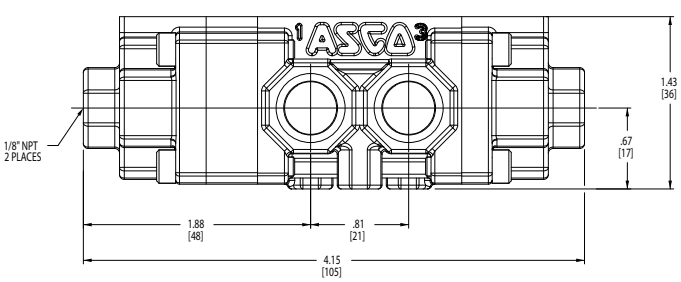
SPECIAL SERVICE PILOT

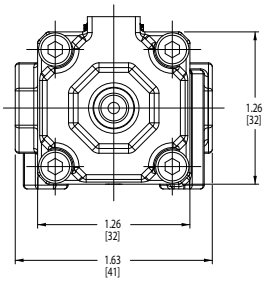
Dimensions: inches (mm)

Const. Ref. 15

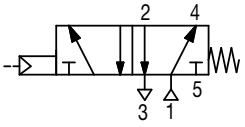


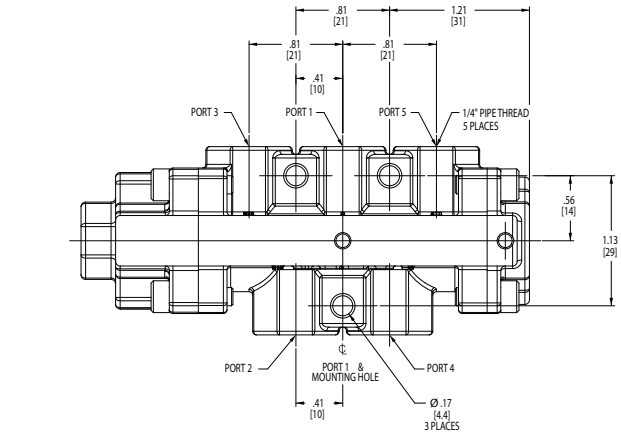


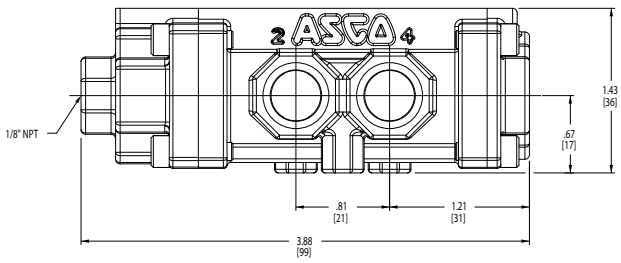


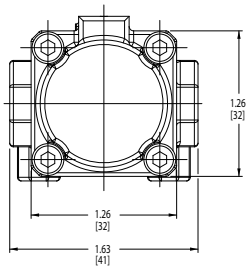


Const. Ref. 16





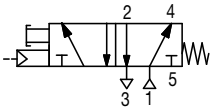


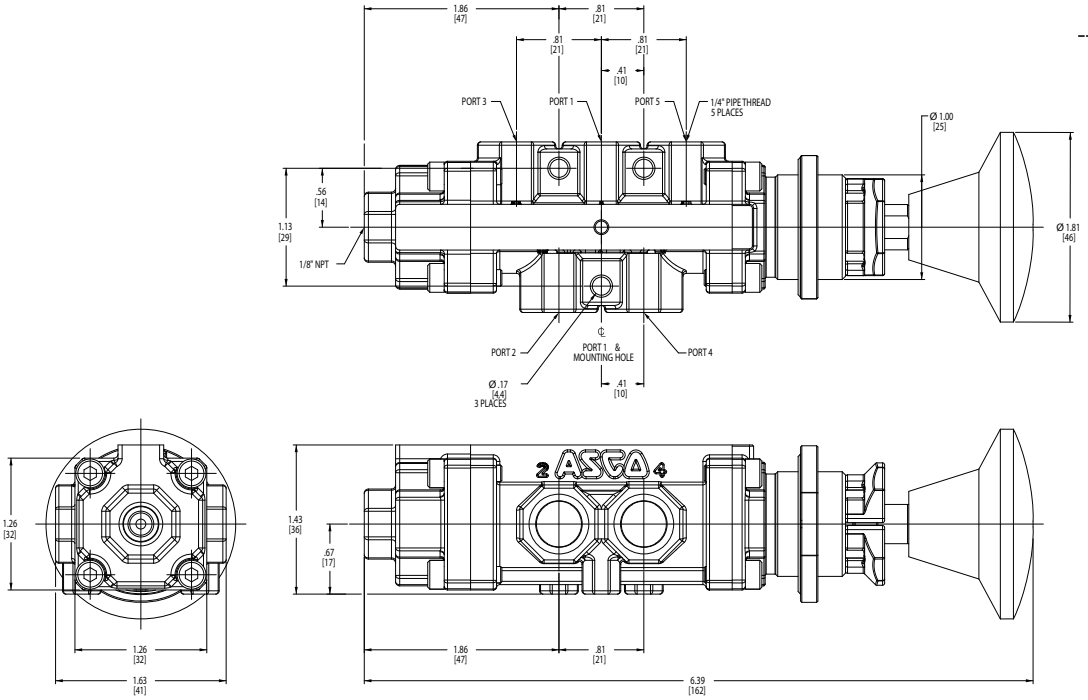


SPECIAL SERVICE PILOT

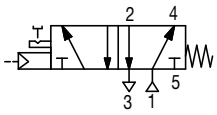
Dimensions: inches (mm)

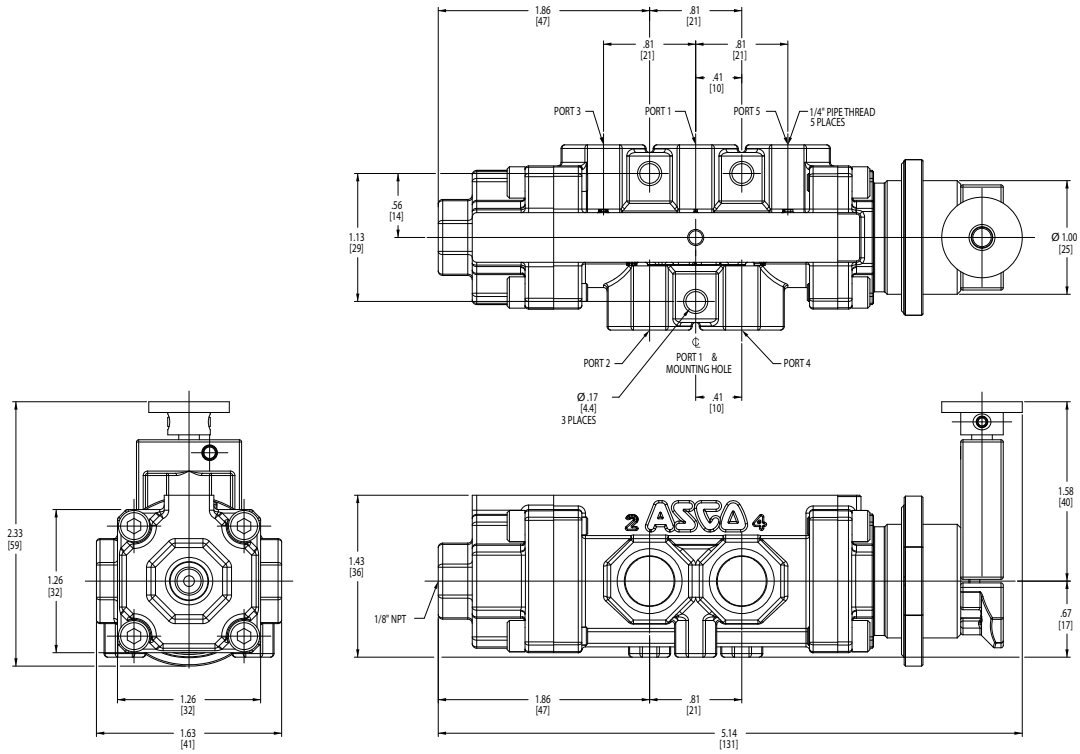
Const. Ref. 17





Const. Ref. 18

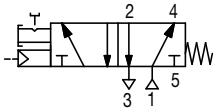


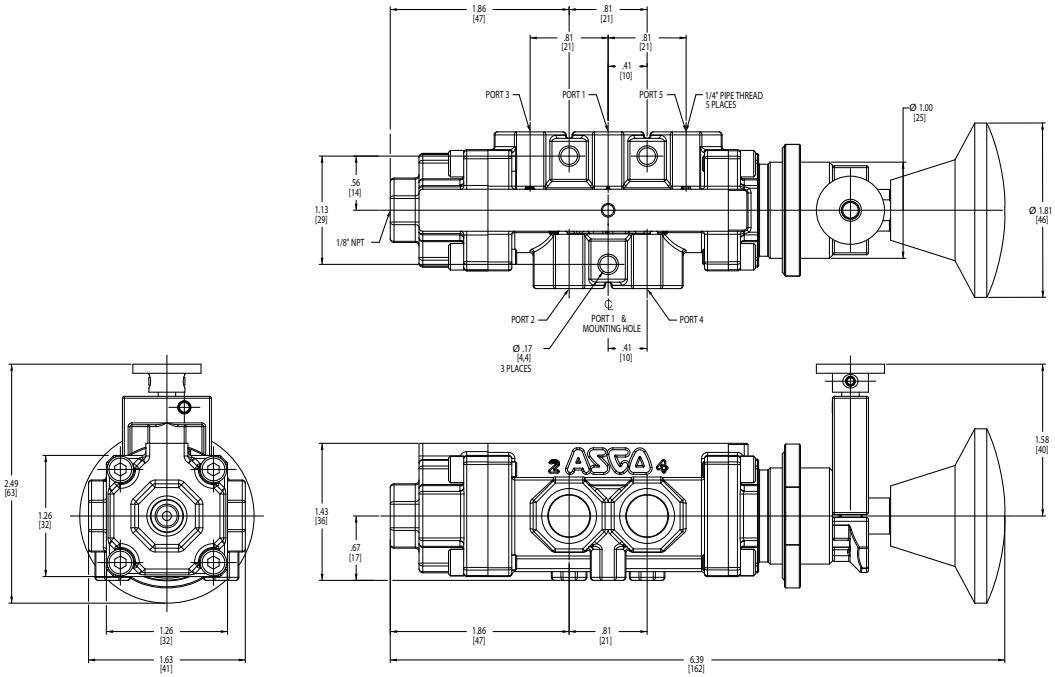


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

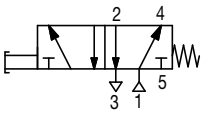
Const. Ref. 19

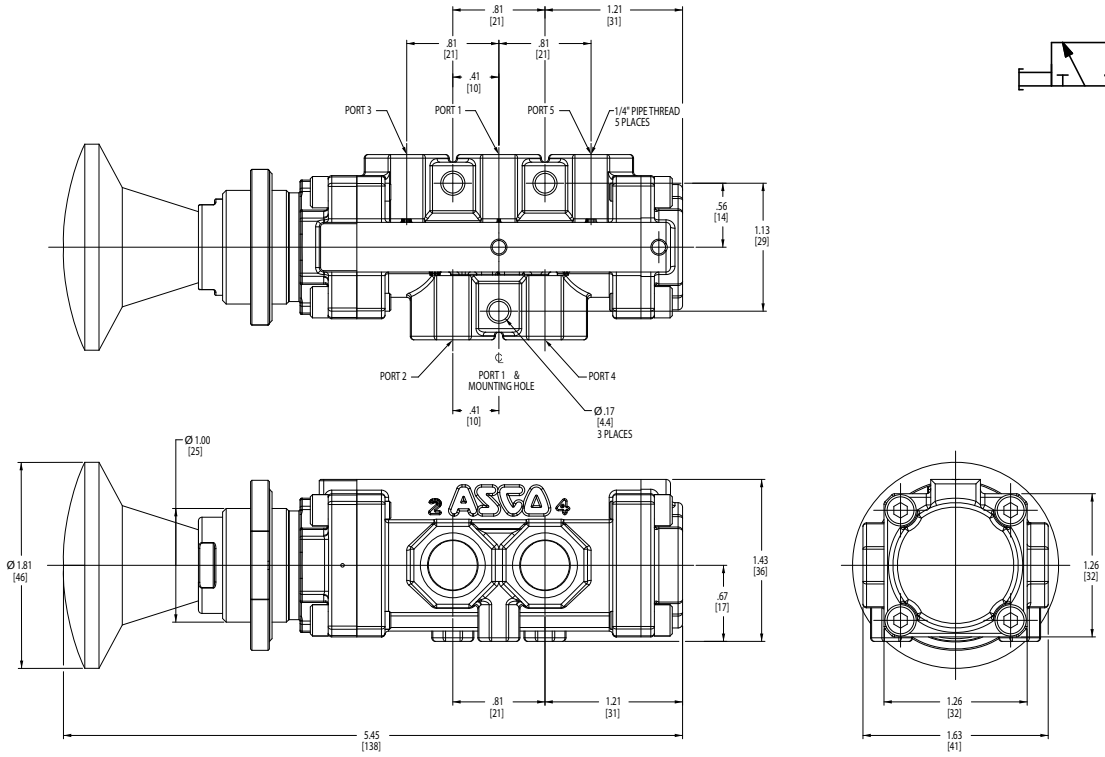




Const. Ref. 20

EXTERNAL PILOT

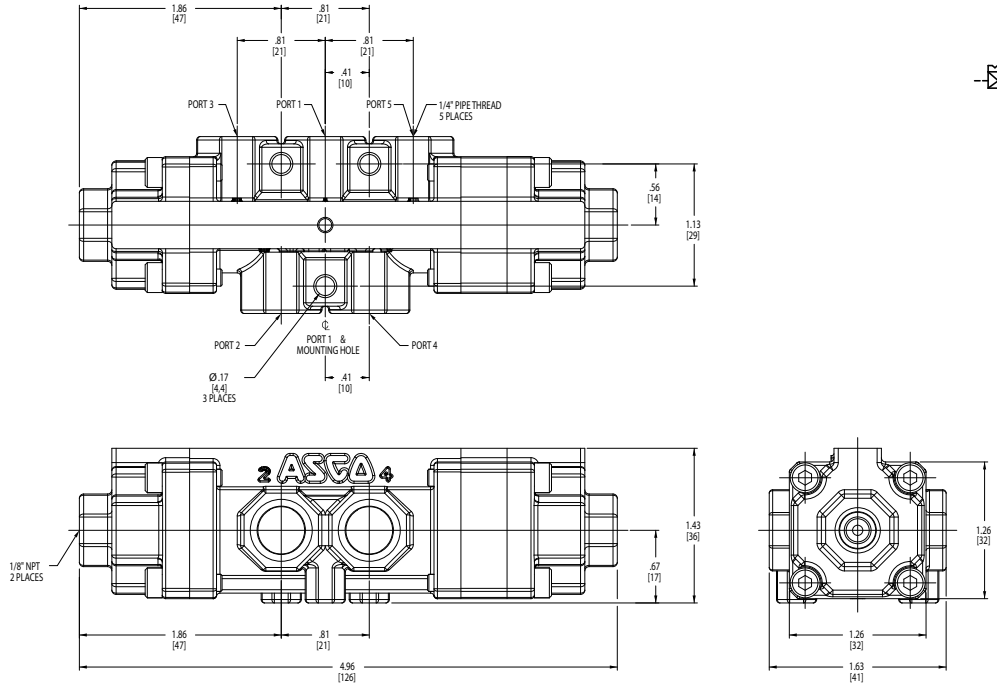


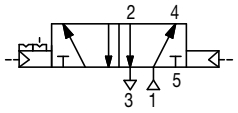


SPECIAL SERVICE PILOT

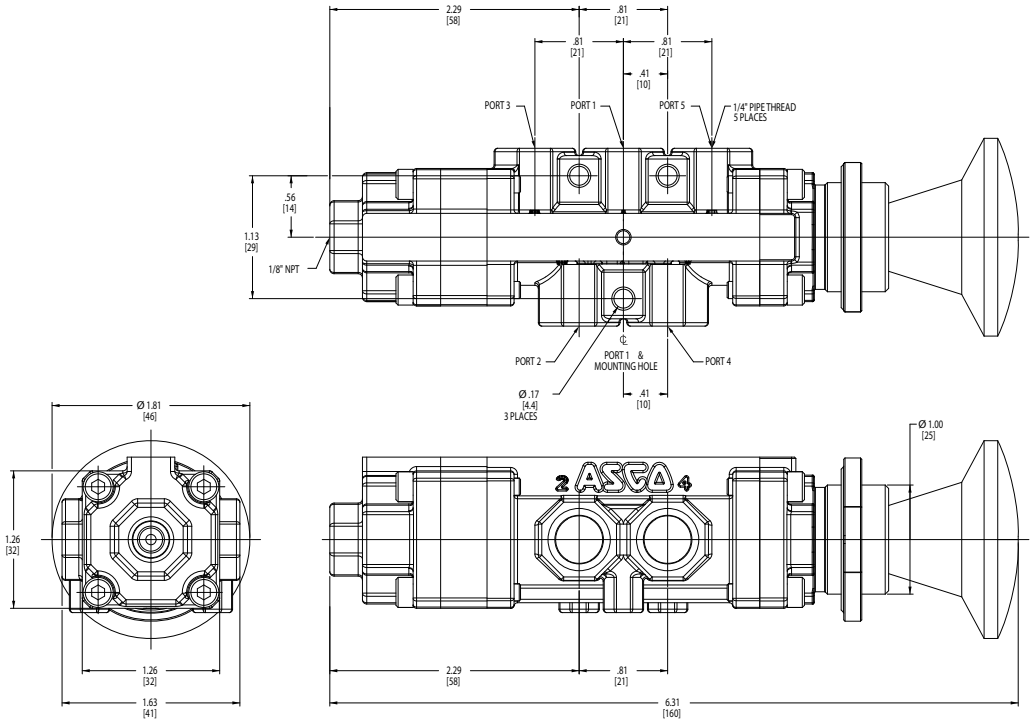
Dimensions: inches (mm)

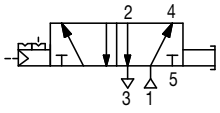
Const. Ref. 21





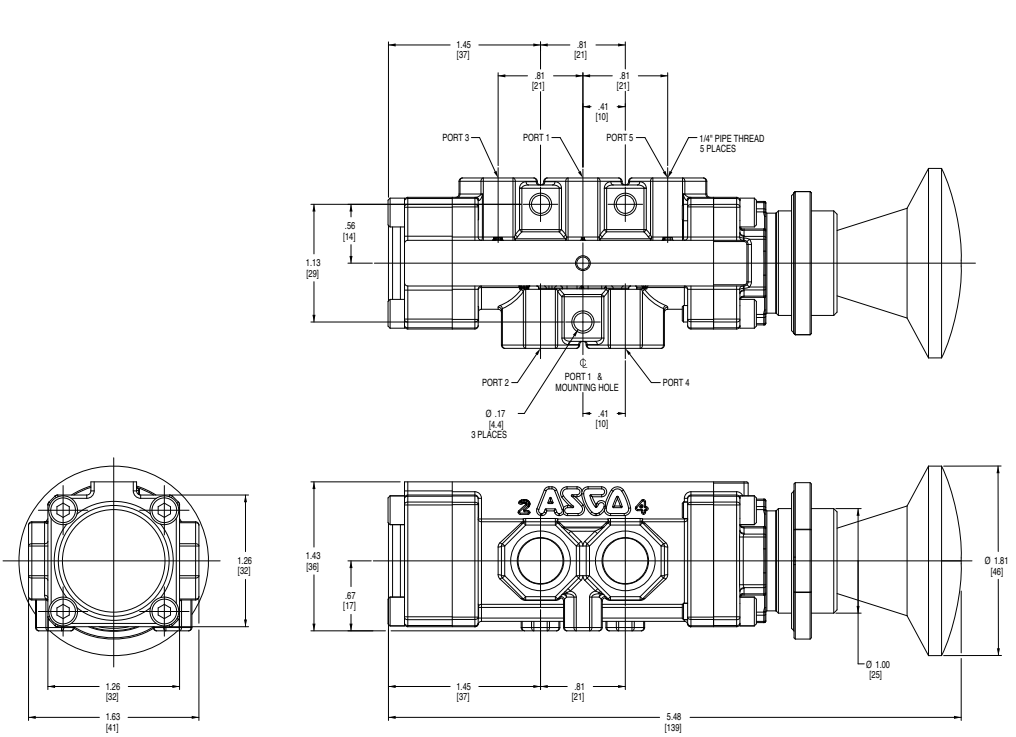
Const. Ref. 22



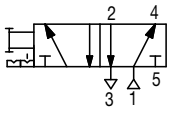


Dimensions: inches (mm)

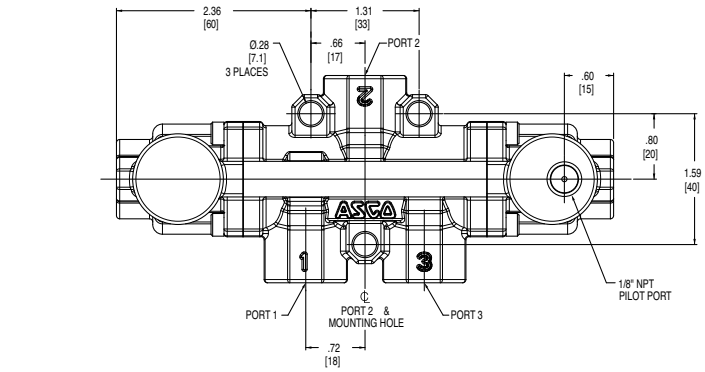
Const. Ref. 23

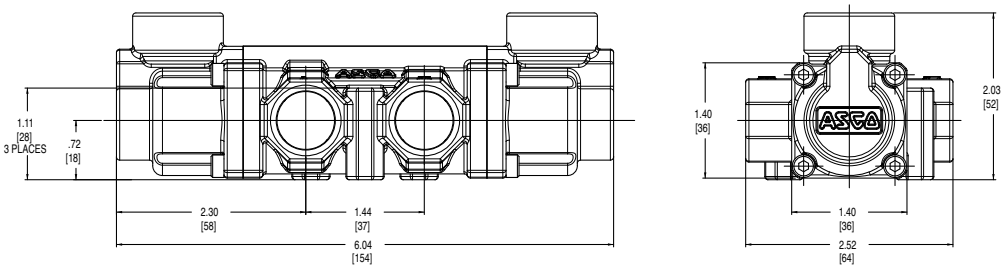


EXTERNAL PILOT

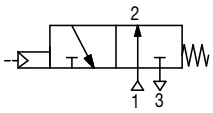


Const. Ref. 24

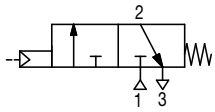




NO EXTERNAL PILOT



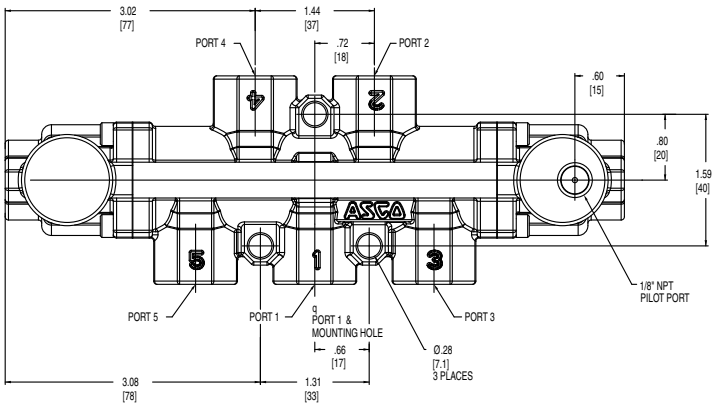
NC EXTERNAL PILOT

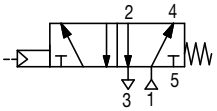


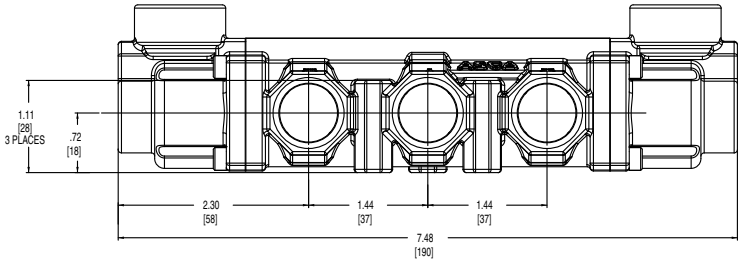
SPECIAL SERVICE PILOT

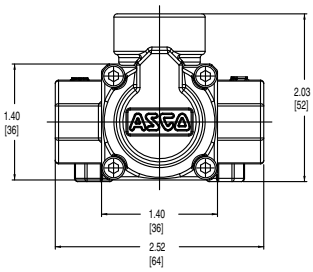
Dimensions: inches (mm)

Const. Ref. 25

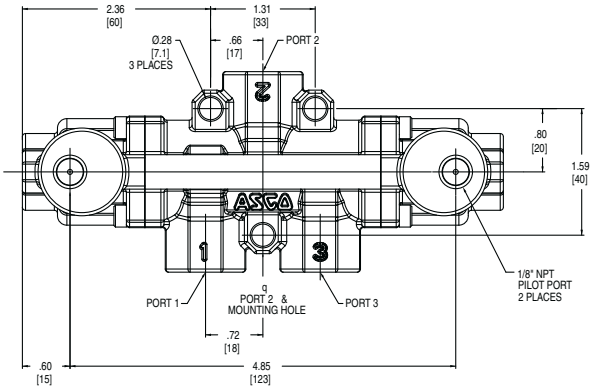


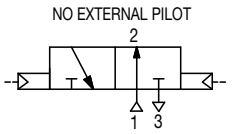


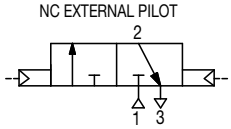


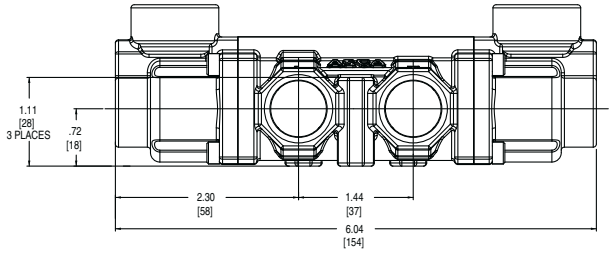


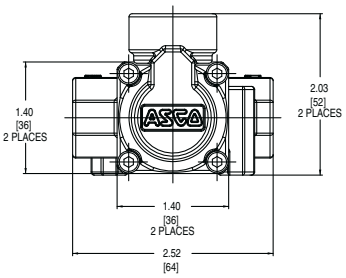
Const. Ref. 26





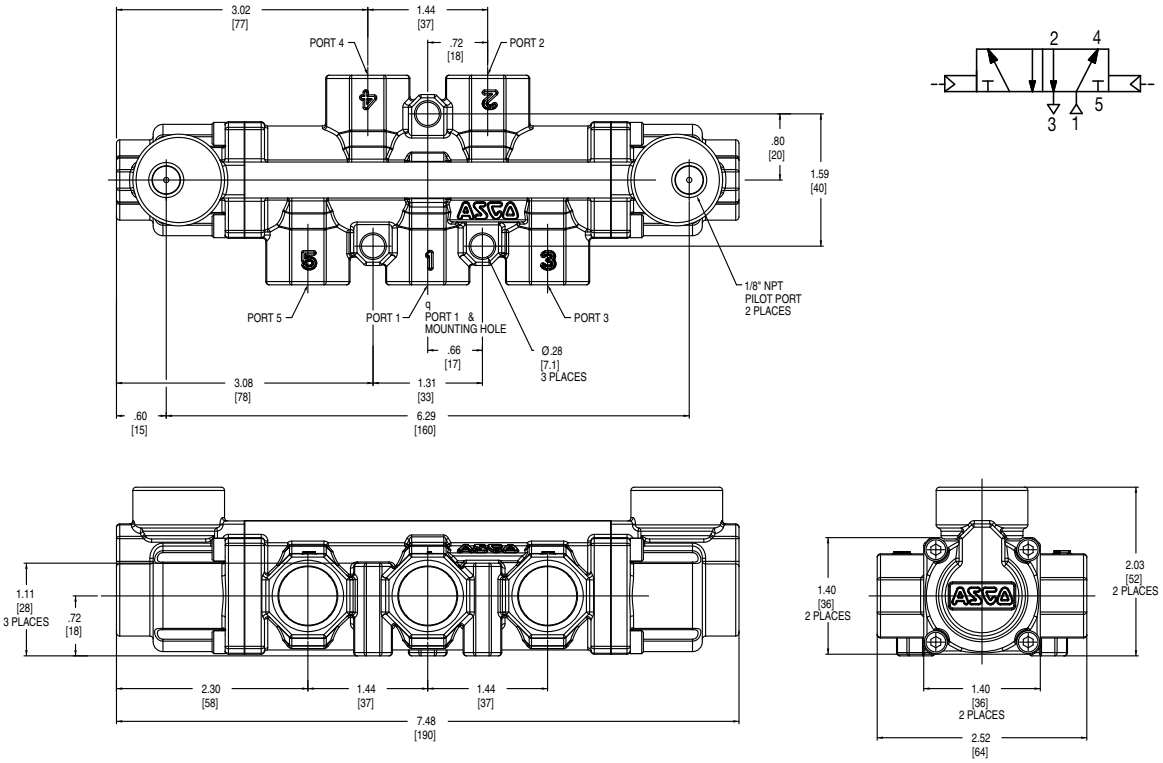




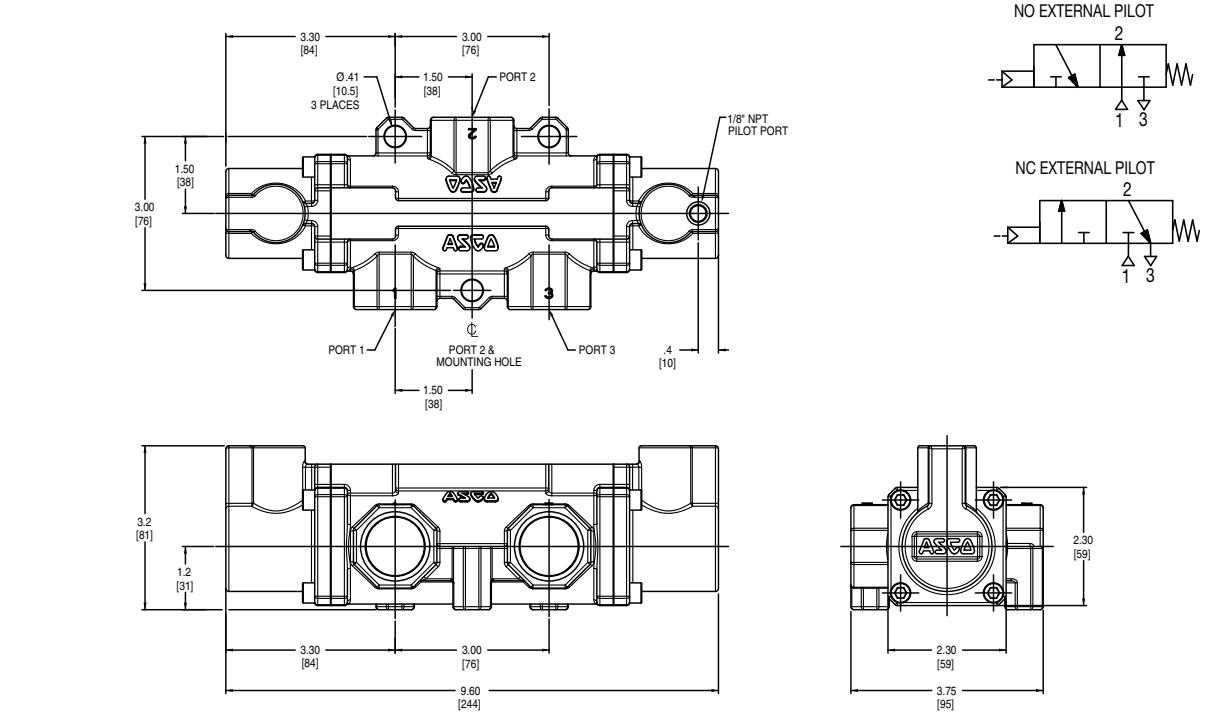


Dimensions: inches (mm)

Const. Ref. 27



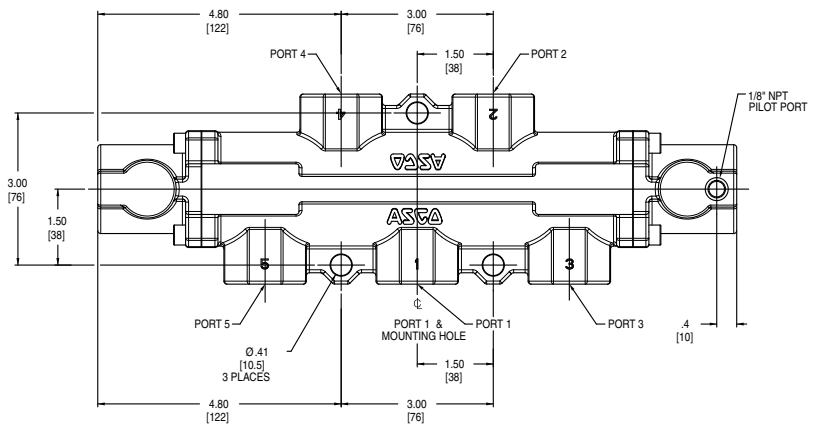
Const. Ref. 28

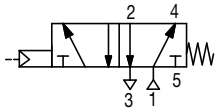


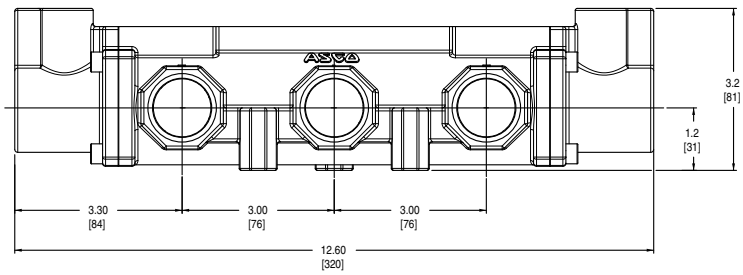
SPECIAL SERVICE PILOT

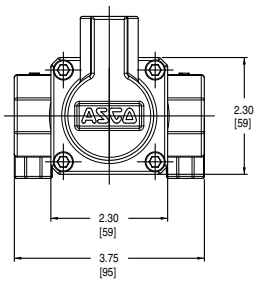
Dimensions: inches (mm)

Const. Ref. 29

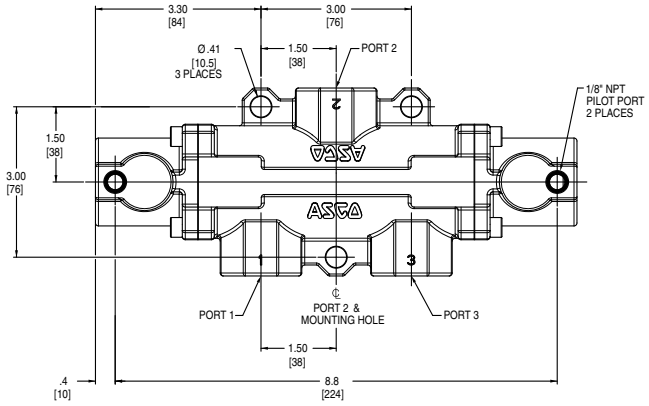


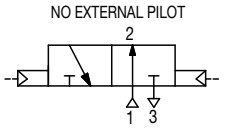


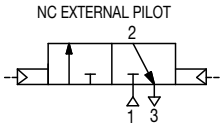


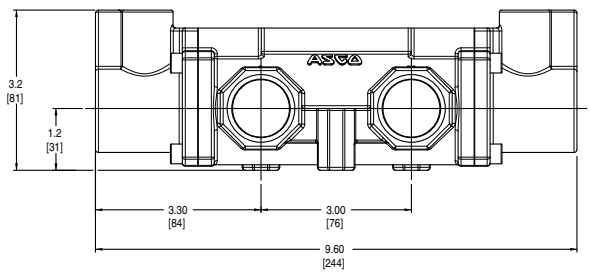


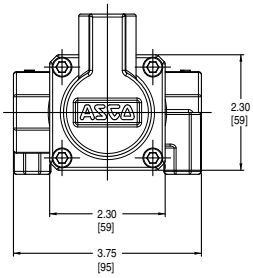
Const. Ref. 30





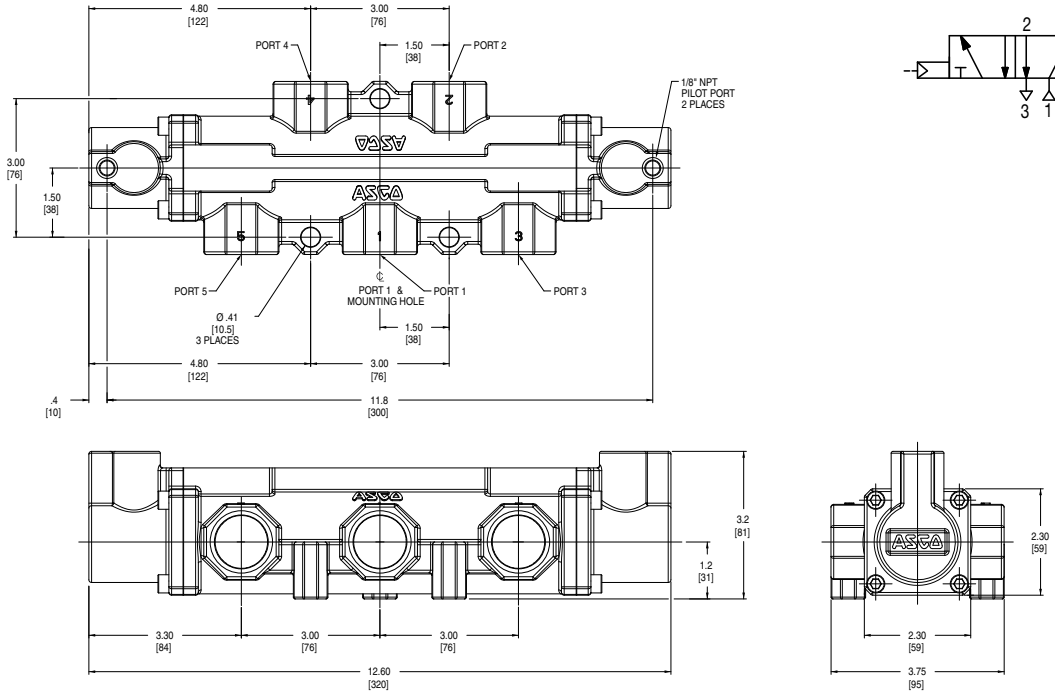




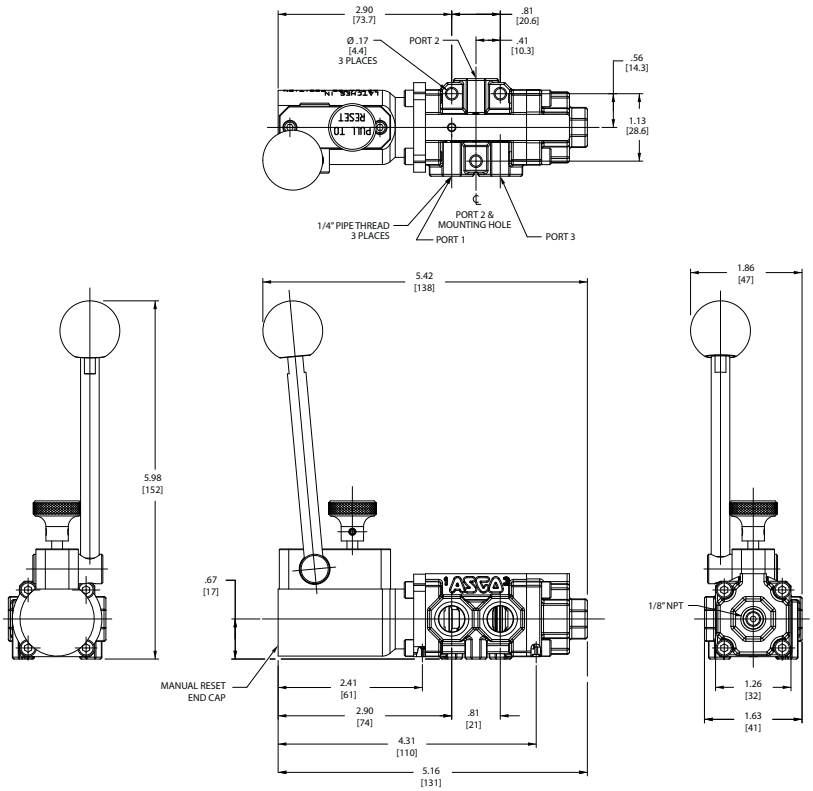


Dimensions: inches (mm)

Const. Ref. 31



Const. Ref. 32

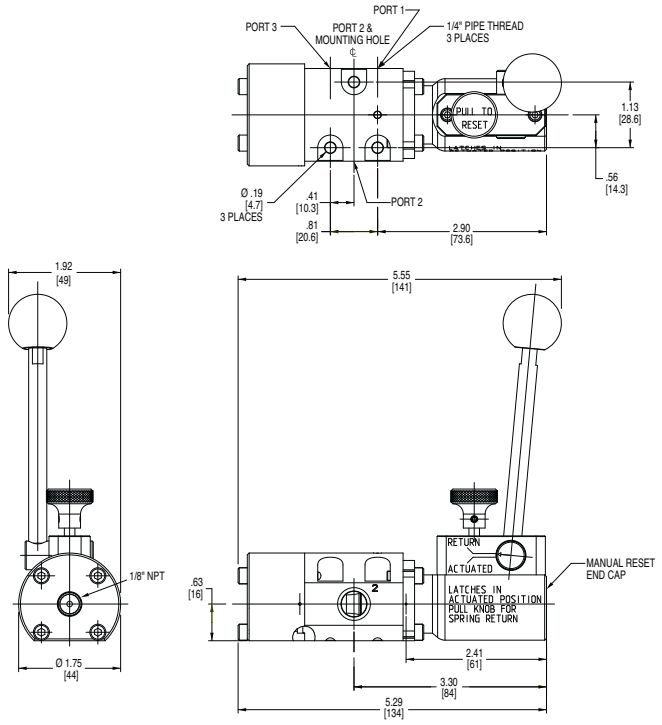


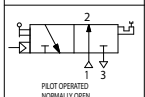
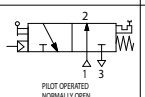
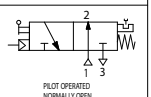
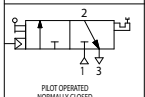
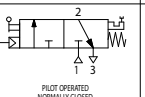
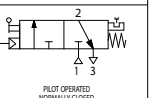
47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH
MANUAL LEVER RETURN LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN DE-ENERGIZED POSITION
PILOT OPERATED NORMALLY OPEN MANUAL RESET	PILOT OPERATED NORMALLY OPEN MANUAL RESET	PILOT OPERATED NORMALLY OPEN MANUAL RESET
PILOT OPERATED NORMALLY CLOSED MANUAL RESET	PILOT OPERATED NORMALLY CLOSED MANUAL RESET	PILOT OPERATED NORMALLY CLOSED MANUAL RESET

SPECIAL SERVICE PILOT

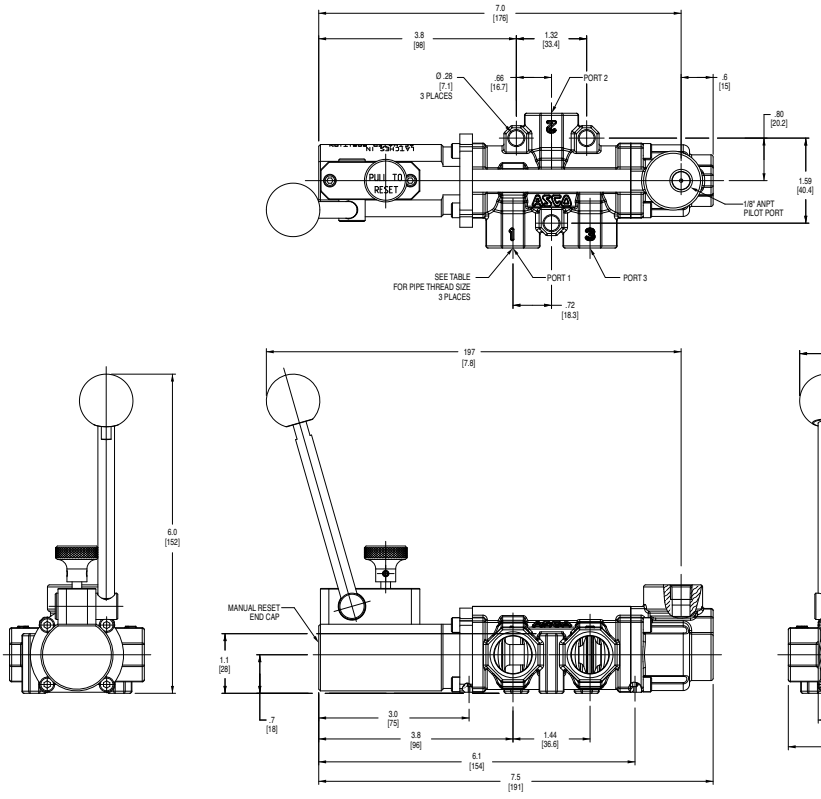
Dimensions: inches (mm)

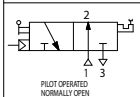
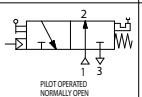
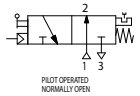
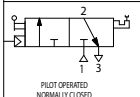
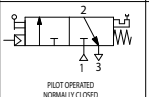
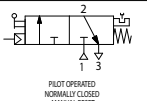
Const. Ref. 33



47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH
MANUAL LEVER RETURN LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN DE-ENERGIZED POSITION
 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET
 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET

Const. Ref. 34

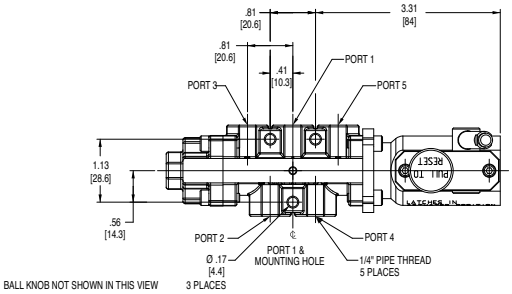


47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH
MANUAL LEVER RETURN LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN ENERGIZED POSITION	SPRING RETURN, LATCHES IN DE-ENERGIZED POSITION
 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET	 PILOT OPERATED NORMALLY OPEN MANUAL RESET
 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET	 PILOT OPERATED NORMALLY CLOSED MANUAL RESET

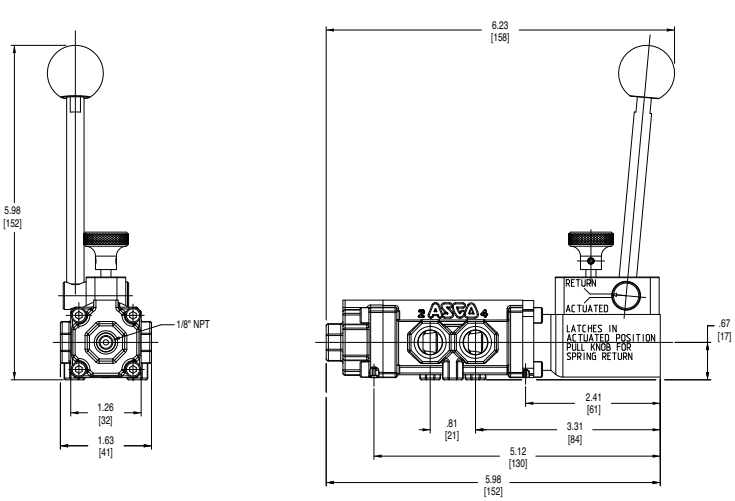
SPECIAL SERVICE
PILOT

Dimensions: inches (mm)

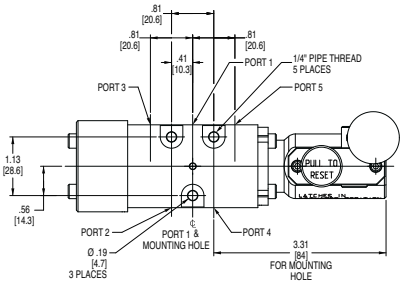
Const. Ref. 35



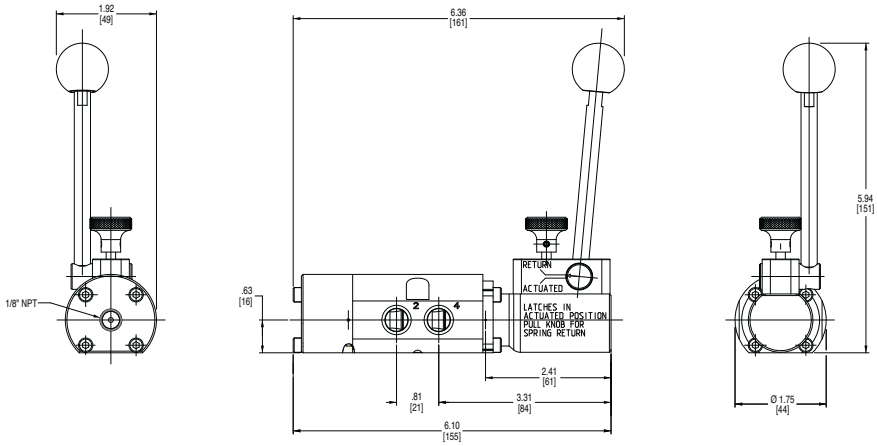
PILOT OPERATED MANUAL RESET		
47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH



Const. Ref. 36



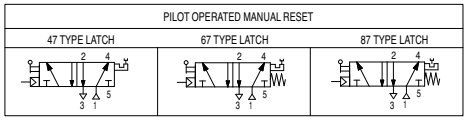
PILOT OPERATED MANUAL RESET		
47 TYPE LATCH	67 TYPE LATCH	87 TYPE LATCH

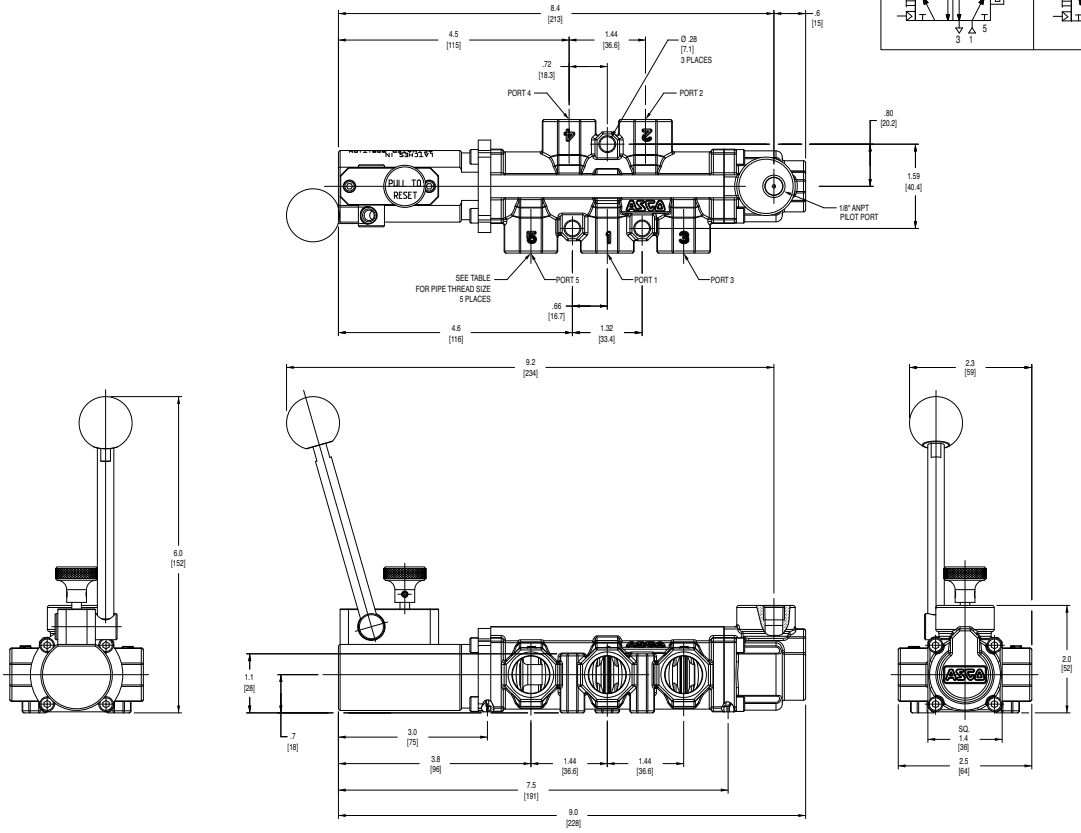


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 37





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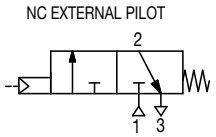
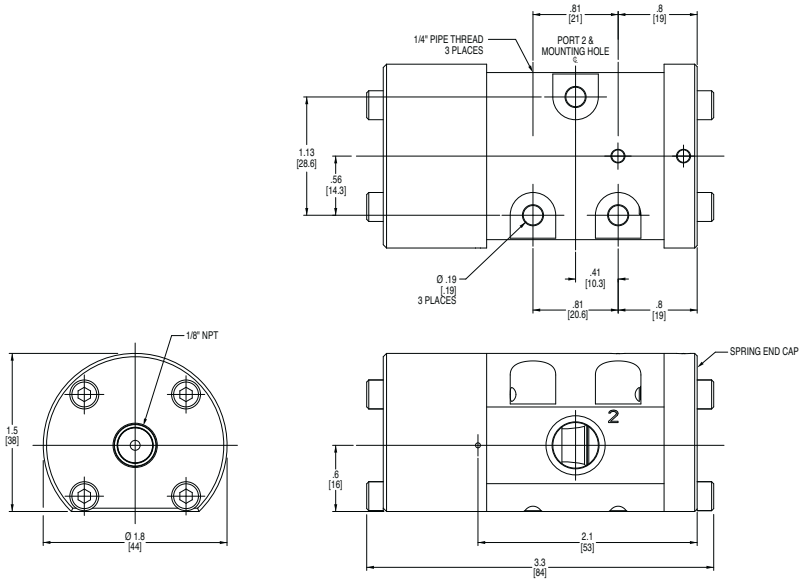
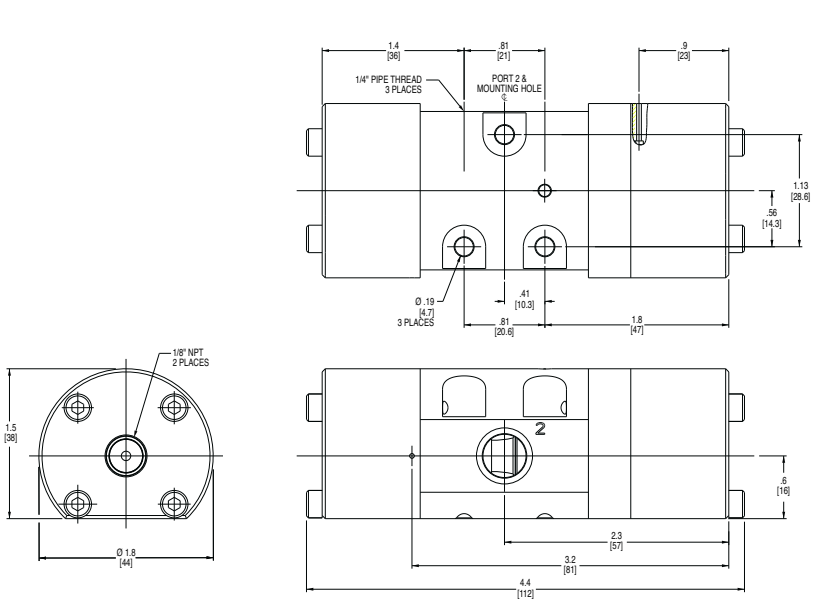
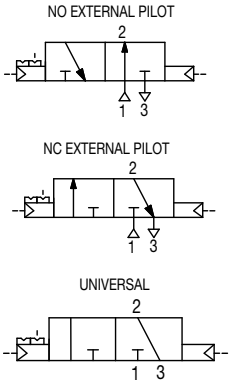




Dimensions: inches (mm)

Const. Ref. 39





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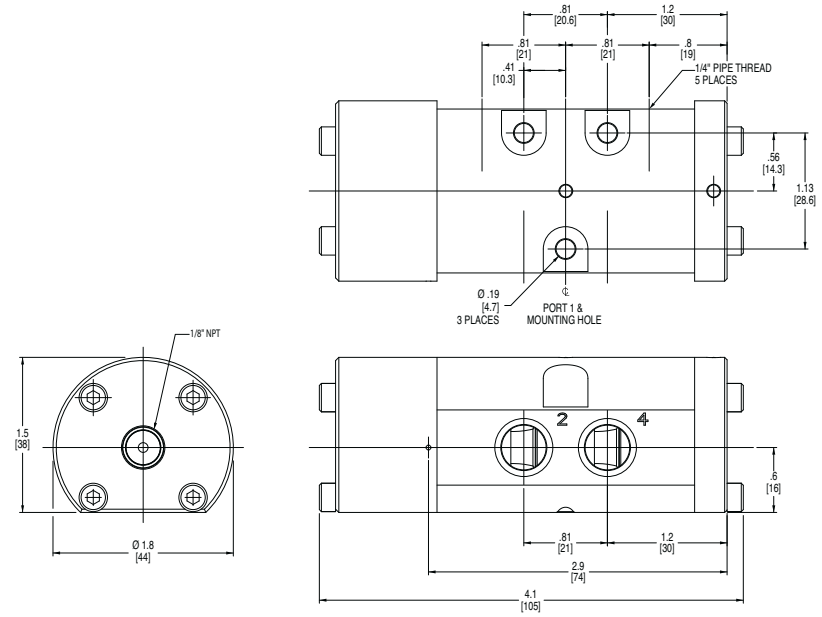
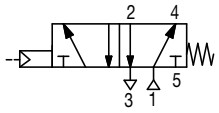
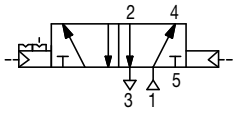


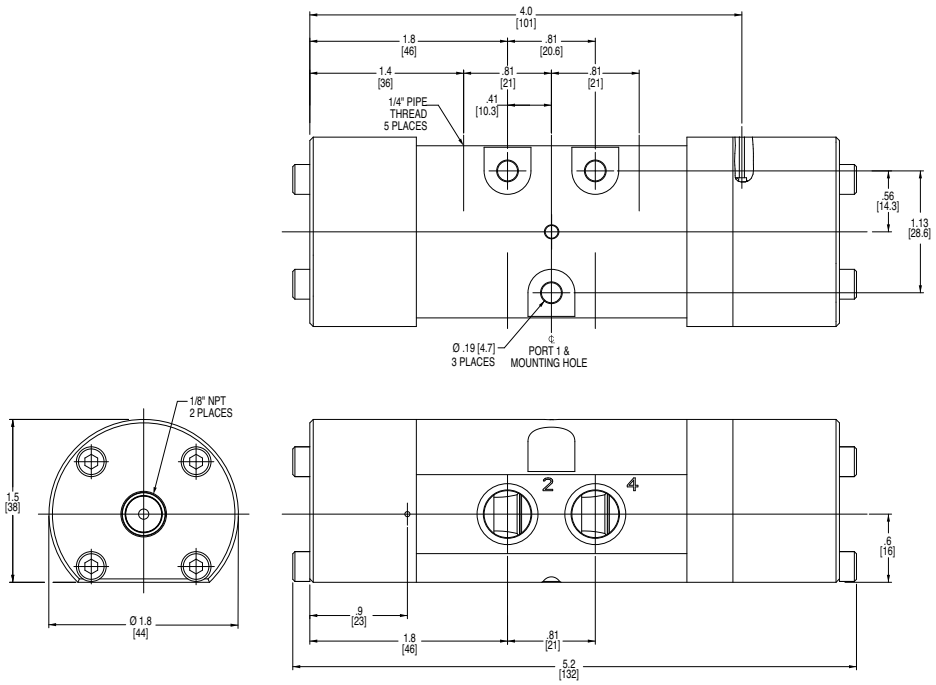


SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 41





SPECIAL SERVICE PILOT

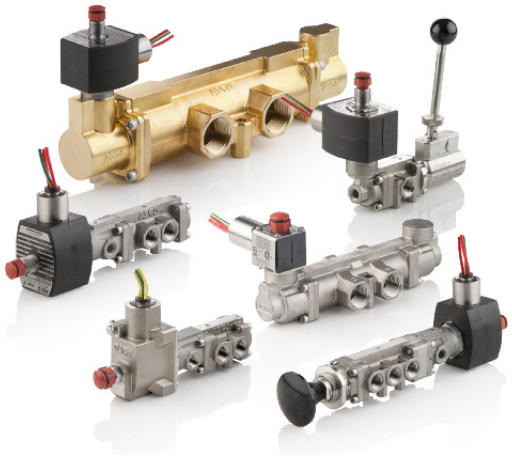
ASCO™ Spool Valves

Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

3/2 SERIES 362/562

Features

- Ideal for valve automation for the oil and gas market
- Reliable, robust design with high flow performance
- Corrosion Resistant - 316L Stainless Steel valve materials make it ideal for offshore and harsh environments
- Solenoid options with Factory Sealed Leads reduces installation time
- Explosion-proof solenoid options
- ATEX & IECEx, UL and CSA global approval options for hazardous locations
- Rated for air, inert gas and sweet dry natural gas
- SIL 3 Capable options
- Manual override option



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel, Brass
Spring	Cobalt Alloy
Seals	FKM (standard), Low Temp NBR (optional)
Core and Plugnut	430F Stainless Steel
Spool	316L Stainless Steel

Electrical

Solenoid Options	Insulation Class	Wattage	Spare Coil Part Number
Intrinsically Safe	H	0.48 W	298006
Ultra Low Power Explosionproof	F/H	0.55/0.7 W	274714/274914
Ultra Low Power General Purpose	F/H	0.55/0.7 W	238710/238910
Ultra Low Power DIN	F	0.55 W	238712
Intrinsically Safe DIN	H	0.48 W	298008
Electronically Enhanced General Purpose	H	1.2 to 1.5 W	250404
Electronically Enhanced Explosion Proof Div. 2	H	1.2 to 1.5 W	250504
Standard Low Power	F/H	1.4 W/1.8 W	274714/274914
Compact Low Power	F	1.8 W	437962
Standard AC	F/H	10.1 W	274614/274814
Standard DC	F/H	11.6 W	274714/274914
Stainless Steel Encapsulated	F	1.8 W	505434
Surge Suppression	F/F/H	0.75/1.7/2.0 W	276007/276007/523130

IMPORTANT: Supervisory & leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.

Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)	Coil Resistance at 68˚F (20˚C) (Ohms)
Ultra Low Power	0.55 W	12V	34.0	3.63	255
		24V	17.0	1.80	1025
		48V	8.5	0.91	4080
		125V	3.2	0.34	27,400
Standard Low Power	1.4 W	12 V	83.5	13.9	102
		24 V	42.0	7.0	410
Compact Low Power	1.8 W	12 V	95.0	20.0	80
		24 V	47.0	10.0	320
Stainless Steel Encapsulated	1.8 W	12 V	99.0	18.0	80
		24 V	47.0	10.0	320

Minimum Ambient/Fluid Temp.*

Brass	Stainless Steel
FKM: -4˚F (-20˚C)	-4˚F (-20˚C)
NBR: -40˚F (-40˚C)	-40˚F (-40˚C)

Note: Low Temperature option for all manual component options: -20˚F to 200˚F (-29˚C to 93˚C)

**See next page for solenoid temperature ranges.*

Solenoid Enclosures

Standard: Explosionproof and Watertight, Types 4X, 6, & 6P.

Refer to Engineering Section for fluid and temp. compatibility.

Approvals

Solenoid Only:

UL and CSA certified for Class I, Div. 1 locations - (except General Purpose and Electronically Enhanced voltage ranging)

UL and CSA certified for Class I, Div. 2 (Explosion-Proof Electronically Enhanced voltage ranging and JS2D Junction Box)

ATEX, IECEx: Ex db mb - All Solenoid except Compact Low Power and Stainless Steel Encapsulated

ATEX, IECEx: Ex db: Stainless Steel Encapsulated Solenoid

ATEX, IECEx: Ex eb mb: JS2D Junction Box

SIL 3 Capable options (Excludes manual lever reset constructions)

Refer to Engineering for details.

Important

These solenoid valves are intended for use on clean dry air, inert gas, or sweet dry natural gas filtered to 40 micron or better. The dew point of the media should be at least 10˚C (18˚F) below the minimum temperature to which any portion of the air, inert gas or sweet dry natural gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with FKM and LT NBR elastomers. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

SPECIAL SERVICE PILOT

ASCO™ Spool Valves

Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

Solenoid Derivatives

Solenoid Operator		Watts		Ambient Temp./Fluid AC		Ambient Temp./Fluid DC	
		AC	DC	Min .˚F (˚C)	Max. ˚F (˚C)	Min. ˚F (˚C)	Max. ˚F (˚C)
Solenoid							
	EV Explosion-Proof Solenoid	10.1	11.6 1.4 1.7* 0.55 0.75*	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W and 1.7 W 149 (65) For 0.55 W and 0.75 W
	EVHT High Temperature Explosion-Proof Solenoid	10.1	11.6 2.0* 1.8 0.7	-4 (-20) FKM -40 (-40) LT NBR	140 (60)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 176 (80) For 1.8 W and 2.0 W ① 176 (80) For 0.7 W
	Compact Low Power	-	1.8	-	-	-4 (-20) FKM -40 (-40) LT NBR	200 (93)
	Intrinsically Safe (IS) (Conduit)	-	0.48	-	-	-4 (-20) FKM -40 (-40) LT NBR	149 (65)
	Electronically Enhanced Voltage Ranging General Purpose	1.2 to 1.5	1.2 to 1.5	140 (60) - Max -4 (-20) FKM & -40 (-40) LT NBR - Min			
	Electronically Enhanced Voltage Ranging Explosion-Proof - Div. 2	1.2 to 1.5	1.2 to 1.5	140 (60) - Max -4 (-20) FKM & -40 (-40) LT NBR - Min			
	Intrinsically Safe DIN (ISSC)	-	0.48	-	-	-4 (-20) FKM -40 (-40) LT NBR	149 (65)
	DIN Connection General Purpose	10.1	11.6 1.4 0.55	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W 149 (65) For 0.55 W
	General Purpose Red-Hat II Solenoid (Conduit)	10.1	11.6 1.4 0.55	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W 149 (65) For 0.55 W
	General Purpose High Temperature (Class H) Red-Hat II Solenoid (Conduit)	10.1	11.6 1.8 0.7	-4 (-20) FKM -40 (-40) LT NBR	140 (60)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 176 (80) For 1.8 W 176 (80) For 0.7 W
	Stainless Steel Encapsulated 22mm coil Explosion-Proof, Div. 1	-	1.8	-	-	-4 (-20) FKM	194 (90)
Enclosures							
	JS2D Class I, Div. 2 Junction Box	10.1	11.6 1.4 1.7* 0.55 0.75	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	115 (46) (ATEX, IECEx) & 131 (55) (UL, CSA) For 11.6 W 140 (60) For 1.4 W and 1.7 W 149 (65) For 0.55 W and 0.75 W
	JSIS Intrinsically Safe - Class I, Div. 1 & 2 Junction Box	-	0.48	-	-	-4 (-20) FKM -40 (-40) LT NBR	149 (65)
	JBEF Class I, Div. 1 Junction Box	10.1	11.6 1.4 1.7* 0.55 0.75*	-4 (-20) FKM -40 (-40) LT NBR	125 (52)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 140 (60) For 1.4 W 149 (65) For 0.55 W
	JBEFHT Class I, Div. 1 (Class H) High-Temperature Junction Box	10.1	11.6 2.0* 1.8 0.7	-4 (-20) FKM -40 (-40) LT NBR	140 (60)	-4 (-20) FKM -40 (-40) LT NBR	131 (55) For 11.6 W 165 (74) For 1.8 W and 2.0 W 176 (80) For 0.7 W

① 165 (74) (ATEX, IECEx) for LTNBR versions only. FKM - Standard version with FKM seals; LTNBR - Low Temperature NBR version. *Surge suppression.
Note: For additional constructions, please visit the 362/562 configurator at www.asco.com.

How to order

8 362 A 1 01 H1 1 1 2 F1

Connection Type
8 = NPT

Product Series
362 = 3 way for Process Automation
562 = 4 way for Process Automation

(See configurator available at www.asco.com)

Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ① Stainless Steel	Base Catalog Number ① Brass	Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ② Min.	Main Operating Pressure Differential psi (bar) ② Max.	External Pilot Pressure psi (bar) ② Min.	External Pilot Pressure psi (bar) ② Max.	Max. Fluid Temp. ③ °F (°C)	Product Weight lbs (kgs)	Const. Ref.
3/2 - Normally Closed / Internally Piloted												
1/4"	8362A101H181	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.13 (0.97)	1
1/4"	8362A102H181	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.33 (1.06)	2
1/4"	8362A104H181	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.38 (1.08)	3
1/4"	8362A105H181	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.4 (1.09)	4
1/4"	8362A102H181	-	Single Solenoid,Palm Button /Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.79 (1.27)	6
1/4"	8362A104H181	-	Single Solenoid With Latching/Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.52 (1.6)	7
1/4"	8362A105H181	-	Single Solenoid, Palm Button With Latching/Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.45 (1.57)	8
1/4"	8362A101H181	-	Single Solenoid/Spring Return	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.84 (1.29)	5
1/4"	-	8362BA01H181	Single Solenoid/Spring Return	90° Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	2.02 (0.92)	49
1/4"	8362A141H181	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H181	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A161H181	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H181	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A181H181	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H181	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
3/8"	8362A201H181	-	Single Solenoid/Spring Return	90° Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.42 (1.55)	35
3/8"	8362A241H181	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A261H181	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A281H181	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H181	Single Solenoid/Spring Return	90° Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H181	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC61H181	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC81H181	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
1/2"	8362A301H181	-	Single Solenoid/Spring Return	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.36 (1.52)	35
1/2"	8362A341H181	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A361H181	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A381H181	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H181	Single Solenoid/Spring Return	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H181	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD61H181	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD81H181	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.80 (1.72)	47
3/4"	8362A401H181	-	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.76 (4.88)	39
3/4"	-	8362AE01H181	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.9 (5.4)	39
1"	8362A501H181	-	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.45 (4.74)	39
1"	-	8362AF01H181	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.48 (5.21)	39
3/2 - Normally Closed / Externally Piloted												
1/4"	8362A101H101	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.02 (0.92)	1
1/4"	8362A102H101	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.33 (1.06)	2
1/4"	8362A104H101	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.38 (1.08)	3
1/4"	8362A105H101	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.4 (1.09)	4
1/4"	8362A102H101	-	Single Solenoid,Palm Button /Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.79 (1.27)	6
1/4"	8362A104H101	-	Single Solenoid With Latching/Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.52 (1.6)	7
1/4"	8362A105H101	-	Single Solenoid, Palm Button With Latching/Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.45 (1.57)	8
1/4"	8362A101H101	-	Single Solenoid/Spring Return	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	2.84 (1.29)	5
1/4"	-	8362BA01H101	Single Solenoid/Spring Return	90° Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	2.02 (0.92)	49
1/4"	8362A141H101	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H101	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A161H101	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H101	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A181H101	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H101	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
3/8"	8362A201H101	-	Single Solenoid / Spring return	90° Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.42 (1.55)	35
3/8"	8362A241H101	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A261H101	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.8 (4.2)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A281H101	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.8 (4.2)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H101	Single Solenoid / Spring return	90° Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H101	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC61H101	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC81H101	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	8362A301H101	-	Single Solenoid / Spring return	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.36 (1.52)	35
1/2"	8362A341H101	-	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A361H101	-	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A381H101	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H101	Single Solenoid / Spring return	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H101	Solenoid, Manual Lever Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD61H101	Solenoid Spring Return, Latches In Energized Position	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD81H101	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90° Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/4"	8362A401H101	-	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.86 (4.93)	39
3/4"	-	8362AE01H101	Single Solenoid/Spring Return	90° Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.9 (5.4)	39
1"	8362A501H101	-	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.58 (4.8)	39
1"	-	8362AF01H101	Single Solenoid/Spring Return	90° Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.48 (5.21)	39

① Please refer to the How to Order section to complete base catalog number selection.

② MOPD values specified are for Compact Low Power versions (1.8 W). Please visit our website to obtain MOPD's per all solenoid types.

③ Maximum fluid temperature cannot exceed solenoid fluid temperature.

④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31°F (-35°C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ①		Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ②		External Pilot Pressure psi (bar) ②		Max. Fluid Temp. ③ ˚F (˚C)	Product Weight lbs (kgs)	Const. Ref.
	Stainless Steel	Brass				Min.	Max.	Min.	Max.			
3/2 - Normally Open / Internally Piloted												
1/4"	8362A101H191	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.02 (0.92)	9
1/4"	8362A102H191	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.33 (1.06)	10
1/4"	8362A104H191	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.38 (1.08)	11
1/4"	8362A105H191	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.4 (1.09)	12
1/4"	8362A102H191	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.79 (1.27)	14
1/4"	8362A104H191	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.52 (1.6)	15
1/4"	8362A105H191	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.45 (1.57)	16
1/4"	8362A101H191	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	2.84 (1.29)	13
1/4"	-	8362BA01H191	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	2.02 (0.92)	49
1/4"	8362A141H191	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H191	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A161H191	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H191	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
1/4"	8362A181H191	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	25 (1.7)	150 (10.3)	-	-	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H191	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.10 (1.41)	45
3/8"	8362A201H191	-	Single Solenoid/Spring Return	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.42 (1.55)	35
3/8"	8362A241H191	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A261H191	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	8362A281H191	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.8 (4.1)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H191	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H191	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
3/8"	-	8362AC61H191	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
3/8"	-	8362AC81H191	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.4)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
1/2"	8362A301H191	-	Single Solenoid/Spring Return	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.36 (1.52)	35
1/2"	8362A341H191	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A361H191	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	8362A381H191	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H191	Single Solenoid/Spring Return	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H191	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
1/2"	-	8362AD61H191	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
1/2"	-	8362AD81H191	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	-	-	200 (93)	1.72 (3.80)	47
3/4"	8362A401H191	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.76 (4.88)	39
3/4"	-	8362AE01H191	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.9 (5.4)	39
1"	8362A501H191	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	10.45 (4.74)	39
1"	-	8362AF01H191	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	-	-	200 (93)	11.48 (5.21)	39
3/2 - Normally Open / Externally Piloted												
1/4"	8362A101H111	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.02 (0.92)	9
1/4"	8362A102H111	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.33 (1.06)	10
1/4"	8362A104H111	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.38 (1.08)	11
1/4"	8362A105H111	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.4 (1.09)	12
1/4"	8362A102H111	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.79 (1.27)	14
1/4"	8362A104H111	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.52 (1.6)	15
1/4"	8362A105H111	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.45 (1.57)	16
1/4"	8362A101H111	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.84 (1.29)	13
1/4"	-	8362BA01H111	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	2.02 (0.92)	49
1/4"	8362A141H111	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA41H111	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A161H111	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA61H111	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
1/4"	8362A181H111	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	3.88 (1.76)	43
1/4"	-	8362BA81H111	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.10 (1.41)	45
3/8"	8362A201H111	-	Single Solenoid/Spring Return	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.42 (1.55)	35
3/8"	8362A241H111	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A261H111	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	8362A281H111	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
3/8"	-	8362AC01H111	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.02 (1.82)	35
3/8"	-	8362AC41H111	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC61H111	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/8"	-	8362AC81H111	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	8362A301H111	-	Single Solenoid/Spring Return	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.36 (1.52)	35
1/2"	8362A341H111	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A361H111	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	8362A381H111	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.24 (1.47)	47
1/2"	-	8362AD01H111	Single Solenoid/Spring Return	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.91 (1.77)	35
1/2"	-	8362AD41H111	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD61H111	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
1/2"	-	8362AD81H111	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.80 (1.72)	47
3/4"	8362A401H111	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.86 (4.93)	39
3/4"	-	8362AE01H111	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.9 (5.4)	39
1"	8362A501H111	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	10.58 (4.8)	39
1"	-	8362AF01H111	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	11.48 (5.21)	39

① Please refer to the How to Order section to complete base catalog number selection.
② MOPD values specified are for Compact Low Power versions (1.8 W).
Please visit our website to obtain MOPD's per all solenoid types.
③ Maximum fluid temperature cannot exceed solenoid fluid temperature.
④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ① Stainless Steel	Base Catalog Number ① Brass	Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ② Min.	Main Operating Pressure Differential psi (bar) ② Max.	External Pilot Pressure psi (bar) ② Min.	External Pilot Pressure psi (bar) ② Max.	Max. Fluid Temp. ③ ˚F (˚C)	Product Weight lbs (kgs)	Const. Ref.
3/2 - Normally Closed Detent/Internally Piloted												
1/4"	8362A103H1D1	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	17
1/4"	8362A103H1D1	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	18
3/2 - Normally Closed Detent/Externally Piloted												
1/4"	8362A103H141	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	17
1/4"	8362A103H141	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	18
3/2 - Normally Open Detent/Internally Piloted												
1/4"	8362A103H1E1	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	19
1/4"	8362A103H1E1	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	-	-	200 (93)	2.51	20
3/2 - Normally Open Detent/Externally Piloted												
1/4"	8362A103H151	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	19
1/4"	8362A103H151	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	2.51	20
3/2 - Detent/Internally Piloted												
1/4"	8362A106H1G1	-	Dual Solenoid	Straight	2.0 (1.7)	15 (1.0)	150 (10.3)	-	-	200 (93)	4.49	21
1/4"	8362A106H1G1	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	15 (1.0)	150 (10.3)	-	-	200 (93)	4.49	22
1/4"	-	8362BA06H1G1	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	15 (1.0)	150 (10.3)	-	-	200 (93)	3.67 (1.67)	51
3/2 - Detent/Externally Piloted												
1/4"	8362A106H171	-	Dual Solenoid	Straight	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	4.49	21
1/4"	8362A106H171	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	4.49	22
1/4"	-	8362BA06H1G1	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	-	-	200 (93)	3.67 (1.67)	51
5/2 - Internally Piloted												
1/4"	8562A101H1C1	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.61 (1.64)	23
1/4"	8562A102H1C1	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.92 (1.78)	24
1/4"	8562A104H1C1	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.96 (1.8)	25
1/4"	8562A105H1C1	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	3.99 (1.81)	26
1/4"	8562A102H1C1	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.38 (1.99)	28
1/4"	8562A104H1C1	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	5.11 (2.32)	29
1/4"	8562A105H1C1	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	5.04 (2.29)	30
1/4"	8562A101H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.43 (2.01)	27
1/4"	-	8562BA01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	N/A	N/A	200 (93)	2.55 (1.16)	50
1/4"	8562A141H1C1	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA41H1C1	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	25 (1.7)	150 (10.3)	N/A	N/A	200 (93)	3.52 (1.60)	46
1/4"	8562A161H1C1	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA61H1C1	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	N/A	N/A	200 (93)	3.52 (1.60)	46
1/4"	8562A181H1C1	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA81H1C1	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	40 (2.8)	150 (10.3)	N/A	N/A	200 (93)	3.52 (1.60)	46
3/8"	8562A201H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.98 (1.8)	36
3/8"	8562A241H1C1	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
3/8"	8562A261H1C1	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
3/8"	8562A281H1C1	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.8 (4.2)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
3/8"	-	8562AC01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.72 (2.14)	36
3/8"	-	8562AC41H1C1	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC61H1C1	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC81H1C1	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.5)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
1/2"	8562A301H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.87 (1.75)	36
1/2"	8562A341H1C1	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
1/2"	8562A361H1C1	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
1/2"	8562A381H1C1	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.6 (4.8)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	3.75 (1.70)	48
1/2"	-	8562AD01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.55 (2.06)	36
1/2"	-	8562AD41H1C1	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD61H1C1	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD81H1C1	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.0 (4.3)	40 (2.8)	150 (10.3)	NA	NA	200 (93)	4.58 (2.08)	48
3/4"	8562A401H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	13.92 (6.31)	40
3/4"	-	8562AE01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	15.5 (7.03)	40
1"	8562A501H1C1	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	13.41 (6.08)	40
1"	-	8562AF01H1C1	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	50 (3.4)	150 (10.3)	N/A	N/A	200 (93)	14.82 (6.72)	40
3/8"	8362A206H1C1	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	4.56 (2.06)	37
3/8"	-	8362AC06H1C1	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.04 (2.28)	37
1/2"	8362A306H1C1	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	4.49 (2.03)	37
1/2"	-	8362AD06H1C1	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	4.93 (2.23)	37
3/8"	8562A206H1C1	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.12 (2.32)	38
3/8"	-	8562AC06H1C1	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.74 (2.6)	38
1/2"	8562A306H1C1	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.01 (2.27)	38
1/2"	-	8562AD06H1C1	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	20 (1.4)	150 (10.3)	NA	NA	200 (93)	5.57 (2.52)	38
3/4"	8362A406H1C1	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	11.77 (5.34)	41
3/4"	-	8362AE06H1C1	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	12.68 (5.75)	41
1"	8362A506H1C1	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	15.12 (6.86)	41
1"	-	8362AF06H1C1	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	16.71 (7.58)	41
3/4"	8562A406H1C1	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	14.61 (6.63)	42
3/4"	-	8562AE06H1C1	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	15.51 (7.04)	42
1"	8562A506H1C1	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	13.24 (6.01)	42
1"	-	8562AF06H1C1	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	20 (1.4)	150 (10.3)	N/A	N/A	200 (93)	14.83 (6.73)	42

① Please refer to the How to Order section to complete base catalog number selection.
② MOPD values specified are for Compact Low Power versions (1.8 W). Please visit our website to obtain MOPD's per all solenoid types.
③ Maximum fluid temperature cannot exceed solenoid fluid temperature.
④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

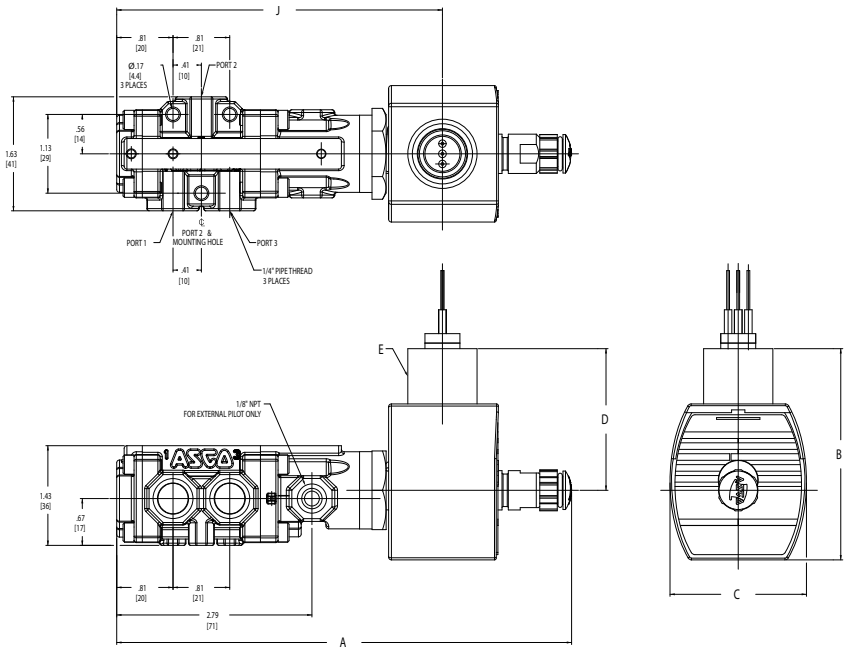
Specifications English units (Metric)

Pipe Size (in)	Base Catalog Number ①		Function ④	Solenoid Orientation	Flow Cv (Kv)	Main Operating Pressure Differential psi (bar) ②		External Pilot Pressure psi (bar) ②		Max. Fluid Temp. ③ ˚F (˚C)	Product Weight	Const. Ref.
	Stainless Steel	Brass				Min.	Max.	Min.	Max.		lbs (kgs)	
5/2 - Externally Piloted												
1/4"	8562A101H131	-	Single Solenoid/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.61 (1.64)	23
1/4"	8562A102H131	-	Single Solenoid,Palm Button /Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.92 (1.78)	24
1/4"	8562A104H131	-	Single Solenoid With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.96 (1.8)	25
1/4"	8562A105H131	-	Single Solenoid, Palm Button With Latching/Spring Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.99 (1.81)	26
1/4"	8562A102H131	-	Single Solenoid,Palm Button /Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.38 (1.99)	28
1/4"	8562A104H131	-	Single Solenoid With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	5.11 (2.32)	29
1/4"	8562A105H131	-	Single Solenoid, Palm Button With Latching/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	5.04 (2.29)	30
1/4"	8562A101H131	-	Single Solenoid/Spring Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.43 (2.01)	27
1/4"	-	8562BA01H131	Single Solenoid/Spring Return	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	2.55 (1.16)	50
1/4"	8562A141H131	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA41H131	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	3.52 (1.60)	46
1/4"	8562A161H131	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA61H131	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.52 (1.60)	46
1/4"	8562A181H131	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.7)	150 (10.3)	200 (93)	4.06 (1.84)	44
1/4"	-	8562BA81H131	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	40 (2.8)	150 (10.3)	200 (93)	3.52 (1.60)	46
3/8"	8562A201H131	-	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.98 (1.8)	36
3/8"	8562A241H131	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
3/8"	8562A261H131	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
3/8"	8562A281H131	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
3/8"	-	8562AC01H131	Single Solenoid/Spring Return	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.72 (2.14)	36
3/8"	-	8562AC41H131	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC61H131	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
3/8"	-	8562AC81H131	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	4.0 (3.5)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
1/2"	8562A301H131	-	Single Solenoid/Spring Return	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.87 (1.75)	36
1/2"	8562A341H131	-	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
1/2"	8562A361H131	-	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
1/2"	8562A381H131	-	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.8 (5.0)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	3.75 (1.70)	48
1/2"	-	8562AD01H131	Single Solenoid/Spring Return	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.55 (2.06)	36
1/2"	-	8562AD41H131	Solenoid, Manual Lever Return, Latches In Energized Position	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD61H131	Solenoid Spring Return, Latches In Energized Position	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
1/2"	-	8562AD81H131	Solenoid Spring Return, Latches In De-energized Position - No Voltage Release	90˚ Solenoid	5.3 (4.6)	0	200 (13.8)	40 (2.8)	150 (10.3)	200 (93)	4.58 (2.08)	48
3/4"	8562A401H131	-	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	13.92 (6.31)	40
3/4"	-	8562AE01H131	Single Solenoid/Spring Return	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	15.5 (7.03)	40
1"	8562A501H131	-	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	13.41 (6.08)	40
1"	-	8562AF01H131	Single Solenoid/Spring Return	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	50 (3.4)	150 (10.3)	200 (93)	14.82 (6.72)	40
3/8"	8362A206H131	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	4.56 (2.06)	37
3/8"	-	8362AC06H131	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.04 (2.28)	37
1/2"	8362A306H131	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	4.49 (2.03)	37
1/2"	-	8362AD06H131	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	4.93 (2.23)	37
3/8"	8562A206H131	-	Dual Solenoid	90˚ Solenoid	4.8 (4.1)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.12 (2.32)	38
3/8"	-	8562AC06H131	Dual Solenoid	90˚ Solenoid	4.0 (3.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.74 (2.6)	38
1/2"	8562A306H131	-	Dual Solenoid	90˚ Solenoid	5.6 (4.8)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.01 (2.27)	38
1/2"	-	8562AD06H131	Dual Solenoid	90˚ Solenoid	5.0 (4.3)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	5.57 (2.52)	38
3/4"	8362A406H131	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	11.77 (5.34)	41
3/4"	-	8362AE06H131	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	12.68 (5.75)	41
1"	8362A506H131	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	15.12 (6.86)	41
1"	-	8362AF06H131	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	16.71 (7.58)	41
3/4"	8562A406H131	-	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	14.61 (6.63)	42
3/4"	-	8562AE06H131	Dual Solenoid	90˚ Solenoid	13.0 (11.2)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	16.73 (7.59)	42
1"	8562A506H131	-	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	14.45 (6.56)	42
1"	-	8562AF06H131	Dual Solenoid	90˚ Solenoid	15.5 (13.4)	0	200 (13.8)	20 (1.4)	150 (10.3)	200 (93)	16.05 (7.28)	42
5/2 - Detent/Internally Piloted												
1/4"	8562A106H1G1	-	Dual Solenoid	Straight	2.0 (1.7)	15 (1.0)	150 (10.3)	N/A	N/A	200 (93)	6.08 (2.76)	31
1/4"	8562A103H1G1	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.10 (1.86)	32
1/4"	8562A106H1G1	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	15 (1.0)	150 (10.3)	N/A	N/A	200 (93)	6.08 (2.76)	33
1/4"	-	8562BA06H1G1	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	15 (1.0)	150 (10.3)	N/A	N/A	200 (93)	3.67 (1.67)	51
1/4"	8562A103H1G1	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	25 (1.8)	150 (10.3)	N/A	N/A	200 (93)	4.10 (1.86)	34
5/2 - Detent/Externally Piloted												
1/4"	8562A106H171	-	Dual Solenoid	Straight	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	6.08 (2.76)	31
1/4"	8562A103H171	-	Single Solenoid, Palm Button/Manual Return	Straight	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	4.10 (1.86)	32
1/4"	8562A106H171	-	Dual Solenoid	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	6.08 (2.76)	33
1/4"	-	8562BA06H171	Dual Solenoid	90˚ Solenoid	1.8 (1.55)	0	150 (10.3)	15 (1.0)	150 (10.3)	200 (93)	3.67 (1.67)	52
1/4"	8562A103H171	-	Single Solenoid, Palm Button/Manual Return	90˚ Solenoid	2.0 (1.7)	0	150 (10.3)	25 (1.8)	150 (10.3)	200 (93)	4.10 (1.86)	34

① Please refer to the How to Order section to complete base catalog number selection.
② MOPD values specified are for Compact Low Power versions (1.8 W).
Please visit our website to obtain MOPD's per all solenoid types.
③ Maximum fluid temperature cannot exceed solenoid fluid temperature.
④ 1/4", 3/8", and 1/2" brass and stainless steel valves can be used as selector valves with two different input pressures with no change to existing ratings. One pressure applied to Port 1 and another applied to Port 3. 3/4" and 1" valves can be used as selectors with LTNBR versions limited to -31˚F (-35˚C). Operating the valve will allow the user to select which pressure will flow through Port 2. See I&M sheet for more information.

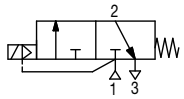
Dimensions: inches (mm)

Const. Ref. 1



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.34	136	6.3	160
A with MO	7.95	202	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	49.53	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
J	4.66	118	4.15	105	4.39	111
J with MO	6.10	155	-	-	-	-

NC INTERNAL PILOT



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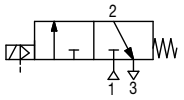
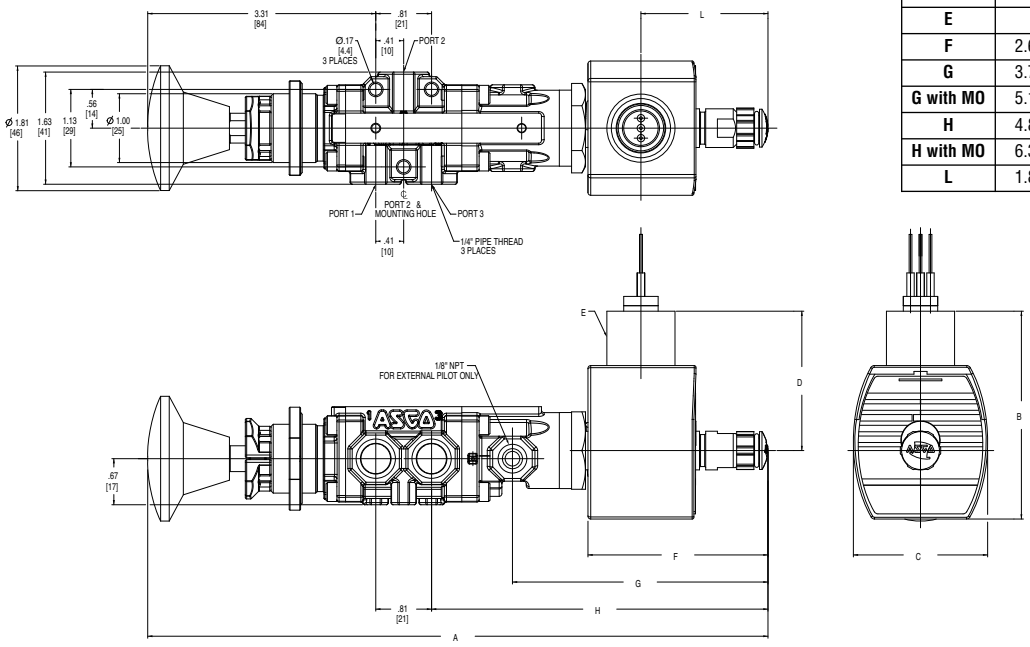


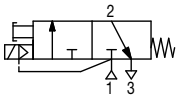
SPECIAL SERVICE PILOT

Const. Ref. 2



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49

NC INTERNAL PILOT



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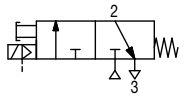
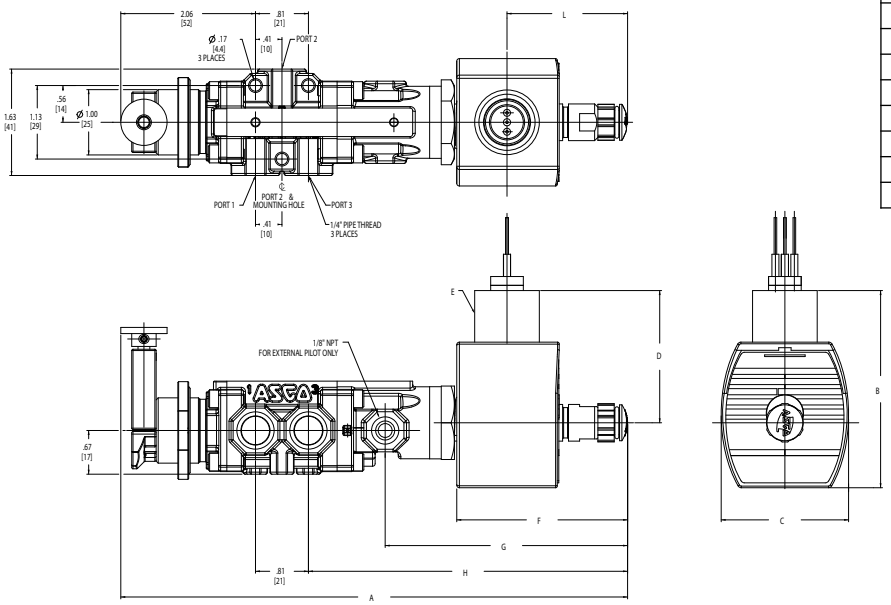


Dimensions: inches (mm)

Const. Ref. 3

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.76	197	6.60	168	7.55	192
A with MO	9.21	234	-	-	-	-
B	3.02	77	2.81	72	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49



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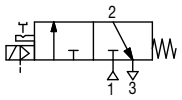
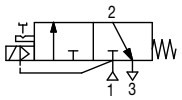
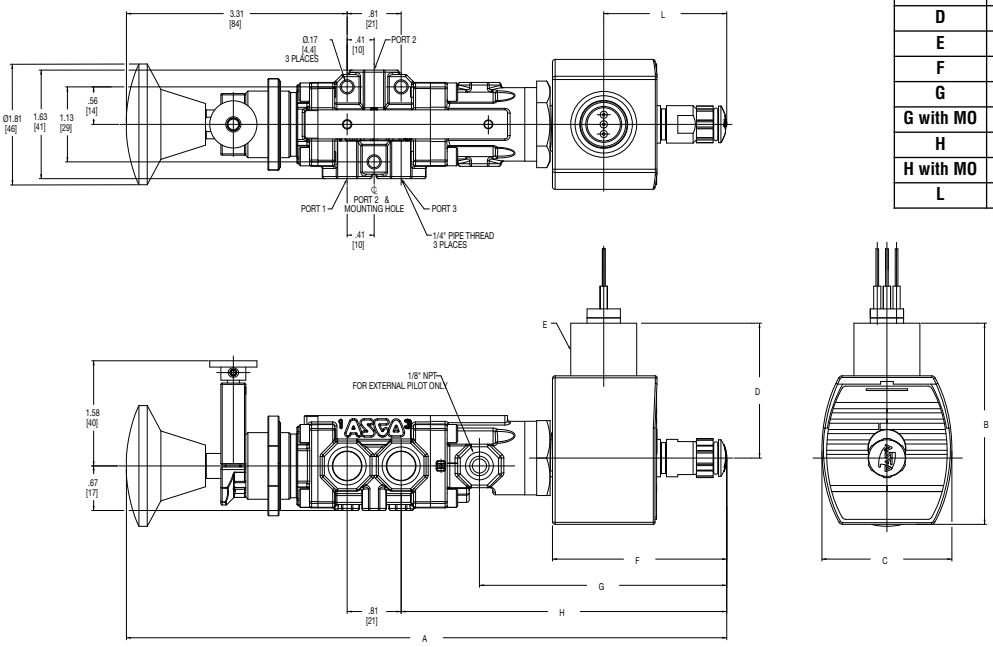


NC INTERNAL PILOT

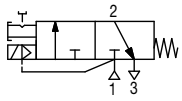


Const. Ref. 4

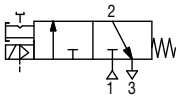
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49



NC INTERNAL PILOT



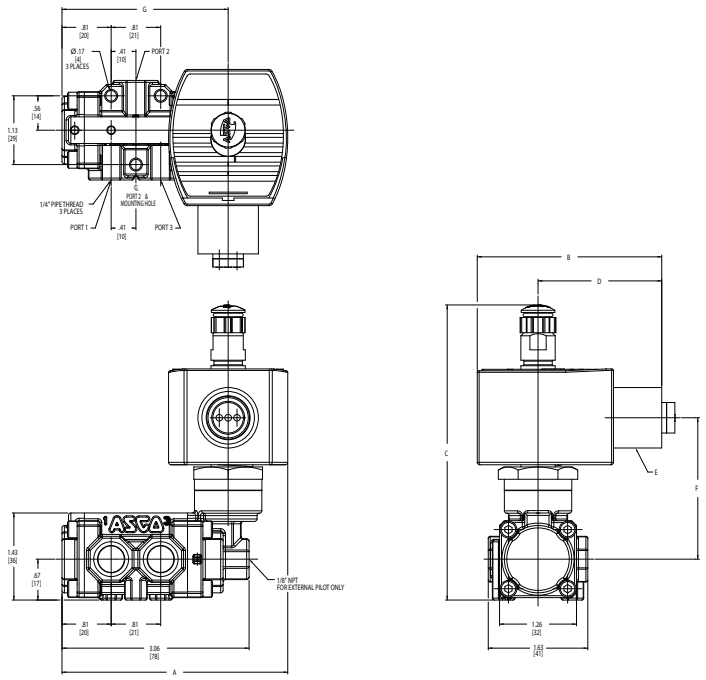
NC EXTERNAL PILOT



SPECIAL SERVICE PILOT

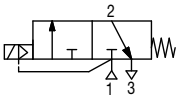
Dimensions: inches (mm)

Const. Ref. 5

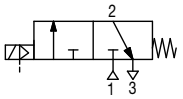


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.70	94	3.35	85	3.55	90
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	2.72	69	2.72	69	2.72	69

NC INTERNAL PILOT

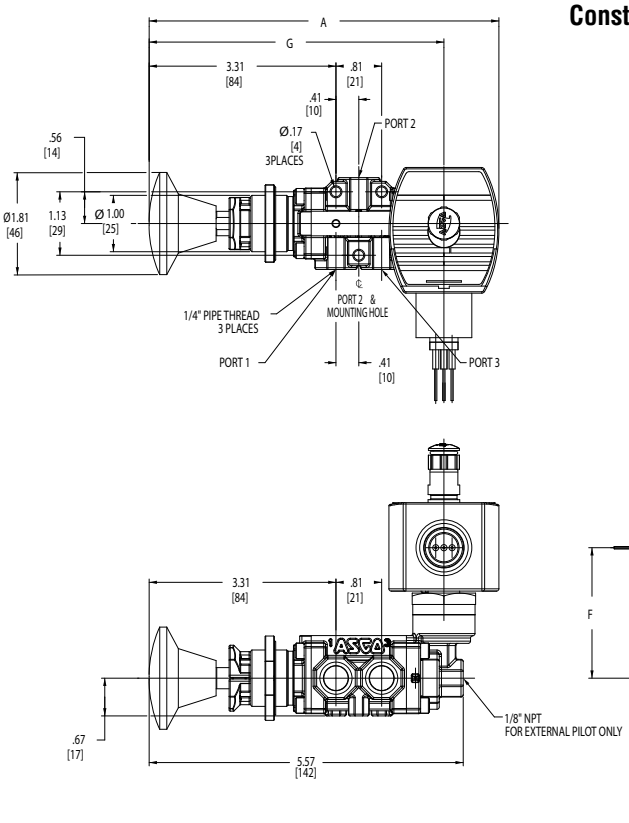


NC EXTERNAL PILOT



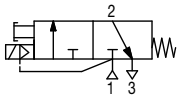
SPECIAL SERVICE PILOT

Const. Ref. 6

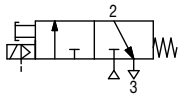


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.20	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133

NC INTERNAL PILOT

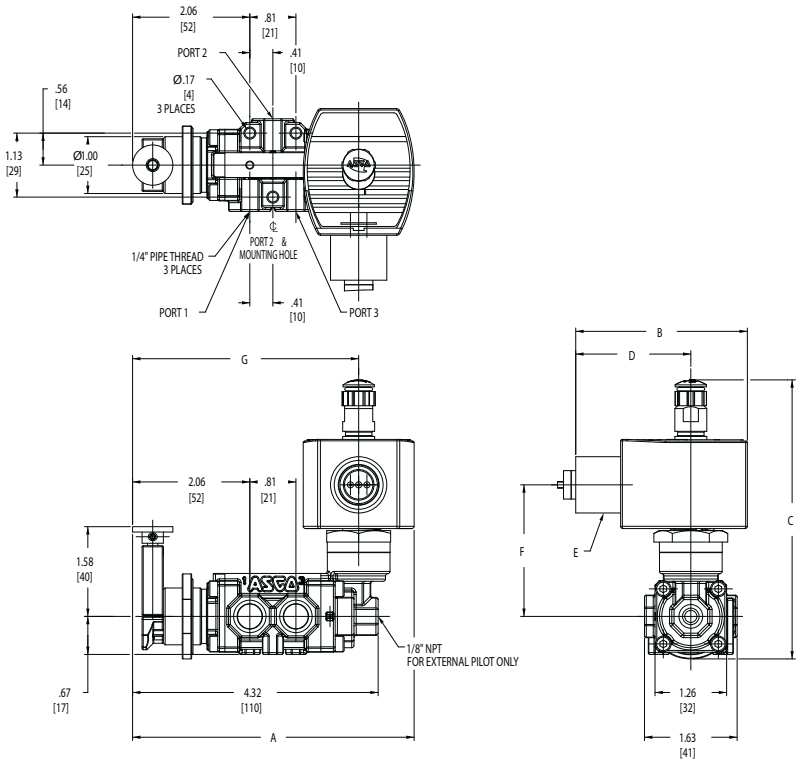


NC EXTERNAL PILOT



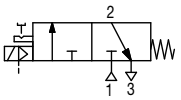
Dimensions: inches (mm)

Const. Ref. 7

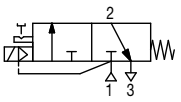


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	4.95	126	4.60	117	4.81	122
B	3.02	77	2.81	71	3.03	77
C	4.91	125	3.75	95	4.65	118
C with MO	6.38	162	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	3.98	101	3.98	101	3.98	101

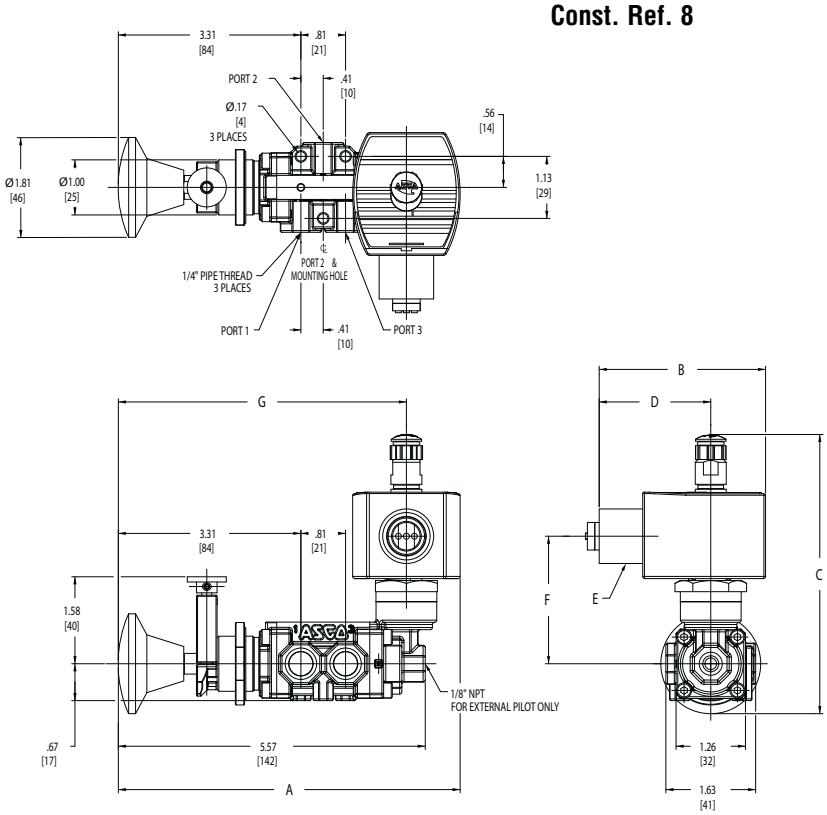
NC EXTERNAL PILOT



NC INTERNAL PILOT

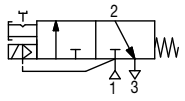


Const. Ref. 8

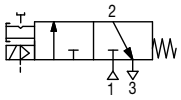


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.2	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133

NC INTERNAL PILOT



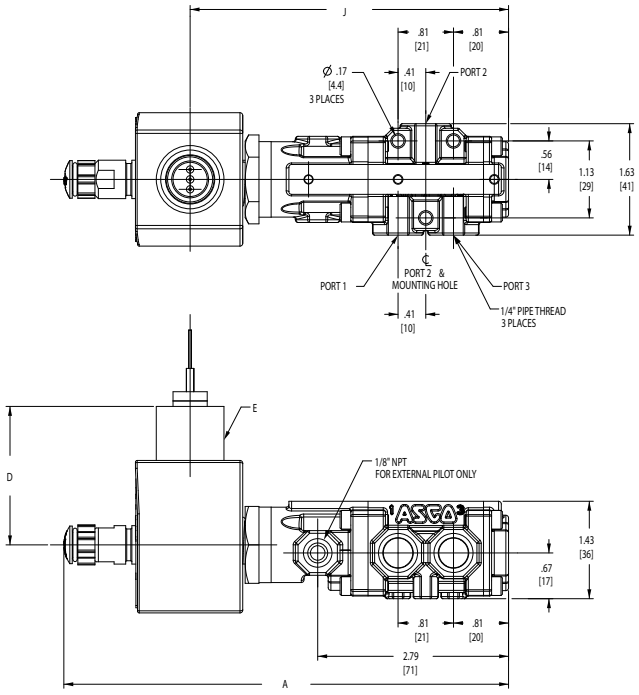
NC EXTERNAL PILOT



SPECIAL SERVICE PILOT

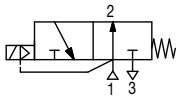
Dimensions: inches (mm)

Const. Ref. 9

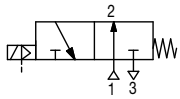


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.34	136	6.3	160
A with MO	7.95	202	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2 NPT		1/2 NPT		1/2" NPT	
F	2.62	67	1.95	45	2.63	67
G	3.71	94	2.55	65	3.5	89
H	4.89	124	4.54	95	4.68	119
J	2.22	118	4.15	105	4.39	111
J with MO	6.10	155	-	-	-	-

NO INTERNAL PILOT

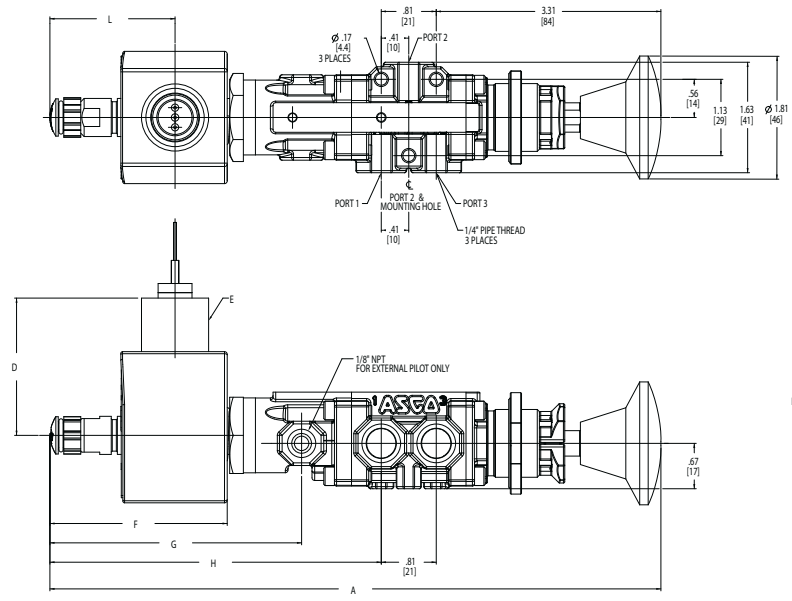


NO EXTERNAL PILOT



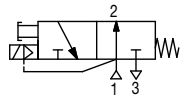
SPECIAL SERVICE PILOT

Const. Ref. 10

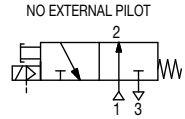


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49

NO INTERNAL PILOT

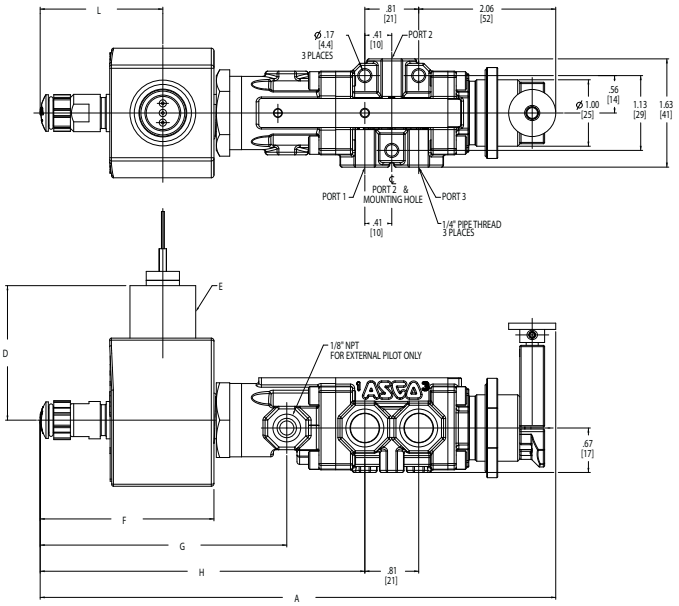


NO EXTERNAL PILOT



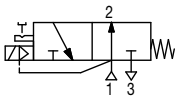
Dimensions: inches (mm)

Const. Ref. 11

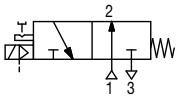


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.76	197	6.60	168	7.55	192
A with MO	9.21	234	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	42	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	1.91	49

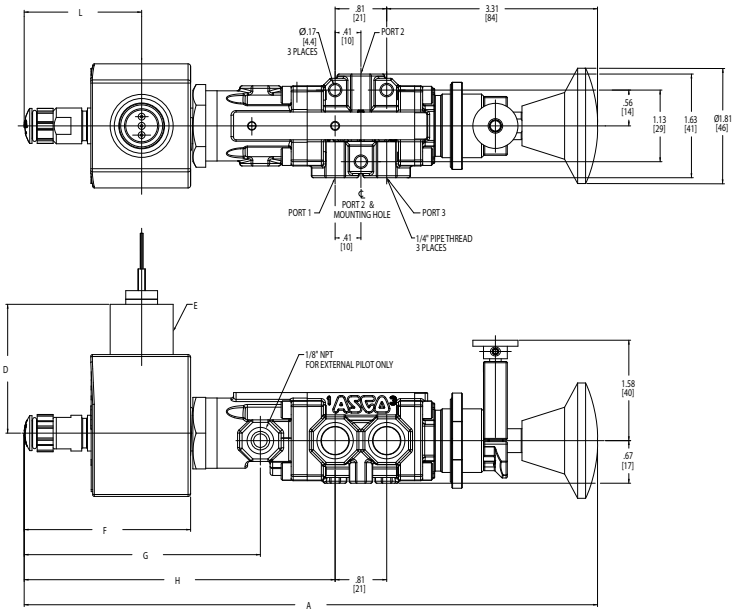
NO INTERNAL PILOT



NO EXTERNAL PILOT

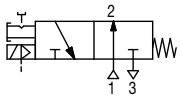


Const. Ref. 12

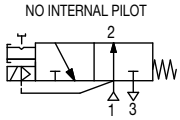


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	8.8	224
A with MO	10.47	266	-	-	-	-
B	3.05	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2 NPT		1/2 NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	4.68	119
H with MO	6.34	161	-	-	-	-
J	7.17	182	6.66	169	6.89	175

NO EXTERNAL PILOT



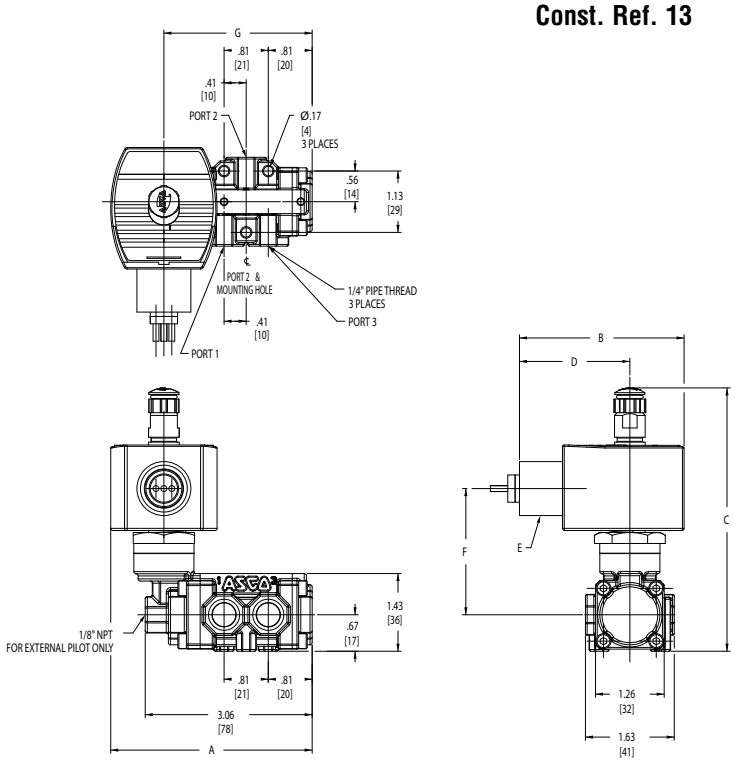
NO INTERNAL PILOT



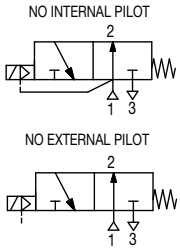
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

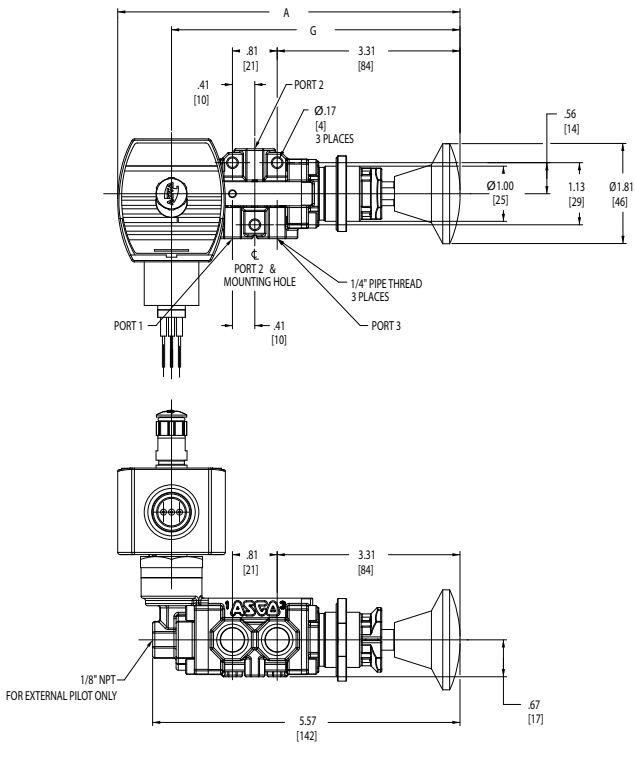
Const. Ref. 13



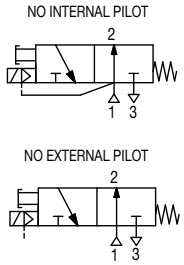
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.70	94	3.34	85	3.55	90
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	2.72	69	2.72	69	2.72	69



Const. Ref. 14



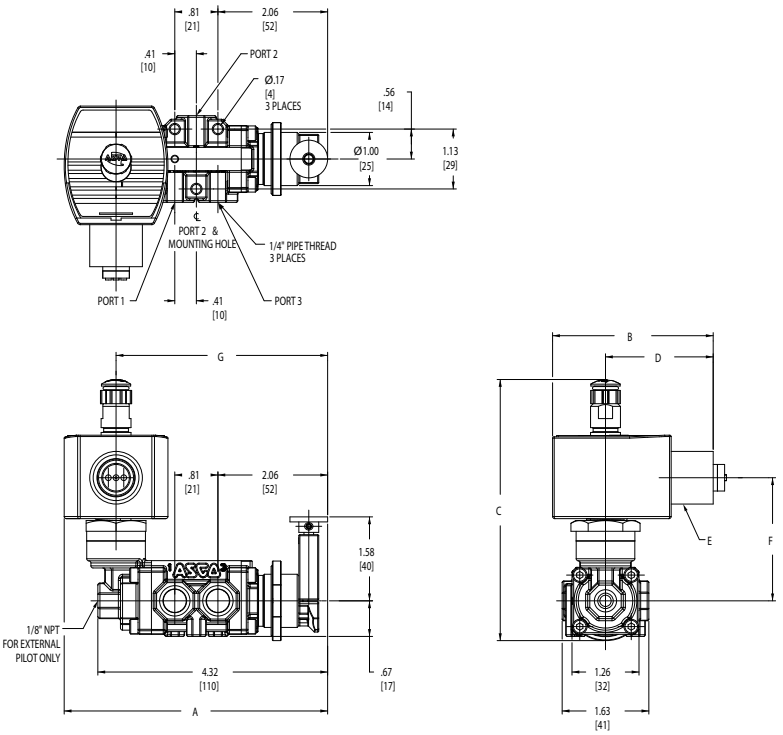
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.20	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133



SPECIAL SERVICE PILOT

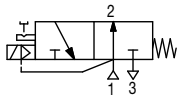
Dimensions: inches (mm)

Const. Ref. 15

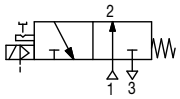


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	4.95	126	4.60	117	4.81	122
B	3.02	77	2.81	71	3.03	77
C	4.91	125	3.75	95	4.7	119
C with MO	6.38	162	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	3.98	101	3.98	101	3.98	101

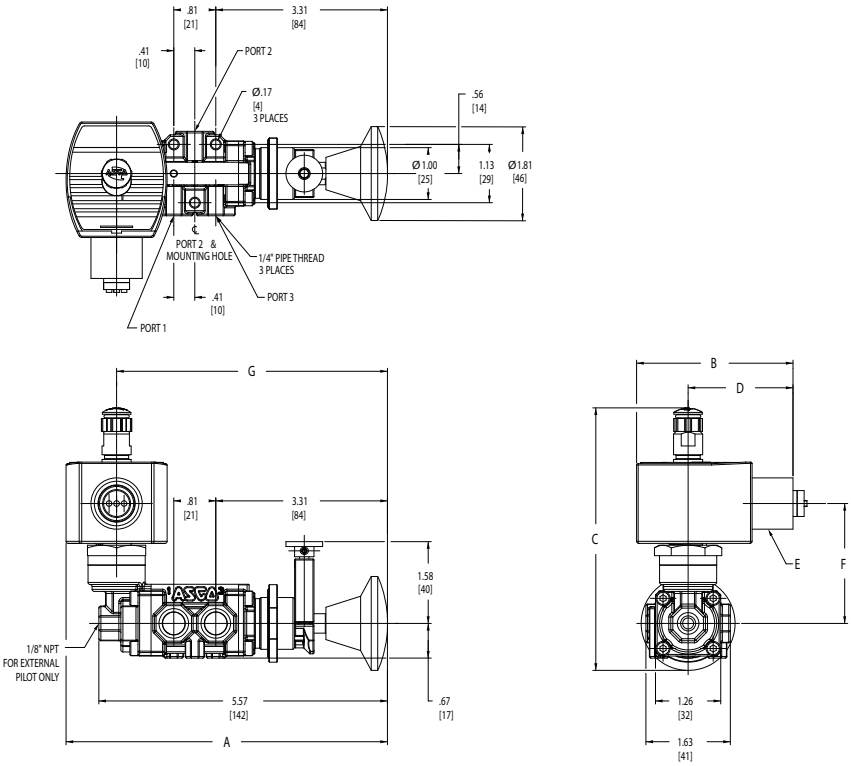
NO INTERNAL PILOT



NO EXTERNAL PILOT

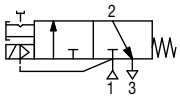


Const. Ref. 16

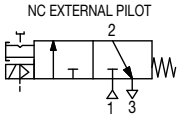


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.2	157	5.85	149	6.06	154
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.32	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.23	133	5.23	133	5.23	133

NC INTERNAL PILOT



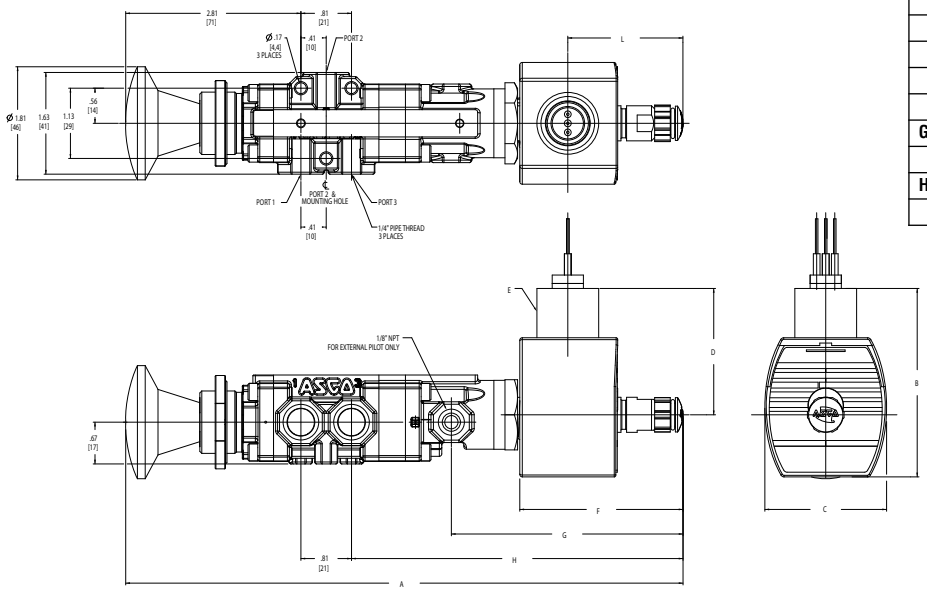
NC EXTERNAL PILOT



SPECIAL SERVICE PILOT

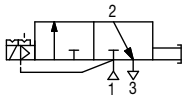
Dimensions: inches (mm)

Const. Ref. 17

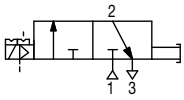


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	8.93	227	7.77	197	8.72	222
A with MO	10.39	264	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45.4457	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	106	5.1	130
H with MO	6.77	172	-	-	-	-
L	1.85	47	1.19	30	1.91	49

NC INTERNAL PILOT

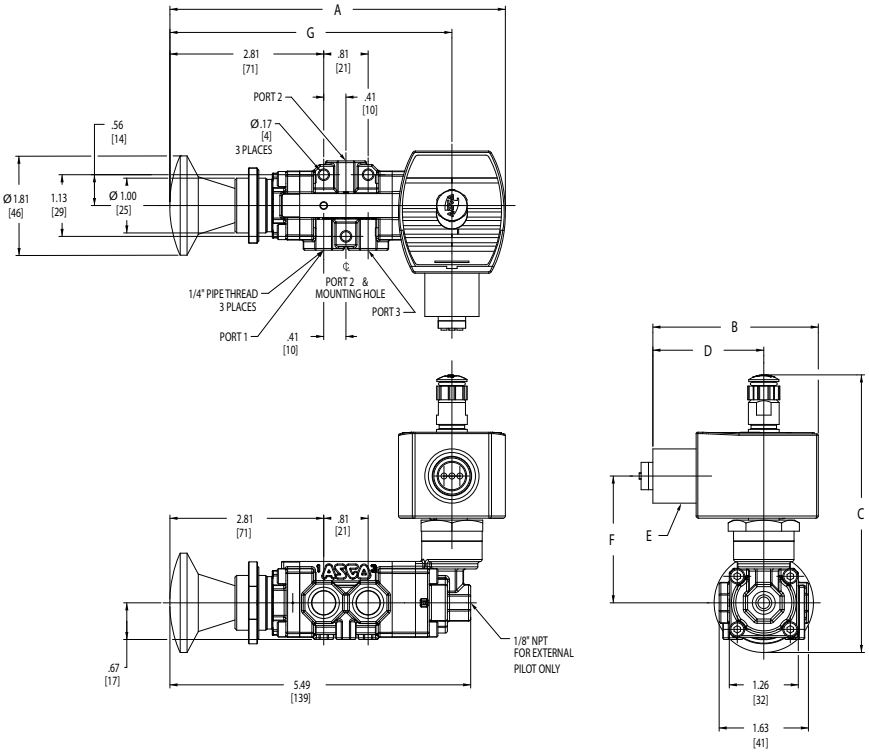


NC EXTERNAL PILOT



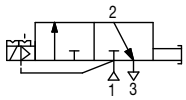
SPECIAL SERVICE PILOT

Const. Ref. 18

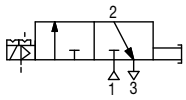


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.12	156	5.77	147	5.98	152
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.15	131	5.15	131		

NC INTERNAL PILOT

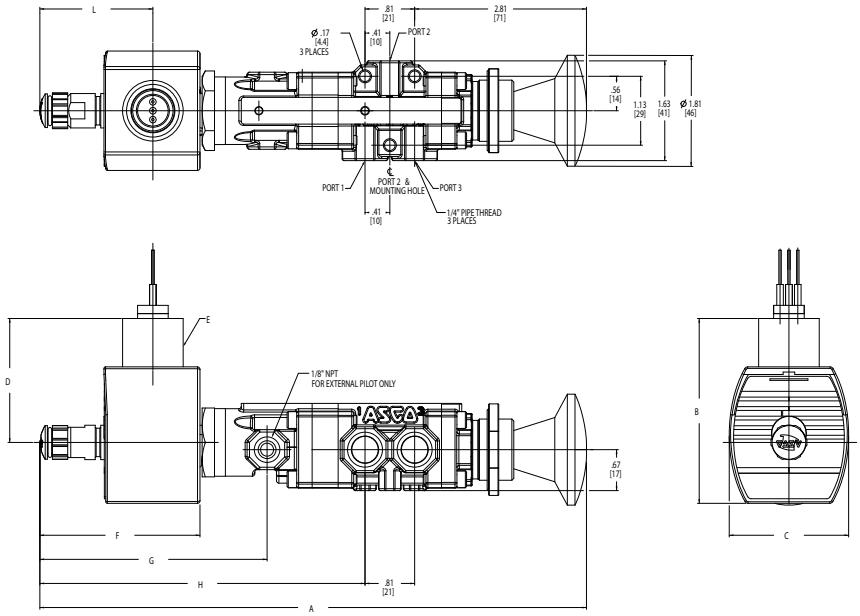


NC EXTERNAL PILOT



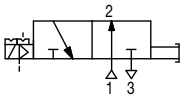
Dimensions: inches (mm)

Const. Ref. 19

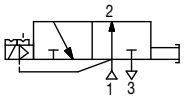


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	8.93	227	7.76	197	8.72	222
C with MO	10.39	264	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	105	5.1	130
H with MO	6.77	172	-	-	-	-
L	1.85	47	1.19	30	1.91	49

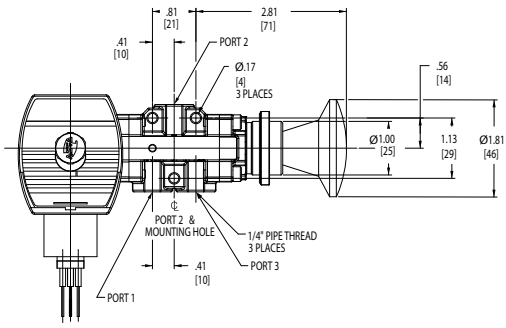
NO EXTERNAL PILOT



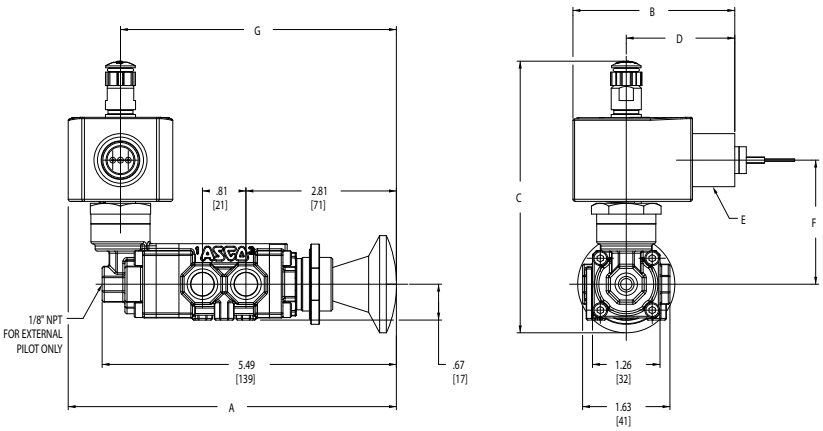
NO INTERNAL PILOT



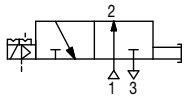
Const. Ref. 20



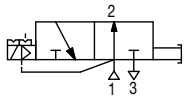
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.12	156	5.77	147	5.98	152
B	3.02	77	2.81	71	3.03	77
C	5.07	129	3.91	99	4.86	123
C with MO	6.54	166	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.32	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	5.15	131	5.15	131	5.15	131



NO EXTERNAL PILOT



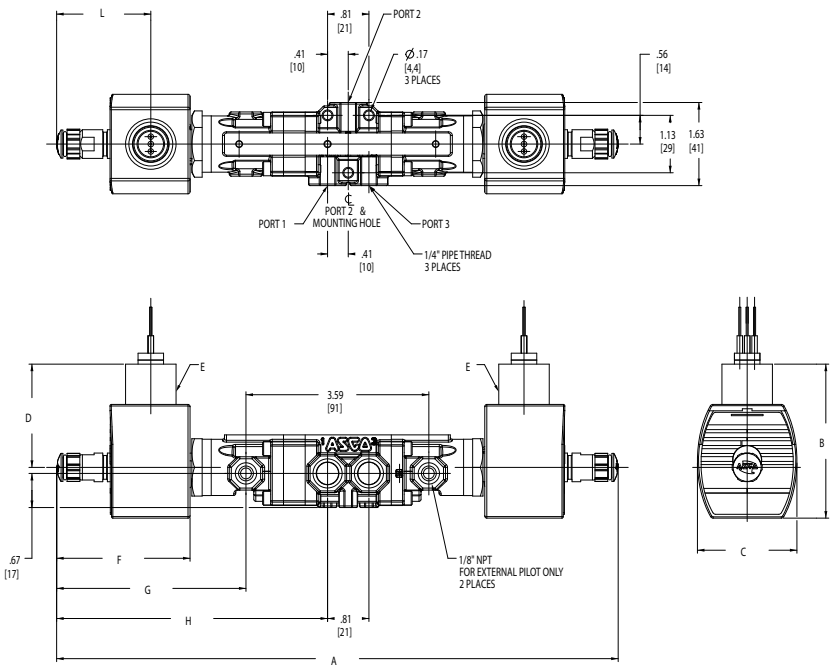
NO INTERNAL PILOT



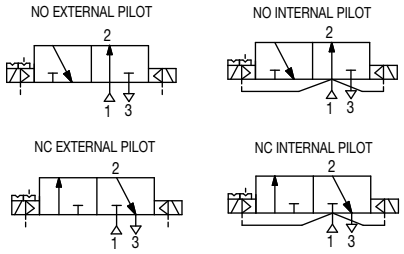
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

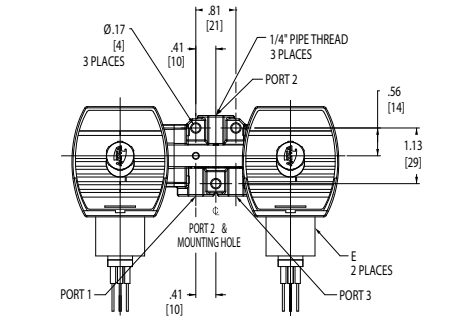
Const. Ref. 21

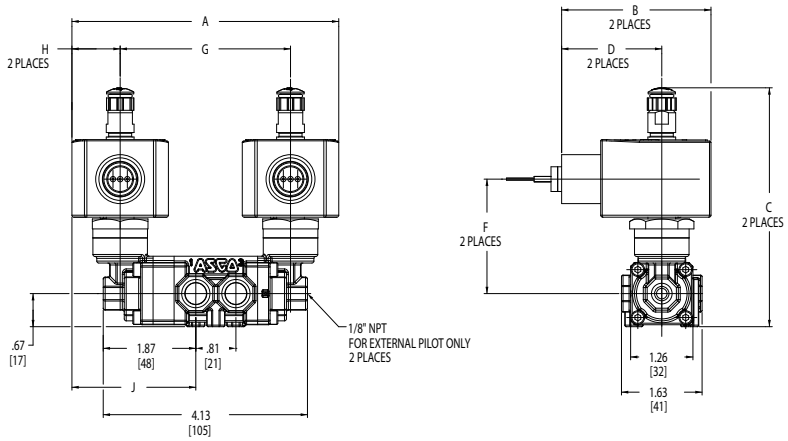


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	11.01	280	8.70	221	10.6	269
A with MO	13.94	354	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2 NPT		1/2 NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	105	5.1	130
H with MO	6.77	172	-	-	-	-

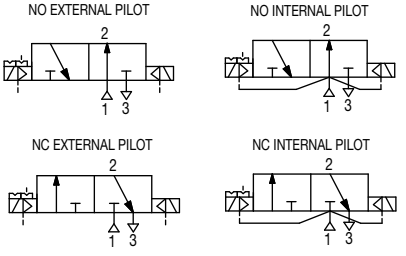


Const. Ref. 22





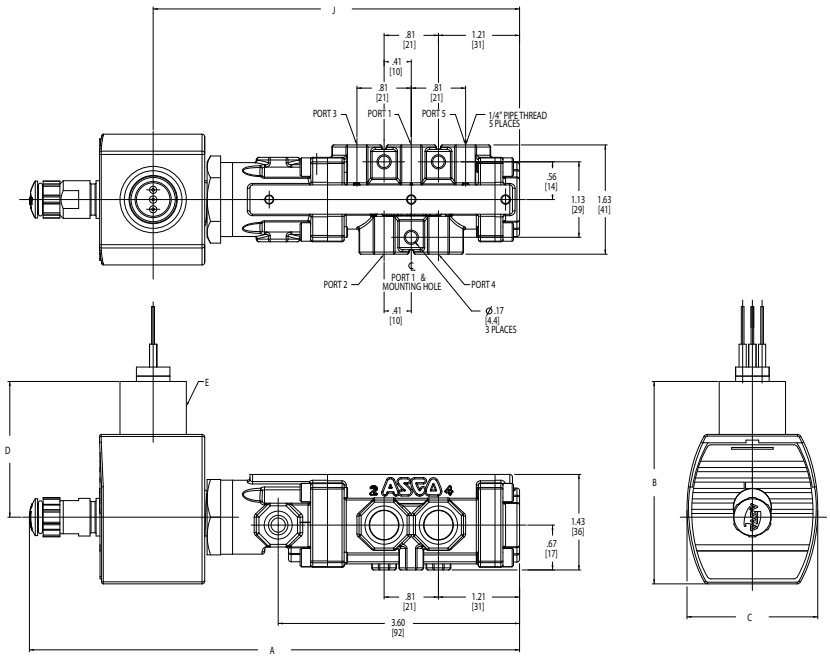
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	5.4	137	4.69	119	5.1	129
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	3.45	88	3.45	88	3.44	87
H	0.98	25	0.62	16	0.83	21
J	2.5	64	2.15	55	2.36	60



SPECIAL SERVICE PILOT

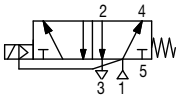
Dimensions: inches (mm)

Const. Ref. 23

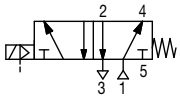


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.34	136	7.11	181
A with MO	7.95	202	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
J	4.66	118	4.15	105	5.2	132
J with MO	6.10	155	-	-	-	-

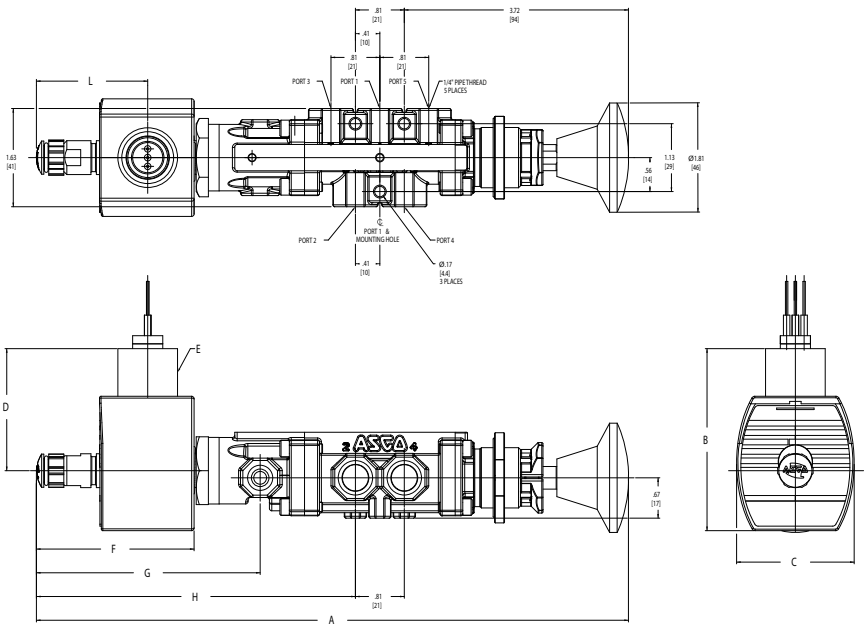
INTERNAL PILOT



EXTERNAL PILOT

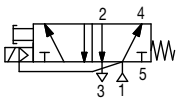


Const. Ref. 24

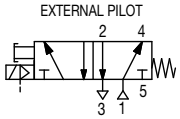


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	9.62	244
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT



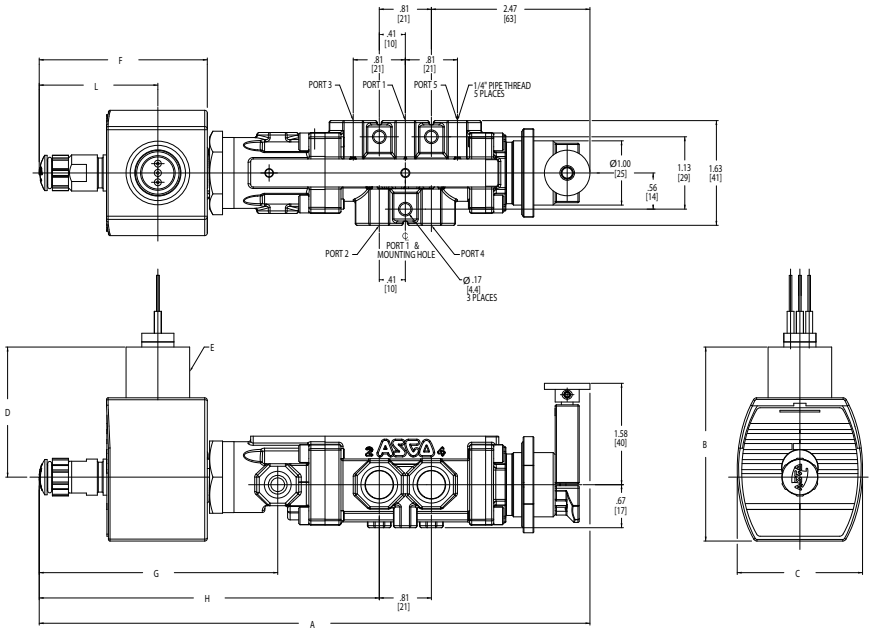
EXTERNAL PILOT



SPECIAL SERVICE PILOT

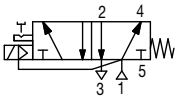
Dimensions: inches (mm)

Const. Ref. 25

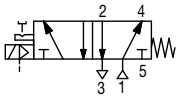


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	6.60	168	8.36	212
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT

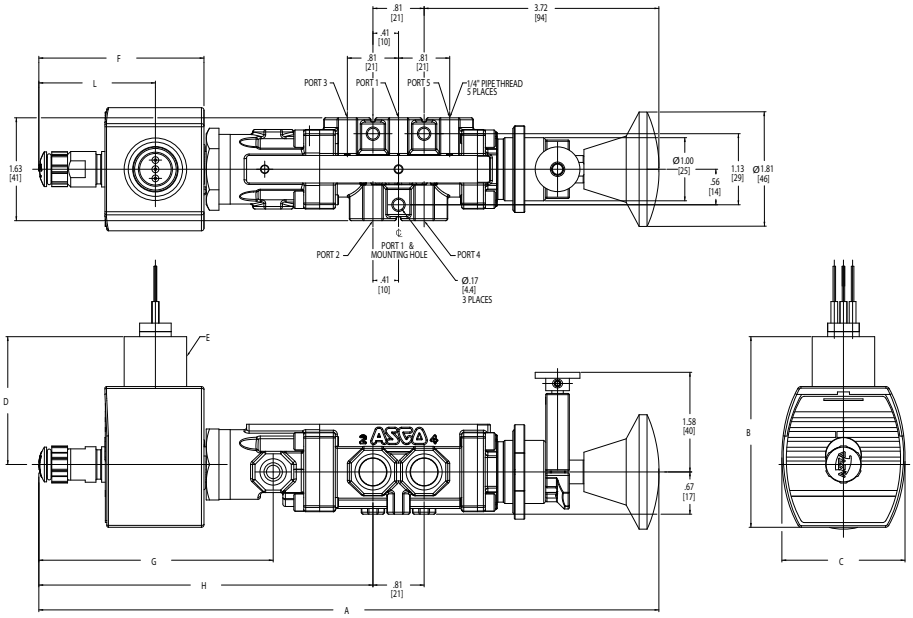


EXTERNAL PILOT



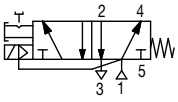
SPECIAL SERVICE PILOT

Const. Ref. 26

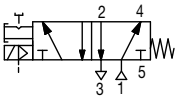


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	9.01	229	7.85	199	9.62	244
A with MO	10.47	266	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	3.73	95	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT



EXTERNAL PILOT

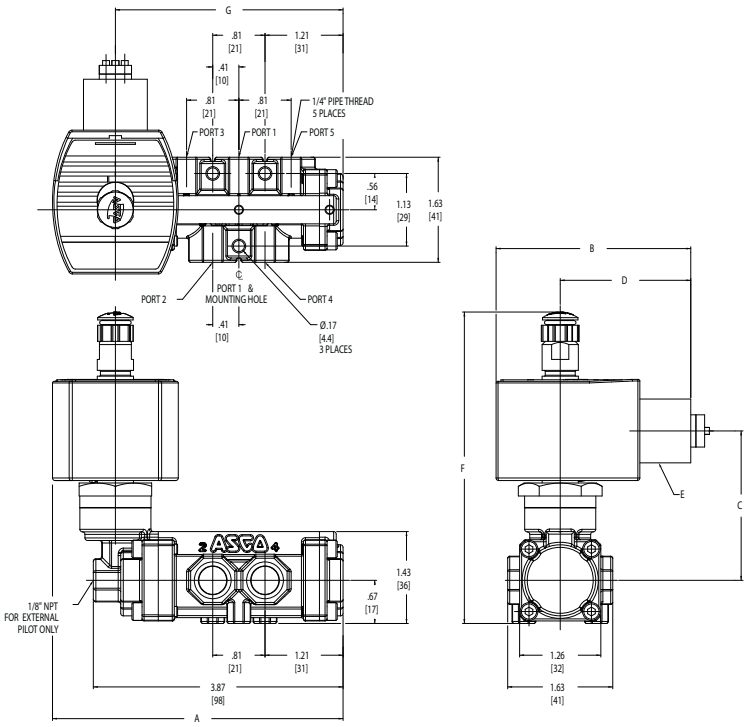


ASCO™ Spool Valves

Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

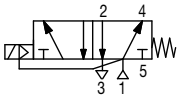
Dimensions: inches (mm)

Const. Ref. 27

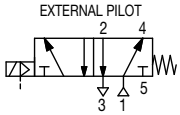


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	4.51	115	3.34	85	4.36	111
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	4.83	123	3.67	93	4.62	117
F with MO	6.30	160	-	-	-	-
G	3.53	90	2.72	69	3.53	90

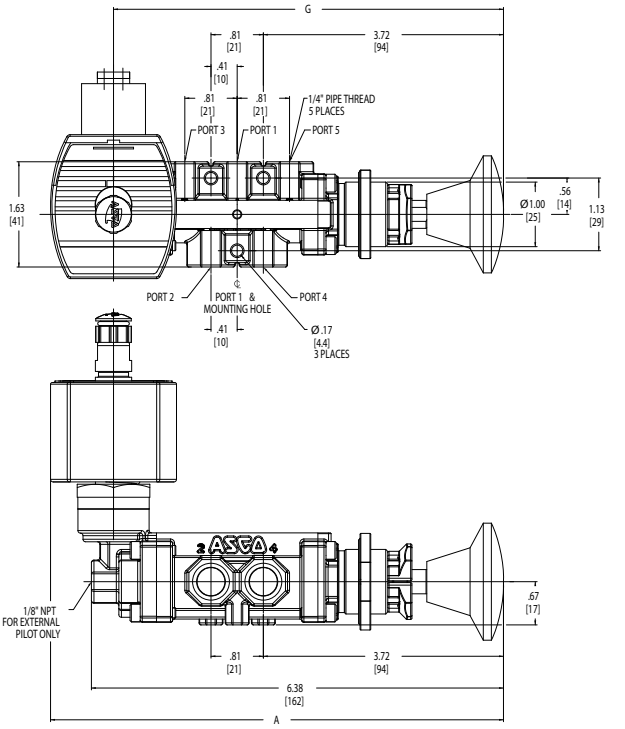
INTERNAL PILOT



EXTERNAL PILOT

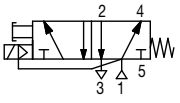


Const. Ref. 28

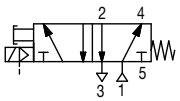


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.01	178	5.85	149	6.87	174
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	5.07	129	3.91	99	4.86	123
F with MO	6.54	166	-	-	-	-
G	6.04	153	5.23	133	6.04	153

INTERNAL PILOT

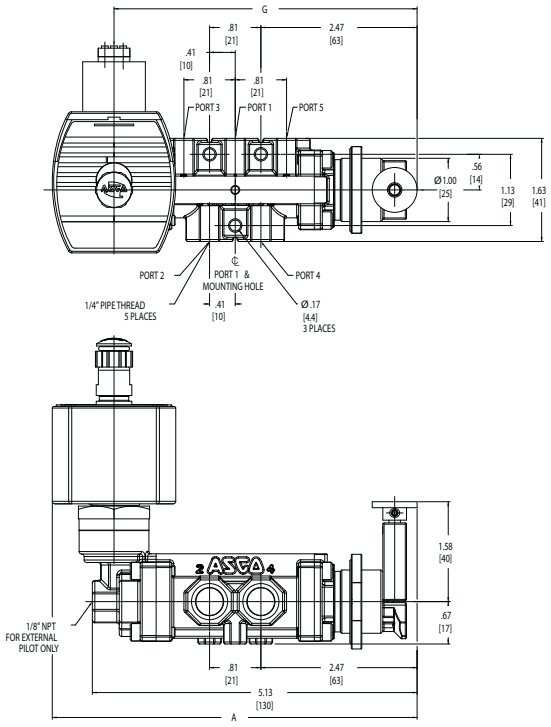


EXTERNAL PILOT



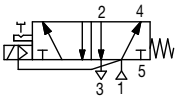
Dimensions: inches (mm)

Const. Ref. 29

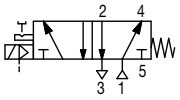


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	5.76	146	4.60	117	5.62	143
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	4.91	125	3.75	95	4.7	119
F with MO	6.38	162	-	-	-	-
G	4.79	122	3.98	101	-	-

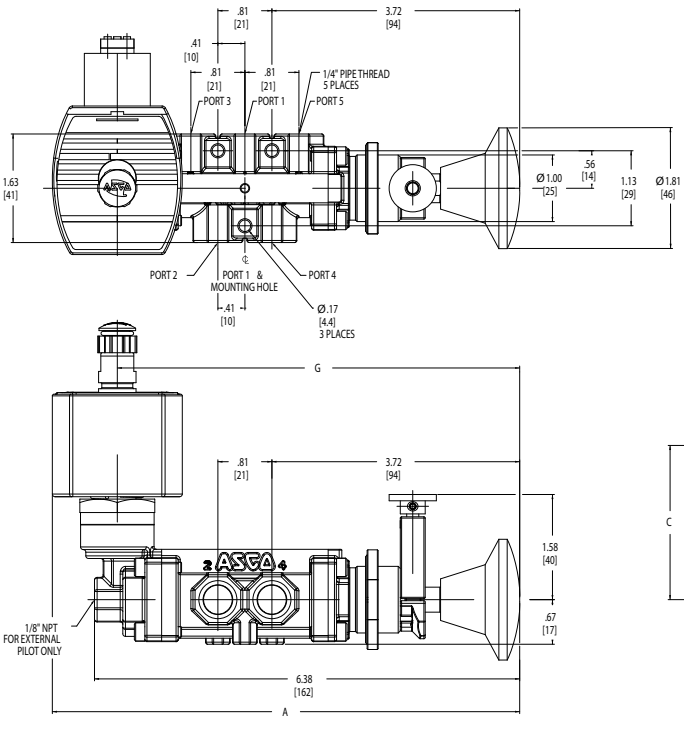
INTERNAL PILOT



EXTERNAL PILOT

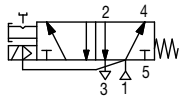


Const. Ref. 30

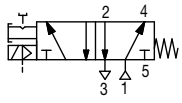


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.02	178	5.85	149	6.87	174
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	5.07	129	3.91	99	4.86	123
F with MO	6.54	166	-	-	-	-
G	6.04	153	5.23	133	-	-

INTERNAL PILOT



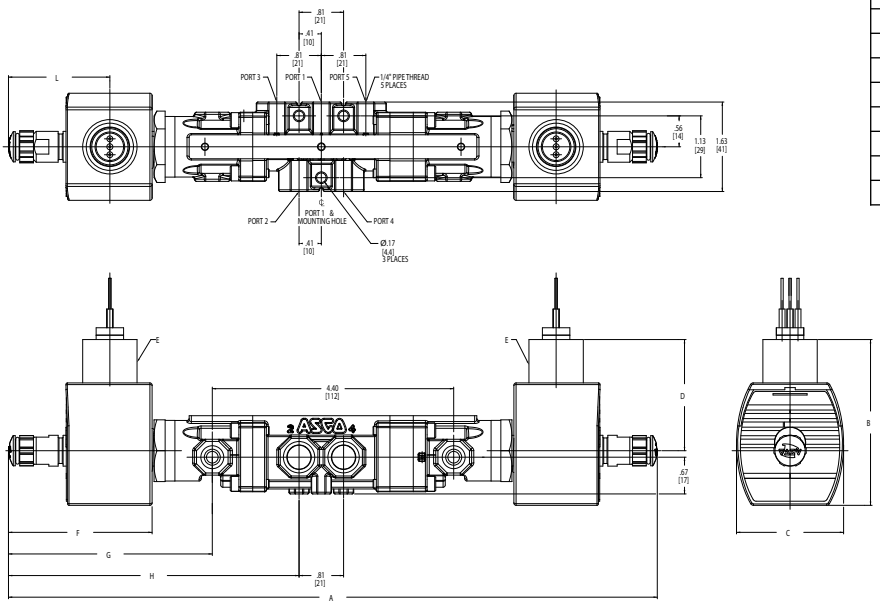
EXTERNAL PILOT



SPECIAL SERVICE PILOT

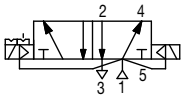
Dimensions: inches (mm)

Const. Ref. 31

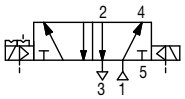


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	8.93	227	8.70	221	11.41	290
A with MO	11.85	301	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	2.55	65	3.5	89
G with MO	5.16	131	-	-	-	-
H	5.31	135	4.15	105	5.09	129
H with MO	6.77	172	-	-	-	-
L	1.85	47	1.19	30	-	-

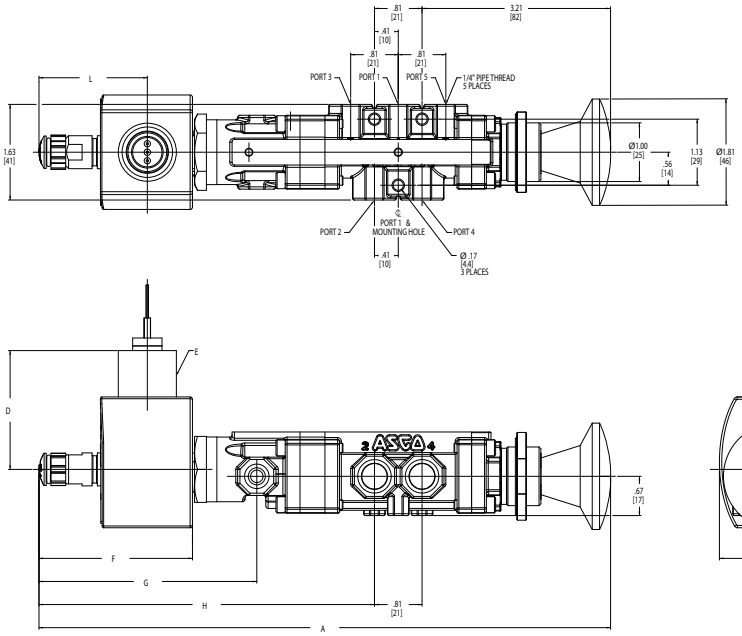
INTERNAL PILOT



EXTERNAL PILOT

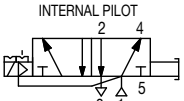


Const. Ref. 32

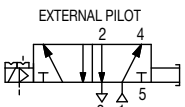


Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.76	197	7.77	197	9.54	242
A with MO	9.21	234	-	-	-	-
B	3.02	77	2.81	71	3.03	77
C	1.95	50	1.25	32	1.66	42
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.62	67	1.79	45	2.63	67
G	3.71	94	3.71	94	3.5	89
G with MO	5.16	131	-	-	-	-
H	4.89	124	4.15	105	5.09	129
H with MO	6.34	161	-	-	-	-
L	1.85	47	1.19	30	-	-

INTERNAL PILOT

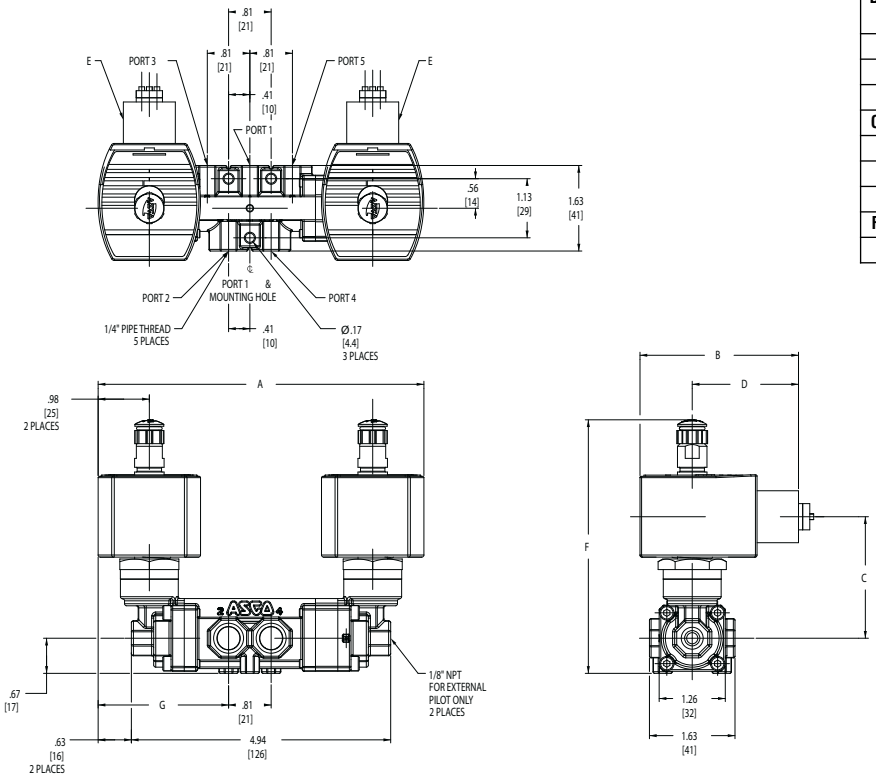


EXTERNAL PILOT

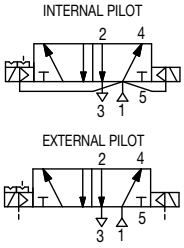


Dimensions: inches (mm)

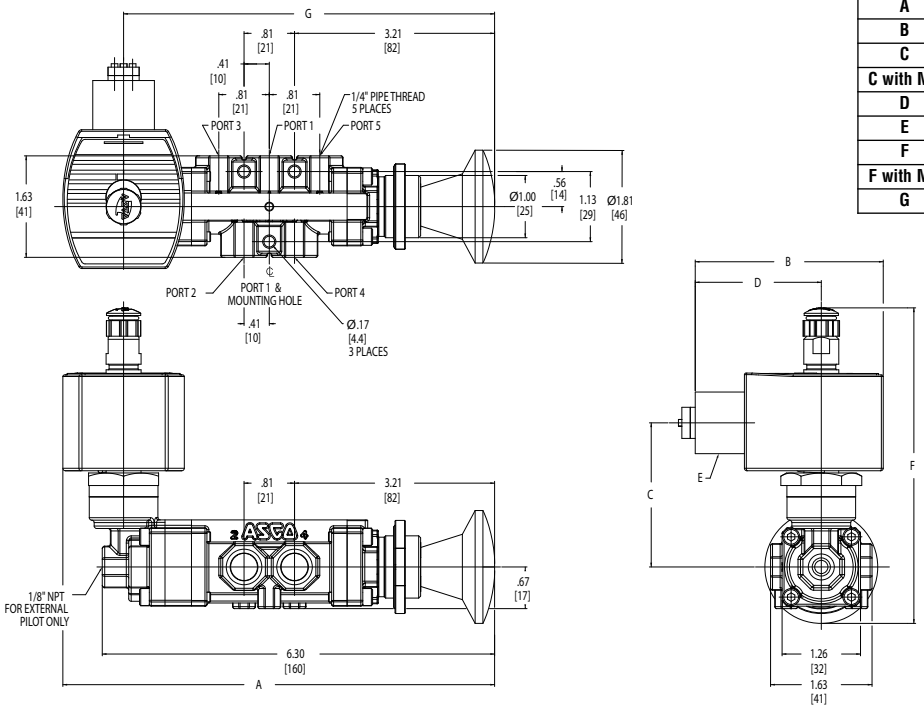
Const. Ref. 33



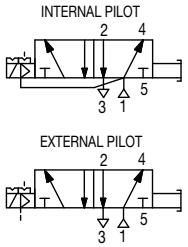
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.21	158	4.69	119	5.91	150
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	4.83	123	3.67	93	4.62	117
F with MO	6.30	160	-	-	-	-
G	2.49	63	2.15	55	2.34	59



Const. Ref. 34



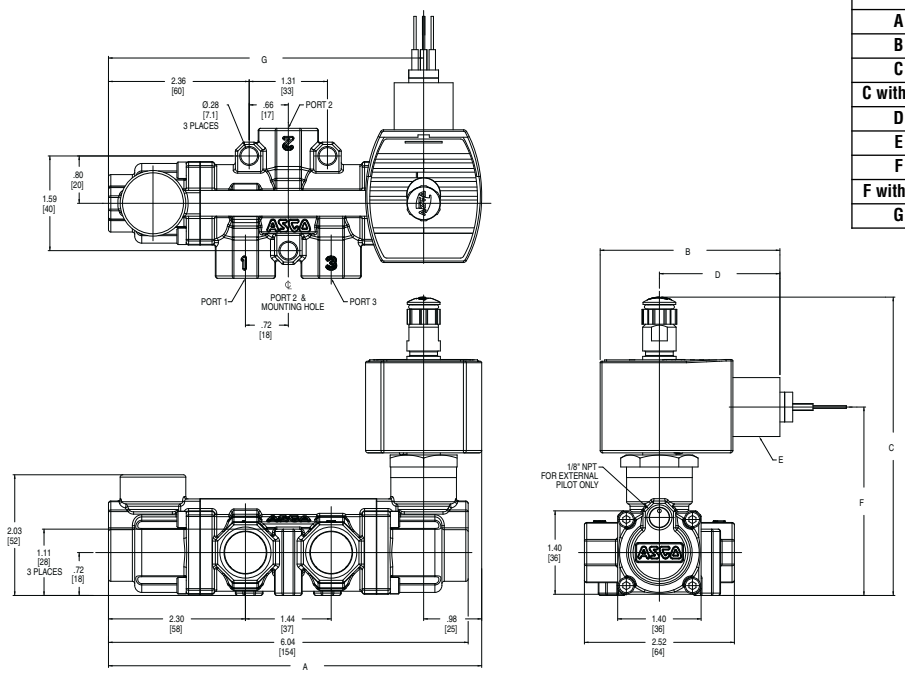
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.94	176	5.77	147	6.79	172
B	3.02	77	2.81	71	3.03	77
C	2.32	59	1.81	46	2.04	52
C with MO	3.78	96	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	5.07	129	3.91	99	4.86	123
F with MO	6.54	166	-	-	-	-
G	5.96	151	5.15	131	5.96	151



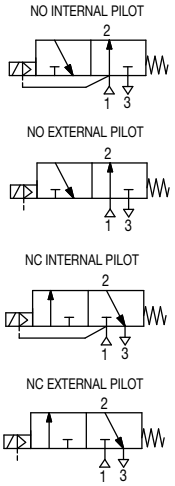
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

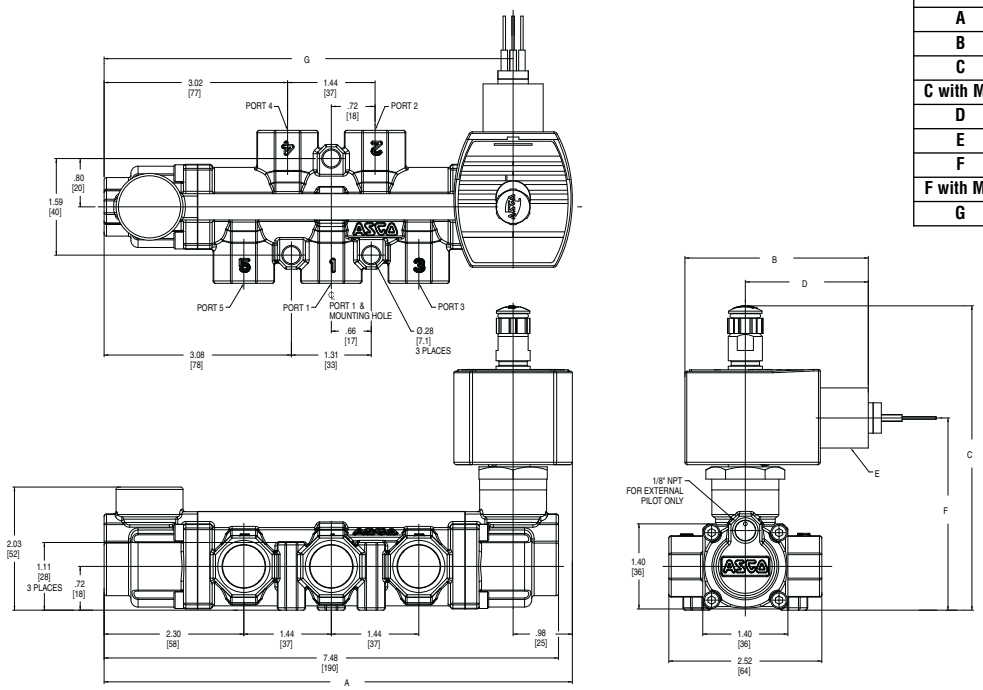
Const. Ref. 35



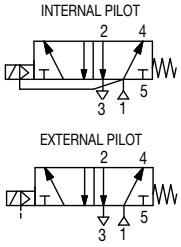
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.26	159	6.06	154	6.14	156
B	3.27	83	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.46	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-
G	5.31	135	5.31	135	5.31	135



Const. Ref. 36



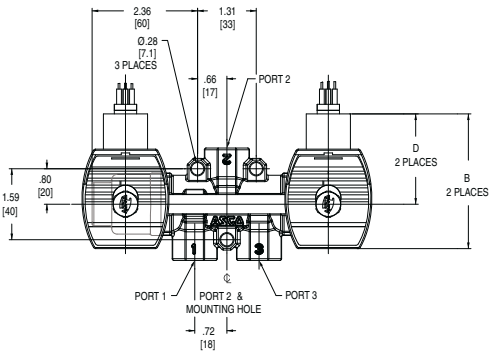
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.72	196	7.48	190	7.56	192
B	3.03	77	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.46	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-
G	6.73	171	6.73	171	6.73	171

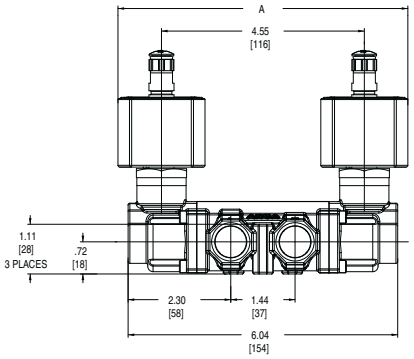


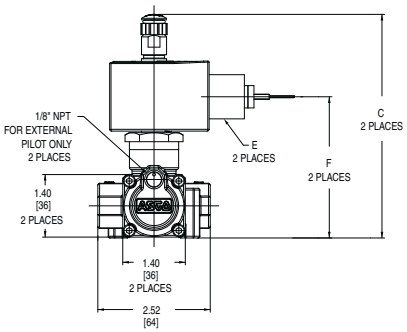
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

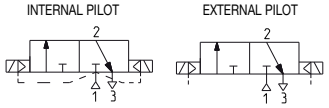
Const. Ref. 37



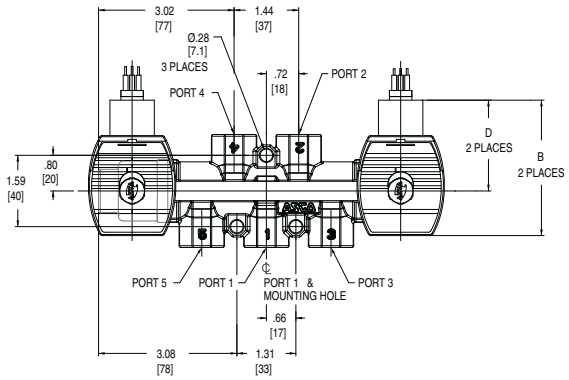


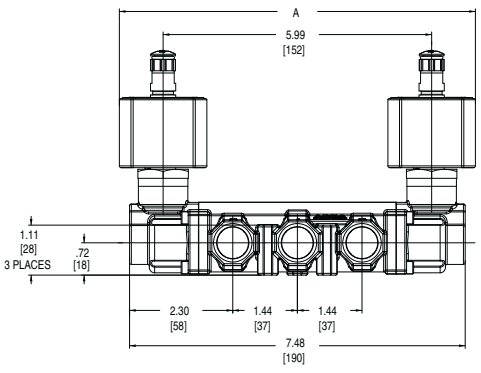


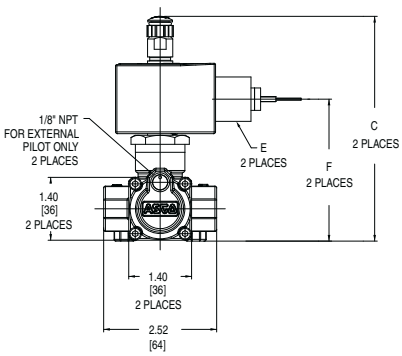
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.50	165	5.79	147	6.22	158
B	3.03	77	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.45	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-



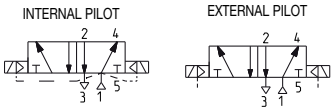
Const. Ref. 38







Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	7.91	201	7.24	184	7.64	194
B	3.03	77	2.80	71	3.03	77
C	5.00	127	3.74	95	4.76	121
C with MO	6.45	164	-	-	-	-
D	2.01	51	2.20	56	2.13	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	3.15	80	2.64	67	2.87	73
F with MO	4.61	117	-	-	-	-



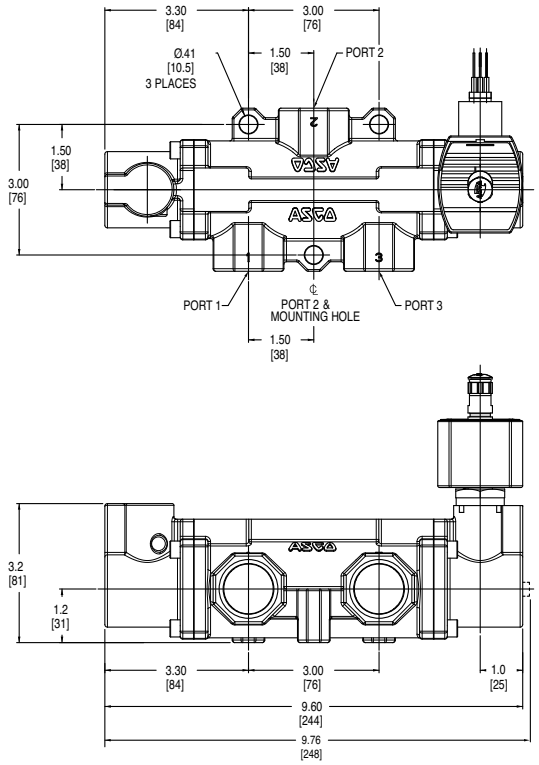
ASCO™ Spool Valves

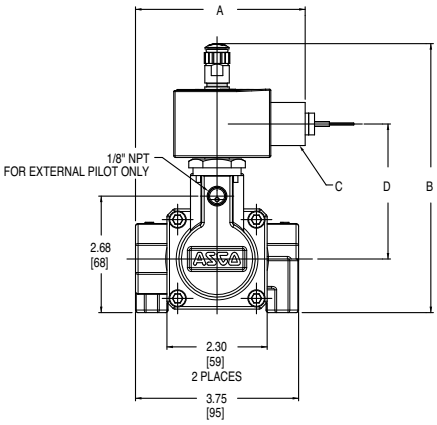
Pilot Operated, Explosion-Proof, Low Power Solenoid Valves | 1/4" - 1" NPT

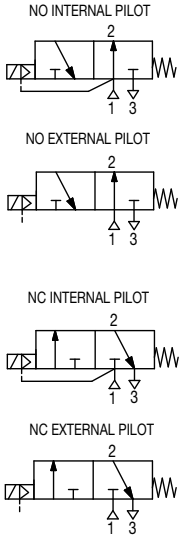
Dimensions: inches (mm)

Const. Ref. 39

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72

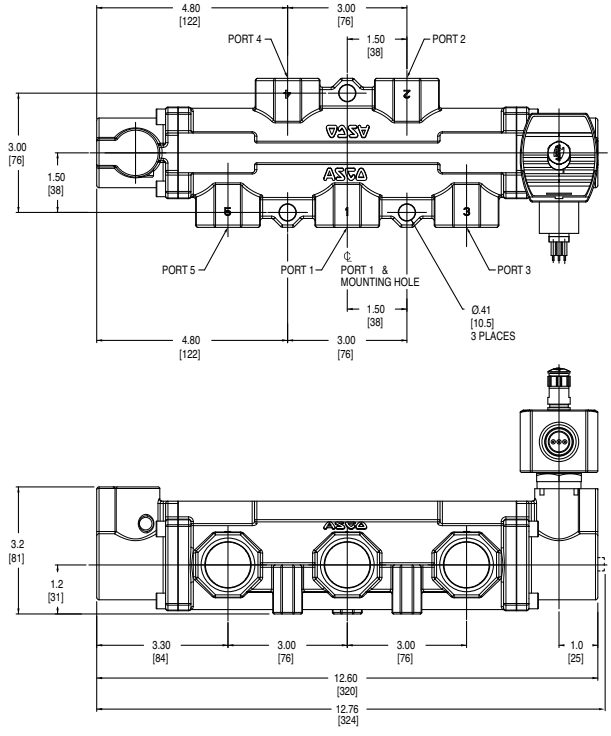


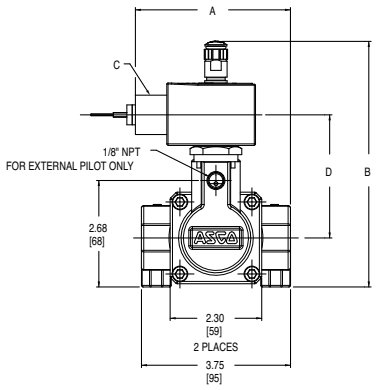


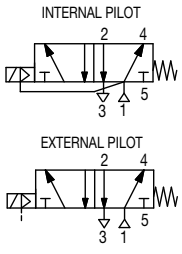


Const. Ref. 40

Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72

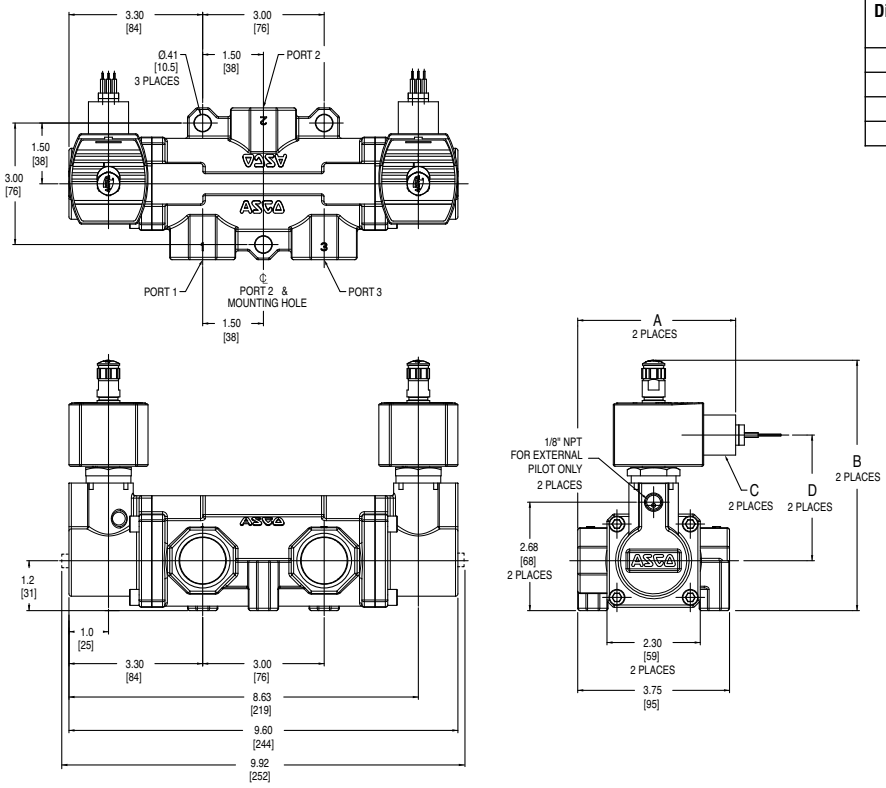




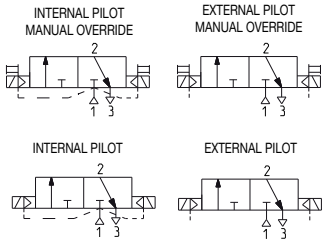


Dimensions: inches (mm)

Const. Ref. 41



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72



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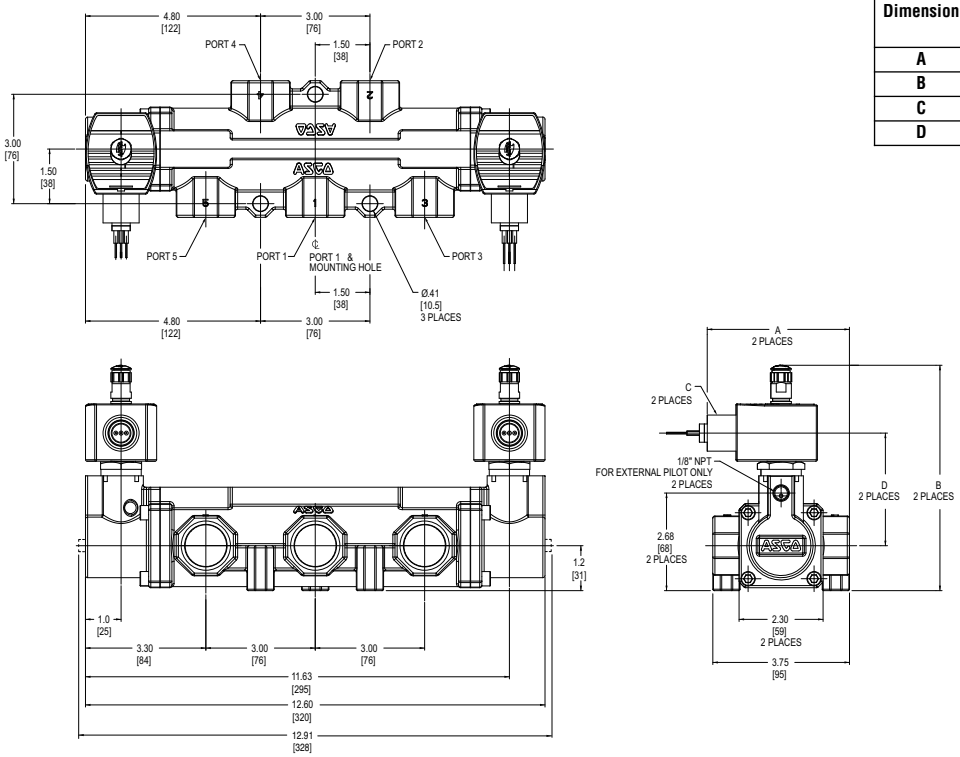
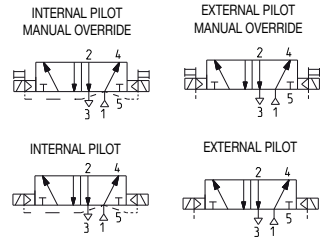


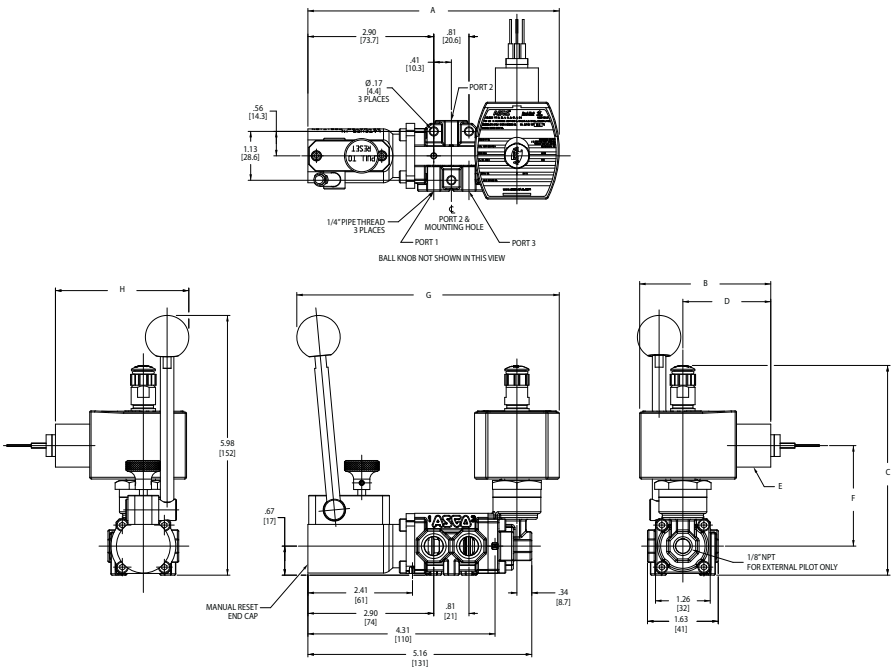
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	3.9	99	4.1	103	4.0	102
B	6.2	157	5.0	127	6.0	152
C	1/2" NPT		1/2" NPT		1/2" NPT	
D	3.1	79	2.6	66	2.8	72



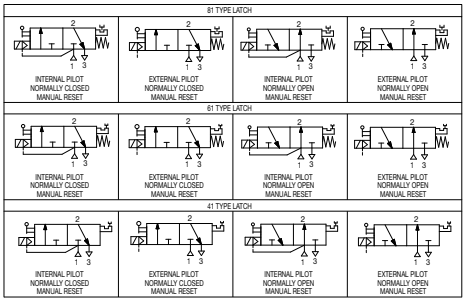
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 43



Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	5.79	147	5.48	139	5.64	143
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	6.05	154	5.73	146	5.90	150
H	3.07	78	3.26	83	3.19	81



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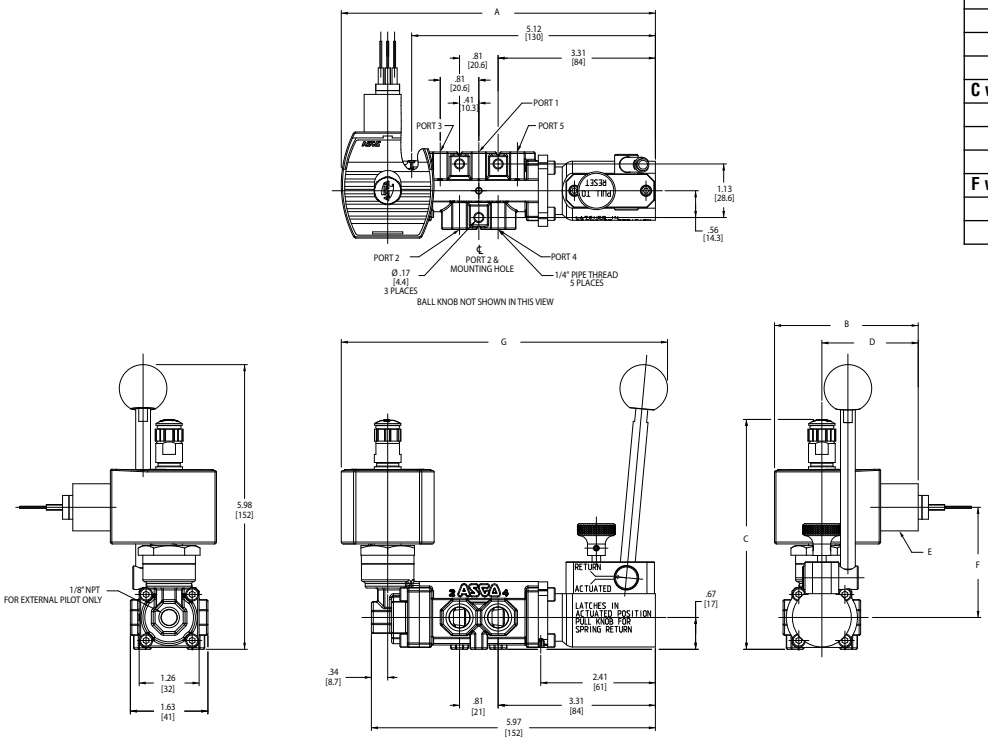
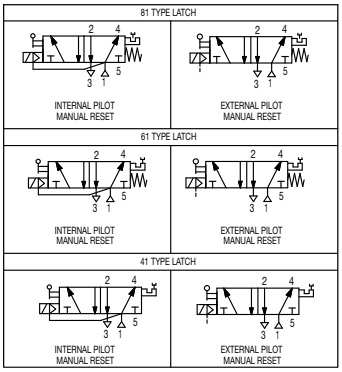
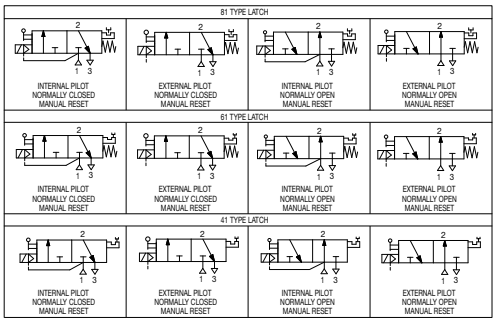


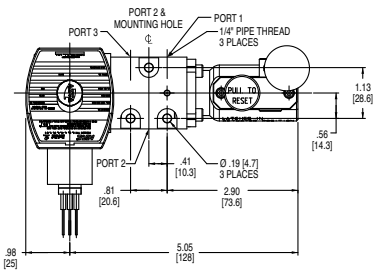
Dimension	Low Power Standard AC/DC		Compact Low Power		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm
A	6.61	168	6.30	160	6.46	164
B	3.02	77	2.81	71	3.03	77
C	4.83	123	3.67	93	4.62	117
C with MO	6.30	160	-	-	-	-
D	2.03	51	2.20	56	2.12	54
E	1/2" NPT		1/2" NPT		1/2" NPT	
F	2.31	59	1.81	46	2.04	52
F with MO	3.78	96	-	-	-	-
G	6.89	175	6.57	167	6.73	171
H	3.07	78	3.26	83	3.19	81

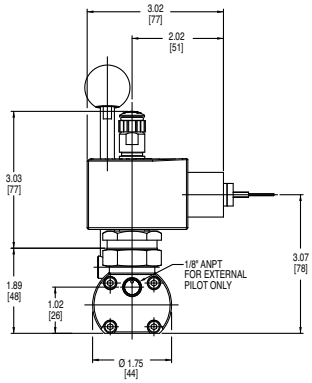


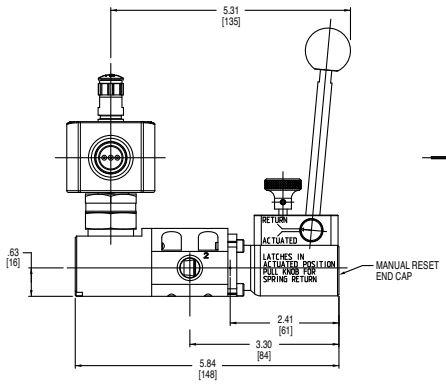
Dimensions: inches (mm)

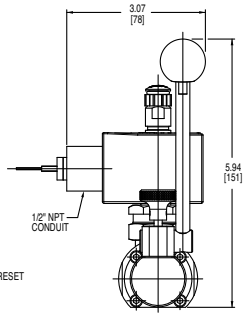
Const. Ref. 45











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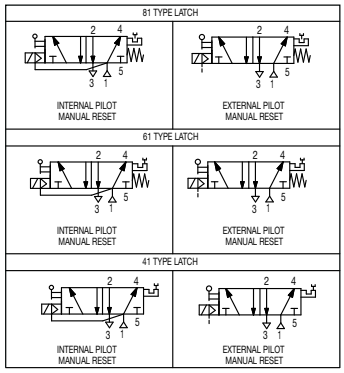
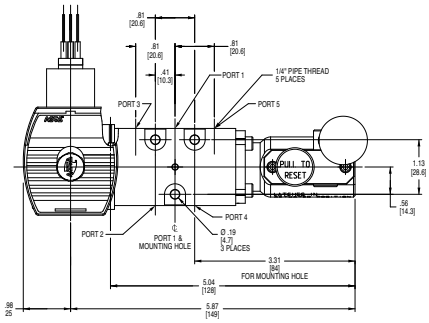
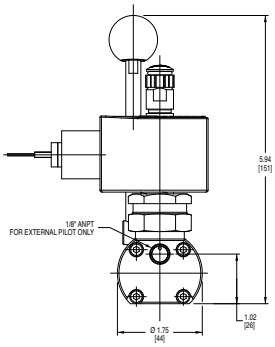
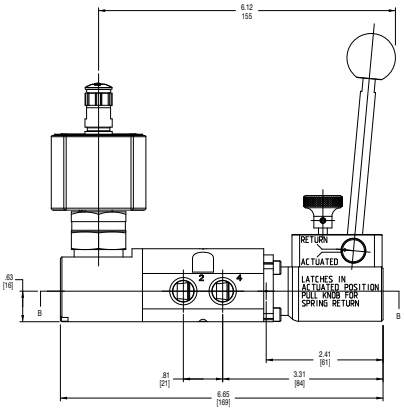
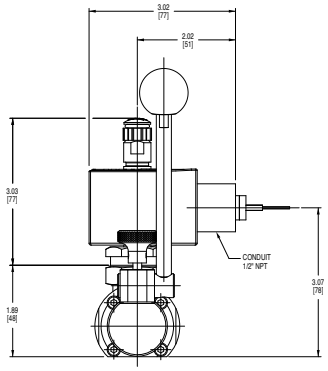






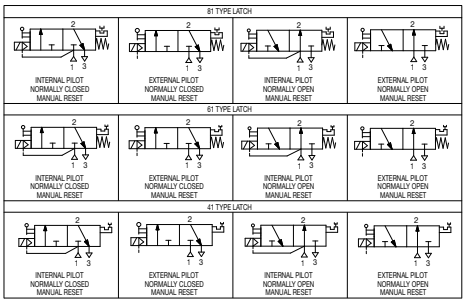


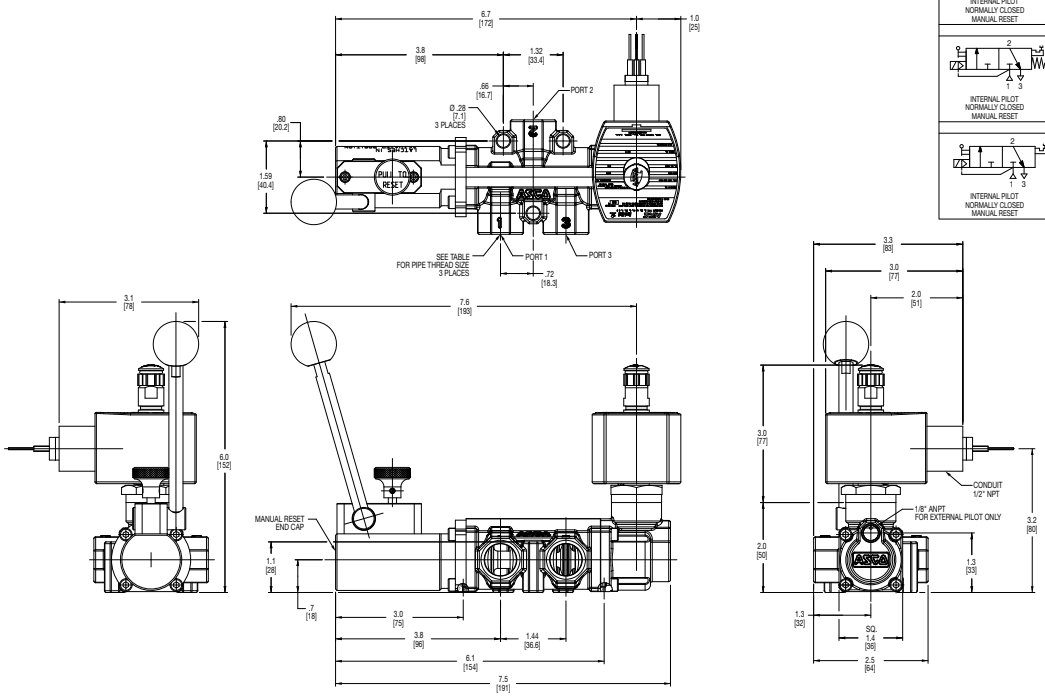


SPECIAL SERVICE PILOT

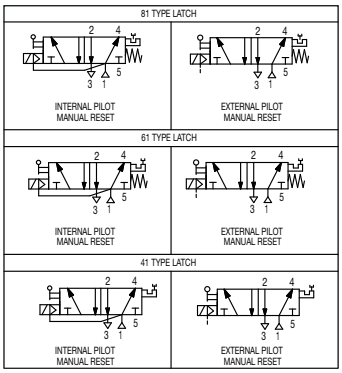
Dimensions: inches (mm)

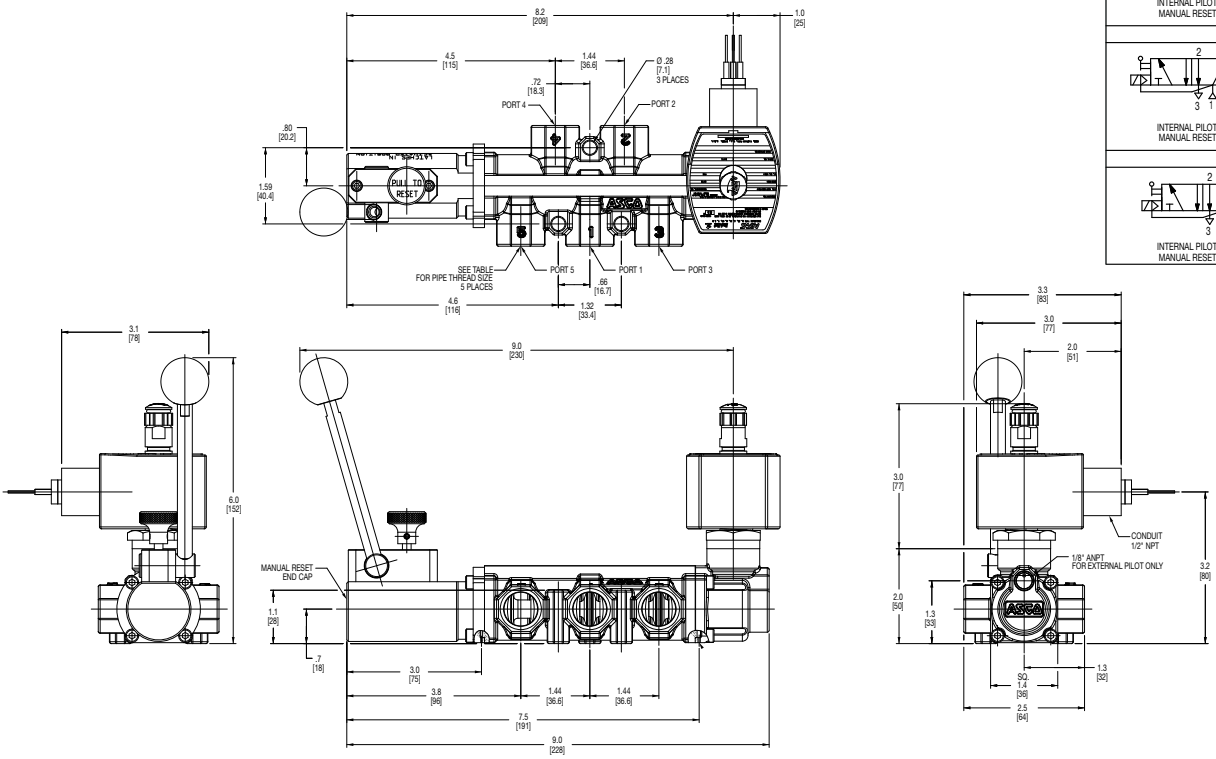
Const. Ref. 47





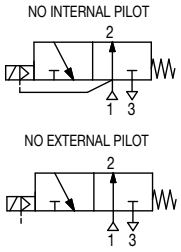
Const. Ref. 48

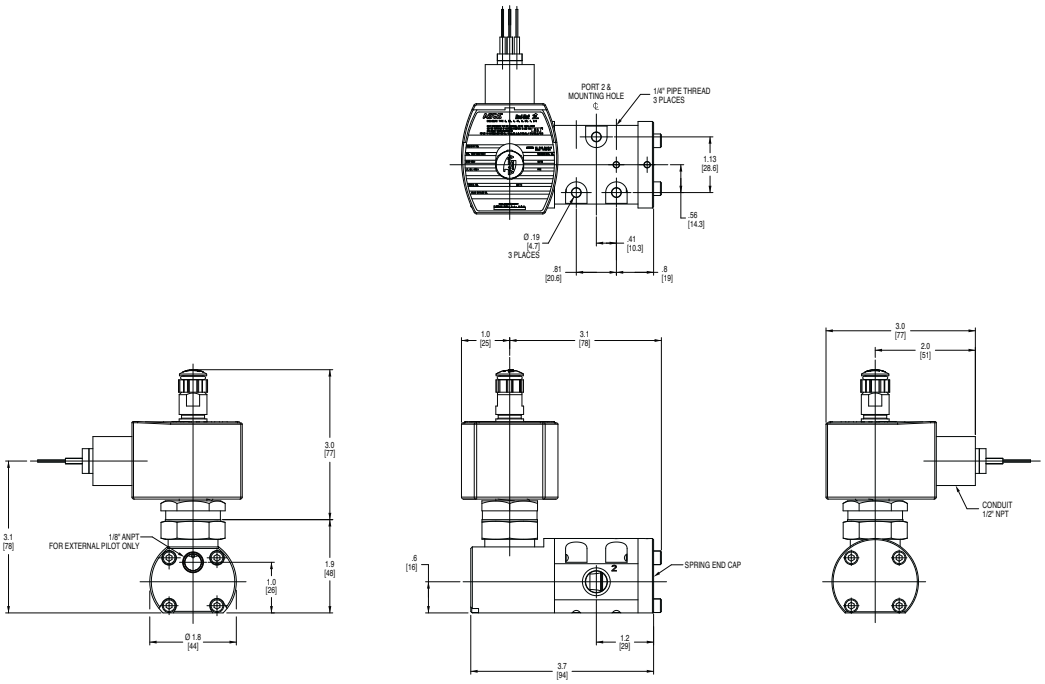




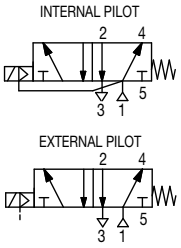
Dimensions: inches (mm)

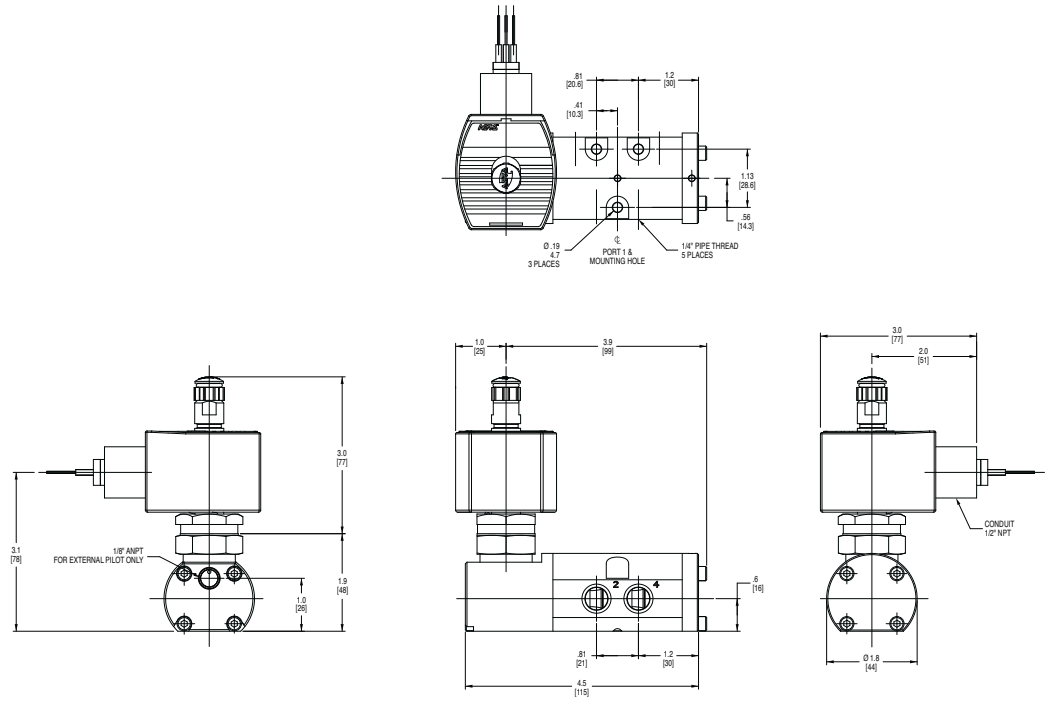
Const. Ref. 49





Const. Ref. 50

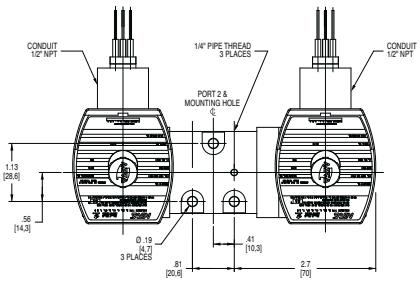


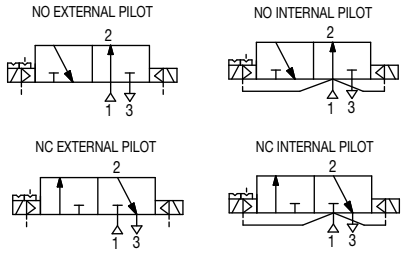


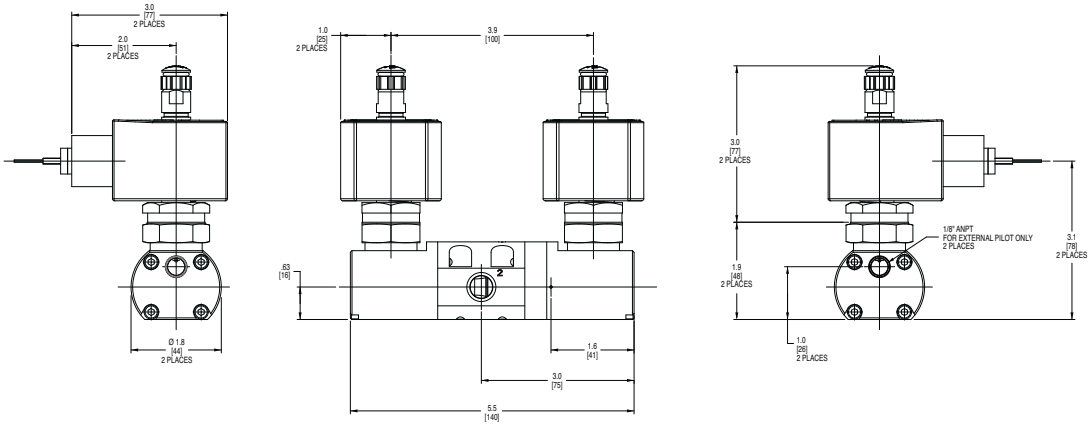
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

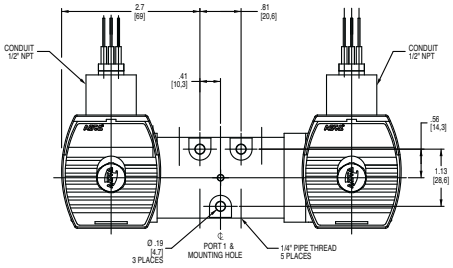
Const. Ref. 51

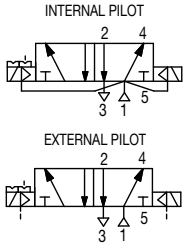


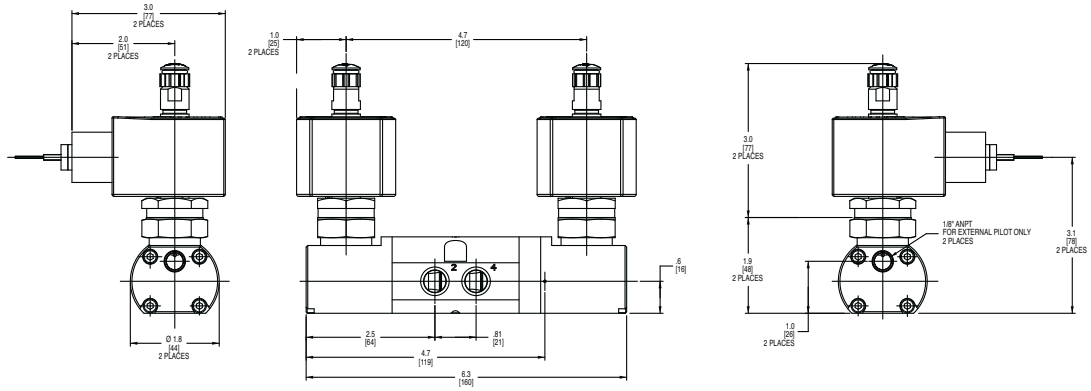




Const. Ref. 52



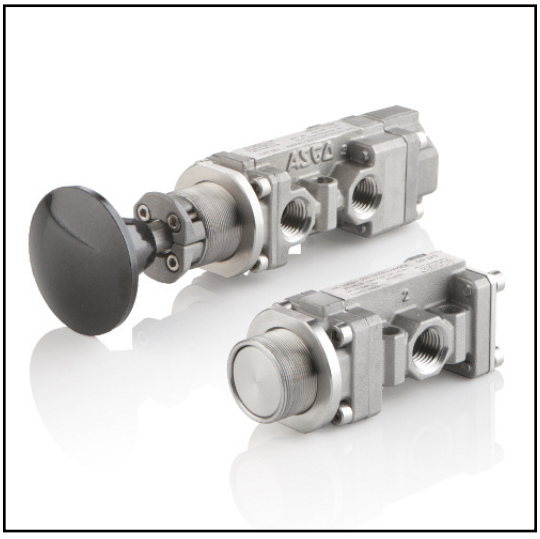




SPECIAL SERVICE PILOT

Features

- Ideal for oil and gas control panel applications
- Drop-in replacement design - compatible with most existing applications which eliminates the need to modify existing designs
- NACE compliant
- Corrosion resistant - 316L Stainless Steel valve materials make it ideal for offshore and harsh environments
- Extensive manual and pneumatic options including Main Supply Reset versions
- Rated for air, natural gas and hydraulic oil (Grade 32)



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
Spring	Ni-Co Alloy
Seals	FKM
Spool	316L Stainless Steel

Nominal Ambient Temperature Range

Air, natural gas pilot: -10°F to 203°F (-23°C to 95°C)
Hydraulic oil pilot: 14°F to 203°F (-10°C to 95°C)
Refer to Engineering Section for details.

Ordering

8364A1	13	00	1	1000

Function

07	Pilot Operated/Spring Return
13	Double Pilot
16	Button Operated (guarded)/Spring Return
17	Button Operated (unguarded)/Spring Return
18	Palm Button with Pilot/Manual Return
19	Palm Button with Pilot/Spring Return
20	Palm Button with Air Latch Pilot/Spring Return
21	Latching Palm Button with Pilot/Spring Return
22	Latching Palm Button with Remote Air Latch Pilot/Spring Return
24	Indicating Palm Button with Air Latch Pilot/Spring Return
26	Indicating, Latching Palm Button with Air Latch Pilot/Spring Return
27	Indicating, Latching Palm Button with Pilot/Spring Return
28	Indicating Palm Button with Air Latch Pilot and Loss of Pressure Trip/Spring Return
29	Latching Palm Button with Air Latch Pilot/Spring Return

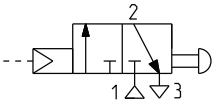
Construction / Pilot

0	Normally Closed / Externally Piloted
1	Normally Open / Externally Piloted
2	Normally Closed , Closed Center / Externally Piloted
7	Detent / Externally Piloted

Manually Operated

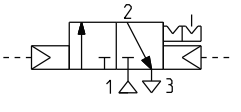
Button (guarded/unguared)/Spring Return

Palm Button with Pilot/Manual Return



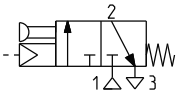
Pilot Operated/Spring Return

Double Pilot

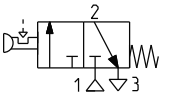


Manual Reset Options - Non Indicating

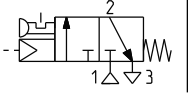
Palm Button with Air Pilot/Spring Return



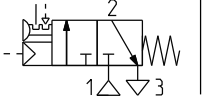
Palm Button with Air Latch Pilot/Spring Return



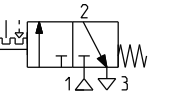
Latching Palm Button with Air Pilot/Spring Return



Latching Palm Button with Remote Air Latch Pilot/Spring Return

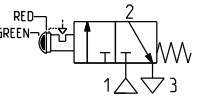


Latching Palm Button with Air Latch Pilot/Spring Return

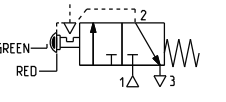


Manual Reset Options - Indicating

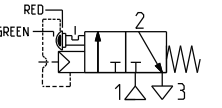
Indicating Palm Button with Air Latch Pilot/Spring Return



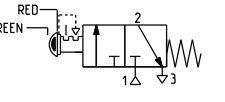
Indicating Palm Button with Air Latch Pilot and Loss of Pressure Trip/Spring Return



Indicating, Latching Palm Button with Air Pilot/Spring Return



Indicating, Latching Palm Button with Air Latch Pilot/Spring Return



Specifications English units (Metric)

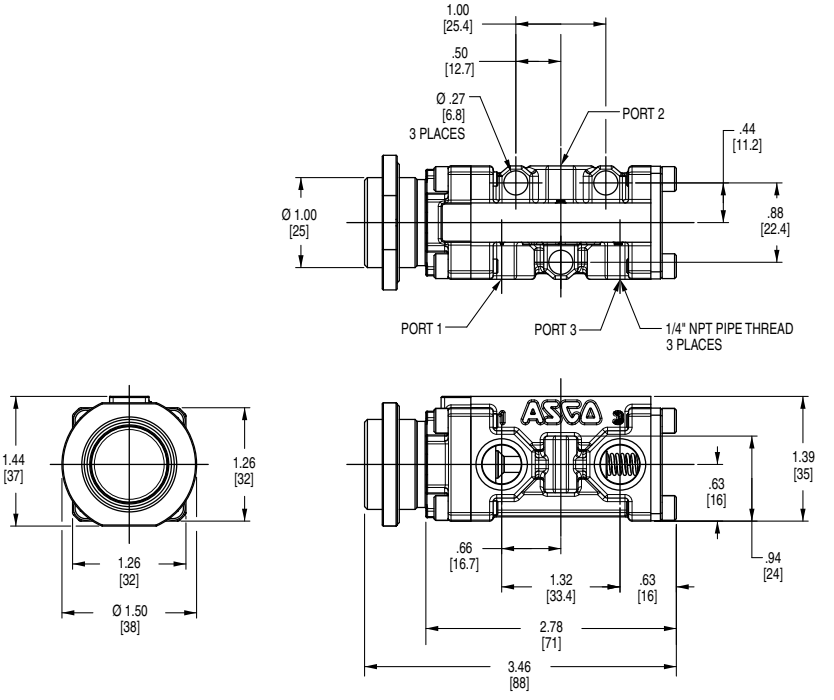
Pipe Size (in)	Flow Cv (Kv)	Base Catalog Number	Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)			Max. Fluid Temp. °F (˚C)	Function	Const. Ref.
					Min.					
			Min.	Max.	Air/Natural Gas	Hydraulic oil (Grade 32)	Max.			
Normally Open / Externally Piloted										
1/4	1.1 (0.95)	8364A1160011000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (guarded)/Spring Return	1
1/4	1.1 (0.95)	8364A1170011000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (unguarded)/Spring Return	2
1/4	1.1 (0.95)	8364A1070011000	0	200 (13.8)	36 (2.5)	-	200 (13.8)	203 (95)	Pilot Operated/Spring Return	3
Normally Closed, Closed Center / Externally Piloted										
1/4	0.8 (0.71)	8364A1160021000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (guarded)/Spring Return	4
1/4	0.8 (0.71)	8364A1070021000	0	200 (13.8)	36 (2.5)	70*/90**	200 (13.8)	203 (95)	Pilot Operated/Spring Return	5
1/4	0.8 (0.71)	8364A1180021000	0	200 (13.8)	15 (1)	70*/90**	200 (13.8)	203 (95)	Palm Button with Pilot/Manual Return	6
Normally Closed / Externally Piloted										
1/4	1.6 (1.38)	8364A1160001000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (guarded)/Spring Return	1
1/4	1.6 (1.38)	8364A1170001000	0	200 (13.8)	-	-	-	203 (95)	Button Operated (unguarded)/Spring Return	7
1/4	1.6 (1.38)	8364A1070001000	0	200 (13.8)	36 (2.5)	-	200 (13.8)	203 (95)	Pilot Operated/Spring Return	3
1/4	1.6 (1.38)	8364A1180001000	0	200 (13.8)	15 (1)	-	200 (13.8)	203 (95)	Palm Button with Pilot/Manual Return	6
1/4	1.6 (1.38)	8364A1190001000	0	200 (13.8)	25 (1.7)	-	200 (13.8)	203 (95)	Palm Button with Pilot/Spring Return	6
1/4	1.6 (1.38)	8364A1200001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Palm Button with Air Latch Pilot/Spring Return	8
1/4	1.6 (1.38)	8364A1210001000	0	200 (13.8)	25 (1.7)	-	200 (13.8)	203 (95)	Latching Palm Button with Pilot/Spring Return	9
1/4	1.6 (1.38)	8364A1270001000	0	200 (13.8)	25 (1.7)	-	200 (13.8)	203 (95)	Indicating, Latching Palm Button with Pilot/Spring Return	10
1/4	1.6 (1.38)	8364A1240001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Indicating Palm Button with Air Latch Pilot/Spring Return	11
1/4	1.6 (1.38)	8364A1290001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Latching Palm Button with Air Latch Pilot/Spring Return	12
1/4	1.6 (1.38)	8364A1260001000	0	200 (13.8)	40 (2.8)	-	200 (13.8)	203 (95)	Indicating, Latching Palm Button with Air Latch Pilot/Spring Return	13
1/4	1.6 (1.38)	8364A1280001000	0	75 (5.2)	40 (2.8)	-	75 (5.2)	203 (95)	Indicating Palm Button with Air Latch Pilot and Loss of Pressure Trip/Spring Return	11
1/4	1.6 (1.38)	8364A1220001000	0	200 (13.8)	50 (3.4)	-	200 (13.8)	203 (95)	Latching Palm Button with Remote Air Latch Pilot/Spring Return	14
Detent / Externally Piloted										
1/4	1.6 (1.38)	8364A1130071000	0	200 (13.8)	15 (1)	-	200 (13.8)	203 (95)	Double Pilot	15

*When Pilot Media is Air and Main Valve Media is Hydraulic Oil: Min. Pilot Pressure is 70 psi (4.8 bar)

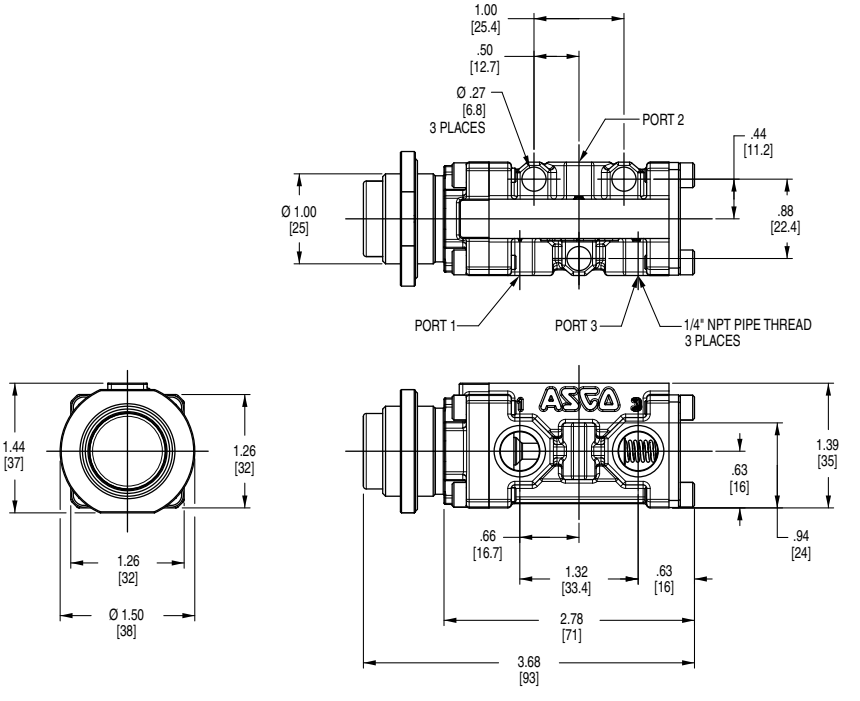
**When Pilot Media is Hydraulic Oil and Main Valve Media is Hydraulic Oil: Min. Pilot Pressure is 90 psi (6.2 bar)

Dimensions: inches (mm)

Const. Ref. 1

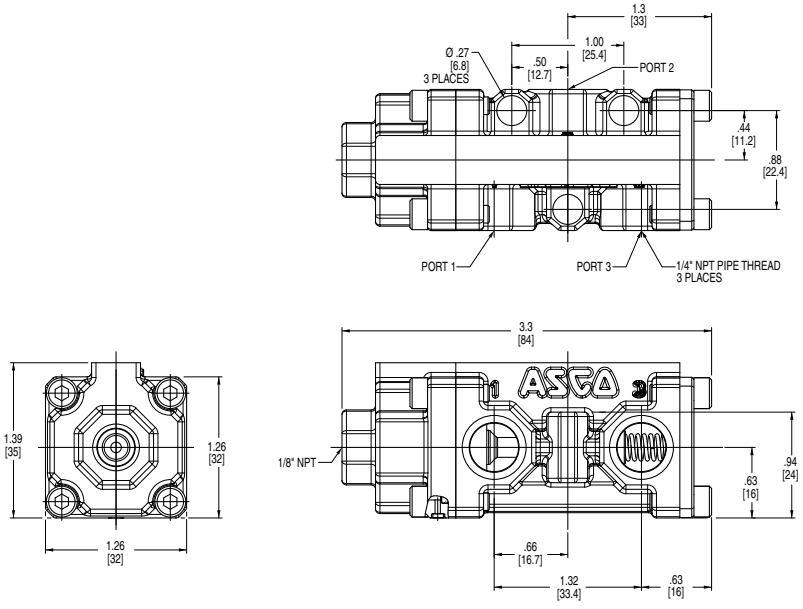


Const. Ref. 2



Dimensions: inches (mm)

Const. Ref. 3



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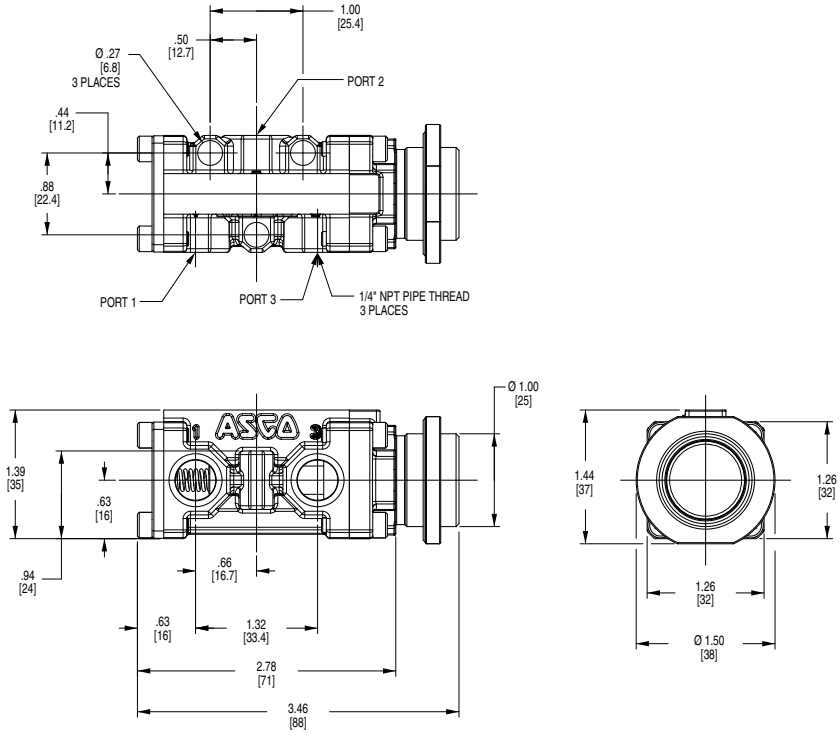
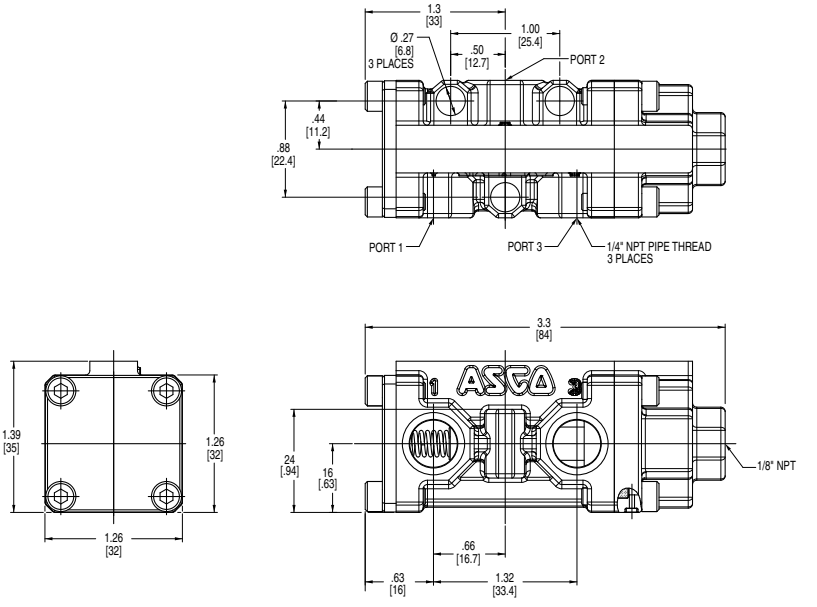


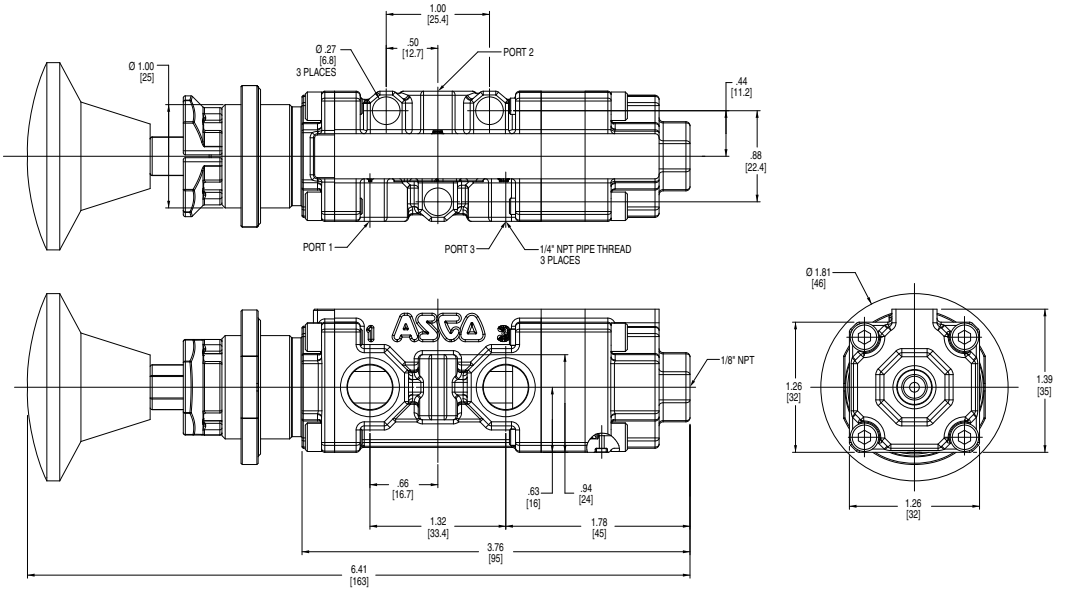
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 5



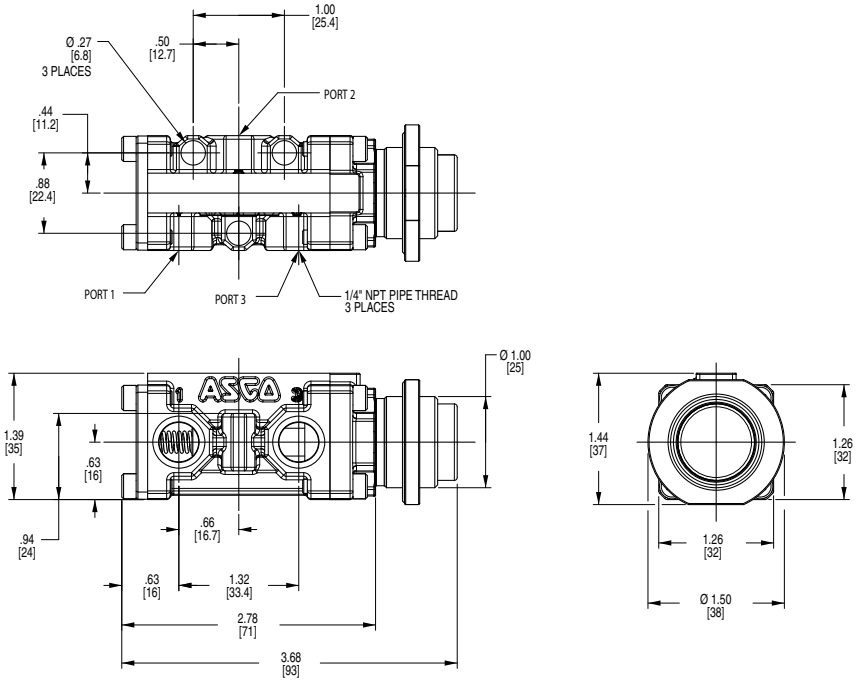
Const. Ref. 6



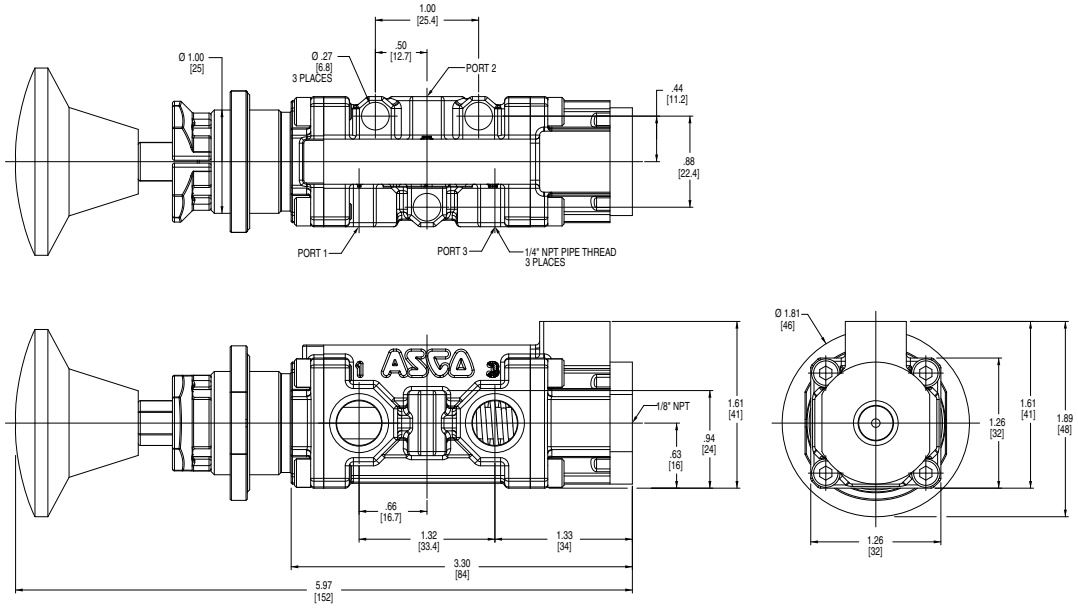
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 7



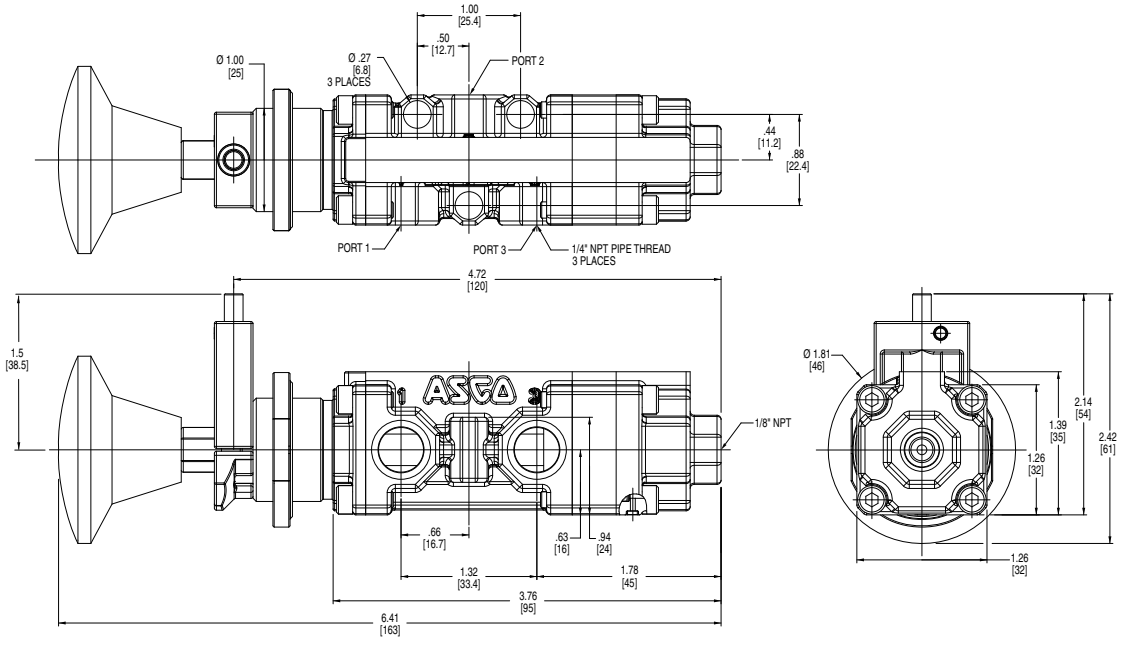
Const. Ref. 8



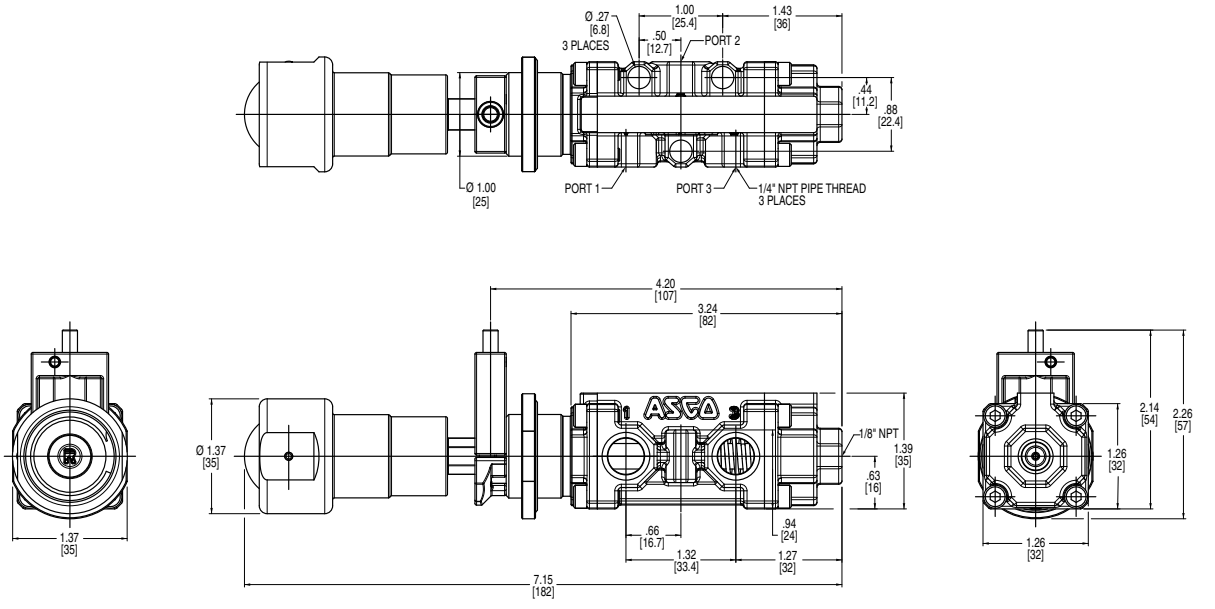
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 9

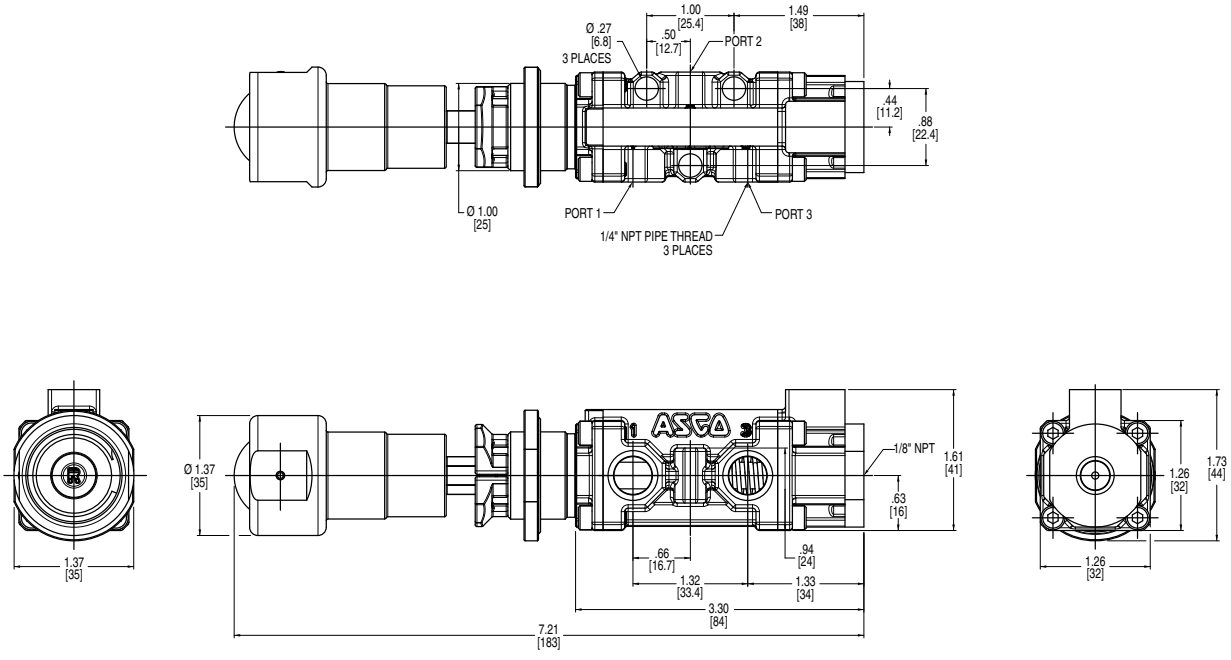


Const. Ref. 10

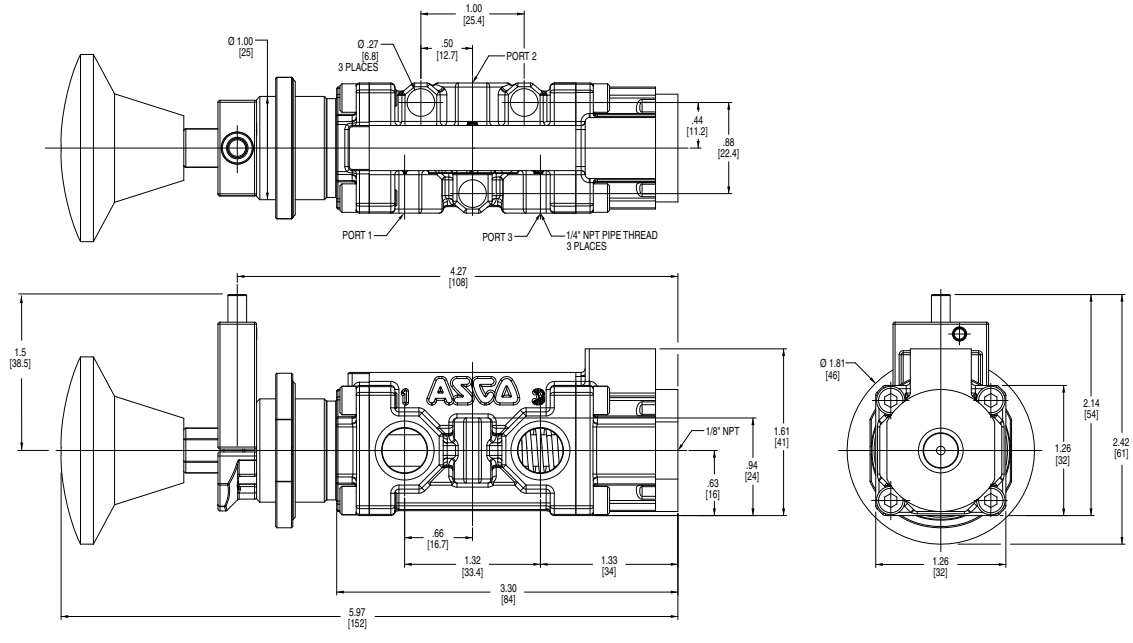


Dimensions: inches (mm)

Const. Ref. 11



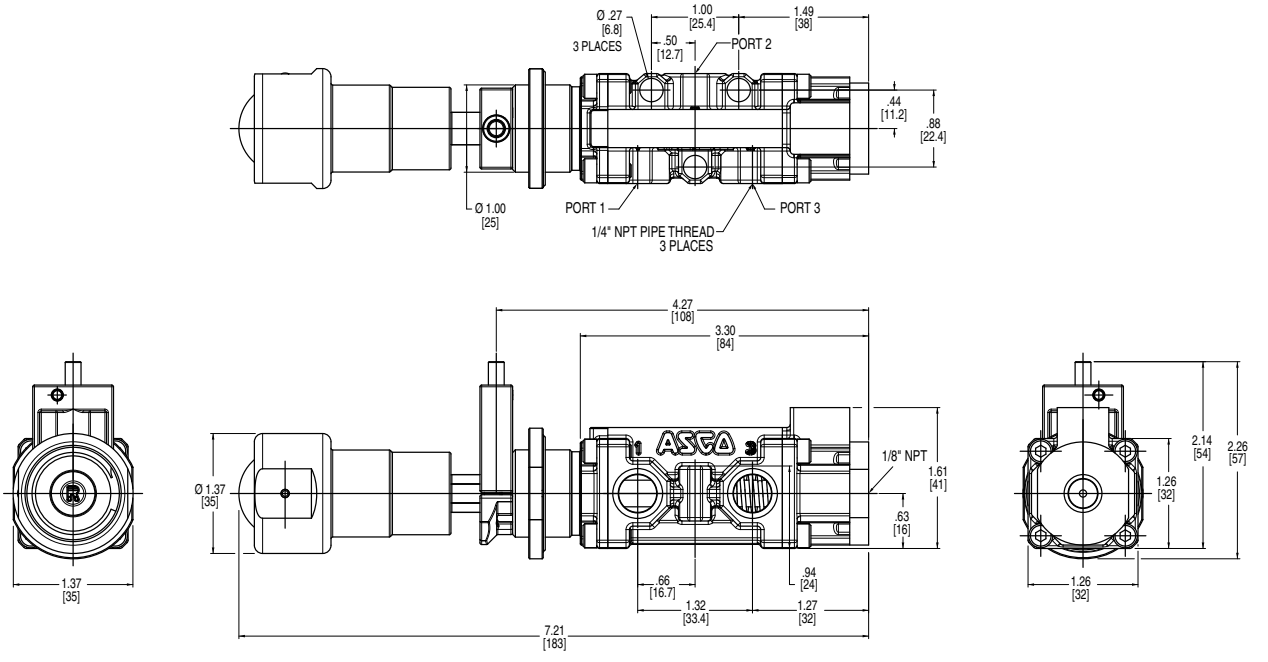
Const. Ref. 12



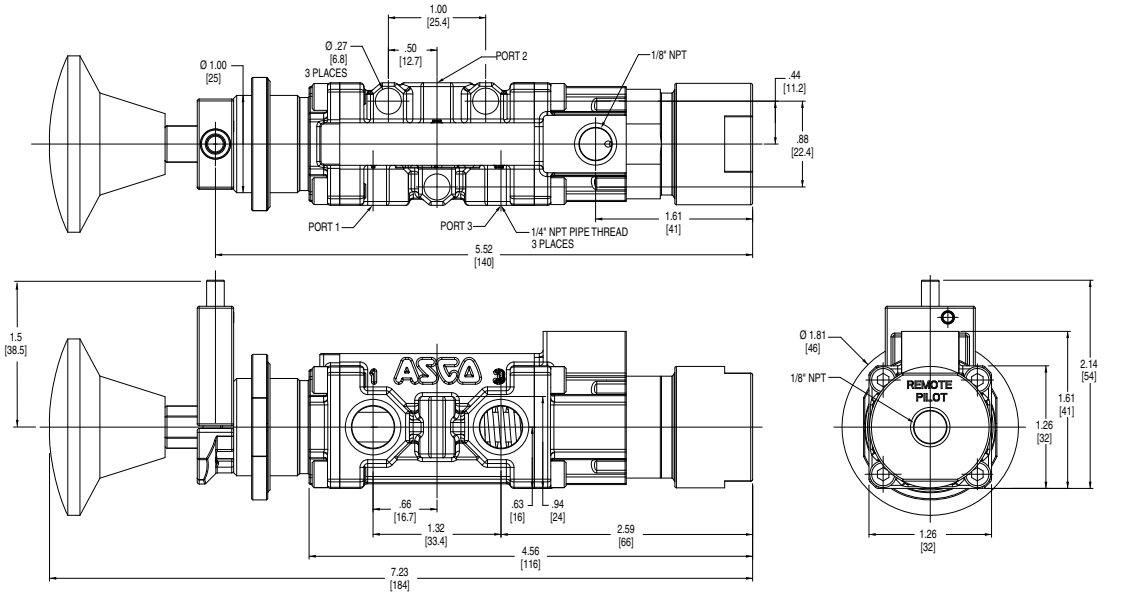
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 13

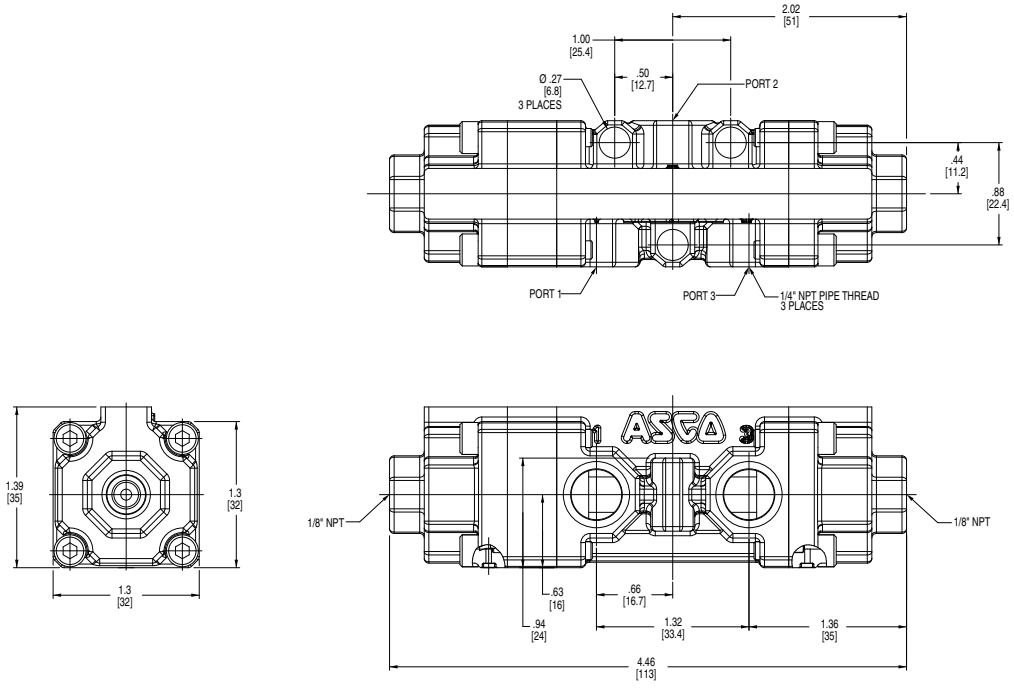


Const. Ref. 14



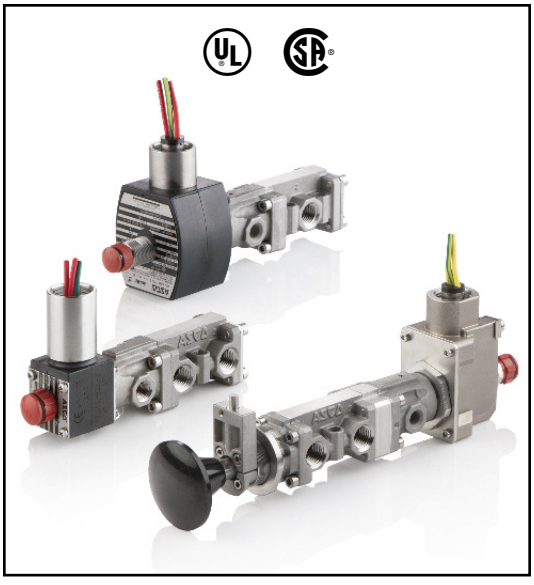
Dimensions: inches (mm)

Const. Ref. 15



Features

- Ideal for oil and gas control panel applications
- Drop-in replacement design - compatible with most existing applications which eliminates the need to modify existing designs
- Explosion-proof solenoid options
- Solenoid options with factory sealed leads reduce installation time
- ATEX/IECEx and UL/CSA approved for hazardous locations
- Corrosion Resistant - 316L Stainless Steel valve material makes it ideal for offshore and harsh environments
- Rated for air, inert gas and sweet dry natural gas



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
Spring	Ni-Co Alloy
Seals	FKM, LT NBR (Solenoid Only)
Core and Plugnut	430F Stainless Steel
Spool	316L Stainless Steel

Electrical

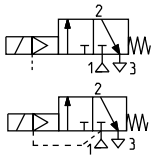
Coil Options	Insulation Class	Wattage	Spare Coil Part Number
Intrinsically Safe	H	0.48 W	298006
Ultra Low Power	F	0.55 W	274714
Standard Low Power	F	1.4 W	274714
Compact Low Power	F	1.8 W	437962
Standard AC	F	10.1 W	274614
Standard DC	F	11.6 W	274714
Stainless Steel Encapsulated	F	1.8 W	505434

IMPORTANT: Supervisory & leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.

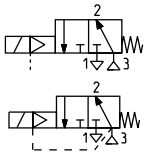
Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)	Coil Resistance at 68˚F (20˚C) (Ohms)
Ultra Low Power	0.55 W	12V	34.0	3.63	255
		24V	17.0	1.80	1025
		48V	8.5	0.91	4080
		125V	3.2	0.34	27,400
Standard Low Power	1.4 W	12 V	83.5	13.9	102
		24 V	42.0	7.0	410
Compact Low Power	1.8 W	12 V	95.0	20.0	80
		24 V	47.0	10.0	320
Stainless Steel Encapsulated	1.8 W	12 V	99.0	18.0	80
		24 V	47.0	10.0	320

Single Solenoid

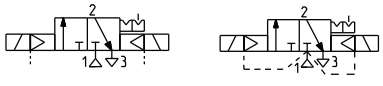
Normally Closed



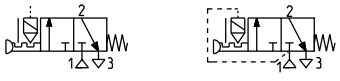
Normally Open



Dual Solenoid



Normally Closed Latching Palm Button



Nominal Ambient Temp. Ranges

Ultra Low Power, and Intrinsically Safe: -9˚F to 149˚F (-23˚C to 65˚C)
Standard Low Power: -9˚F to 140˚F (-23˚C to 60˚C)
Compact Low Power: -9˚F to 203˚F (-23˚C to 95˚C)
Standard AC: -9˚F to 125˚F (-23˚C to 52˚C)
Standard DC: -9˚F to 131˚F (-23˚C to 55˚C)
Stainless Steel Encapsulated: -9˚F to 194˚F (-23˚C to 90˚C)
Refer to Engineering Section for details.

Solenoid Enclosures

Standard: Explosionproof and Watertight, Types 4X, 6, and 6P.
Refer to Engineering Section for fluid and temperature compatibility.

Approvals

Solenoid Only:
UL and CSA Certified for Class I Div. 1 Locations
ATEX, IECEx: Ex d mb
ATEX, IECEx: Ex d
Refer to Engineering Section for details.

SPECIAL SERVICE PILOT

Important

These solenoid valves are intended for use on clean dry air, inert gas, or sweet dry natural gas filtered to 40 micron or better. The dew point of the media should be at least 10˚C (18˚F) below the minimum temperature to which any portion of the air, inert gas or sweet dry natural gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with FKM and LT NBR elastomers. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

How to order

8 3 6 4 A 1 | 0 1 | H 1 | 1 | 1 | 1 | F 1

Function

01	Single Solenoid/Spring Return
06	Dual Solenoid
23	Latching Palm Button with Solenoid Operated Air Latch Pilot

Electrical Connection Type

H1	1/2" Conduit with 18 ' Leads Harsh Enviroment Class I Div 1

Construction / Pilot

0	Normally Closed / Externally Piloted
1	Normally Open / Externally Piloted
7	Detent / Externally Piloted
8	Normally Closed / Internally Piloted
9	Normally Open / Internally Piloted
G	Detent / Internally Piloted

Solenoid Type / Orientation

1	Compact Low Power (1.8W)
2	Low Power (1.4W)
3	Stainless Steel Encapsulated (1.8 W)
4	Ultra Low Power (0.55W)
5	Intrinsically Safe Low Power (0.48W)
6	Standard AC (10.1W)
7	Standard DC (11.6W)
A	Compact Low Power (1.8W) / 90 Degree Solenoid
C	Low Power (1.4W) / 90 Degree Solenoid
D	Stainless Steel Encapsulated (1.8W) / 90 Degree Solenoid
E	Ultra Low Power (0.55W) / 90 Degree Solenoid
F	Intrinsically Safe Low Power (0.48W) / 90 Degree Solenoid
G	Standard AC (10.1W) / 90 Degree Solenoid
H	Standard DC (11.6W) / 90 Degree Solenoid

Voltages

F0	120/60, 110/50 Class F
F1	24/DC Class F
F3	12/DC Class F
H1	24/DC Class H

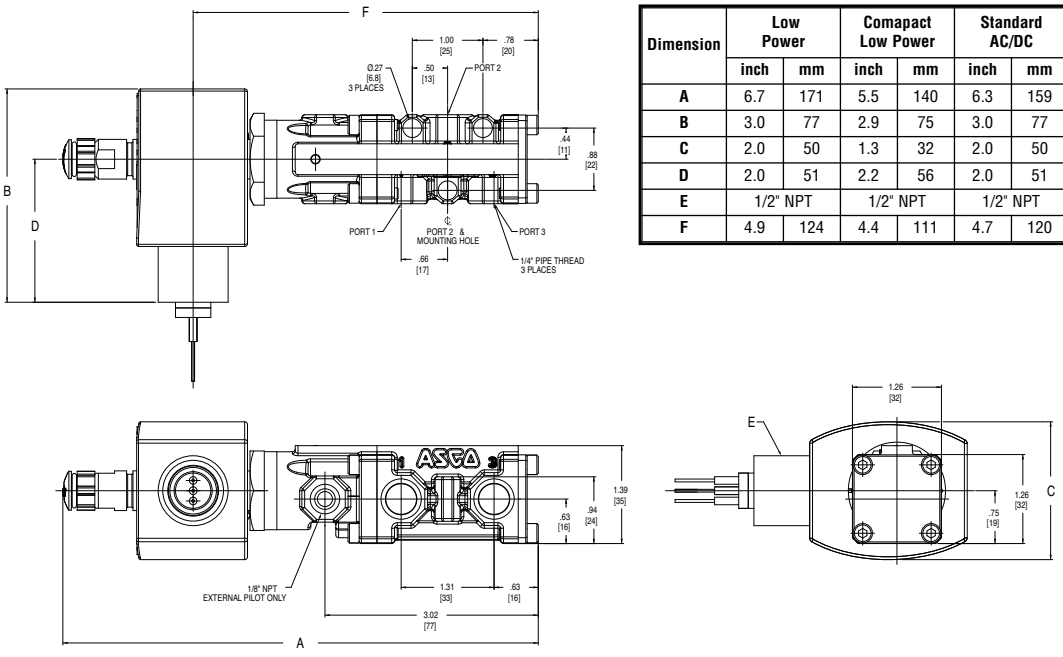
Specifications English units (Metric)

Pipe Size (in)	Pilot Orifice Size (in)	Flow Cv (Kv)	Operating Pressure Differential psi (bar)		External Pilot Pressure psi (bar)		Base Catalog Number ①	Function	Solenoid Orientation	Const. Ref.
			Min.	Max.	Min.	Max.				
Normally Open / Internally Piloted										
1/4	1/16	1.1 (0.95)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H191_F1	Single Solenoid/Spring Return	Straight	1
1/4	1/16	1.1 (0.95)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H191_F1	Single Solenoid/Spring Return	90˚ Solenoid	2
Normally Open / Externally Piloted										
1/4	1/16	1.1 (0.95)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H111_F1	Single Solenoid/Spring Return	Straight	1
1/4	1/16	1.1 (0.95)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H111_F1	Single Solenoid/Spring Return	90˚ Solenoid	2
Normally Closed / Internally Piloted										
1/4	1/16	1.6 (1.38)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H181_F1	Single Solenoid/Spring Return	Straight	3
1/4	1/16	1.6 (1.38)	18 (1.2)	150 (10) ②	N/A	N/A	8364A101H181_F1	Single Solenoid/Spring Return	90˚ Solenoid	4
1/4	1/16	1.6 (1.38)	40 (2.8)	150 (10) ②	N/A	N/A	8364A123H181_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	Straight	5
1/4	1/16	1.6 (1.38)	40 (2.8)	150 (10) ②	N/A	N/A	8364A123H181_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	90˚ Solenoid	6
Normally Closed / Externally Piloted										
1/4	1/16	1.6 (1.38)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H101_F1	Single Solenoid/Spring Return	Straight	3
1/4	1/16	1.6 (1.38)	0	200 (13.8)	36 (2.5)	150 (10) ③	8364A101H101_F1	Single Solenoid/Spring Return	90˚ Solenoid	4
1/4	1/16	1.6 (1.38)	0	200 (13.8)	40 (2.8)	150 (10) ③	8364A123H101_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	Straight	5
1/4	1/16	1.6 (1.38)	0	200 (13.8)	40 (2.8)	150 (10) ③	8364A123H101_F1	Latching Palm Button with Solenoid Operated Air Latch Pilot	90˚ Solenoid	6
Detent Internally Piloted										
1/4	1/16	1.6 (1.38)	15 (1.0)	150 (10) ②	N/A	N/A	8364A106H1G1_F1	Dual Solenoid	Straight	7
1/4	1/16	1.6 (1.38)	15 (1.0)	150 (10) ②	N/A	N/A	8364A106H1G1_F1	Dual Solenoid	90˚ Solenoid	8
Detent Externally Piloted										
1/4	1/16	1.6 (1.38)	0	200 (13.8)	15 (1.0)	150 (10) ③	8364A106H171_F1	Dual Solenoid	Straight	7
1/4	1/16	1.6 (1.38)	0	200 (13.8)	15 (1.0)	150 (10) ③	8364A106H171_F1	Dual Solenoid	90˚ Solenoid	8

① Base Catalog Numbers are listed as 24 V versions. For 12 V DC, change last digit from a "1" to a "3"
② Maximum Operating Pressure for Intrinsically Safe and Ultra Low Power Versions is 130 psi (9 bar) and 200 psi (13.8 bar)for Standard AC
③ Maximum Pilot Pressure for Intrinsically Safe and Ultra Low Power Versions is 130 psi (9 bar) and 200 psi (13.8 bar)for Standard AC

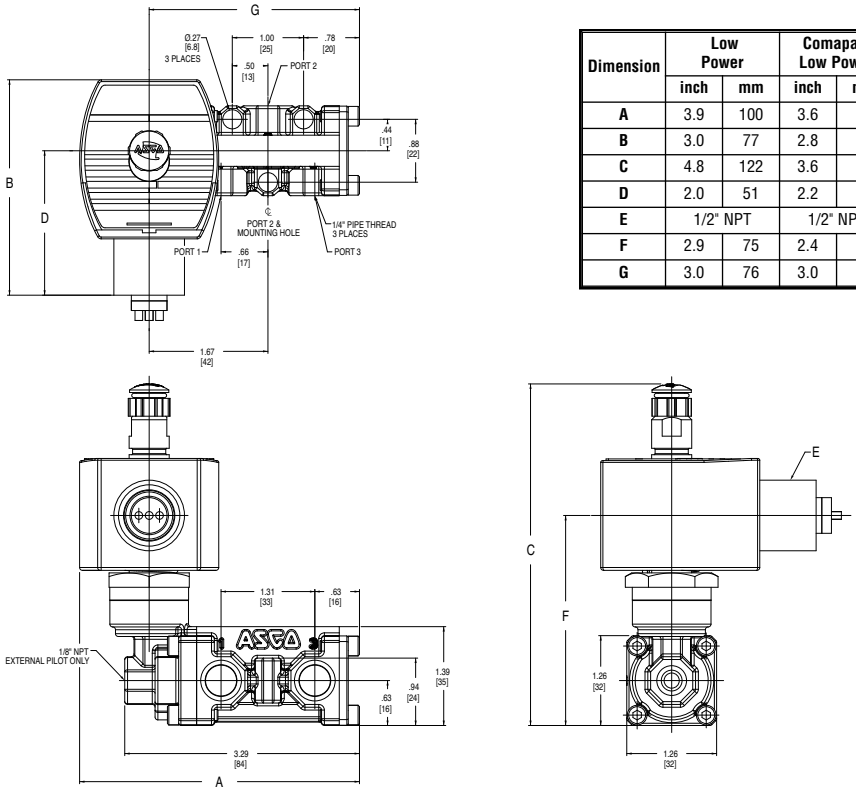
Dimensions: inches (mm)

Const. Ref. 1



Dimension	Low Power		Comapact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	6.7	171	5.5	140	6.3	159	6.7	171
B	3.0	77	2.9	75	3.0	77	3	77
C	2.0	50	1.3	32	2.0	50	2	50
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	4.9	124	4.4	111	4.7	120	4.9	124

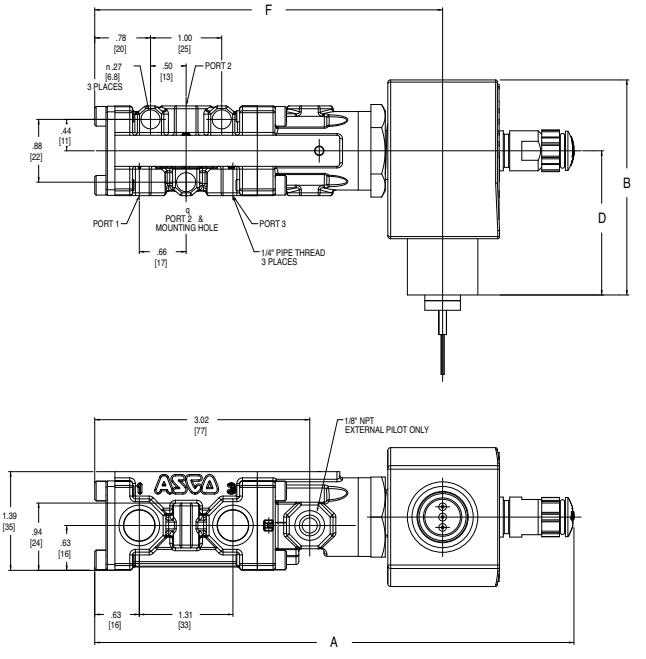
Const. Ref. 2

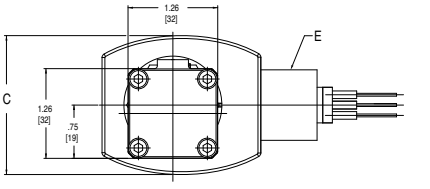


Dimension	Low Power		Comapact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	3.9	100	3.6	91	3.9	100	3.9	100
B	3.0	77	2.8	72	3.0	77	3	77
C	4.8	122	3.6	90	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	2.9	75	2.4	62	2.8	71	2.9	75
G	3.0	76	3.0	75	3.0	76	2.9	75

Dimensions: inches (mm)

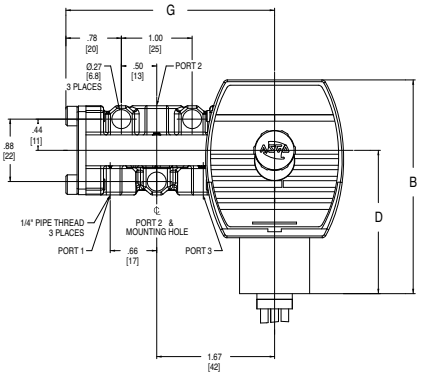
Const. Ref. 3

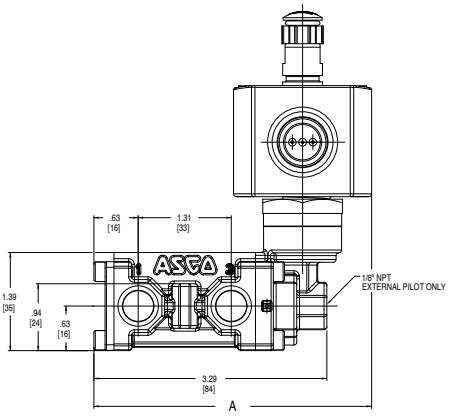


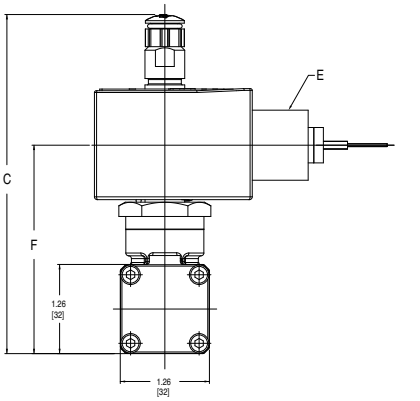


Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	6.7	171	5.5	140	6.3	159	6.7	171
B	3.0	77	2.9	75	3.0	77	3	77
C	2.0	50	1.3	32	2.0	50	2	50
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	4.9	124	4.4	111	4.7	119	4.9	124

Const. Ref. 4



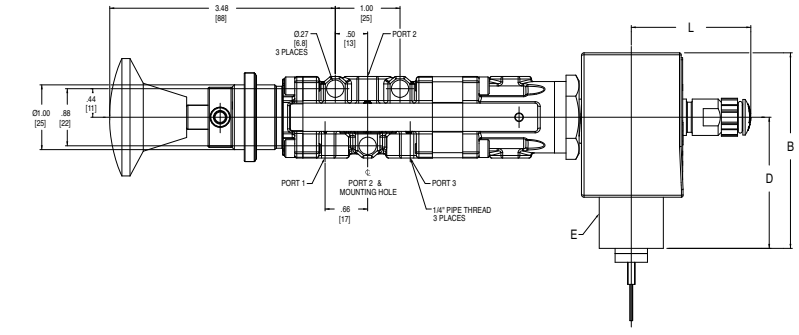


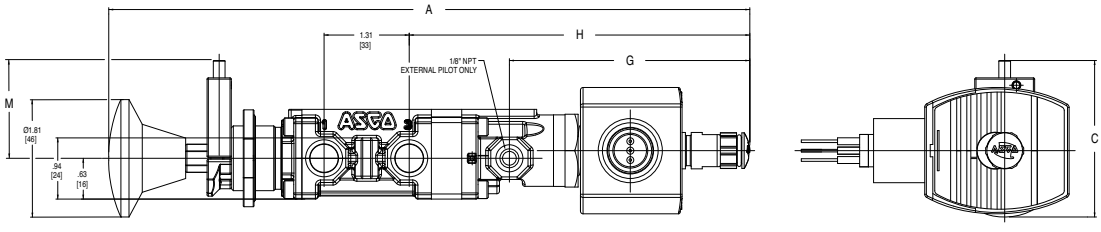


Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	3.9	100	3.6	91	3.9	100	3.9	100
B	3.0	77	2.8	72	3.0	77	3	77
C	4.8	122	3.6	90	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	2.9	75	2.4	62	2.8	72	2.9	75
G	3.0	76	3.0	75	3.0	76	2.9	75

Dimensions: inches (mm)

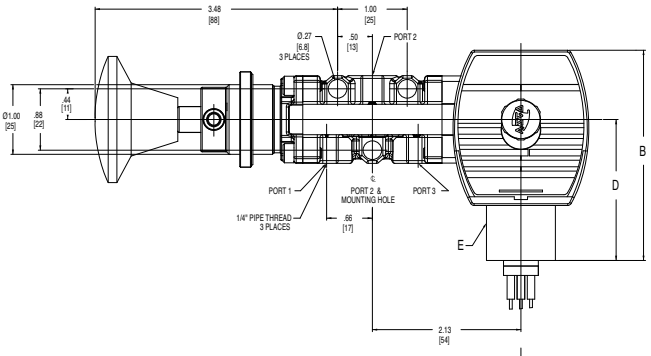
Const. Ref. 5

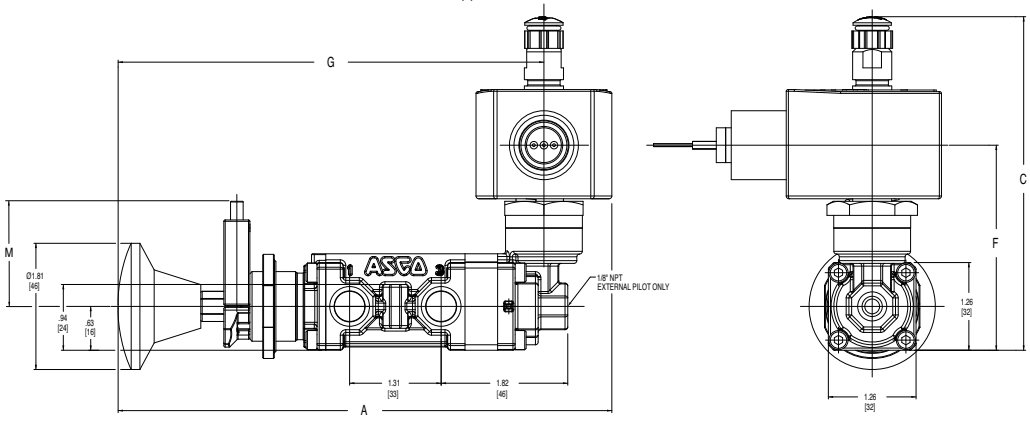




Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	9.9	251	8.7	220	9.4	239	9.9	251
B	3.0	77	2.8	71	3.0	77	3	77
C	2.4	61	3.5	89	2.4	61	2.4	61
D	2.0	51	1.3	32	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
G	3.7	94	2.5	63	3.2	82	3.7	94
H	5.3	134	4.0	102	4.8	121	5.3	134
L	1.9	47	1.1	28	1.5	39	1.9	47
M	1.5	39	1.5	39	1.5	39	-	-

Const. Ref. 6

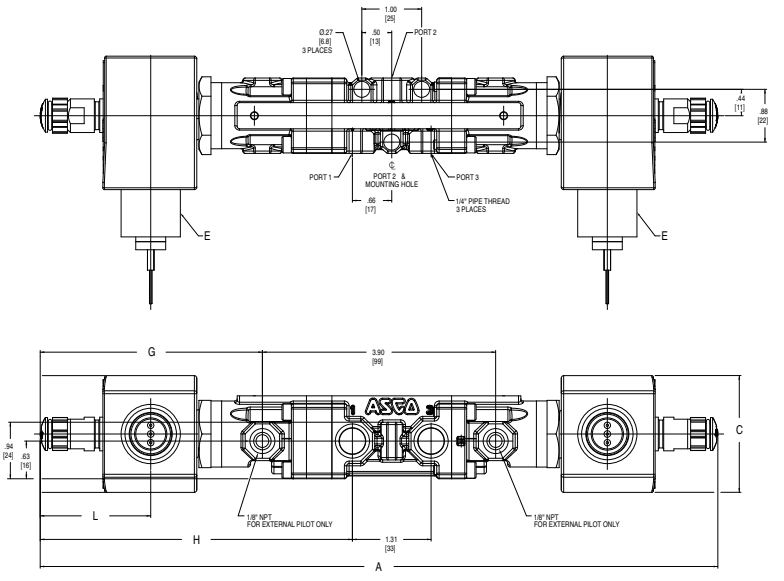




Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	7.1	180	6.7	171	7.1	180	7.1	180
B	3.0	77	2.8	71	3.0	77	3	77
C	4.8	122	3.5	88	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	3.0	75	2.4	62	2.8	71	2.9	75
G	6.0	151	6.0	151	6.0	151	6.1	155
M	1.5	39	1.5	39	1.5	39	-	-

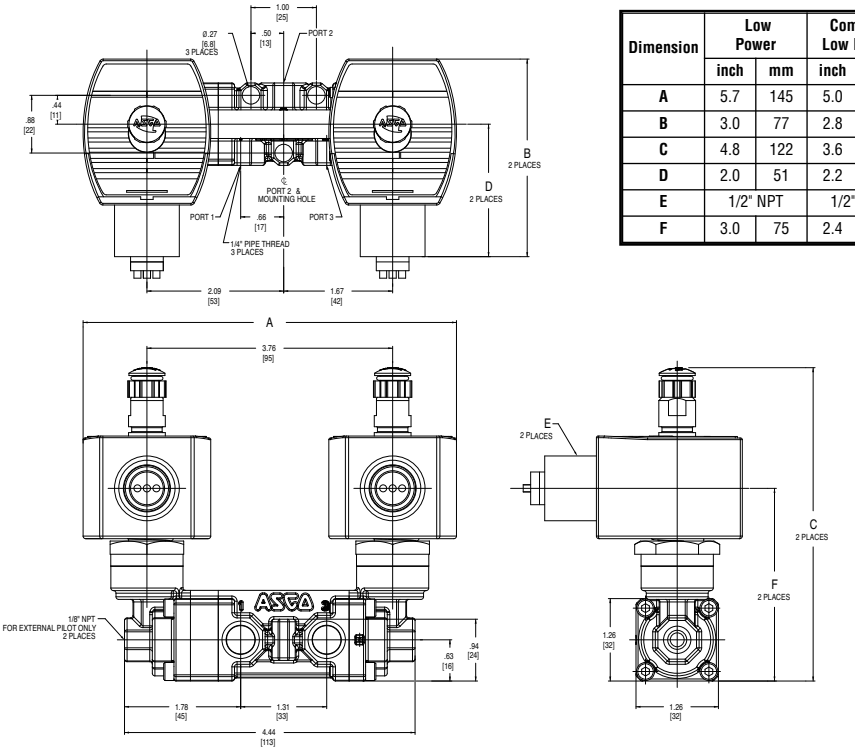
Dimensions: inches (mm)

Const. Ref. 7



Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	11.3	288	8.9	225	10.4	263	11.3	288
B	3.0	77	2.9	75	3.0	77	3	77
C	2.0	50	2.9	75	2.0	50	2	50
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
G	3.7	94	2.5	63	3.2	82	3.7	94
H	5.2	133	4.0	101	4.7	120	5.2	133
L	1.8	47	1.1	28	1.5	39	1.8	47

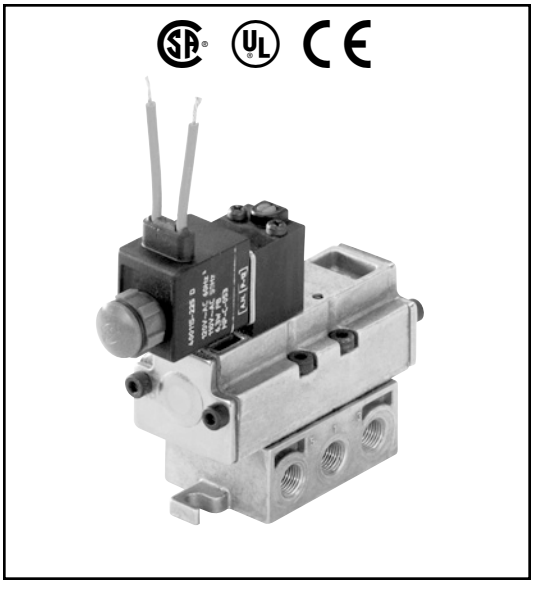
Const. Ref. 8

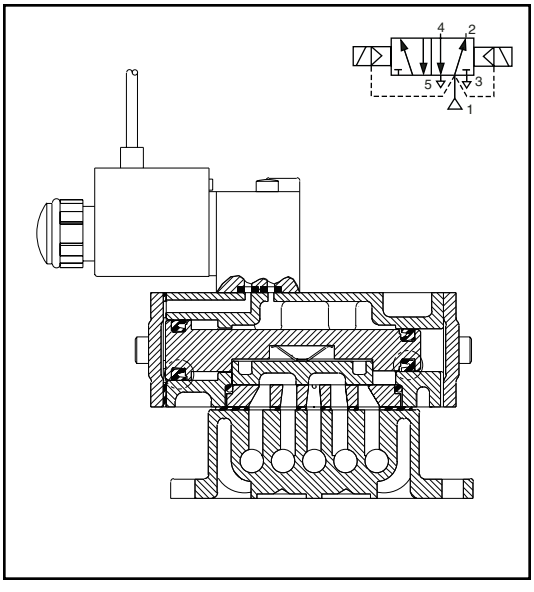


Dimension	Low Power		Compact Low Power		Standard AC/DC		Stainless Steel Encapsulated	
	inch	mm	inch	mm	inch	mm	inch	mm
A	5.7	145	5.0	127	5.7	145	5.7	145
B	3.0	77	2.8	72	3.0	77	3	77
C	4.8	122	3.6	90	4.3	109	4.8	122
D	2.0	51	2.2	56	2.0	51	2	51
E	1/2" NPT		1/2" NPT		1/2" NPT		1/2" NPT	
F	3.0	75	2.4	62	2.8	71	2.9	75

Features

- Unique sliding, sealing member
- Optional flow control regulates cylinder speed in either direction
- Dual solenoid versions hold last position, even after loss of electric power
- Dual solenoid operation: solenoid may be energized momentarily (1/10 second) or continuously
- Air/inert gas service only
- Durable and "non-sticking" sealing method
- Standard manual operator both momentary and maintained
- Optional flow control provides adjustable Cv from 0.2 to 0.8





Construction

Valve Parts in Contact with Fluids	
Main Valve Body, Sub- and Manifold Base, End Caps	Aluminum
Pilot Valve Body	Molded CA
End Caps	Stainless Steel (non-metering) Molded CA (metering)
Seals	NBR (Carboxylated Nitrile)
Spool	Molded Delrin
Slide	Molded Delrin
Flow Plate	Ceramic (alumina)
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core and Plugnut	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption					
		AC			Spare Coil Part No.	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC
F	6.9	6.3	8.8	12.1	400125	400125

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

Standard: Open Frame Solenoid.

Optional: Watertight, Types 1, 2, 3, 3S, 4, and 4X.
(To order, substitute with prefix "WT".) Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, substitute with prefix "EF".)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Standard Class F insulation:
AC: 0˚F to 135˚F (-18˚C to 57˚C) ("U" and "SC" prefix)
AC: 0˚F to 104˚F (-18˚C to 40˚C)
(optional "WT" or "EF" prefix)
DC: 0˚F to 77˚F (-18˚C to 25˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL recognized components for "U" and "SC" prefix. With prefix "WT", UL listed as a General Purpose Valve. Meets applicable CE directives.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Main Line Supply Pressure (psi)			Max. Fluid Temp.˚F		Molded Epoxy Open Frame Solenoid				Watt Rating/ Class of Coil Insulation	
				Air-Inert Gas				Sub-Base Mounted		Manifold Mounted			
			Min.	Max. AC	Max . DC	AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
SINGLE SOLENOID													
1/4	1/4	.80	20	150	150	135	77	U8401B101	1	U8401B103	2	6.3/F	6.9/F
DUAL SOLENOID													
1/4	1/4	.80	20	150	150	135	77	U8401B105	3	U8401B107	4	6.3/F	6.9/F

Specifications (Metric units)

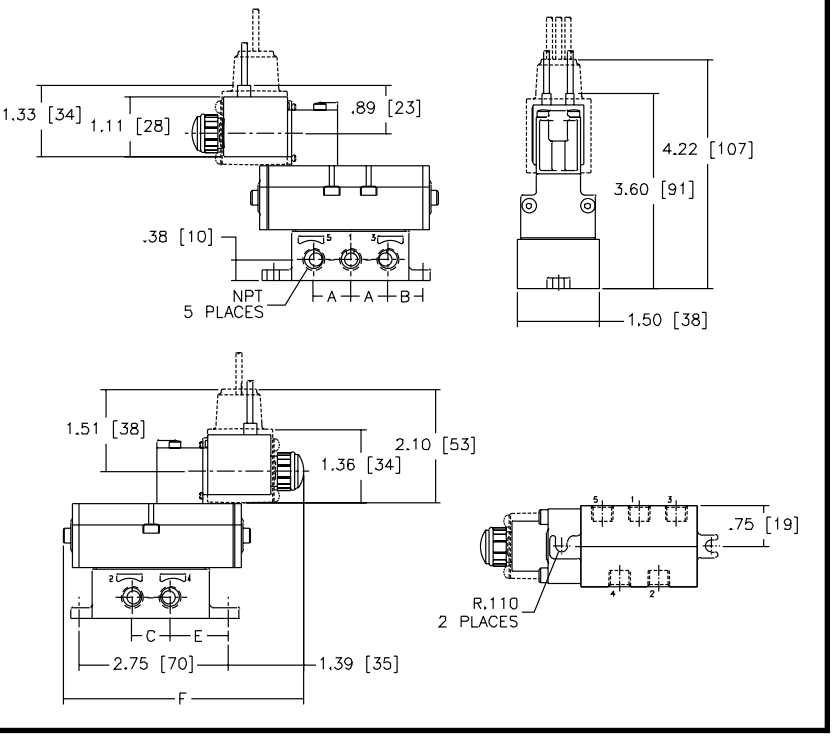
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Main Line Supply Pressure (bar)			Max. Fluid Temp.˚C		Molded Epoxy Open Frame Solenoid				Watt Rating/ Class of Coil Insulation	
				Air-Inert Gas				Sub-Base Mounted		Manifold Mounted			
			Min.	Max. AC	Max . DC	AC	DC	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
SINGLE SOLENOID													
1/4	6.4	.69	1.4	10	10	57	25	U8401B101	1	U8401B103	2	6.3/F	6.9/F
DUAL SOLENOID													
1/4	6.4	.69	1.4	10	10	57	25	U8401B105	3	U8401B107	4	6.3/F	6.9/F

Dimensions: inches (mm)

Const. Ref.		A	B	C	E	F
1	in	.73	.60	.80	1.02	4.43 ①
	mm	19	15	20	26	112 ①
2	in	-	-	.79	.91	4.43 ①
	mm	-	-	20	23	112 ①
3	in	.73	.60	.80	1.02	-
	mm	19	15	20	26	-

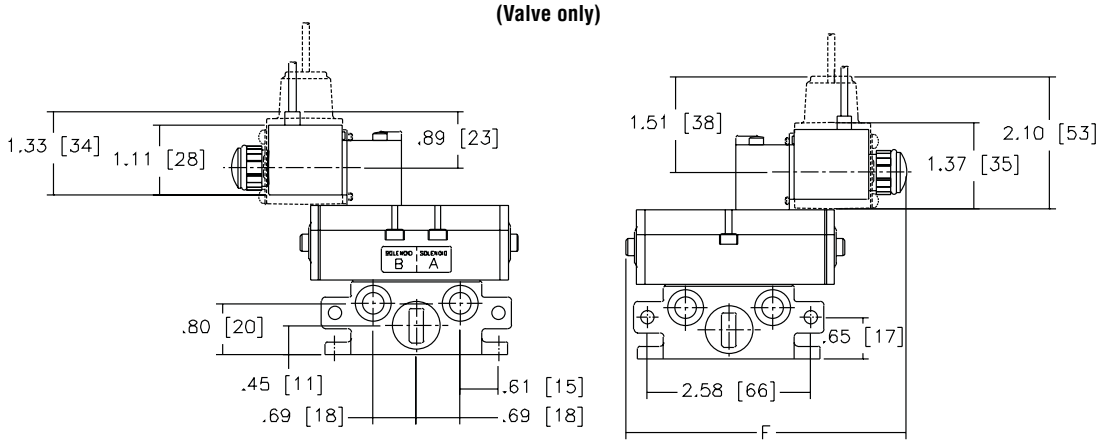
① Add .54 (13.7mm) for metering.
See drawings for dimensions not shown.
Note: "EF" and "WT" dimensions shown by dotted lines.
IMPORTANT: Valve can be mounted in any position.

Const. Ref. 1

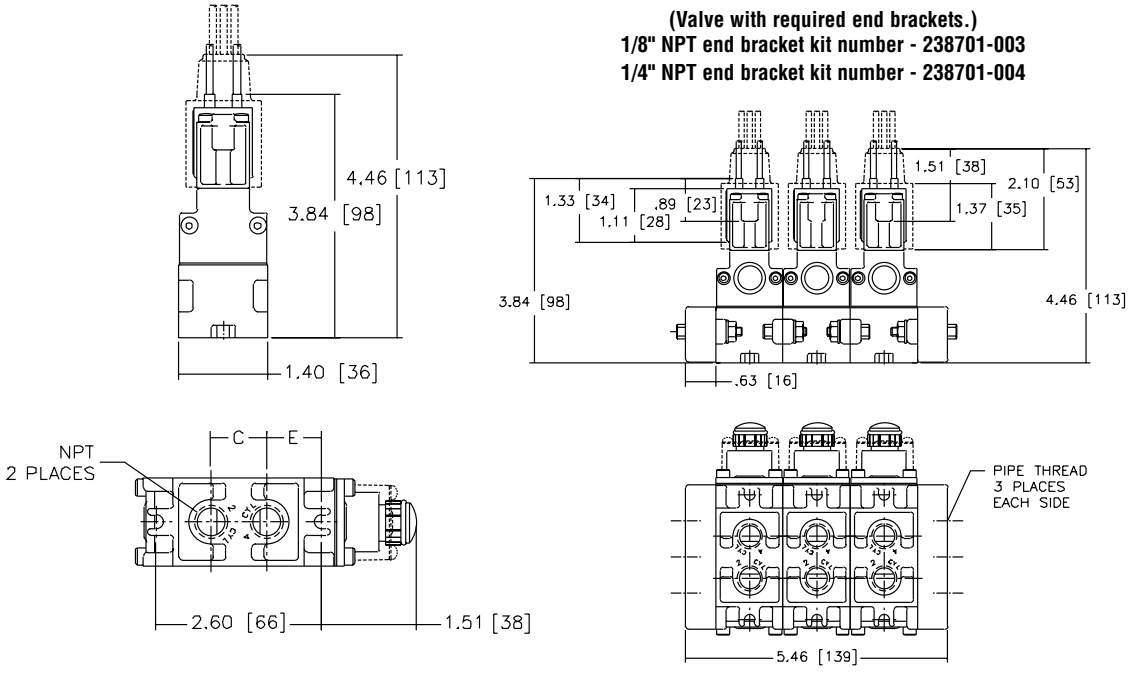


Dimensions: inches (mm)

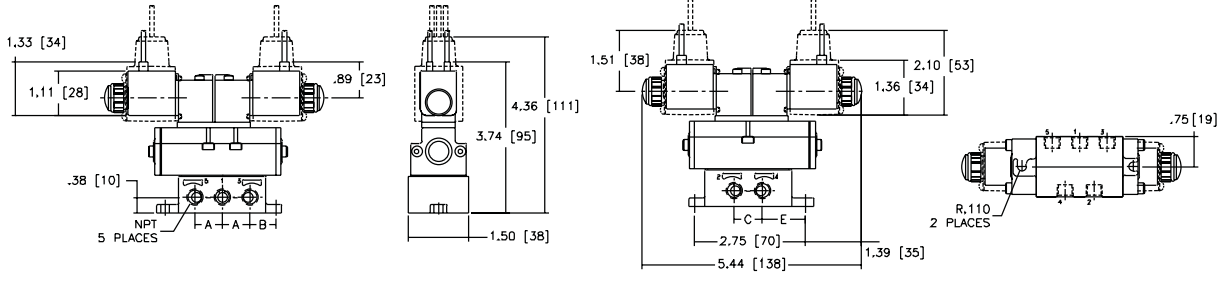
Const. Ref. 2
(Valve only)



Const. Ref. 2
(Valve with required end brackets.)
1/8" NPT end bracket kit number - 238701-003
1/4" NPT end bracket kit number - 238701-004



Const. Ref. 3



Dimensions: inches (mm)

Const. Ref.		A	B	C	E	F	G	H
4*	in	-	-	.79	.91	-	-	-
	mm	-	-	20	23	-	-	-

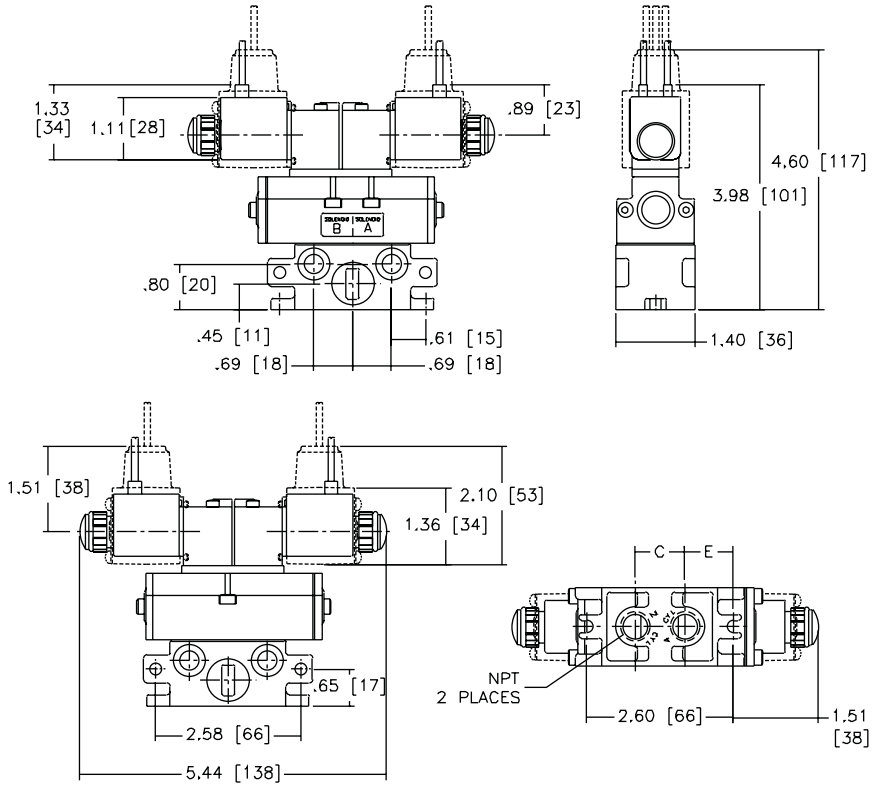
① Add .54 (13.7 mm) for metering. ② Add 1.07 (27.2 mm)

See drawings for dimensions not shown.

Note: "EF" and "WT" dimensions shown by dotted lines. Male 1/2" connection on EF/WT coil, conduit connector provided.
*For dimensions with required end brackets see Const. Ref. 3.

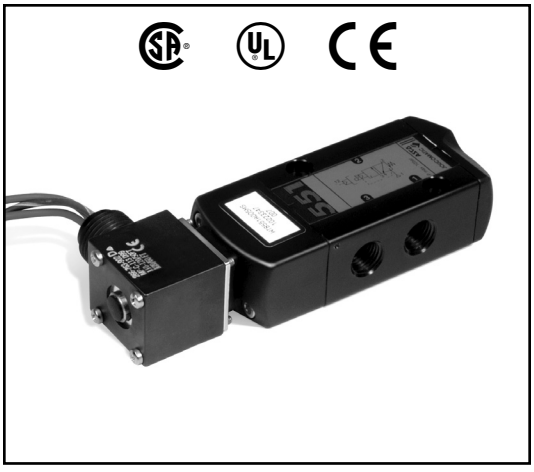
IMPORTANT: Valve can be mounted in any position.

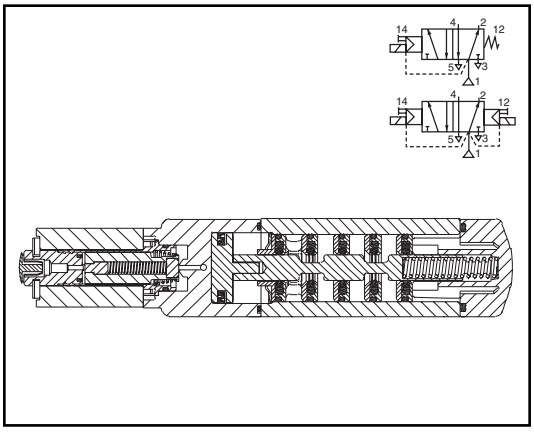
Const. Ref. 4



Features

- Compact spool valve with threaded port connections
- All exhaust ports are pipable, providing better protection against harsh environments
- Standard manual operator
- DIN, Watertight and Explosionproof solenoids available
- Single and dual solenoid constructions
- Mountable in any position





Construction

Valve Parts in Contact with Fluids	
Body	Black Anodized Aluminum
Spring	Phosphate Treated Black Steel
Shading Coil	Copper
Seals	NBR + PUR
Core and Core Tube	Stainless Steel/Brass
End Covers	6/6 Glass Filled PA/FG
Spool	Aluminum
Internal Parts	Zamak, Steel, CA, Aluminum

Electrical

Standard Coil and Class of Insulation	Enclosure Type	Watt Rating and Power Consumption				Spare Coil Part Number	
		DC Watts	AC Watts	VA Holding	VA Inrush	AC	DC
F	SC	3	2.5	3.5	6	400127	400127
F	SC	6.9	5	7	15	400727	400727
F	EF	6.9	6.3	7	10.1	266762	270007
F	WT	6.9	6.3	7	10.1	266763	270008

Standard Voltages: SC: 24, 120, 240 Volts AC, 50-60 Hz; 12, 24, 120 Volts DC.
WT and EF: 24/50-60HZ, (120/60, 110-120/50)①, (240/60, 220-240/50)② Volts AC; 6, 12, 24, 120 Volts DC.
① Order as 120/60, 110/50
② Order as 240/60, 220/50

Solenoid Enclosures

Standard: - Prefix

SC = IP65 type DIN (open frame) per 46244

WT = Combination General Purpose and Watertight Types 1, 2, 3, 3S, 4, and 4X

EF = Combination Explosionproof and Watertight Types 3, 3S, 4, 4X, 6, 6P, 7, 9 Class I, Div. 1 (Groups A - D) and Class II, Div. 1 Type 9 (Groups E-G)

Nominal Ambient Temp. Ranges

SC: AC/DC: 5˚F to +140˚F (-15˚C to 60˚C)

EF: AC: 5˚F to +104˚F (-15˚C to 40˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

WT: AC: 5˚F to +140˚F (-15˚C to 60˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

Note: For temperatures below 32˚F (0˚C) moisture-free air must be used.
Refer to Engineering Section for details.

Approvals

SC (2.5W and 3W only) UL recognized component, CSA certified. (Series 8551 only)

WT: UL listed, CSA certified. (Series 8551 only)

EF: UL and CSA listed solenoid.
Meets applicable CE directives.

Refer to Engineering Section for details.

Note

When mounting inline 8551 valves with WT & EF solenoids (6.3 & 6.9 watts), ASCO recommends using two (2) 1/8" thick washers under the valve body to provide clearance for the solenoid coil.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Fluid Temp.˚F (for single and dual solenoid)			Single Solenoid	Dual Solenoid	Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Catalog Number	AC	DC
OPEN FRAME DIN COIL											
1/4	1/4	.86	30	150	5	140	140	SC8551A017MS	SC8551A018MS	2.5	3
1/2	1/2	3.7	30	150	-15	140	140	SC8553A017MS	SC8553A018MS	5	6.9
WATERTIGHT ENCLOSURE											
1/4	1/4	.86	30	150	5	140	77	WT8551A017MS	WT8551A018MS	6.3	6.9
1/2	1/2	3.7	30	150	-15	140	77	WT8553A017MS	WT8553A018MS	6.3	6.9
EXPLOSIONPROOF ENCLOSURE											
1/4	1/4	.86	30	150	5	104	77	EF8551A017MS	EF8551A018MS	6.3	6.9
1/2	1/2	3.7	30	150	-15	104	77	EF8553A017MS	EF8553A018MS	6.3	6.9

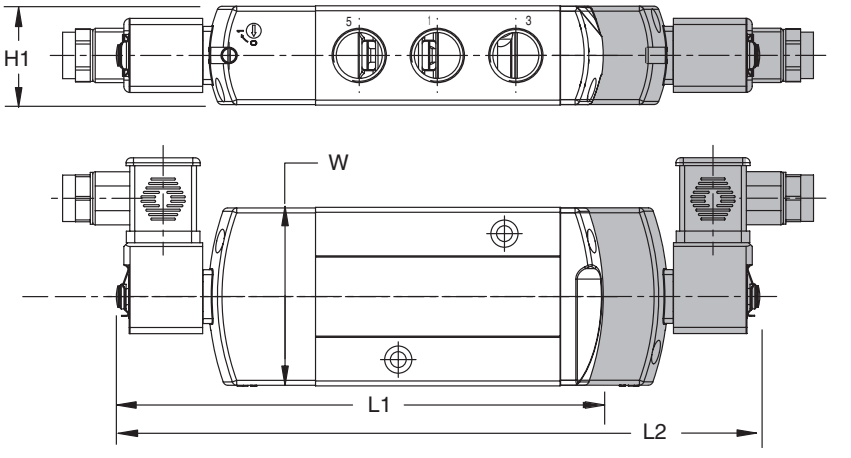
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Fluid Temp.˚C (for single and dual solenoid)			Single Solenoid	Dual Solenoid	Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Catalog Number	AC	DC
OPEN FRAME DIN COIL											
1/4	6	.75	2	10	-15	60	60	SC8551A017MS	SC8551A018MS	2.5	3
1/2	13	3.15	2	10	-25	60	60	SC8553A017MS	SC8553A018MS	5	6.9
WATERTIGHT ENCLOSURE											
1/4	6	.75	2	10	-15	60	25	WT8551A017MS	WT8551A018MS	6.3	6.9
1/2	13	3.15	2	10	-25	60	25	WT8553A017MS	WT8553A018MS	6.3	6.9
EXPLOSIONPROOF ENCLOSURE											
1/4	6	.75	2	10	-15	40	25	EF8551A017MS	EF8551A018MS	6.3	6.9
1/2	13	3.15	2	10	-25	40	25	EF8553A017MS	EF8553A018MS	6.3	6.9

Dimensions inches (mm)

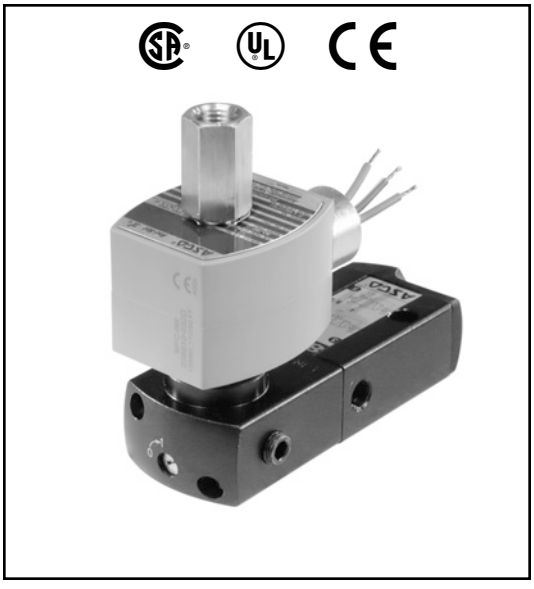
Series	8551	8553
NPT	1/4	1/2
L1	6.18 (157)	7.76 (197)
L2	8.28 (210)	10.25 (260)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

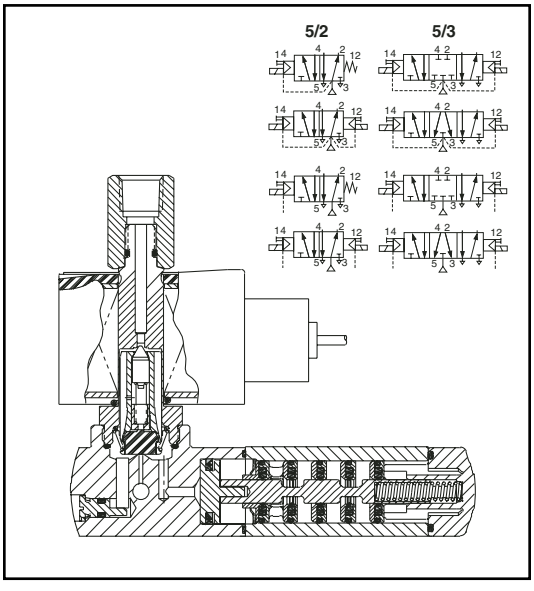
NOTE: Valve shown with CM22 DIN terminal coil and connector. Connector sold separately.



Features

- Compact Spool Valve
- Single and dual solenoid constructions available
- Unique design combines hard T-seals and flexible o-rings, provides bubble-tight shutoff, resistance to dirt and multimillion cycle life controlling air or inert gas
- Low Power and Intrinsically Safe construction available *See Special Service Pilot Valve Section for details*





Construction

Valve Parts in Contact with Fluids			
Body	Aluminum, Black Anodized	Brass	316L Stainless Steel
End Cover (Spring end)	Glass-filled Polyamide	Brass	316L Stainless Steel
Spool Valve Internals	Zamak, Stainless Steel, Acetal (POM), Aluminum	Brass, Acetal (POM), Delrin	
Pilot End Covers	Aluminum, Black Anodized	Brass	316L Stainless Steel
Core Tube	Stainless Steel		
Core and Plugnut	Stainless Steel		
Springs	Stainless Steel		
Seals and Discs	NBR		
Top Disc	Nylon (PA)		
Core Guide	Acetal		
Seat and Seat Insert	Brass, Acetal		
Shading Coil	Copper		
Rider Ring (low power)	PTFE		

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	238614	238714

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (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

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" or ("EV" for stainless steel) to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Body Material	Description
Aluminum	AC: 5˚F to 125˚F (-15˚C to 52˚C) DC: 5˚F to 104˚F (-15˚C to 40˚C)
Brass	AC: -40˚F to 125˚F (-40˚C to 52˚C) DC: -40˚F to 104˚F (-40˚C to 40˚C)
Stainless Steel	

Approvals

UL/CSA approvals for aluminum constructions pending. EF and EV are UL listed solenoids. CSA certified. Meet applicable CE directives.

Refer to Engineering Section for details.

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Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid: Operating Pressure Differential (psi) Air-Inert Gas Min.	Max. AC	Max. DC	Max. Fluid Temp. °F AC	DC	Catalog Number	Const. Ref.	Dual Solenoid: Operating Pressure Differential (psi) Air-Inert Gas Min.	Max. AC	Max. DC	Max. Fluid Temp. °F AC	DC	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	DC
Aluminum 5/2	1/4	1/4	.86	30	145	120	140	120	8551G417	1	30	145	120	140	120	8551G418	1	10.1/F	11.6/F
Aluminum 5/3 Center Closed									-							8551G467			
Aluminum 5/3 Center Open									-							8551G468			
Brass 5/2									EF8551G419 ①							EF8551G420 ①			
316L Stainless Steel 5/2									EV8551G421 ②							EV8551G422 ②			
Aluminum 5/2	1/2	1/2	3.7						8553G417							8553G418			
316L Stainless Steel 5/2									EV8553G421 ②							EV8553G422 ②			

① Brass construction supplied standard with EF solenoid. ② Stainless steel construction supplied standard with EV solenoid.

Specifications (Metric units)

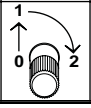
Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Single Solenoid: Operating Pressure Differential (bar) Air-Inert Gas Min.	Max. AC	Max. DC	Max. Fluid Temp. °C AC	DC	Catalog Number	Const. Ref.	Dual Solenoid: Operating Pressure Differential (bar) Air-Inert Gas Min.	Max. AC	Max. DC	Max. Fluid Temp. °C AC	DC	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	DC
Aluminum 5/2	1/4	6.4	.75	2	10	8.2	60	48	8551G417	1	2	10	8.2	60	48	8551G418	1	10.1/F	11.6/F
Aluminum 5/3 Center Closed									-							8551G467			
Aluminum 5/3 Center Open									-							8551G468			
Brass 5/2									EF8551G419 ①							EF8551G420 ①			
316L Stainless Steel 5/2									EV8551G421 ②							EV8551G422 ②			
Aluminum 5/2	1/2	13	3.15						8553G417							8553G418			
316L Stainless Steel 5/2									EV8553G421 ②							EV8553G422 ②			

① Brass construction supplied standard with EF solenoid. ② Stainless steel construction supplied standard with EV solenoid.

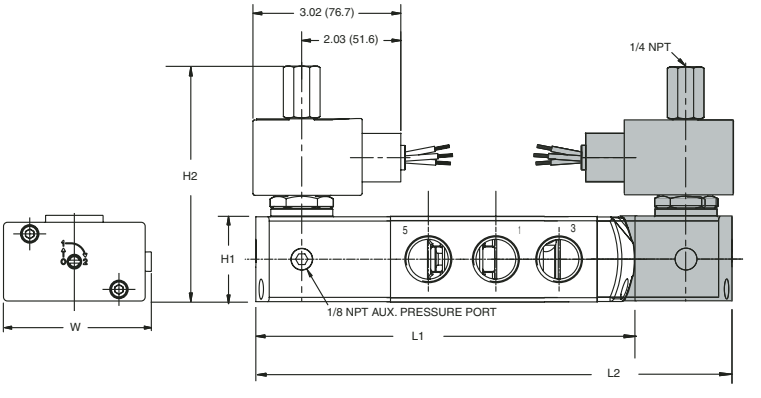
Dimensions inches (mm)

Series	8551	8553
NPT	1/4	1/2
L1 ①	5.63 (143)	7.06 (179)
L2 ①	7.20 (183)	8.86 (225)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250",
MS option adds .468" to each solenoid endcap.

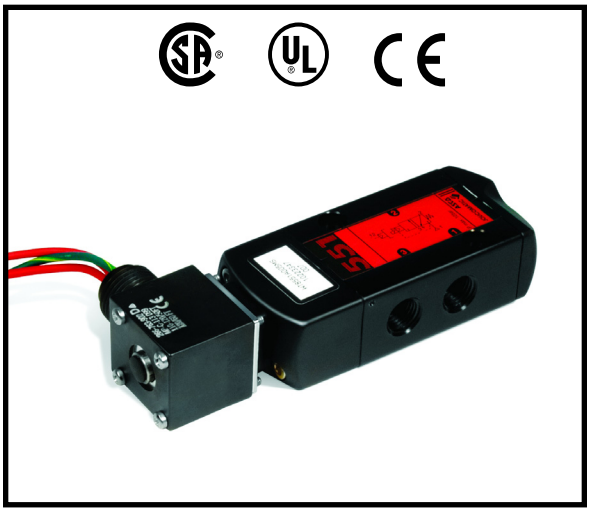
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

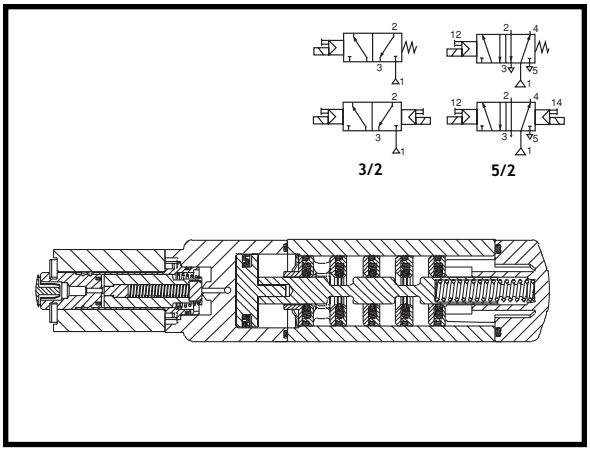
Const. Ref. 1



Features

- Compact spool valve with threaded port connections.
- All exhaust ports are pipable, providing better protection against harsh environments.
- Standard manual operator.
- DIN, Watertight and Explosionproof solenoids available.
- Single and dual solenoid constructions.
- Mountable in any position.





Construction

Valve Parts in Contact with Fluid	
Body	Black Anodized Aluminum
Spring	Phosphate treated black steel
Shading Coil	Copper
Seals	NBR + PUR
Core and Core tube	Stainless Steel/Brass
End Covers	6/6 glass filled PA/FG
Spool	Aluminum
Internal Parts	Zamak, Steel, CA, Aluminum

Electrical

Standard Coil and Class of Insulation	Enclosure Type	Watt Rating and Power Consumption				Spare Coil Part Number	
		DC Watts	AC Watts	VA Holding	VA Inrush	AC	DC
F	SC	3	2.5	3.5	6	400125	400125
F	EF	6.9	6.3	7	10.1	266762	270007
F	WT	6.9	6.3	7	10.1	266763	270008

Standard Voltages: SC: 24, 120, 240 volts AC, 50-60 Hz; 12, 24, 120 volts DC. WT and EF: 24/50-60Hz, (120/60, 110-120/50)①, (240/60, 220-240/50)② volts AC; 6, 12, 24, 120 volts DC.
Notes: ① Order as 120/60, 110/50
② Order as 240/60, 220/50

Solenoid Enclosures

Standard: - Prefix
SC = IP65 type DIN (open frame) per 46244
WT= Combination General Purpose and Watertight Types 1, 2, 3, 3S, 4, and 4X
EF = Combination Explosionproof and Watertight Types 3, 3S, 4, 4X, 6, 6P, 7, 9 CLASS 1, DIV. 1 (Groups A - D) and CLASS 2, DIV.1 Type 9 (Groups E-G)

Nominal Ambient Temperature Ranges:

SC: AC/DC: 5˚F to +140˚F (-15˚C to 60˚C)
EF: AC: 5˚F to +104˚F (-15˚C to 40˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)
WT: AC: 5˚F to +140˚F (-15˚C to 60˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

Note: For temperatures below 32˚F (0˚C) moisture-free air must be used. *Refer to Engineering Section for details.*

Approvals:

SC: UL recognized component.
EF: UL and CSA solenoid approval.
WT: UL General Purpose valve.
Meets applicable CE directives. *Refer to Engineering Section for details.*

Option:

Metering: order metering device pkg. of 20 pcs.
Order kit number: 276790-002-*.

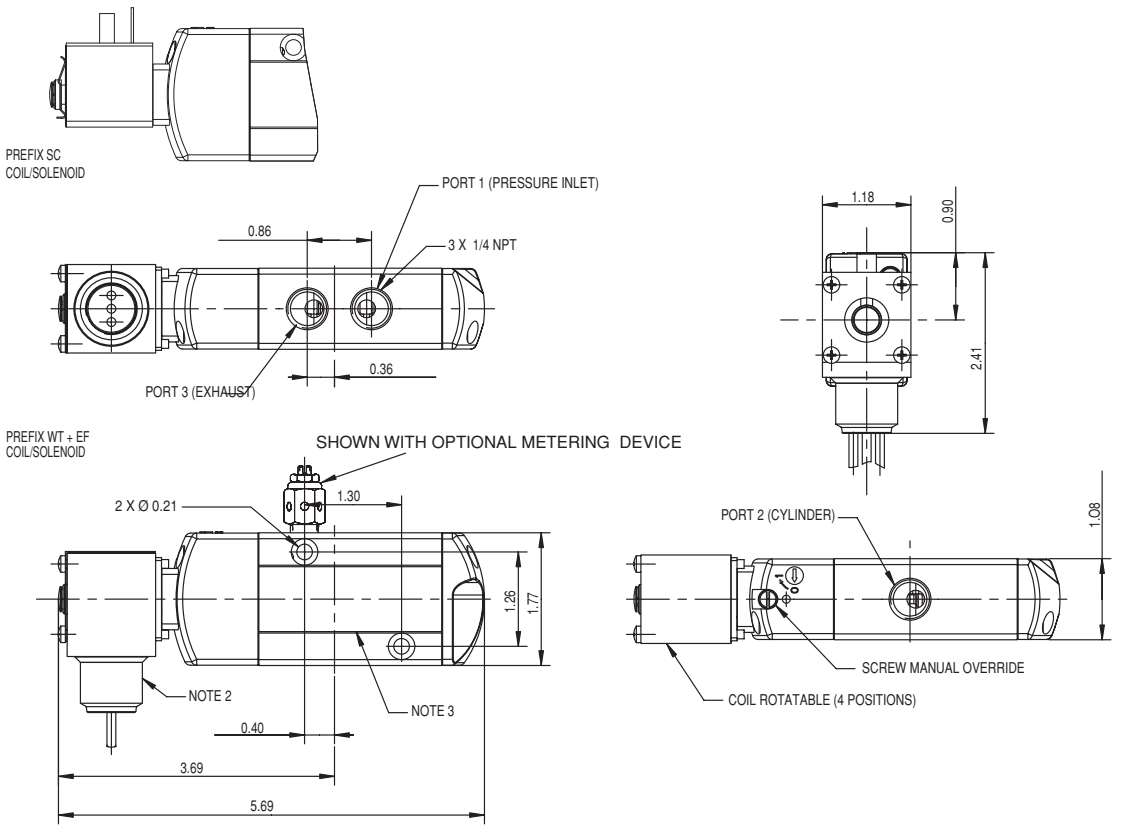
NOTE: When mounting inline 8551 valves with WT & EF solenoids (6.3 & 6.9 watts), ASCO recommends using two (2) 1/8" thick washers under the valve body to provide clearance for the solenoid coil.

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Pilot Pressure		Fluid Temp.˚F (for single and dual solenoid)			Single Solenoid		Dual Solenoid		Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Constr. Ref. No.	Catalog Number	Const. Ref. No.	AC	DC
OPEN FRAME DIN COIL													
3 WAY													
1/4	1/4	.86	30	150	5	140	140	SC8551A005MS	1	SC8551A006MS	3	2.5	3
4 WAY													
1/4	1/4	.86	30	150	5	140	140	SC8551A017MS	2	SC8551A018MS	4	2.5	3
WATERTIGHT ENCLOSURE													
3 WAY													
1/4	1/4	.86	30	150	5	140	77	WT8551A005MS	1	WT8551A006MS	3	6.3	6.9
4 WAY													
1/4	1/4	.86	30	150	5	140	77	WT8551A017MS	2	WT8551A018MS	4	6.3	6.9
EXPLOSIONPROOF ENCLOSURE													
3 WAY													
1/4	1/4	.86	30	150	5	104	77	EF8551A005MS	1	EF8551A006MS	3	6.3	6.9
4 WAY													
1/4	1/4	.86	30	150	5	104	77	EF8551A017MS	2	EF8551A018MS	4	6.3	6.9

Dimensions: inches

Const. Ref. 1



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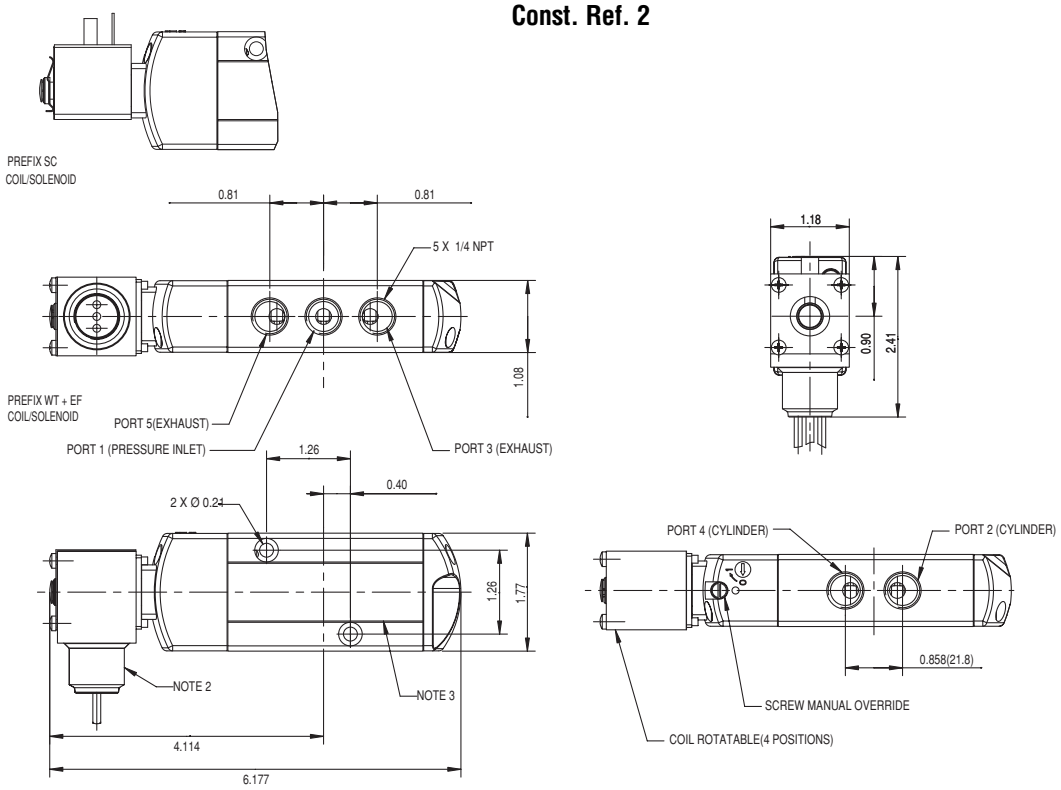
Dimensions: inches

Const. Ref. 2



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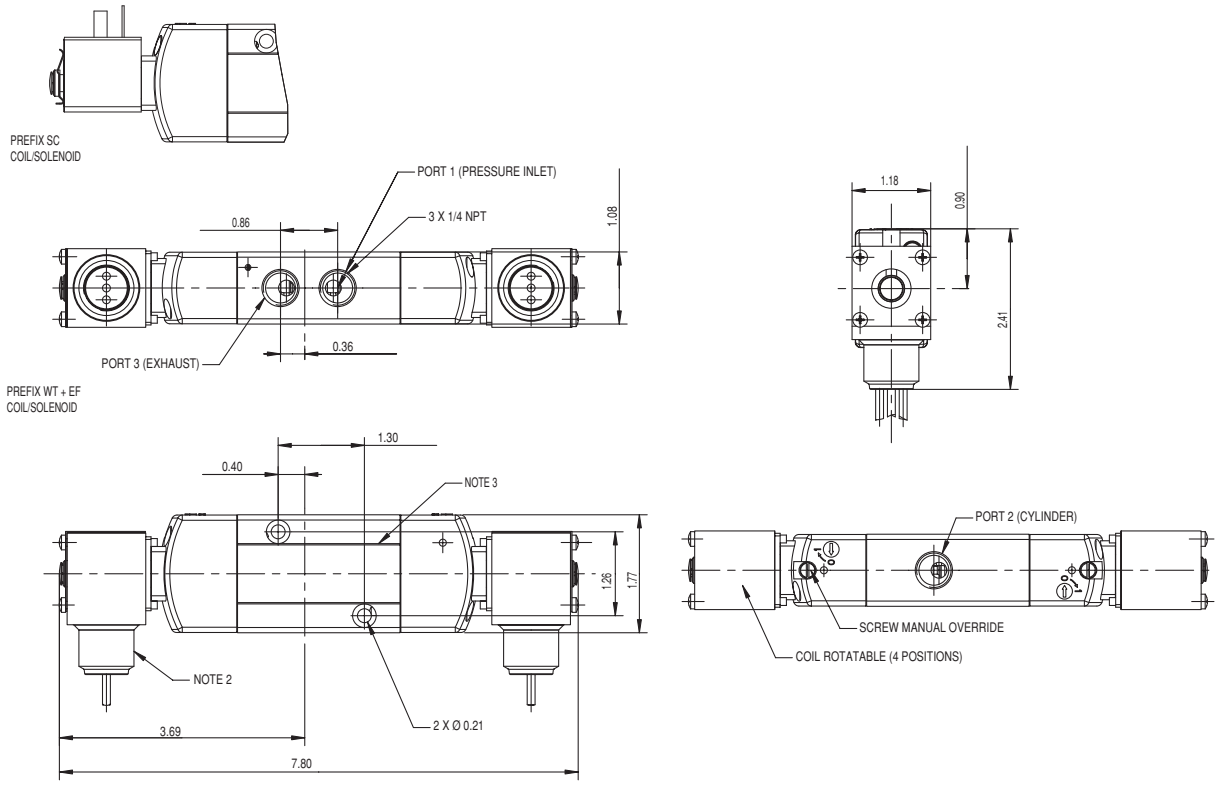
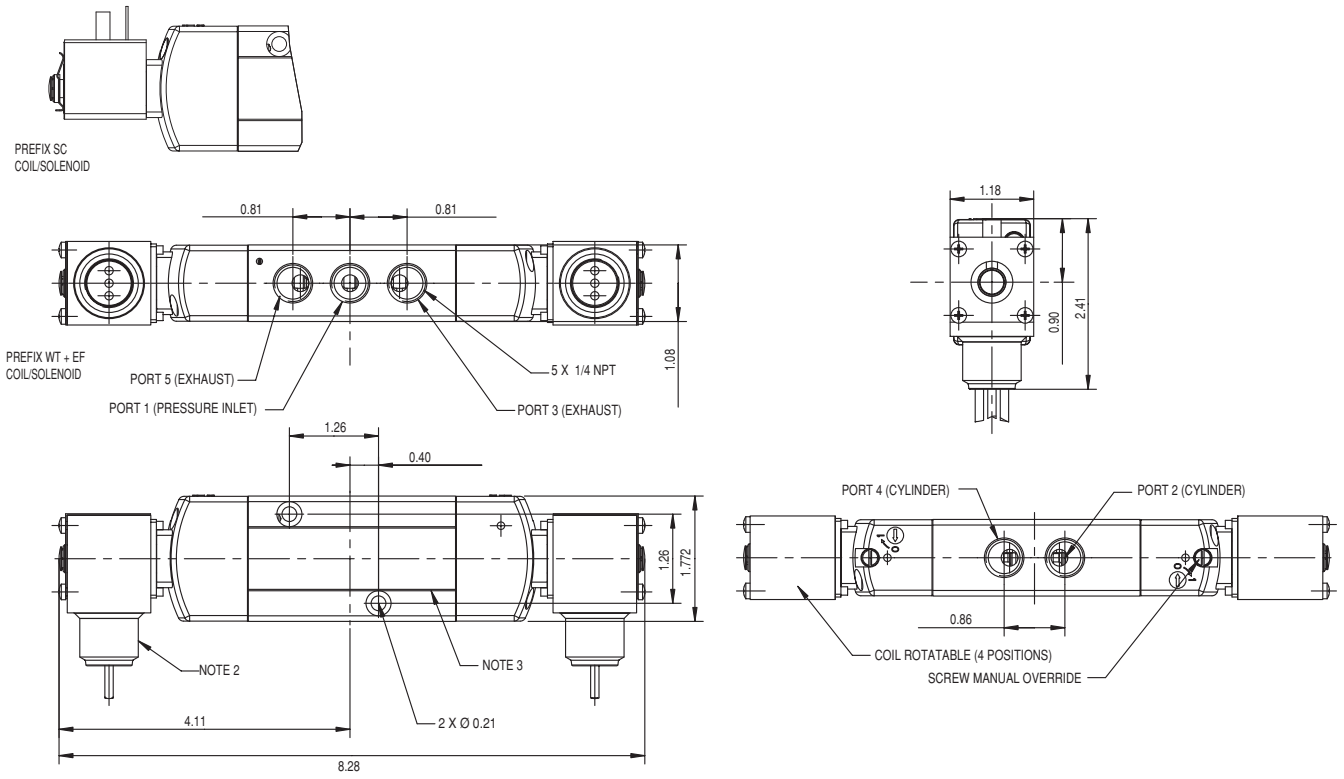


Dimensions: inches

Constr. Ref. 4



Electronically Enhanced Solenoid Valves
(Next Generation)

RedHat Next Generation is the future of solenoid valve technology, designed and manufactured to provide new capabilities. The Next Generation of solenoid valves provides lower operating cost, and represents an advancement in the performance, reliability, and ruggedness that you have come to expect from ASCO.

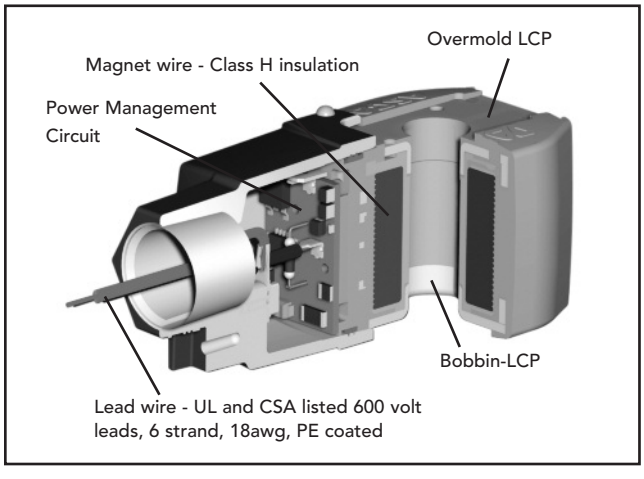
RedHat Next Generation valves use electronics technology to manage power, providing a new standard of operation. The solenoid incorporates a power management circuit providing lower power consumption, enhanced pressure and flow ratings, and electrical surge suppression to both the solenoid and electronic controls.

The new solenoid draws only 1.2 watts of power for 12-24V DC and 1.5 watts for 24-120V AC/DC, 100-240V AC/DC. A conventional solenoid with the same performance can draw as high as 17 watts of power. The savings in power usage over the installed life of the valve will lower the total cost of ownership up to 14%.

The new technology accepts both AC and DC voltages without sacrificing flow or pressure specifications. DC performance has been increased by 150% to 500% from today's industry standards, making the valves' DC characteristics equivalent to AC pressure and flow values. This simplifies your control by eliminating the need for AC output cards, reduces wiring costs, and provides safer working environments for users operating on DC.

RedHat Next Generation coils are offered in three voltage ranges covering most electrical requirements – 100-240/AC or DC, 24-120/AC or DC, or 12-24/DC. Each coil has built-in electrical surge suppression that protects the coil from external voltage spikes and eliminates inductive voltage spikes associated with conventional solenoids. An optional solenoid is available for use in Class I, Division 2 hazardous locations.

ASCO RedHat Next Generation addresses many other operating characteristics that will further improve the life of your solenoid valves. These include a much lower temperature rise, and an increase in valve ambient temperature rating to 140˚F/60˚C. Because of our confidence in the rugged design of the RedHat Next Generation solenoids, ASCO is pleased to extend a 3-year warranty on the coils.



ELECTRONICALLY ENHANCED

Index

General Description	Pipe Size (NPT)	Page
2-Way Normally Closed	1/4" - 2"	106-110
2-Way Normally Open	1/4" - 3/4"	106-110
3-Way Normally Closed	1/4" - 3/4"	111-115
3-Way Normally Open	1/4"	111-115
3-Way Universal	1/4"	111-115
4-Way	1/4" - 1"	116-118

Electronically Enhanced Solenoid Valves

Brass and Stainless Steel Bodies
1/4" - 2" NPT

2/2•3/2•4/2 SERIES Next Generation

Features

- Increase in DC pressure ratings to AC levels on all products (up to a 500% improvement)
- Lower power operation
- Voltage ranging
- Built-in surge suppression
- Elimination of AC hum
- Increase in AC and DC operating temperatures
- Low solenoid temperature rise
- Longer coil life due to lower operating temperatures and electrical surge suppression
- Solenoid approvals to UL, CSA, and CE directives
- Available with Class I, Division 2 coils (EE prefix)
- RoHS 2 Compliant

Nominal Ambient Temp. Ranges

14˚F to 140˚F (-10˚C to 60˚C)
For 8262/8263/8314 Series: -13˚F to 140˚F (-25˚C to 60˚C)

How to order

Find the valve that you are looking for in the provided specifications tables.
The tables contain the following information designed to help you in making your selection:

Pipe Size (in)	Orifice Dia. (in)	Cv Flow	Operating Pressure Differential (psi) Min.	Max. Air-Inert Gas	Max. Water	Max. Light Oil @ 300 SSU	Max Fluid Temp.˚F	Brass ①	Const. Ref.	Agency UL	Stainless Steel	Const. Ref.	Agency UL	Wattage DC	Wattage AC/DC	Approx. Shipping Weight (lbs.)
1/2	5/8	4	0	150	150	-	180	8210P094	4	❍	-	-	-	1.2	1.5	3.2

① When ordering a valve product, specify the ASCO base catalog number (Ex. **8210P094**). This number will always be 8 digits long.

Choose one of the three operating voltage ranges (100-240V/50-60Hz/DC, 24-120V/50-60Hz/DC or 12-24/DC) and add it to the base catalog number (Ex. 8210P094 **24-120V/50-60Hz/DC**).

If you want to enhance the product with one or more of the options allowed in the Optional Features Chart for that catalog number, please add the appropriate prefix or suffix (as shown):

Pipe Size (in)	Orifice Dia. (in)	Solenoid Options ② Class I, Division 2 Coil	Base Catalog Number Brass	Base Catalog Number Stainless Steel	Resilient Materials ③ NBR	FKM	EPDM	CR	Oxygen Service	PTFE	Urethane	Vacuum	Other ③ Manual Operator	Other ③ Mounting Bracket	Standard Rebuild Kit ④ Brass	Standard Rebuild Kit ④ Stainless Steel
1/2	5/8	EE	8210P094	-	●	V	E	J	N	-	-	VH	MO	MB	322670	-

② Optional Class I, Division 2 solenoid (Ex. **EE**8210P094 24-120V/50-60Hz/DC)

③ If an FKM elastomer and manual operator are required, add VMO to the back of the base catalog number. (Ex. 8210P094**VMO** 24-120V/50-60Hz/DC)

④ When ordering a rebuild kit for a valve, supply the rebuild kit number as shown in the table. (Ex. 322670) When ordering a rebuild kit for a valve with a suffix, add the suffix to the appropriate standard rebuild kit. (Ex. The rebuild kit for the above valve with FKM is 322670-V)

All constructions are available with prefix EE for Class I, Division 2 requirements.

When ordering a replacement coil, select from the following:

Voltage Range	Valve Prefix	Replacement Coil Part Number
100-240V/50-60Hz/DC	-	250404-605-*
24-120V/50-60Hz/DC	-	250404-606-*
12-24/DC	-	250404-607-*
100-240V/50-60Hz/DC	EE	250504-605-*
24-120V/50-60Hz/DC	EE	250504-606-*
12-24/DC	EE	250504-607-*

Solenoid Enclosures

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

Optional: Class I, Division 2 for Hazardous Locations and Watertight, Types 3, 3S, 4, 4X. (To order, add prefix "EE" to catalog number.)

Construction & Electrical

See Engineering Section for valve parts in contact with fluids and additional electrical information.

ASCO®

2-Way Features

- Two-way (2/2) Next Generation solenoid valves have one inlet port and one outlet port
- Control of air, water, light oil, and non-corrosive media
- Normally closed (opens when energized) and normally open (closed when energized) operation
- Pipe sizes – 1/8 to 2 inch

Pipe Size (in)	Orifice Dia. (in)	Cv Flow	Operating Pressure Differential (psi) Min.	Max. Air-Inert Gas	Max. Water	Max. Light Oil @ 300 SSU	Max Fluid Temp.°F	Brass	Const. Ref.	Agency UL	Stainless Steel	Const. Ref.	Agency UL	Wattage DC	Wattage AC/DC
General Service - Normally Closed															
1/8	3/64	0.06	0	2200	2200	1700	140	-	-	-	8262R175 ⑤	1	●		
1/8	3/64	0.06	0	1500	1500	1500	140	8262R099 ⑤	1	●	-	-	-		
1/8	3/32	0.21	0	720	410	410	180	8262R277	1	❍	8262R178	1	❍		
1/8	1/8	0.35	0	540	395	360	180	8262R105	1	❍	8262R174	1	❍		
1/8	1/8	0.35	0	200	-	-	167	8262R077 ⑥	1	❍	-	-	-		
1/4	3/64	0.06	0	1500	1500	1500	140	8262R107 ⑤	2	●	-	-	-		
1/4	3/64	0.06	0	2200	2200	1700	140	-	-	-	8262R181 ⑤	2	●		
1/4	3/32	0.21	0	720	410	410	180	8262R109	2	❍	8262R183	2	❍		
1/4	1/8	0.35	0	540	395	360	180	8262R232	2	❍	8262R185	2	❍		
1/4	5/32	0.52	0	300	225	225	180	8262R202	2	❍	8262R220	2	❍		
1/4	7/32	0.73	0	125	125	125	180	8262R208	2	❍	8262R226	2	❍		
1/4	9/32	0.88	0	105	105	105	180	8262R212	2	❍	8262R230	2	❍		
1/4	9/32	1.0	0	50	-	-	167	8262R078 ⑥	2	❍	-	-	-		
1/4	5/16	1.5	10	1500	1500	1500	180	8223P025	18	-	-	-	-		
3/8	1/8	0.35	0	540	395	360	180	8263R115	3	❍	8263R191	3	❍		
3/8	5/32	0.52	0	300	225	225	180	8263R200	3	❍	8263R193	3	❍		
3/8	7/32	0.73	0	125	125	125	180	8263R124	3	❍	8263R332	3	❍	1.2 ⑧	1.5 ⑨
3/8	9/32	0.88	0	105	85	85	180	8263R210	3	❍	8263R333	3	❍		
3/8	5/16	1.5	10	1500	1500	1500	180	8223P027	18	-	-	-	-		
3/8	5/8	3	0	150	150	-	180	8210P093	4	❍	-	-	-		
3/8	5/8	3	5	300	300	300	180	8210P006	4	●	-	-	-		
1/2	3/8	3.2	25	1500	1500	1500	180	8223P003	5	-	8223P010	6	-		
1/2	5/8	4	0	150	150	-	180	8210P094	4	❍	-	-	-		
1/2	5/8	4	0	150	150	125	180	-	-	-	8210P087	7	●		
1/2	5/8	4	5	300	300	300	180	8210P007	4	❍	-	-	-		
3/4	5/8	4.5	0	150	150	125	180	-	-	-	8210P088	7	●		
3/4	3/4	5	0	150	150	-	180	8210P095	7	❍	-	-	-		
3/4	3/4	5	0	3	3	-	180	8030P003	8	❍	-	-	-		
3/4	3/4	7.8	25	750	750	750	180	8223P005	9	-	-	-	-		
1	1	13	5	150	150	100	180	8210P004	10	❍	-	-	-		
1 1/4	1 1/8	15	5	150	150	100	180	8210P008	10	❍	-	-	-		
1 1/2	1 1/4	22.5	5	150	150	100	180	8210P022	11	❍	-	-	-		
2	1 3/4	43	5	150	125	90	180	8210P100	12	●	-	-	-		
General Service - Normally Open															
1/8	3/64	0.06	0	1150	900	800	140	8262R155 ⑤	1	●	8262R168 ⑤	1	●		
1/8	3/64	0.06	0	750	750	750	180	8262R156	1	●	8262R169	1	●		
1/8	3/32	0.21	0	275	230	180	180	8262R128	1	●	8262R236	1	●		
1/8	1/8	0.35	0	160	145	125	180	8262R129	1	●	8262R237	1	●		
1/4	3/64	0.06	0	1150	900	800	140	8262R161 ⑤	2	●	8262R199 ⑤	2	●		
1/4	3/64	0.06	0	750	750	750	180	8262R260	2	●	8262R130	2	●		
1/4	3/32	0.21	0	275	230	180	180	8262R261	2	●	8262R134	2	●		
1/4	1/8	0.35	0	160	145	125	180	8262R262	2	●	8262R138	2	●		
1/4	5/32	0.54	0	90	90	70	180	8262R263	2	●	8262R142	2	●		
1/4	7/32	0.83	0	45	45	40	180	8262R264	2	●	8262R148	2	●	1.2 ⑧	1.5 ⑨
1/4	9/32	0.96	0	30	30	30	180	8262R265	2	●	8262R152	2	●		
3/8	1/8	0.35	0	160	145	125	180	8263R070	3	●	8263R080	3	●		
3/8	5/32	0.54	0	90	90	70	180	8263R071	3	●	8263R081	3	●		
3/8	7/32	0.83	0	45	45	40	180	8263R072	3	●	8263R082	3	●		
3/8	9/32	0.96	0	30	30	30	180	8263R073	3	●	8263R083	3	●		
3/8	5/8	3	0	150	150	125	180	8210P033	15	●	-	-	-		
1/2	5/8	4	0	150	150	125	180	8210P034	15	●	-	-	-		
3/4	3/4	5.5	0	150	150	125	180	8210P035	16	●	-	-	-		
3/4	3/4	5.5	0	2	2	-	180	8030P083	17	●	-	-	-		

❍ = Safety Shut-off Valve. ● = General Purpose Valve.

2-Way Specifications (Metric units)

Pipe Size (in)	Orifice Dia. (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)				Max Fluid Temp.˚C	Brass	Const. Ref.	Agency	Stainless Steel	Const. Ref.	Agency	Wattage	
			Min.	Max.						UL			UL	DC	AC/DC
				Air-Inert Gas	Water	Light Oil @ 300 SSU									
General Service - Normally Closed															
1/8	1.2	0.05	0	152	152	117	60	-	-	-	8262R175 ⑤	1	●		
1/8	1.2	0.05	0	103	103	103	60	8262R099 ⑤	1	●	-	-	-		
1/8	2.4	0.18	0	50	28	28	82	8262R277	1	❍	8262R178	1	❍		
1/8	3.2	0.30	0	37	27	25	82	8262R105	1	❍	8262R174	1	❍		
1/8	3.2	0.30	0	14	-	-	75	8262R077 ⑥	1	❍	-	-	-		
1/4	1.2	0.05	0	103	103	103	60	8262R107 ⑤	2	●	-	-	-		
1/4	1.2	0.05	0	152	152	117	60	-	-	-	8262R181 ⑤	2	●		
1/4	2.4	0.18	0	50	28	28	82	8262R109	2	❍	8262R183	2	❍		
1/4	3.2	0.30	0	37	27	25	82	8262R232	2	❍	8262R185	2	❍		
1/4	4.0	0.45	0	21	16	16	82	8262R202	2	❍	8262R220	2	❍		
1/4	5.6	0.63	0	9	9	9	82	8262R208	2	❍	8262R226	2	❍		
1/4	7.1	0.76	0	7	7	7	82	8262R212	2	❍	8262R230	2	❍		
1/4	7.1	0.74	0	3	-	-	75	8262R078 ⑥	2	❍	-	-	-		
1/4	7.9	1.3	.7	103	103	103	82	8223P025	18	-	-	-	-		
3/8	3.2	0.30	0	37	27	25	82	8263R115	3	❍	8263R191	3	❍		
3/8	4.0	0.45	0	21	16	16	82	8263R200	3	❍	8263R193	3	❍		
3/8	5.6	0.63	0	9	9	9	82	8263R124	3	❍	8263R332	3	❍	1.2 ⑧	1.5 ⑨
3/8	7.1	0.76	0	7	6	6	82	8263R210	3	❍	8263R333	3	❍		
3/8	7.9	1.3	.7	103	103	103	82	8223P027	18	-	-	-	-		
3/8	16	2.6	0	10	10	-	82	8210P093	4	❍	-	-	-		
3/8	16	2.6	0.3	21	21	21	82	8210P006	4	●	-	-	-		
1/2	9.5	2.7	1.7	103	103	103	82	8223P003	5	-	8223P010	6	-		
1/2	16	3.4	0	10	10	-	82	8210P094	4	❍	-	-	-		
1/2	16	3.4	0	10	10	9	82	-	-	-	8210P087	7	●		
1/2	16	3.4	0.3	21	21	21	82	8210P007	4	❍	-	-	-		
3/4	16	3.9	0	10	10	9	82	-	-	-	8210P088	7	●		
3/4	19	4.3	0	10	10	-	82	8210P095	7	❍	-	-	-		
3/4	19	4.3	0	0.2	0.2	-	82	8030P003	8	❍	-	-	-		
3/4	19	6.7	1.7	52	52	52	82	8223P005	9	-	-	-	-		
1	25	11	0.3	10	10	7	82	8210P004	10	❍	-	-	-		
1 1/4	29	13	0.3	10	10	7	82	8210P008	10	❍	-	-	-		
1 1/2	32	19	0.3	10	10	7	82	8210P022	11	❍	-	-	-		
2	44	37	0.3	10	9	6	82	8210P100	12	●	-	-	-		
General Service - Normally Open															
1/8	1.20	0.05	0	79	62	55	60	8262R155 ⑤	1	●	8262R168 ⑤	1	●		
1/8	1.20	0.05	0	52	52	52	82	8262R156	1	●	8262R169	1	●		
1/8	2.40	0.18	0	19	16	12	82	8262R128	1	●	8262R236	1	●		
1/8	3.20	0.30	0	11	10	9	82	8262R129	1	●	8262R237	1	●		
1/4	1.20	0.05	0	79	62	55	60	8262R161 ⑤	2	●	8262R199 ⑤	2	●		
1/4	1.20	0.05	0	52	52	52	82	8262R260	2	●	8262R130	2	●		
1/4	2.40	0.18	0	19	16	12	82	8262R261	2	●	8262R134	2	●		
1/4	3.20	0.30	0	11	10	9	82	8262R262	2	●	8262R138	2	●		
1/4	3.90	0.47	0	6	6	5	82	8262R263	2	●	8262R142	2	●		
1/4	5.60	0.72	0	3	3	3	82	8262R264	2	●	8262R148	2	●	1.2 ⑧	1.5 ⑨
1/4	7.10	0.83	0	2	2	2	82	8262R265	2	●	8262R152	2	●		
3/8	3.20	0.30	0	11	10	9	82	8263R070	3	●	8263R080	3	●		
3/8	3.90	0.47	0	6	6	5	82	8263R071	3	●	8263R081	3	●		
3/8	5.60	0.72	0	3	3	3	82	8263R072	3	●	8263R082	3	●		
3/8	7.10	0.83	0	2	2	2	82	8263R073	3	●	8263R083	3	●		
3/8	16	2.6	0	10	10	9	82	8210P033	15	●	-	-	-		
1/2	16	3.5	0	10	10	9	82	8210P034	15	●	-	-	-		
3/4	19	4.8	0	10	10	9	82	8210P035	16	●	-	-	-		
3/4	19	4.8	0	.14	.14	-	82	8030P083	17	●	-	-	-		

❍ = Safety Shut-off Valve. ● = General Purpose Valve

ELECTRONICALLY ENHANCED

ASCO®

2-Way Optional Features Chart

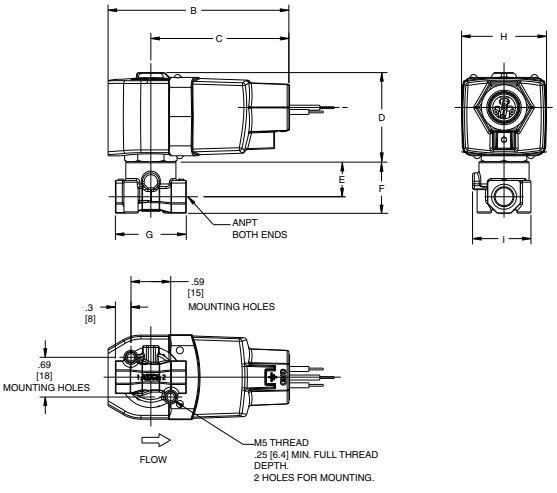
Pipe Size (in)	Orifice Dia. (in)	Base Catalog Number		Resilient Materials and Suffix Options												Other		Standard Rebuild Kit	
		Brass	Stainless Steel	Ammonia ⑦	Silicone Free	Dry Air	NBR	LT NBR	FKM	EPDM	CR	Oxygen Service	PTFE ②	Urethane	Vacuum	Manual Operator	Mounting Bracket	Brass	Stainless Steel
1/8	3/64	8262R099 ⑤	8262R175 ⑤	-	SF	-	-	-	-	-	-	-	-	●	-	-	MB	323593-W	323595-W
1/8	3/64	8262R155 ⑤	8262R168 ⑤	-	SF	-	-	-	-	-	-	-	-	●	-	-	MB	323986-W	323988-W
1/8	3/64	8262R156	8262R169	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323986	323988
1/8	3/32	8262R277	8262R178	NH	SF	-	●	A	V	E	J	N	T	-		MS	MB	323593	323595
1/8	3/32	8262R128	8262R236	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
1/8	1/8	8262R105	8262R174	NH	SF	-	●	A	V	E	J	N	T	-	VH	MS	MB	323593	323595
1/8	1/8	8262R077 ⑥	-	-	SF	-	-	●	-	-	-	-	-	-	-	-	MB	325039	-
1/8	1/8	8262R129	8262R237	NH	SF	-	●	A	V	E	J	N	T	-	VH	-	MB	323987	323989
1/4	3/64	8262R107 ⑤	8262R181 ⑤	-	SF	-	-	-	-	-	-	-	-	●	-	-	MB	323593-W	323595-W
1/4	3/64	8262R161 ⑤	8262R199 ⑤	-	SF	-	-	-	-	-	-	-	-	●	-	-	MB	323986-W	323988-W
1/4	3/64	8262R260	8262R130	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323986	323988
1/4	3/32	8262R109	8262R183	NH	SF	P	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
1/4	3/32	8262R261	8262R134	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
1/4	1/8	8262R232	8262R184	NH	SF	P	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
1/4	1/8	8262R262	8262R138	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
1/4	5/32	8262R202	8262R220	NH	SF	P	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
1/4	5/32	8262R263	8262R142	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
1/4	7/32	8262R208	8262R226	NH	SF	P	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
1/4	7/32	8262R264	8262R148	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
1/4	9/32	8262R212	8262R230	NH	SF	P	●	A	V	E	J	N	T	-	VH	MS	MB	323593	323595
1/4	9/32	8262R265	8262R152	NH	SF	-	●	A	V	E	J	N	T	-	VH	-	MB	323987	323989
1/4	9/32	8262R078 ⑥	-	-	SF	-	-	●	-	-	-	-	-	-	-	-	MB	325039	-
1/4	5/16	8223P025 ④	-	-	-	-	●	A	-	-	-	-	-	-	-	-	-	322815	-
3/8	1/8	8263R115	8263R191	NH	SF	-	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
3/8	1/8	8263R070	8263R080	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
3/8	5/32	8263R200	8263R193	NH	SF	-	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
3/8	5/32	8263R071	8263R081	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
3/8	7/32	8263R124	8263R332	NH	SF	-	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
3/8	7/32	8263R072	8263R082	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
3/8	9/32	8263R210	8263R333	NH	SF	-	●	A	V	E	J	N	T	-	-	MS	MB	323593	323595
3/8	9/32	8263R073	8263R083	NH	SF	-	●	A	V	E	J	N	T	-	-	-	MB	323987	323989
3/8	5/16	8223P027 ④	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	322815	-
3/8	5/8	8210P093	-	-	-	-	●	-	V	E	J	N	-	-	VH	MO	MB	322670	-
3/8	5/8	8210P033	-	-	-	-	●	-	V	E	J	N	-	-	VH	-	MB	322770	-
3/8	5/8	8210P006	-	-	-	-	●	-	V	E	J	N	-	-	-	MO	MB	322654	-
1/2	3/8	8223P003 ④	8223P010 ①	-	-	-	●	-	-	-	-	-	-	-	-	-	-	322816	322817
1/2	5/8	8210P094	-	-	-	-	●	-	V	E	J	N	-	-	VH	MO	MB	322670	-
1/2	5/8	8210P034	-	-	-	-	●	-	V	E	J	N	-	-	VH	-	MB	322770	-
1/2	5/8	-	8210P087	-	-	-	●	-	V	E	J	N	-	-	-	MO	MB	-	322676
1/2	5/8	8210P007	-	-	-	-	●	-	V	E	J	N	-	-	-	MO ③	MB	322654	-
3/4	5/8	-	8210P088	-	-	-	●	-	V	E	J	N	-	-	-	MO	MB	-	322676
3/4	3/4	8210P095	-	-	-	-	●	-	V	E	J	N	-	-	VH	MO	MB	322673	-
3/4	3/4	8030P003	-	-	-	-	●	-	V	E	J	N	-	-	-	MO	MB	322758	-
3/4	3/4	8210P035	-	-	-	-	●	-	V	E	J	N	-	-	VH	-	MB	322771	-
3/4	3/4	8030P083	-	-	-	-	●	-	V	E	J	N	-	-	-	-	MB	322763	-
3/4	3/4	8223P005 ④	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	322818	-
1	1	8210P004	-	-	-	-	●	-	V	E	J	N	-	-	-	MO	-	322677	-
1 1/4	1 1/8	8210P008	-	-	-	-	●	-	V	E	J	N	-	-	-	MO	-	322680	-
1 1/2	1 1/4	8210P022	-	-	-	-	●	-	V	E	J	N	-	-	-	MO	-	322680	-
2	1 3/4	8210P100	-	-	-	-	●	-	V	E	J	N	-	-	-	MO	-	322682	-

● = Standard. Other options may be available. All option combinations may not be available. Please consult your local ASCO contact.
① Valve contains PTFE main disc; ② Pressure rating reduced by 25%; ③ Pressure rating limited to 250 psi; ④ Valve contains Nylon 11 piston.
⑤ Cast UR disc supplied as standard, limits min. ambient temp. to 32˚F (0˚C). ⑥ Fuel gas service only; Ambient Temp. -40˚F to 140˚F, Fluid Temp. -40˚F to 167˚F; Gas capacity for 8262R077 is 18,700 Btu/hr, for 8262R078 53,500 Btu/hr based on 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
⑦ NH suffix only available for Stainless Steel constructions. ⑧ 12-24V DC. ⑨ 24-120V AC/DC, 100-240V AC/DC.

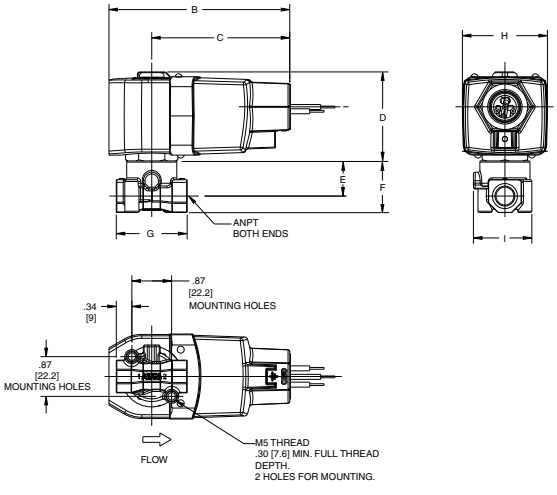
Dimensions: inches (mm)

Const. Ref.		B	C	D	E	F	G	H	I
1	in	3.98	3.04	2.00	0.69	1.00	1.19	1.87	1.24
	mm	101	77	51	18	25	30	48	32
2	in	3.98	3.04	2.00	0.78	1.11	1.56	1.87	1.29
	mm	101	77	51	20	29	40	48	33
3	in	3.98	3.04	2.00	0.77	1.20	1.88	1.87	1.25
	mm	101	77	51	20	30	48	48	32
4	in	3.98	3.04	2.00	1.28	1.84	2.75	1.87	2.28
	mm	101	77	51	33	47	70	48	58
5	in	3.98	3.04	2.00	1.05	2.31	-	1.87	3.03
	mm	101	77	51	27	59	-	48	77
6	in	3.98	3.04	2.00	1.13	2.31	-	1.87	3.13
	mm	101	77	51	29	59	-	48	80
7	in	3.98	3.04	2.00	1.46	2.19	2.81	1.87	2.28
	mm	101	77	51	37	56	71	48	58
8	in	3.98	3.04	2.00	1.44	2.13	2.81	1.87	2.28
	mm	101	77	51	37	54	71	48	58
9	in	3.98	3.04	2.00	1.61	3.03	-	1.87	3.6
	mm	101	77	51	41	77	-	48	91
10	in	3.98	3.04	2.00	2.21	3.67	3.75	1.87	-
	mm	101	77	51	56	93	95	48	-
11	in	3.98	3.04	2.00	2.36	4.14	4.38	1.87	3.92
	mm	101	77	51	60	105	111	48	100
12	in	3.98	3.04	2.00	2.75	5.52	5.06	1.87	4.72
	mm	101	77	51	70	140	129	48	120
15	in	3.98	3.04	2.00	1.72	2.18	2.75	1.87	2.28
	mm	101	77	51	44	55	70	48	58
16	in	3.98	3.04	2.00	1.88	2.57	2.81	1.87	2.28
	mm	101	77	51	48	65	71	48	58
17	in	3.98	3.04	2.00	0.85	1.81	2.81	1.87	2.28
	mm	101	77	51	22	46	71	48	58
18	in	3.98	3.04	2.00	0.77	1.20	1.88	1.87	1.25
	mm	101	77	51	20	30	48	48	32

Const. Ref. 1



Const. Ref. 2



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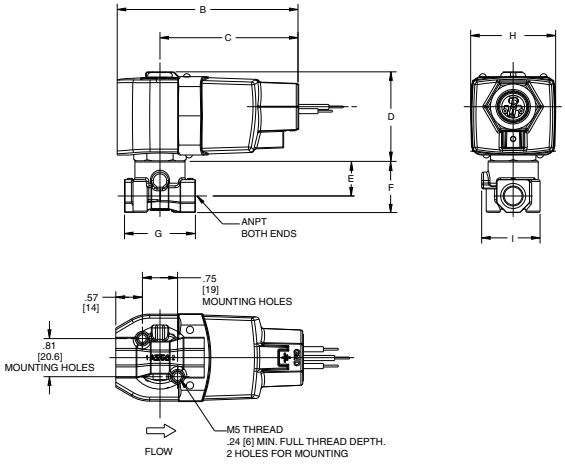
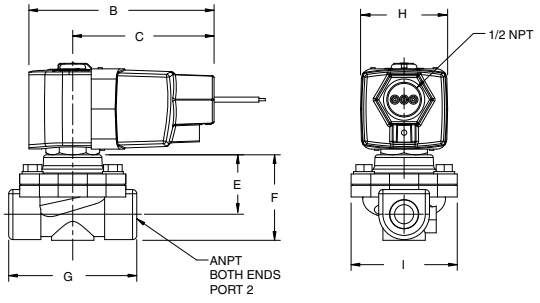


Const. Ref. 4, 7, 15, 16, 17



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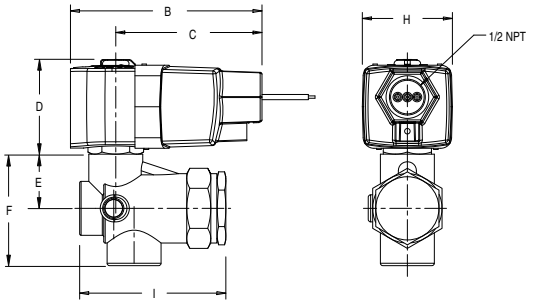
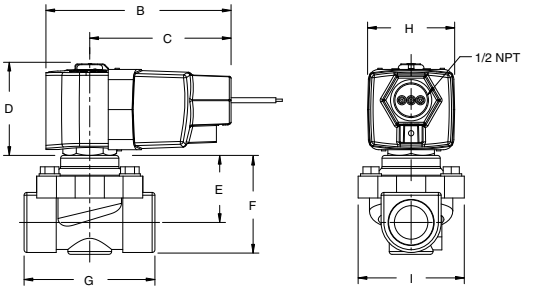
Dimensions: inches (mm)

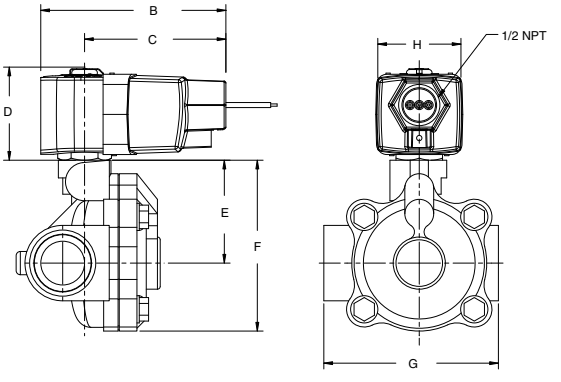
Const. Ref. 5, 6, 9



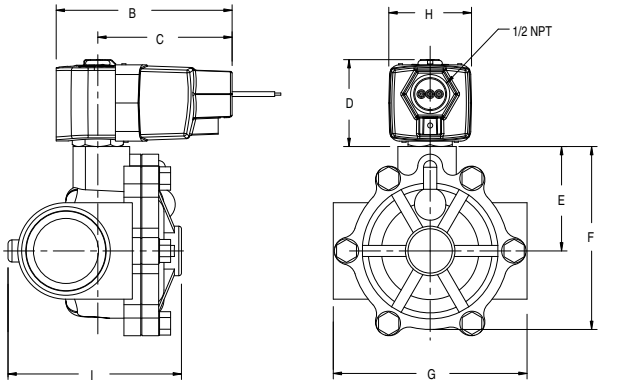
Const. Ref. 8



Const. Ref. 10



Const. Ref. 11, 12



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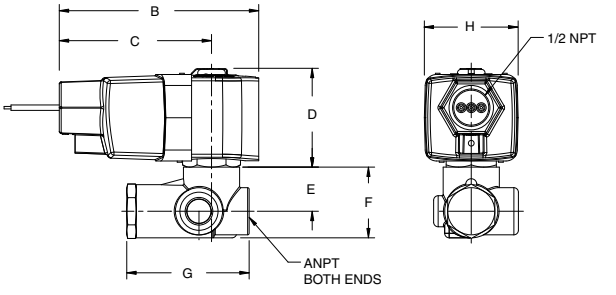

3-Way Features

- Three-way (3/2) Next Generation solenoid valves have three ports and two orifices. When one orifice is open, the other is closed
- Control of air, water, light oil, and other non-corrosive media
- Normally closed (pressure to cylinder port when energized) operation
- Normally open (cylinder port exhausts when energized) operation
- Universal operation (can function as normally open, normally closed, diverter of fluid flow, or selector of 2 fluid sources configurable by piping)
- Pipe sizes – 1/4 to 3/4 inch

3-Way Specifications (English units)

Pipe Size (in)	Orifice Dia. (in)	Cv Flow	Operating Pressure Differential (psi) Min.	Max. Air-Inert Gas	Max. Water	Max. Light Oil @ 300 SSU	Max. Fluid Temp. °F	Brass	Const. Ref.	Agency UL	Stainless Steel	Const. Ref.	Agency UL	Wattage DC	Wattage AC/DC	Approx. Shipping Weight (lbs.)
General Service - Normally Closed																
1/8	3/64	0.05 ③	0	300	300	300 ⑦	200 ⑥	8314R031	1	●	8314R037	1	●			1.7
1/8	3/32	0.15 ④	0	205	205	190 ⑦	200 ⑥	8314R032	1	●	8314R038	1	●			1.7
1/8	1/8	0.25 ④	0	145	145	100 ⑦	200 ⑥	8314R033	1	●	8314R039	1	●			1.7
1/4	3/64	0.05 ③	0	300	300	300 ⑦	200 ⑥	8314R034	2	●	8314R068	2	●			1.8
1/4	3/32	0.15 ④	0	205	205	190 ⑦	200 ⑥	8314R035	2	●	8314R121	2	●			1.8
1/4	1/8	0.25 ④	0	145	145	100 ⑦	200 ⑥	8314R036	2	●	8314R126	2	●			1.8
1/4	5/32	0.50 ④	0	75	75	75 ⑦	200 ⑥	8314R130	2	●	8314R230	2	●			1.8
1/4	7/32	0.70 ④	0	40	40	40 ⑦	200 ⑥	8314R131	2	●	8314R231	2	●			1.8
1/4	9/32	0.85 ④	0	25	25	25 ⑦	200 ⑥	8314R132	2	●	8314R232	2	●			1.8
1/4	1/32	0.05	0	750	750	750	194	8320R180	3	●	-	-	-	1.2 ⑧	1.5 ⑨	2.5
1/4	1/16	0.09	0	255	255	255	194	8320R182	3	●	-	-	-			2.5
1/4	7/64	0.23	0	190	190	190	194	8320R184	3	●	-	-	-			2.5
1/4	1/8	0.25	0	90	90	90	194	8320R186	3	●	-	-	-			2.5
1/4	11/64	0.35	0	55	55	55	194	8320R188	3	●	-	-	-			2.5
1/4	3/32 ①	0.2 ①	5 ⑤	150	150	100	180	8317P035	4	●	-	-	-			2.7
1/4	9/32 ②	0.8 ②	10	200	200	200	180	8321P001	5	●	-	-	-			3.8
3/8	9/32 ②	0.8 ②	10	200	200	200	180	8321P002	5	●	-	-	-			3.8
3/8	5/8	2.5	10	250	250	-	180	8316P054	6	●	-	-	-			4.9
1/2	5/8	3.2	10	250	250	-	180	8316P064	6	●	-	-	-			4.9
3/4	11/16	4.8	10	250	250	-	180	8316P074	7	●	-	-	-			5.1
NAMUR Mount - 3/2 Normally Closed																
1/4	3/32	0.12	-	150	-	-	194	8320R704	9	●	8320R714	9	●	1.2 ⑧	1.5 ⑨	3.2
General Service - Normally Open																
1/8	3/64	0.05 ③	0	300	300	300 ⑦	200 ⑥	8314R049	1	●	8314R055	1	●			1.7
1/8	3/32	0.15 ④	0	175	175	175 ⑦	200 ⑥	8314R050	1	●	8314R056	1	●			1.7
1/8	1/8	0.25 ④	0	160	160	160 ⑦	200 ⑥	8314R051	1	●	8314R057	1	●			1.7
1/4	3/64	0.05 ③	0	300	300	300 ⑦	200 ⑥	8314R052	2	●	8314R069	2	●			1.8
1/4	3/32	0.15 ④	0	175	175	175 ⑦	200 ⑥	8314R053	2	●	8314R122	2	●			1.8
1/4	1/8	0.25 ④	0	160	160	160 ⑦	200 ⑥	8314R054	2	●	8314R070	2	●			1.8
1/4	5/32	0.50 ④	0	150	150	150 ⑦	200 ⑥	8314R133	2	●	8314R233	2	●			1.8
1/4	7/32	0.70 ④	0	100	100	100 ⑦	200 ⑥	8314R134	2	●	8314R234	2	●	1.2 ⑧	1.5 ⑨	1.8
1/4	9/32	0.85 ④	0	65	65	65 ⑦	200 ⑥	8314R135	2	●	8314R235	2	●			1.8
1/8	3/64	0.06	0	350	350	350	194	8320R136	8	●	8320R146	8	●			2.5
1/4	1/32	0.05	0	790	825	825	194	8320R190	3	●	-	-	-			2.5
1/4	1/16	0.09	0	255	255	255	194	8320R192	3	●	-	-	-			2.5
1/4	3/32	0.12	0	200	200	200	194	8320R194	3	●	-	-	-			2.5
1/4	1/8	0.25	0	95	95	95	194	8320R196	3	●	-	-	-			2.5
1/4	11/64	0.35	0	60	60	60	194	8320R198	3	●	-	-	-			2.5
General Service - Universal Operation																
1/8	3/64	0.05 ③	0	200	200	200 ⑦	200 ⑥	8314R041	1	●	8314R042	1	●			1.7
1/8	3/32	0.15 ④	0	105	85	60 ⑦	200 ⑥	8314R043	1	●	8314R044	1	●			1.7
1/8	1/8	0.25 ④	0	70	70	40 ⑦	200 ⑥	8314R045	1	●	8314R040	1	●			1.7
1/4	3/64	0.05 ③	0	200	200	200 ⑦	200 ⑥	8314R006	2	●	8314R123	2	●			1.8
1/4	3/32	0.15 ④	0	105	85	60 ⑦	200 ⑥	8314R007	2	●	8314R120	2	●			1.8
1/4	1/8	0.25 ④	0	70	70	40 ⑦	200 ⑥	8314R008	2	●	8314R124	2	●			1.8
1/4	5/32	0.50 ④	0	35	35	35 ⑦	200 ⑥	8314R127	2	●	8314R227	2	●	1.2 ⑧	1.5 ⑨	1.8
1/4	7/32	0.70 ④	0	18	18	18 ⑦	200 ⑥	8314R128	2	●	8314R228	2	●			1.8
1/4	9/32	0.85 ④	0	10	10	10 ⑦	200 ⑥	8314R129	2	●	8314R229	2	●			1.8
1/4	1/32	0.05	0	395	395	395	194	8320R170	3	●	-	-	-			2.5
1/4	1/16	0.09	0	160	160	160	194	8320R172	3	●	-	-	-			2.5
1/4	3/32	0.12	0	100	100	100	194	8320R174	3	●	-	-	-			2.5
1/4	1/8	0.25	0	50	50	50	194	8320R176	3	●	-	-	-			2.5
1/4	11/64	0.35	0	30	30	30	194	8320R178	3	●	-	-	-			2.5

● = General Purpose Valve. ① 1/4" exhaust orifice with 0.73 Cv flow; ② 11/32" exhaust orifice with 1.20 Cv flow; ③ 3/64" exhaust orifice with 0.06 Cv flow. ④ 3/32" exhaust orifice with 0.20 Cv flow.
⑤ 10 psi minimum for light oils. ⑥ Max. fluid temp. 180°F for light oil @ 45 SSU. ⑦ Pressure rating for light oil @ 45 SSU. ⑧ 12-24V DC. ⑨ 24-120V AC/DC, 100-240V AC/DC.

ASCO®

3-Way Specifications (Metric units)

Pipe Size (in)	Orifice Dia. (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Min.	Max. Air-Inert Gas	Max. Water	Max. Light Oil @ 300 SSU	Max. Fluid Temp.˚C	Brass	Const. Ref.	Agency UL	Stainless Steel	Const. Ref.	Agency UL	Wattage DC	Wattage AC/DC	Approx. Shipping Weight (kgs.)
General Service - Normally Closed																
1/8	1.2	0.04 ③	0	21	21	21 ⑦	93 ⑥	8314R031	1	●	8314R037	1	●			0.77
1/8	2.4	0.13 ④	0	14	14	13 ⑦	93 ⑥	8314R032	1	●	8314R038	1	●			0.77
1/8	3.2	0.22 ④	0	10	10	7 ⑦	93 ⑥	8314R033	1	●	8314R039	1	●			0.77
1/4	1.2	0.04 ③	0	21	21	21 ⑦	93 ⑥	8314R034	2	●	8314R068	2	●			0.81
1/4	2.4	0.13 ④	0	14	14	13 ⑦	93 ⑥	8314R035	2	●	8314R121	2	●			0.81
1/4	3.2	0.22 ④	0	10	10	7 ⑦	93 ⑥	8314R036	2	●	8314R126	2	●			0.81
1/4	4.0	0.43 ④	0	5.2	5.2	5.2 ⑦	93 ⑥	8314R130	2	●	8314R230	2	●			0.81
1/4	5.6	0.60 ④	0	3	3	3 ⑦	93 ⑥	8314R131	2	●	8314R231	2	●			0.81
1/4	7.1	0.73 ④	0	2	2	2 ⑦	93 ⑥	8314R132	2	●	8314R232	2	●			0.81
1/4	0.8	0.04	0	51	51	51	90	8320R180	3	●	-	-	-	1.2 ⑧	1.5 ⑨	
1/4	1.9	0.08	0	18	18	18	90	8320R182	3	●	-	-	-			1.1
1/4	2.7	0.10	0	13	13	13	90	8320R184	3	●	-	-	-			1.1
1/4	3.9	0.21	0	6	6	6	90	8320R186	3	●	-	-	-			1.1
1/4	4.4	0.30	0	4	4	4	90	8320R188	3	●	-	-	-			1.1
1/4	2.3 ①	0.17 ①	0.3 ④	10	10	7	82	8317P035	4	●	-	-	-			1.2
1/4	7.1 ②	0.7 ②	0.7	14	14	14	82	8321P001	5	●	-	-	-			1.7
3/8	7.1 ②	0.7 ②	0.7	14	14	14	82	8321P002	5	●	-	-	-			1.7
3/8	3.3	2.1	0.7	17	17	-	82	8316P054	6	●	-	-	-			2.2
1/2	3.3	2.7	0.7	17	17	-	82	8316P064	6	●	-	-	-			2.2
3/4	17	4.1	0.7	17	17	-	82	8316P074	7	●	-	-	-			2.3
NAMUR Mount - 3/2 Normally Closed																
1/4	2.4	0.1	-	10	-	-	90	8320R704	9	●	8320R714	9	●	1.2 ⑧	2	1.5
General Service - Normally Open																
1/8	1.2	0.04 ③	0	21	21	21 ⑦	93 ⑥	8314R049	1	●	8314R055	1	●			0.77
1/8	2.4	0.13 ④	0	12	12	12 ⑦	93 ⑥	8314R050	1	●	8314R056	1	●			0.77
1/8	3.2	0.22 ④	0	11	11	11 ⑦	93 ⑥	8314R051	1	●	8314R057	1	●			0.77
1/4	1.2	0.04 ③	0	21	21	21 ⑦	93 ⑥	8314R052	2	●	8314R069	2	●			0.81
1/4	2.4	0.13 ④	0	12	12	12 ⑦	93 ⑥	8314R053	2	●	8314R122	2	●			0.81
1/4	3.2	0.22 ④	0	11	11	11 ⑦	93 ⑥	8314R054	2	●	8314R070	2	●			0.81
1/4	4.0	0.43 ④	0	10	10	10 ⑦	93 ⑥	8314R133	2	●	8314R233	2	●			0.81
1/4	5.6	0.60 ④	0	6.8	6.8	6.8 ⑦	93 ⑥	8314R134	2	●	8314R234	2	●	1.2 ⑧	1.5 ⑨	0.81
1/4	7.1	0.73 ④	0	4.5	4.5	4.5 ⑦	93 ⑥	8314R135	2	●	8314R235	2	●			0.81
1/8	1.2	0.05	0	24	24	24	90	8320R136	8	●	8320R146	8	●			1.1
1/4	0.8	0.04	0	54	57	57	90	8320R190	3	●	-	-	-			1.1
1/4	1.6	0.08	0	18	18	18	90	8320R192	2	●	-	-	-			1.1
1/4	2.4	0.10	0	14	14	14	90	8320R194	2	●	-	-	-			1.1
1/4	3.2	0.21	0	6.5	6.5	6.5	90	8320R196	2	●	-	-	-			1.1
1/4	4.4	0.30	0	4	4	4	90	8320R198	2	●	-	-	-			1.1
General Service - Universal Operation																
1/8	1.2	0.04 ③	0	14	14	14 ⑦	93 ⑥	8314R041	1	●	8314R042	1	●			0.77
1/8	2.4	0.13 ④	0	7	6	4 ⑦	93 ⑥	8314R043	1	●	8314R044	1	●			0.77
1/8	3.2	0.22 ④	0	5	5	3 ⑦	93 ⑥	8314R045	1	●	8314R040	1	●			0.77
1/4	1.2	0.04 ③	0	14	14	14 ⑦	93 ⑥	8314R006	2	●	8314R123	2	●			0.81
1/4	2.4	0.13 ④	0	7	6	4 ⑦	93 ⑥	8314R007	2	●	8314R120	2	●			0.81
1/4	3.2	0.22 ④	0	5	5	3 ⑦	93 ⑥	8314R008	2	●	8314R124	2	●			0.81
1/4	4.0	0.43 ④	0	2.5	2.5	2.5 ⑦	93 ⑥	8314R127	2	●	8314R227	2	●	1.2 ⑧	1.5 ⑨	0.81
1/4	5.6	0.60 ④	0	1.5	1.5	1.5 ⑦	93 ⑥	8314R128	2	●	8314R228	2	●			0.81
1/4	7.1	0.73 ④	0	0.7	0.7	0.7 ⑦	93 ⑥	8314R129	2	●	8314R229	2	●			0.81
1/4	0.8	0.04	0	27	27	27	90	8320R170	3	●	-	-	-			1.1
1/4	1.6	0.08	0	11	11	11	90	8320R172	3	●	-	-	-			1.1
1/4	2.4	0.10	0	7	7	7	90	8320R174	3	●	-	-	-			1.1
1/4	3.2	0.21	0	3	3	3	90	8320R176	3	●	-	-	-			1.1
1/4	4.4	0.30	0	2	2	2	90	8320R178	3	●	-	-	-			1.1

● = General Purpose Valve. ① 6.3 mm exhaust orifice with 0.63 Kv flow; ② 8.7 mm exhaust orifice with 1.0 Kv flow; ③ 1.3 mm exhaust orifice with 0.05 Kv flow.
④ 2.5 mm exhaust orifice with 0.17 Kv flow. ⑤ 0.7 bar minimum for light oils. ⑥ Max. fluid temp. 82˚C for light oil @ 45 SSU. ⑦ Pressure rating for light oil @ 45 SSU.
⑧ 12-24V DC. ⑨ 24-120V AC/DC, 100-240V AC/DC.

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3-Way Optional Features Chart

Pipe Size (in)	Orifice Dia. (in)	Base Catalog Number		Resilient Materials and Suffix Options									Other		Standard Rebuild Kit	
		Brass	Stainless Steel	Silicone Free	NBR	FKM	EPDM	CR	Oxygen Service	PTFE ①	Urethane	Vacuum	Manual Operator ③	Mounting Bracket	Brass	Stainless Steel
1/8	3/64	8314R031	8314R037	SF	●	V ②	-	-	N	-	-	-	MS	MB	323957	323959
1/8	3/64	8314R041	8314R042	SF	●	V ②	-	-	N	-	-	-	MS	MB	323961	323963
1/8	3/64	8314R049	8314R055	SF	●	V ②	-	-	N	-	-	-	MS	MB	323969	323971
1/8	3/32	8314R032	8314R038	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/8	3/32	8314R043	8314R044	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/8	3/32	8314R050	8314R056	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/8	1/8	8314R033	8314R039	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/8	1/8	8314R045	8314R040	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/8	1/8	8314R051	8314R057	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/8	3/64	8320R136	8320R146	SF	●	V	E	J	N	-	-	-	MO/MS	MB	326062	326062
1/4	1/32	8320R190	-	SF	●	V	E	J	N	-	-	-	MO/MS	MB	326060	-
1/4	3/64	8314R006	8314R123	SF	●	V ②	-	-	N	-	-	-	MS	MB	323961	323963
1/4	3/64	8314R034	8314R068	SF	●	V ②	-	-	N	-	-	-	MS	MB	323957	323959
1/4	3/64	8314R052	8314R069	SF	●	V ②	-	-	N	-	-	-	MS	MB	323969	323971
1/4	1/32	8320R170	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326061	-
1/4	1/16	8320R172	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326061	-
1/4	1/8	8320R176	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326061	-
1/4	11/64	8320R178	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326061	-
1/4	1/32	8320R180	-	SF	●	V	E	J	N	-	-	-	MO/MS	MB	326059	-
1/4	1/16	8320R182	-	SF	●	V	E	J	N	-	-	-	MO/MS	MB	326059	-
1/4	11/64	8320R188	-	SF	●	V	E	J	N	-	-	-	MO/MS	MB	326059	-
1/4	1/16	8320R192	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326060	-
1/4	3/32	8314R007	8314R120	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/4	3/32	8314R035	8314R121	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/4	3/32	8314R053	8314R122	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/4	3/32	8317P035	-	SF	●	V	-	-	N	-	-	-	-	-	322919	-
1/4	3/32	8320R704	8320R714	SF	●	V	E	J	N	-	-	-	MO/MS	-	326059	326059
1/4	3/32	8320R174	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326061	-
1/4	7/64	8320R184	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326059	-
1/4	3/32	8320R194	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326060	-
1/4	1/8	8320R196	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326060	-
1/4	1/8	8320R186	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326059	-
1/4	11/64	8320R198	-	SF	●	V	E	J	N	-	-	-	MO/MS ④	MB	326060	-
1/4	1/8	8314R008	8314R124	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/4	1/8	8314R036	8314R126	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/4	1/8	8314R054	8314R070	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/4	5/32	8314R127	8314R227	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/4	5/32	8314R130	8314R230	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/4	5/32	8314R133	8314R233	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/4	7/32	8314R128	8314R228	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/4	7/32	8314R131	8314R231	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/4	7/32	8314R134	8314R234	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/4	9/32	8314R129	8314R229	SF	●	V ②	-	-	N	-	-	-	MS	MB	323966	323968
1/4	9/32	8314R132	8314R232	SF	●	V ②	-	-	N	-	-	-	MS	MB	323958	323960
1/4	9/32	8314R135	8314R235	SF	●	V ②	-	-	N	-	-	-	MS	MB	323970	323972
1/4	9/32	8321P001	-	⑤	●	V	E	-	-	-	-	-	MO/MS	-	322688	-
3/8	9/32	8321P002	-	⑤	●	V	E	-	-	-	-	-	MO/MS	-	322688	-
3/8	5/8	8316P054	-	⑤	●	V	E	J	N	-	-	-	MO	MB	322690	-
1/2	5/8	8316P064	-	⑤	●	V	E	J	N	-	-	-	MO	MB	322690	-
3/4	11/16	8316P074	-	⑤	●	V	E	J	N	-	-	-	MO	MB	322692	-

● = Standard. Other options may be available. All option combinations may not be available. Please consult your local ASCO contact. ① Pressure rating reduced by 25%.
② Upper disc is FKM. ③ Not available with PTFE resilient materials. ④ Pressure rating limited to 100 psi (6.9 bar) for MO constructions. ⑤ Consult factory.

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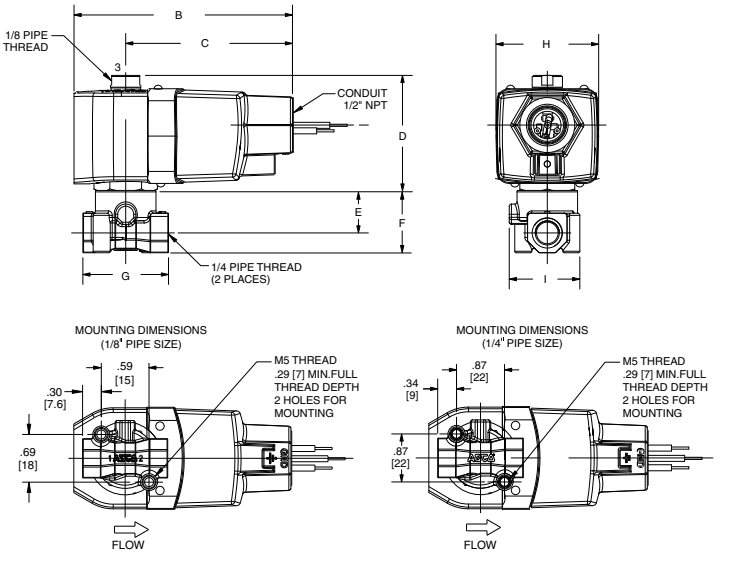
Dimensions: inches (mm)

Const. Ref.		B	C	D	E	F	G	H	I	J
1	in	3.98	3.04	2.09	0.69	1.00	1.19	1.87	1.24	-
	mm	101	77	53	18	25	30	48	32	-
2	in	3.98	3.04	2.09	0.79	1.19	1.56	1.87	1.29	-
	mm	101	77	53	20	30	40	48	33	-
3	in	3.98	3.04	2.00	1.02	2.02	1.69	1.87	1.45	0.44
	mm	101	77	51	26	51	43	48	37	11
4	in	3.98	3.04	2.00	0.57	1.07	2.00	1.87	2.05	-
	mm	101	77	51	14	27	50	48	52	-
5	in	3.98	3.04	2.00	1.00	2.03	1.31	1.87	3.12	1.00
	mm	101	77	51	25	52	33	48	79	25
6	in	3.98	3.04	2.00	2.12	3.77	2.76	1.87	4.29	-
	mm	101	77	51	54	96	70	48	109	-
7	in	3.98	3.04	2.00	2.5	4.19	-	1.87	3.38	-
	mm	101	77	51	64	106	-	48	86	-
8	in	3.98	3.04	2.00	0.67	1.64	1.19	1.87	-	1.81
	mm	101	77	51	17	42	30	48	-	46

Const. Ref.1, 2



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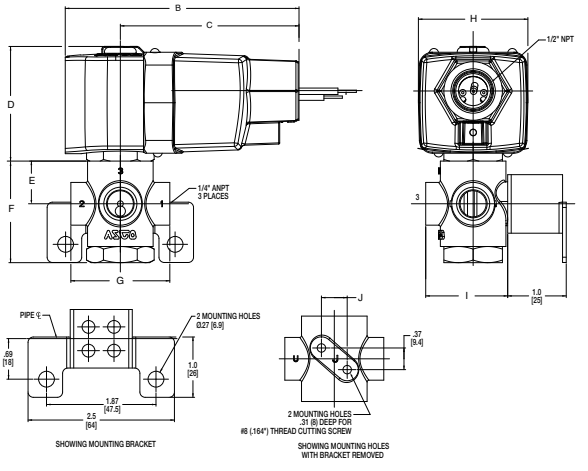

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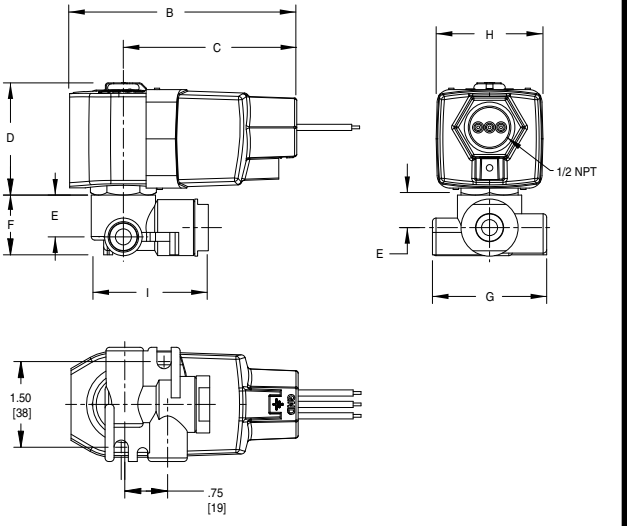

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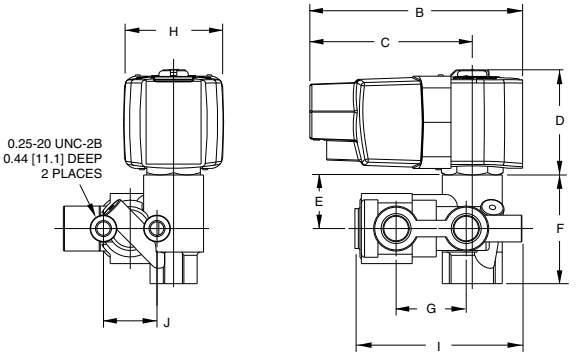
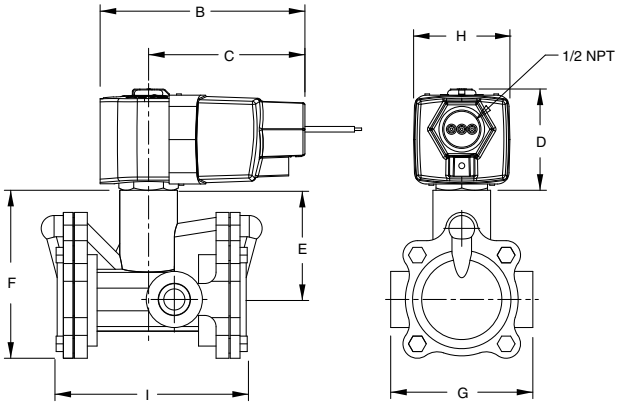


Dimensions: inches (mm)

Const. Ref. 6



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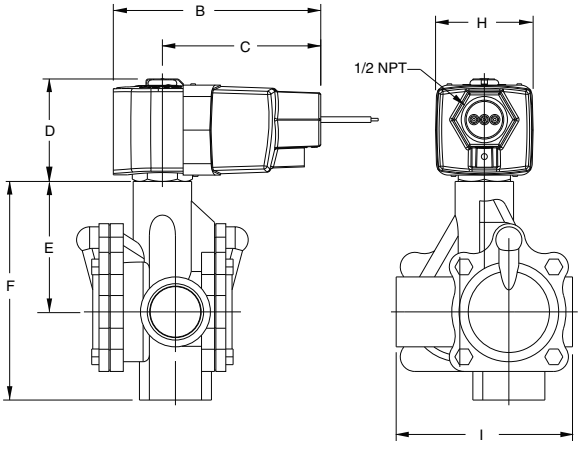

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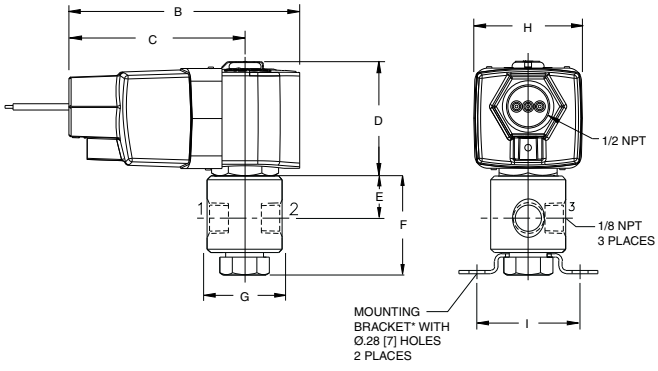

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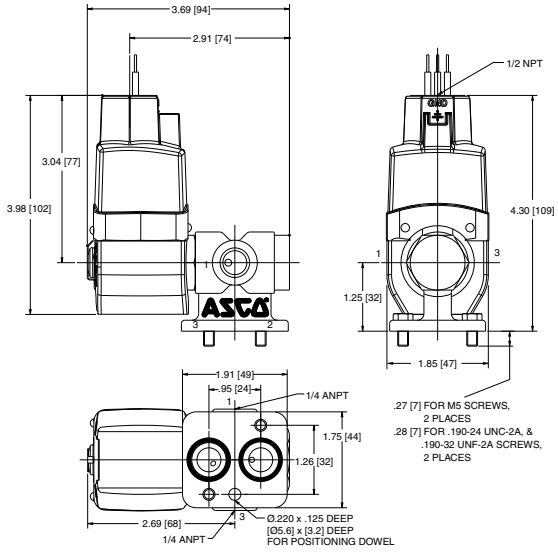


ASCO®

4-Way Features

- Four-way, four port (4/2) and five port (5/2) Next Generation solenoid valves have one pressure port, 2 cylinder ports, and either 1 or 2 exhaust ports
- Control of air, water, light oil, and non-corrosive media
- Single solenoid operation (pressure and exhaust ports and cylinder ports alternate connection based on solenoid operation)
- Pipe sizes – 1/4 to 1 inch

4-Way Specifications (English units)

Pipe Size (in)	Orifice Dia. (in)	Cv Flow		Operating Pressure Differential (psi)				Max. Fluid Temp. ˚F	Brass	Const. Ref.	Agency	316L Stainless Steel	Const. Ref.	Agency	Wattage	
					Max.											
		Pressure	Exhaust	Min.	Air-Inert Gas	Water	Light Oil @ 300 SSU				UL			UL	DC	AC/DC
General Service - Single Solenoid																
1/4	1/16 ②	0.09	0.09	10	150	150	150 ③	180	8345P001	1	●	-	-	-		
1/4	1/4	0.8	1.0	10 ①	250	250	250	180	8344P070	2	●	-	-	-		
3/8	3/8	1.4	2.2	10 ①	250	250	250	180	8344P072	3	●	-	-	-	1.2 ⑤	1.5 ⑥
1/2	3/8	1.4	2.2	10 ①	250	250	250	180	8344P074	3	●	-	-	-		
3/4	3/4	5.2	5.6	10 ①	250	250	250	180	8344P076	4	●	-	-	-		
1	3/4	5.2	5.6	10 ①	250	250	250	180	8344P078	4	●	-	-	-		
General Service - 4/2 Dual Solenoid																
3/8	3/8	1.4	2.2	10 ①	300	300	200	180	8344P080	5	●	-	-	-	1.2 ⑤	1.5 ⑥
NAMUR Mount - 3/2, 5/2 Single Solenoid																
1/4	1/4	0.86	0.86	30	150	-	-	180	EE8551P401 ④	6	●	-	6	●	1.2 ⑤	1.5 ⑥
1/4	1/4	0.86	0.86	30	150	-	-	180	EE8551P403	6	●	EE8551P409	6	●	1.2 ⑤	1.5 ⑥

● = General Purpose Valve. ① 25 psi minimum for light oils. ② 3/32" exhaust orifice. ③ Viscosity 50 SSU max. ④ Aluminum body. ⑤ 12-24V DC. ⑥ 24-120V AC/DC, 100-240V AC/DC.

4-Way Specifications (Metric units)

Pipe Size (in)	Orifice Dia. (mm)	Kv Flow Factor (m^3/h)		Operating Pressure Differential (bar)				Max. Fluid Temp. ˚C	Brass	Const. Ref.	Agency	316L Stainless Steel	Const. Ref.	Agency	Wattage	
					Max.											
		Pressure	Exhaust	Min.	Air-Inert Gas	Water	Light Oil @ 300 SSU				UL			UL	DC	AC/DC
General Service - Single Solenoid																
1/4	1.5 ②	0.07	0.07	0.7	10	10	10 ③	82	8345P001	1	●	-	-	-		
1/4	6.3	0.7	0.86	0.7 ①	17	17	17	82	8344P070	2	●	-	-	-		
3/8	9.5	1.2	2	0.7 ①	17	17	17	82	8344P072	3	●	-	-	-	1.2 ⑤	1.5 ⑥
1/2	9.5	1.2	2	0.7 ①	17	17	17	82	8344P074	3	●	-	-	-		
3/4	19	4.5	4.8	0.7 ①	17	17	17	82	8344P076	4	●	-	-	-		
1	19	4.5	4.8	0.7 ①	17	17	17	82	8344P078	4	●	-	-	-		
General Service - 4/2 Dual Solenoid																
3/8	9.5	1.2	1.9	①	21	21	14	82	8344P080	5	●	-	-	-	1.2 ⑤	1.5 ⑥
NAMUR Mount - 3/2, 5/2 Single Solenoid																
1/4	6.3	0.74	0.74	2.1	10.3	-	-	82	EE8551P401④	6	●	-	-	-	1.2 ⑤	1.5 ⑥
1/4	6.3	0.74	0.74	2.1	10.3	-	-	82	EE8551P403	6	●	EE8551P409	6	●	1.2 ⑤	1.5 ⑥

● = General Purpose Valve. ① 25 psi minimum for light oils. ② 3/32" exhaust orifice. ③ Viscosity 50 SSU max. ④ Aluminum body. ⑤ 12-24V DC. ⑥ 24-120V AC/DC, 100-240V AC/DC.

Important

A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Refer to Engineering Section for details.

4-Way Optional Features Chart

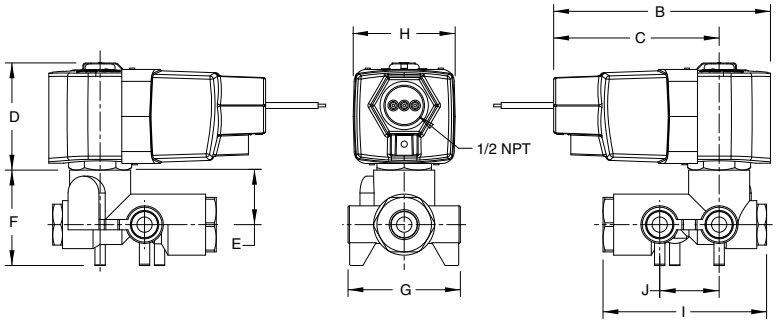
Pipe Size (in)	Orifice Dia. (in)	Base Catalog Number		Resilient Materials and Suffix Options								Other		Standard Rebuild Kit
		Brass	Stainless Steel	NBR	FKM	EPDM	CR	Oxygen Service	PTFE	Urethane	Vacuum	Manual Operator	Mounting Bracket	Brass
1/4	1/16	8345P001	-	●	V	-	-	-	-	-	-	MO	-	322925
1/4	1/4	EE8551P401*	-	●	-	-	-	-	-	-	-	MH/MS	-	-
1/4	1/4	EE8551P403	EE8551P409	●	-	-	-	-	-	-	-	MH/MS	-	-
1/4	1/4	8344P070	-	●	V	-	-	-	-	-	-	MO	-	322696
3/4	3/4	8344P080	-	●	V	-	-	-	-	-	-	MO		322700
3/8	3/8	8344P072	-	●	V	-	-	-	-	-	-	MO	-	322697
1/2	3/8	8344P074	-	●	V	-	-	-	-	-	-	MO	-	322697
3/4	3/4	8344P076	-	●	V	-	-	-	-	-	-	MO	-	322698
1	3/4	8344P078	-	●	V	-	-	-	-	-	-	MO	-	322698

● = Standard. * Aluminum body.

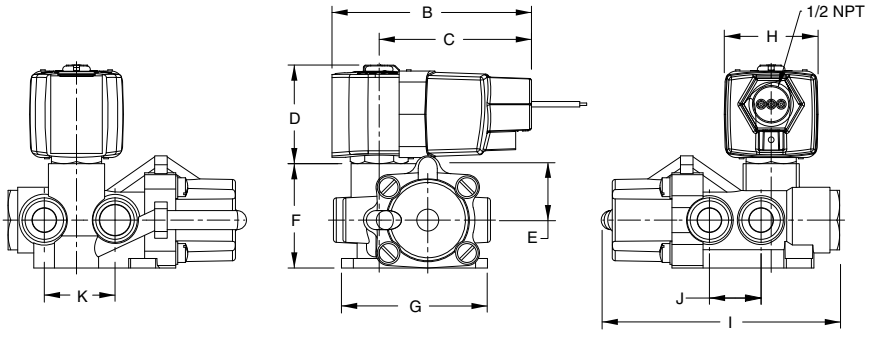
Dimensions: inches (mm)

Const. Ref.		B	C	D	E	F	G	H	I	J	K	Exhaust Pipe Size
1	in	3.98	3.04	2.0	1.12	2.08	2.94	1.87	4.82	1.03	1.41	3/8
	mm	101	77	51	28	53	75	48	122	26	112	
2	in	3.98	3.04	2.09	1.00	1.75	2.06	1.87	3.00	1.09	-	1/4
	mm	101	77	53	25	44	52	35	76	28	-	
3	in	3.98	3.04	2.0	0.94	2.06	3.18	1.87	6.05	1.50	1.86	1/2
	mm	101	77	51	24	52	81	48	154	38	47	
4	in	3.98	3.04	2.0	1.31	2.86	4.12	1.87	8.25	2.10	2.12	1
	mm	101	77	51	33	73	105	48	210	53	54	

Const. Ref. 1

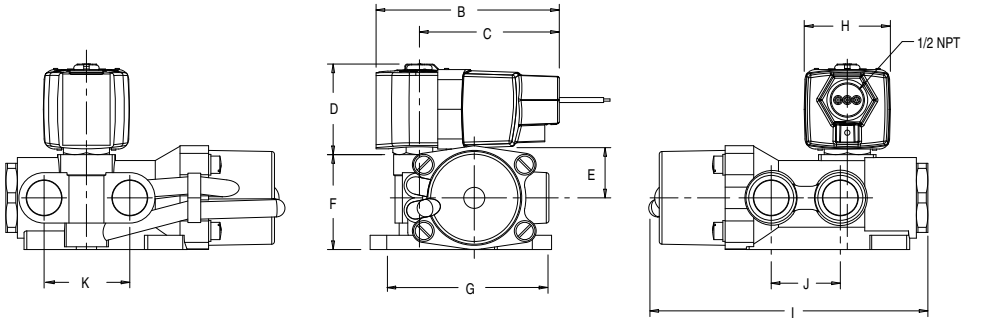


Const. Ref. 2



Dimensions: inches (mm)

Const. Ref. 3, 4



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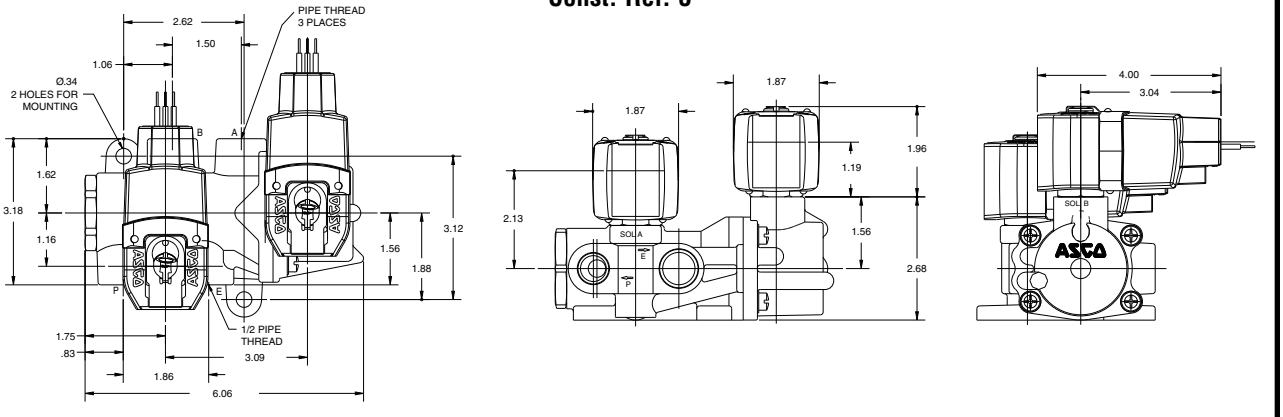
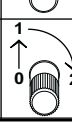
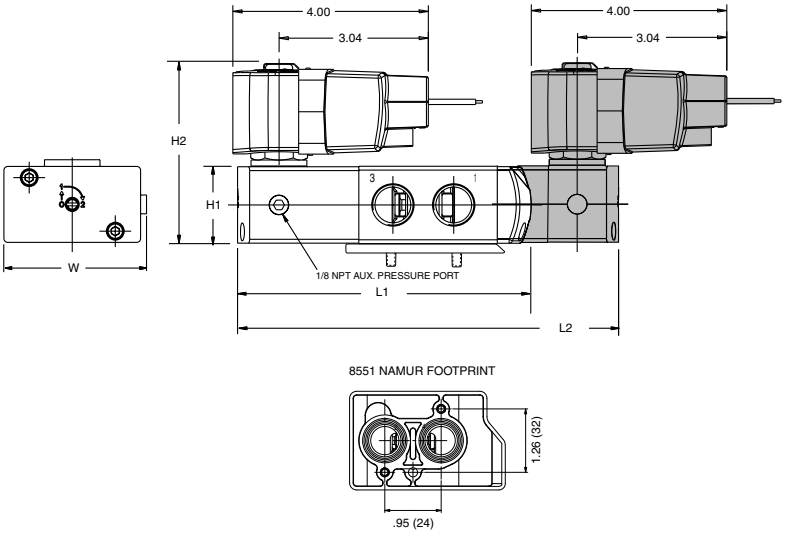


Series	8551
NPT	1/4
L1	4.96 (126)
L2	6.50 (165)
H2	3.97 (101)
H1	1.57 (40)
W	1.77 (45)

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 6



Electronically Enhanced Solenoids
(Next Generation)

All RedHat Next Generation solenoid valves are rated for continuous duty under the operating conditions outlined within this section.

Coil Operating Voltage Ranges

All coils are designed for industrial operating voltages and can be used on the following voltage ranges:

Voltage Range	Minimum Voltage	Maximum Voltage
100-240V/50 or 60Hz/DC	85	264
24-120V/50 or 60Hz/DC	20.4	132
12-24/DC only	10.4	26.4

The coils with voltage ranges of 100-240 and 24-120 have three lead wires, 24 inches long (2 red for power input, and one green lead for grounding where necessary). These two versions are not polarity sensitive.

The coil with a voltage range of 12-24/DC has 3 lead wires, one red, one black, and one green. This coil is polarity sensitive. The red lead is the positive, black is the negative, and green is the ground wire. This solenoid is also polarity protected. Reversing the polarity will not damage the coil, but the coil will not function until the correct polarity is applied.

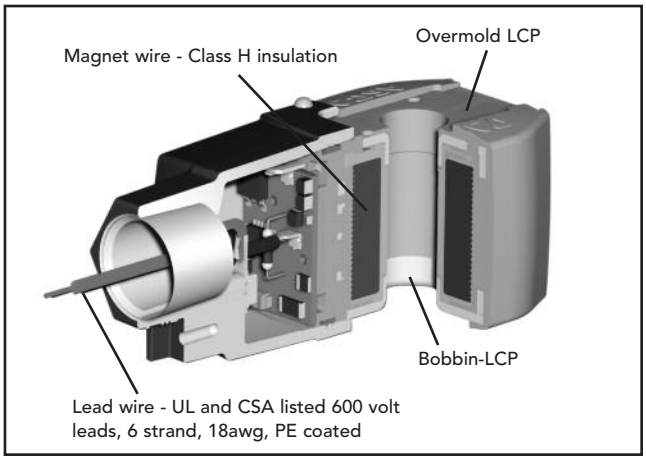
Note: The 100-240 voltage range is also suitable for battery charging circuits designed around a 125/DC nominal voltage range.

Electrical Specifications

2 Watt Electronic Coils	Type
Maximum Ambient Temperature	140˚F
Maximum Cycle Rate	1 Operation/ Second
Standard Coil Class of Insulation	H

Power Consumption

The Next Generation solenoid power rating is 1.2 watt of power for 12-24V DC and 1.5 watts for 24-120V AC/DC, and 100-240V AC/DC.



The advanced technology used in the Next Generation coil includes electronic circuitry which may limit the compatibility with certain control system components. The following issues need to be considered when specifying an output card or device to operate the Next Generation coil. An initial inrush current spike is drawn by the Next Generation coil. This inrush spike is 72 msec in duration, which is sufficient time for the core to reach the plugnut. The electrical requirement then drops to the holding value.

Inrush Current: The power source, wiring, and output device used need to have surge ratings equal to or greater than the inrush current value (appropriate to the voltage range) specified in the table below.

Inrush Current Rating	
Coil Version	**Peak Inrush Current (Amps)**
12-24/DC	3.2
24-120/50-60Hz/DC	1.4
100-240/50-60Hz/DC	0.32
Maximum Duration = 72 ms	

Holding Current: The power source, wiring, and output device used need to have continuous current ratings equal to or greater than the holding current value (appropriate to the voltage range) specified in the table below.

Holding Current Rating			
Coil Version	**Input Voltage**	**Average Holding Current (Amps)**	**Average Holding Volt-Amps (VA)**
12-24/DC	12	0.230	2.8
	24	0.190	4.5
24-120/50-60Hz/DC	24	0.140	3.4
	120	0.070	8.8
100-240/50-60Hz/DC	100	0.044	4.4
	240	0.032	7.8

Supervisory/Leakage Currents:
The leakage current is defined as a current that is supplied from an output device when the device is in its off or de-activated state.

The Next Generation coil is suitable for systems using supervisory currents that do not exceed the drop-out currents noted in the table below.

Supervisory/Leakage Current Rating	
Coil Version	**Drop-out Current (mA)**
12-24/DC	20
24-120/50-60Hz/DC	15
100-240/50-60Hz/DC	7
Important: Supervisory and leakage currents above the drop-out current listed with cause improper operation. Consult your local ASCO Sales office for additional assistance.	

Solenoid Enclosures

The Next Generation solenoid coil is fully encapsulated using Dupont™ Zenite® Liquid Crystal Polymer resin (LCP). Zenite (LCP) is a thermoplastic polyester resin which exhibits several advantages over other thermoplastics. The advantages include excellent resistance to a wide range of organic solvents and automotive fluids*, resistance to impact, and long term retention of properties at continuous-use temperatures.

*Chemical resistance of Zenite LCP may not be suitable for all applications. Zenite LCP is not suitable for caustic solution. *Please consult ASCO for appropriate product solutions.*

Zenite is a registered Trademark of Dupont Co.

RedHat Next Generation Solenoids are available as:

General Purpose/Watertight – Intended for indoor and outdoor use and provides protection classifications from NEMA Types 1 through 4X.

Class I, Division 2 for Hazardous Locations/Watertight – Meets Types 1 through 4X and is UL listed and CSA certified for Class I, Division 2, Groups A, B, C, and D and Class II, Division 2, Groups F and G. Operating temperature code T4A (120˚C).

Valve Specifications

Maximum Ambient Temperature

The maximum ambient temperature is 140˚F (60˚C). This limit is based on continuous energization with the maximum fluid temperatures as shown on each catalog page.

Response Time

Response time from fully closed to fully open or vice versa depends on valve size, operating mode, fluids, temperature, inlet pressure, and pressure drop. The response times for Next Generation are defined as:

Small direct acting valves – 10 to 60 msec
Large direct acting valves – 25 to 90 msec

Internally pilot operated valves:

- Small diaphragm types – 20 to 100 msec
- Large diaphragm types – 80 to 150 msec
- Small piston types – 80 to 150 msec
- Large piston types – 105 to 200 msec

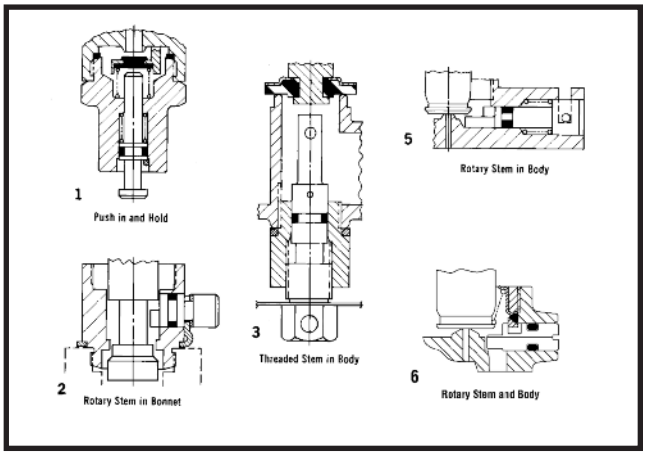
Operation on liquids has relatively little effect on small direct acting valves, however, response times of large direct acting and internally piloted valves may be lengthened by 50% to 100%.

Manual Operators

Manual operators are provided to operate the valves manually when electric actuation is not provided. There are two basic types of manual operators, momentary and maintained. To determine which type of manual operator is available for your valves, please see the Optional Features Chart on the relevant valve catalog page. Once it is determined that the subject valve can accommodate a manual operator, the chart below will tell you the type of manual operator. The chart also references the relevant cutaway illustration.

Series Number	Const. Ref.	Manual Operator Suffix	Manual Operator Type	Illustration Number
8030	8	MO	Maintained	3
8210	4, 7, 10, 11, 12	MO	Maintained	2
8262	1	MS	Maintained	6
8263	1	MS	Maintained	6
8314	1	MS	Maintained	6
8316	5, 6	MO	Maintained	2
8320	2	MO	Momentary	1
8320	2	MS	Maintained	6
8321	4	MO	Momentary	1
8321	4	MS	Maintained	3
8344	1, 3, 4	MO	Maintained	2
8345	2	MO	Maintained	5

Cutaway Illustrations

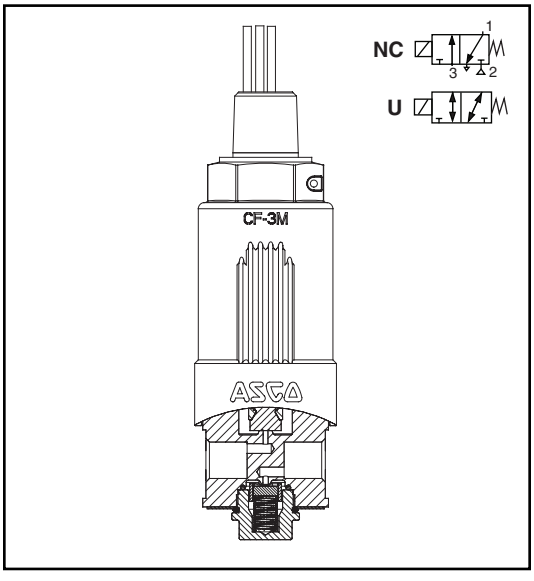


Valve Parts in Contact with Fluids						
Series	**Body**	**Seals and Discs**	**Disc Holder**	**Core Guide**	**Springs**	**Shading Coil**
8030	Brass	NBR	-	-	302 Stainless Steel	Copper
8210	304 Stainless Steel	NBR	-	-	302 Stainless Steel	Silver
	Brass	NBR	①	-	302 Stainless Steel	Copper
8223	304 Stainless Steel	PTFE, NBR	-	-	302 Stainless Steel	Silver
	Brass	NBR, PA, PTFE	-	-	302 Stainless Steel	Copper
8262	304 Stainless Steel	NBR	-	-	302 Stainless Steel	Silver
8262P261	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262R099	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262R107	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262R175	304 Stainless Steel	UR		-	302 Stainless Steel	Silver
8262R178	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262	Brass	NBR	-	-	302 Stainless Steel	Copper
8262R077	Brass	LT NBR	-	-	Inconel	Copper
8262R078	Brass	LT NBR	-	POM	Inconel	Copper
8263	304 Stainless Steel	NBR	-	-	302 Stainless Steel	Silver
8263	Brass	NBR	-	-	302 Stainless Steel	Copper
8314	304 Stainless Steel	NBR, FKM	-	POM	302 Stainless Steel	Silver
8314	Brass	NBR, FKM	-	POM	302 Stainless Steel	Copper
8316	Brass	NBR	POM	POM	302, 17-7PH Stainless Steels	Copper
8317	Brass	NBR, FKM, CR	-	POM	302, 17-7PH Stainless Steels	Copper
8320	303 Stainless Steel	NBR	POM	POM	302 Stainless Steel	Silver
8320	Brass	NBR	POM	POM	302 Stainless Steel	Copper
8321	Brass	NBR	POM	POM	302 Stainless Steel	Copper
8344	Brass	NBR	POM	POM	302, 17-7PH Stainless Steels	Copper
8345	Brass	NBR, PA	-	POM	302 Stainless Steel	Copper
8551	316 Stainless Steel	NBR, PA	-	POM	302 Stainless Steel	Copper
8551	Anodized Aluminum	NBR, PA	-	POM	302 Stainless Steel	Copper

Note: All core tubes are 305 stainless steel and all cores and plugnuts are 430F stainless steel. ① 8210P033, 8210P034, and 8210P035 with PA Disc Holder

Features

- Designed for harsh, hazardous environments, including offshore applications
- Provides quick shutdown of valves and actuators
- Low power consumption suitable for solar panels and PLC/DCS* applications
- CSA, ATEX, IECEx approved with factory-sealed leads
- Approvals on all constructions
  - UL, CSA, ATEX, IECEx
- Mountable in any position
- Increased pressure ratings on low power constructions
- Maximum corrosion resistance with 316L constructions



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
Seals and Disc	FKM
Core and Plugnut	430F Stainless Steel
Core Spring	17-7 Stainless Steel
Rider Rings	PTFE
Disc-Holder and Core Guide	CA

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption
	DC Watts
F	0.55
F	1.3
Standard Voltages: 12 and 24 volts DC.	

***IMPORTANT:** Supervisory and leakage current above the drop out current listed will cause improper operation. *Consult your local ASCO sales office for additional assistance.*

Solenoid No.	Wattage (DC)	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)*	Coil Resistance @ 68˚F (20˚C) (ohms)
HV298934001	1.3W	12V DC	81.4	11.3	111
		24V DC	41.0	6.6	443
HV298934002	0.55W	12V DC	35.8	3.4	262
		24V DC	17.9	1.7	1047

Solenoid Enclosures

Standard: Prefix "EF", 316L Stainless Steel, Explosionproof and Watertight with 72" leads. Types 1, 2, 3, 4, 4X, 6, 6P, and 7.

See Engineering Section under "Enclosures" for details.

Nominal Ambient Temp. Ranges

-4˚F to 122˚F (-20˚C to 50˚C)

Refer to Engineering Section for details.

Approvals

Solenoid Only:

UL & CSA approved for Class I, Div. 1, Groups C & D

ATEX / IECEx approved for II 2 G Ex d IIB T6 Gb

SIL 3 Capable per IEC61508.

Third party certification provided by EXIDA.

Meets applicable CE directives.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)		Cv Flow Factor		Operating Pressure Differential (psi)				Wattage Rating/ Coil Insulation Class
					Air/Natural Gas		Catalog Number	Const. Ref.	
	Pressure	Exhaust	Pressure	Exhaust	Min.	Max.			12 or 24 VDC
NORMALLY CLOSED (Closed when de-energized)									
1/4	1/16	3/32	0.08	0.16	0	150 ③	EF8320A511	1	1.3/F
1/4	3/64	5/64	0.05	0.11	0	125 ④	EF8320A512	1	0.55/F
1/4	1/16	1/4	0.08	1.4	20	150	EF8317A511 ②	2	1.3/F
1/4	5/16	5/16	1.10	1.40	20	150	EF8321A511 ①	3	1.3/F
1/4	5/16	5/16	1.10	1.40	20	125	EF8321A512 ①	3	0.55/F
UNIVERSAL FLOW (Pressure at any port)									
1/4	1/16	3/32	0.08	.16	0	65	EF8320A515	1	1.3/F

① Main disc is NBR ② This valve has a Hytrel diaphragm. ③ Light Oil @ 300 SSU Max. Pressure 125 psi (8.6 bar). ④ Light Oil @ 300 SSU Max. Pressure 90 psi (6 bar).

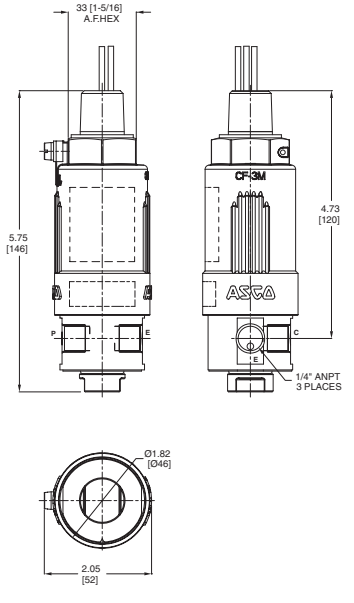
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)		Kv Flow Factor (m^3/h)		Operating Pressure Differential (bar)				Wattage Rating/ Coil Insulation Class
					Air/Natural Gas		Catalog Number	Const. Ref.	
	Pressure	Exhaust	Pressure	Exhaust	Min.	Max.			12 or 24 VDC
NORMALLY CLOSED (Closed when de-energized)									
1/4	1.6	2.4	0.07	0.14	0	10	EF8320A511 ③	1	1.3/F
1/4	1.2	1.8	0.04	0.09	0	8.6	EF8320A512 ④	1	0.55/F
1/4	1.6	6.4	0.07	1.2	1.4	10	EF8317A511 ②	2	1.3/F
1/4	7.9	7.9	0.95	1.20	1.4	10	EF8321A511 ①	3	1.3/F
1/4	7.9	7.9	0.95	1.20	1.4	8.6	EF8321A512 ①	3	0.55/F
UNIVERSAL FLOW (Pressure at any port)									
1/4	1.6	2.4	0.07	0.14	0	4.5	EF8320A515	1	1.3/F

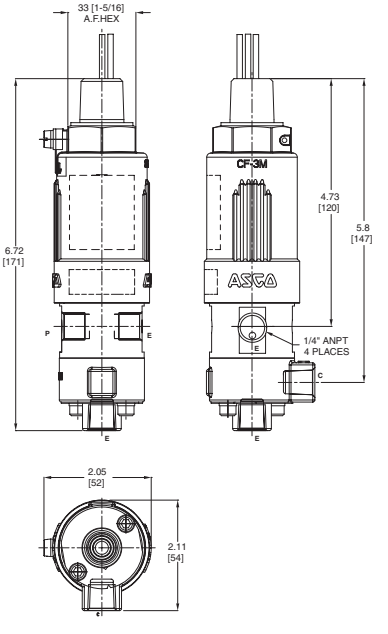
① Main disc is NBR ② This valve has a Hytrel diaphragm. ③ Light Oil @ 300 SSU Max. Pressure 125 psi (8.6 bar). ④ Light Oil @ 300 SSU Max. Pressure 90 psi (6 bar).

Dimensions: inches (mm)

Const. Ref. 1



Const. Ref. 2 (Quick Exhaust)



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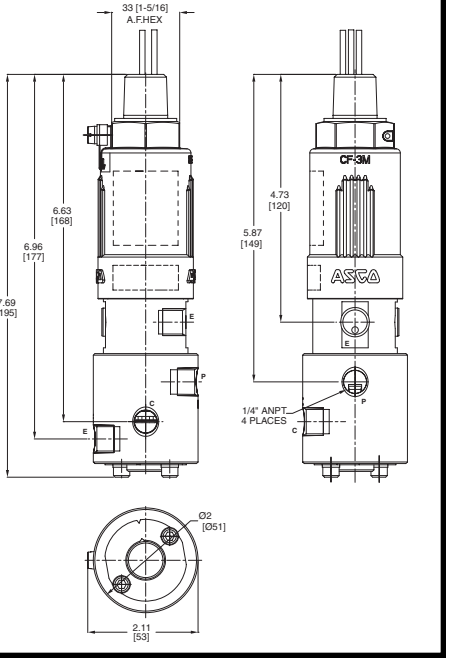
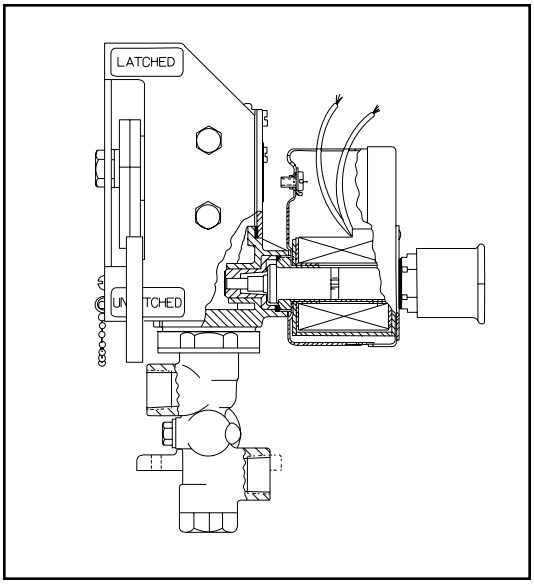


Intrinsically Safe Manual Reset Valves

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

Features

- Intrinsically safe solenoid. When energized, holds the manual reset mechanism in the latched position
- Normally closed, normally open, or universal constructions
- Valve operates when the solenoid has been energized and the lever latched while holding in the yellow button
- Valve trips when power is interrupted. Valve can be manually cycled, but must be manually reset for automatic operation
- Designed solely for installation in intrinsically safe areas, with properly approved and sized current and voltage-limiting safety barriers
- Acceptable for use in hazardous locations as classified by the National Electrical Code: Classes I, II, and III, Division 1, including Groups A through G



Construction

Valve Parts in Contact with Fluids		
Body	Brass	Stainless Steel
Seals and Disc	NBR	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Core Tube	305 Stainless Steel	
Pilot Seat Cartridge	CA (Series WPIS8308A041, -2, -3)	
Rider Rings	PTFE	
Spring Retainer	CA	

Electrical

Standard Voltages: 24 volts DC
Coil: Continuous duty molded Class A.
Minimum Operating Current: 0.023 amps

Parameters	Groups A-D	Groups C-D
Entity	V max - 28 VDC	V max - 34 VDC
	I max - 92 mA	I max - 125 mA
	Capacitance = 0	Capacitance = 0
	Inductance = 0	Inductance = 0

IMPORTANT: Electrical parameters are unique to the manual reset line and will differ from other Intrinsically Safe valve's electrical data.

Enclosure

Standard: RedHat Type 4, Watertight Splice Box enclosure.

Optional: No standard options are available.

Consult local sales office for your needs.

Nominal Ambient Temp. Ranges

-4˚F to 200˚F (-20˚C to 93˚C), as indicated.

Refer to Engineering Section for details.

Approvals

FM approved under J. I. 3W2A7.AX (3610).
CSA certified under File LR-13976.
FM Nonincendive approved for Class 1, Division 2.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Air-Inert Gas Min.	Operating Pressure Differential (psi) Air-Inert Gas Max.	Max. Fluid and Ambient Temp. °F	Catalog Number	Const. Ref.
3/2 UNIVERSAL OPERATION, Brass Body with NBR Disc or Stainless Steel Seats and Discs ②							
1/4	11/64	.38	0	125	180	WPIS8308B040	4
1/4	1/4	.45	0	125	180	WPIS8308044 ②	1
3/8	1/4	.45	0	125	180	WPIS8308045 ②	1
1/2	5/16	.75	0	125	180	WPIS8308046 ②	2
3/2 NORMALLY CLOSED OR NORMALLY OPEN, Brass Body with NBR Disc							
3/8	5/8	3	10	250	180	WPIS8308C041 ①	5
1/2	5/8	4	10	250	180	WPIS8308C042 ①	5
3/4	11/16	5.5	10	250	180	WPIS8308C043 ①	6
3/2 UNIVERSAL OPERATION, Stainless Steel Body with Stainless Steel Seats and Discs							
1/2	5/16	.75	0	125	200	WPIS8308047	3
4/2 OPERATION, Brass Body with PTFE and FPM Seats and Discs							
1/4	3/16	.80	0	250	160	WPIS8408B006	7
3/8	3/16	.80	0	250	160	WPIS8408B007	7

① For Normally Closed operation, add suffix "F" to catalog number; for Normally Open operation, add suffix "G" to catalog number.
② Supplied with stainless steel seats and discs.

SPECIAL SERVICE PILOT

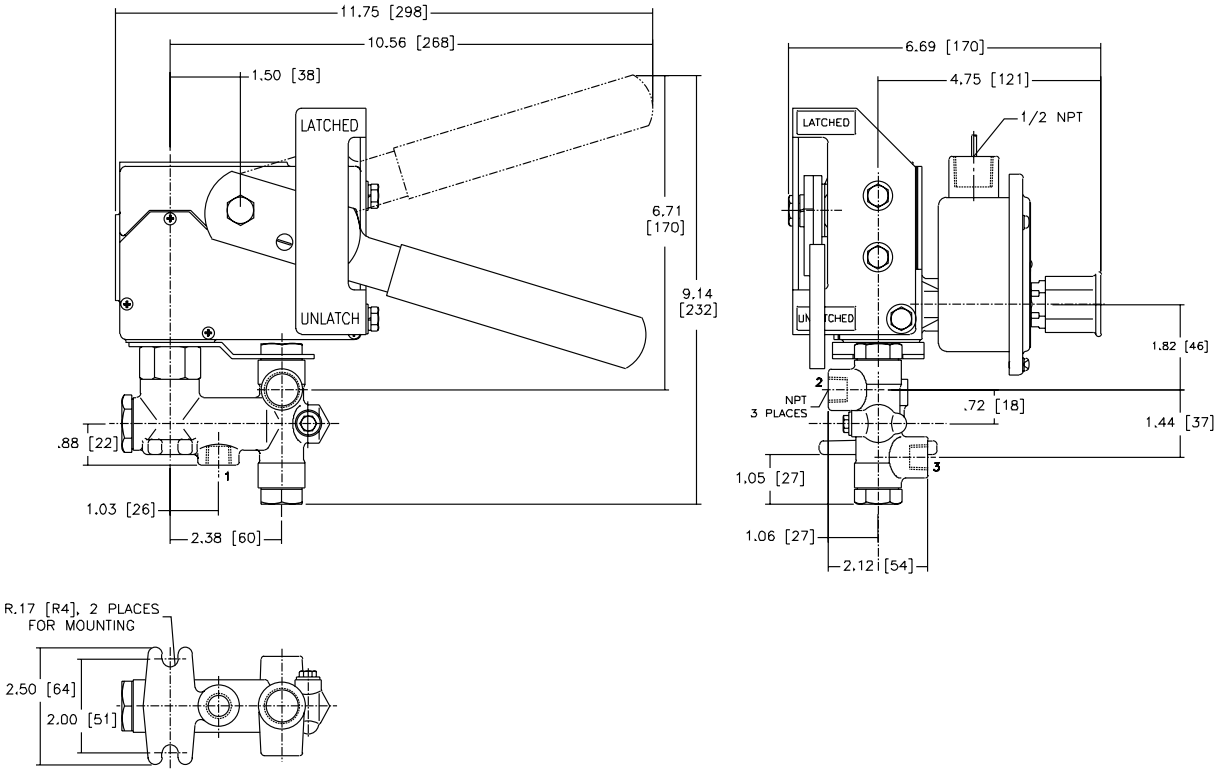
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Air-Inert Gas Min.	Operating Pressure Differential (bar) Air-Inert Gas Max.	Max. Fluid and Ambient Temp. °C	Catalog Number	Const. Ref.
3/2 UNIVERSAL OPERATION, Brass Body with NBR Disc or Stainless Steel Seats and Discs ②							
1/4	4	.33	0	8.6	81	WPIS8308B040	4
1/4	6	.39	0	8.6	81	WPIS8308044 ②	1
3/8	6	.39	0	8.6	81	WPIS8308045 ②	1
1/2	8	.64	0	8.6	81	WPIS8308046 ②	2
3/2 NORMALLY CLOSED OR NORMALLY OPEN, Brass Body with NBR Disc							
3/8	16	2.57	0.7	17.2	81	WPIS8308C041 ①	5
1/2	16	3.43	0.7	17.2	81	WPIS8308C042 ①	5
3/4	17	4.71	0.7	17.2	81	WPIS8308C043 ①	6
3/2 UNIVERSAL OPERATION, Stainless Steel Body with Stainless Steel Seats and Discs							
1/2	8	.64	0	8.6	92	WPIS8308047	3
4/2 OPERATION, Brass Body with PTFE and FPM Seats and Discs							
1/4	5	.69	0	17.2	70	WPIS8408B006	7
3/8	5	.69	0	17.2	70	WPIS8408B007	7

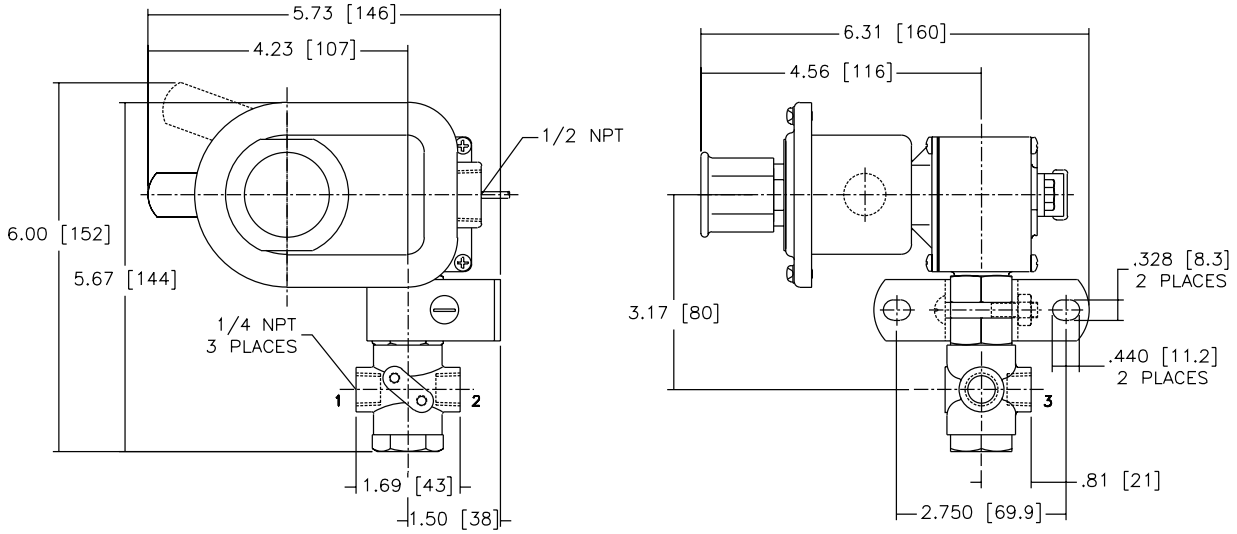
① For Normally Closed operation, add suffix "F" to catalog number; for Normally Open operation, add suffix "G" to catalog number.
② Supplied with stainless steel seats and discs.

Dimensions: inches (mm)

Const. Ref. 1, 2, 3

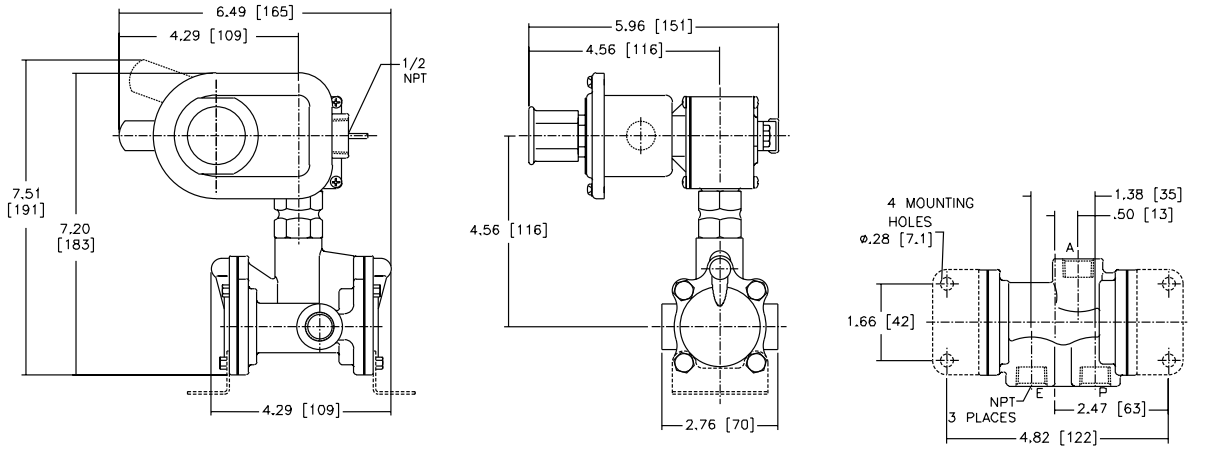


Const. Ref. 4

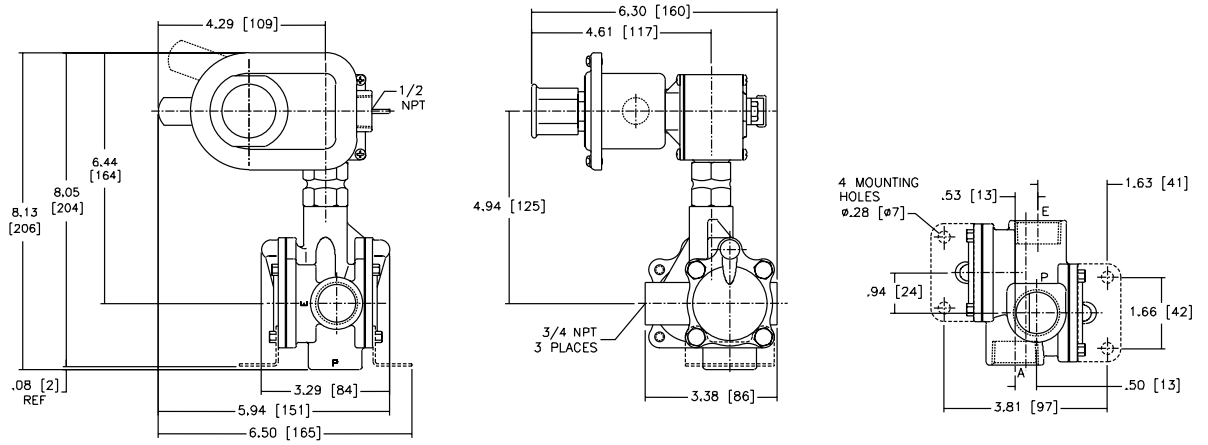


Dimensions: inches (mm)

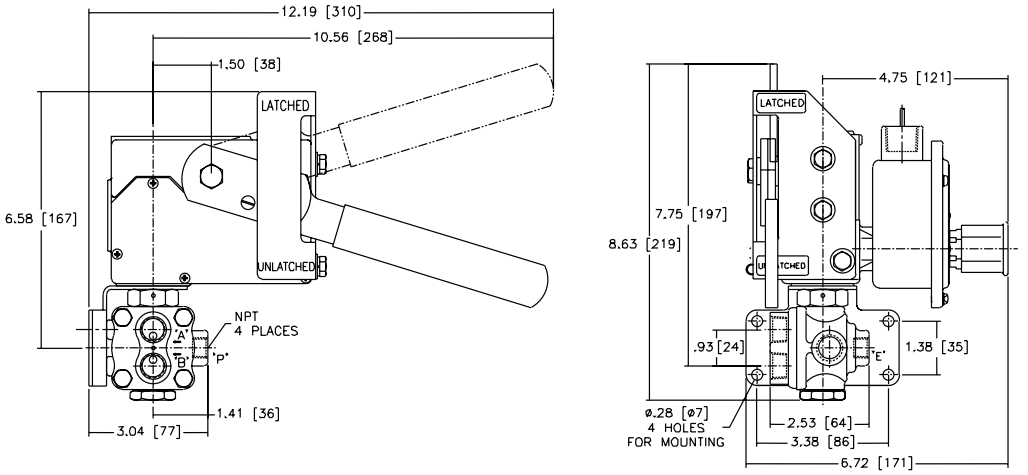
Const. Ref. 5



Const. Ref. 6



Const. Ref. 7



Features

- Available in 4 different coil terminations
- H Class coil construction
- Designed solely for installation in intrinsically safe or NIFW areas, with properly approved and sized limiting barriers
- Compatible with supervisory current applications
- Mountable in any position

Enclosure Ratings

Catalog Prefix	Description	Enclosure Type Rating	Enclosure IP Rating
IS	1/2" NPT Conduit	4, 4X	IP66
		6, 6P	IP67
JPIS	Aluminum Junction Box with 1/2" NPT Conduit	4, 4X	IP66
		6, 6P	IP67
JSIS	316L Stainless Steel Junction Box with 1/2" NPT Conduit	4, 4X	IP66
		6, 6P	IP67
ISVT	5-Pin (Male M12)	NA	IP20
ISSC	DIN (Form A)	NA	IP20

Valve Construction

Valve Parts in Contact with Fluids			
Body	Aluminum	Brass	Stainless Steel
Seals and Discs	PUR, NBR		
Sleeve	430 Stainless Steel		
Core and Plugnut	430F Stainless Steel		
Core Springs	302 Stainless Steel		
Pilot Seat Insert (Series 8316 & 8344 only)	POM		
Rider Rings	PTFE		
Spring Retainer	POM		

Electrical

Nominal voltage before the barrier – 24VDC +/- 10%.

IMPORTANT: Maximum allowable "Off" state leakage current or supervisory current is 4.0 mA.

I_{loop} - **Loop current in the circuit, which may be calculated as follows:**

$$I_{loop} = \frac{V_{supply}}{(R_{coil} + R_{loop} + R_{barrier})}$$

Where: R_{coil} - The resistance of the solenoid coil at $T_{ambient}$ in degrees C

$$R_{coil} = 320 \text{ ohms} \times \frac{(T_{ambient} + 234)}{254}$$

R_{loop} - Resistance of the lead wires

$R_{barrier}$ - Internal resistance of the barrier

V_{supply} - Supply voltage

This current must always be greater than or equal to 0.030 amps for proper operation of the solenoid valve.

24VDC Spare Coil Part Number	
IS	298006-002-D*
ISSC, JPIS, JSIS	298008-002-*
ISVT	272401-047-*

Ordering Information

Example:

With Aluminum Junction Box – JPIS8314B300

With 316L Stainless Steel Junction Box – JSIS8314B300

With Conduit – IS8314B300

With Quick Disconnect – ISVT8314B300

With DIN Connection – ISSC8314B300
(Connector not included)

Approvals

FM and CSA approved for IS - Class I, Div. 1 & 2, Groups A, B, C, and D; Class II, Groups E, F, and G. Approved for NIFW - Class I, Div. 2

FM (US & Canada) approved under 3037789 & 3037789C

CSA certified under File 13976, Class 3228-01 (Certificate 1099243)

ATEX Approved for:
II 1 G Ex ia IIC T6 Ga under FM10ATEX0015X

IECEx Approved for:
Ex ia IIC T6 Ga under IECExFMG10.0008X

Meets applicable CE directives.

Refer to Engineering Section for details.

Entity Parameters

V_{max} = 32 VDC C_i = 0 nF

I_{max} = 500 mA L_i = 0 mH

P_i = 1.5 W

Nominal Ambient Temp. Ranges

Series	Body Material	Normal Temperature Range
8553	Stainless Steel	-40°F to 140°F (-40°C to 60°C)
8551	Brass	
8553	Aluminum	-13°F to 140°F (-25°C to 60°C)
8551		5°F to 140°F (-15°C to 60°C)
8551	Stainless Steel	-40°F to 149°F (-40°C to 65°C)
8262	Brass / Stainless Steel	
8314		
8317		
8316*		-20°F to 149°F (-29°C to 65°C)
8223		-4°F to 149°F (-20°C to 65°C)
8344	Brass only	
8316H334		

*Does not include JPIS8316B334; Includes JPIS8316B374. **Note**: 8553 not available in brass

Important

These solenoid valves are intended for use on clean dry air or inert gas, filtered to 40 micrometres or better. The dew point of the media should be at least 10°C (18° F) below the minimum temperature to which any portion of the clean air/inert gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with Nitrile elastomers. Diester oils may cause operational problems. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/4	1/16	.06		0	130	149	JPIS8262B320	1	JSIS8262B386	1
3/8	5/16	1.5		10	130	149	JPIS8223B323	2	-	-
1/2	3/8	3.2		25	130	149	JPIS8223B303	3	JSIS8223B310	3
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦ ⑧										
1/4	1/20	.06	.06	0	130/105 ⑥	149	JPIS8314B300	4	JSIS8314B301	5
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc or FKM (Suffix V), as Listed – SIL 3 Capable, Certified by Exida ⑧										
1/4	5/16	1.5	1.5	⑤	130	149	JPIS8316B301 ③	6	JSIS8316B381	6
3/8	5/16	1.8	1.8	⑤	130	149	JPIS8316B302 ③	6	JSIS8316B382	6
3/8	5/8	4	4	⑤	130	149	JPIS8316B303 ③	6	-	-
1/2	5/8	4	4	⑤	130	149	JPIS8316B304 ③	6	JSIS8316B384	6
3/4	11/16	5.5	5.5	10	130	149	JPIS8316B374 ③	7	-	-
1	1	13	13	10	130	149	JPIS8316B334 ③	8	-	-
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc										
1/4	②	.06	.73	5	130	149	JPIS8317B307 ①	9	JSIS8317B308 ①	10
4/2 VALVES, Brass Body with NBR Disc										

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
1/4	1/4	.80	1	10	130	149	JPIS8344B370 ①③	11	JPIS8344B344 ③⑨	12
3/8	3/8	1.5	2.2	10	130	149	JPIS8344B372 ①③	13	JPIS8344B380 ③⑨	14
1/2	3/8	1.5	2.2	10	130	149	JPIS8344B374 ①③	13	JPIS8344B382 ③⑨	14
3/4	3/4	5.2	5.6	10	130	149	JPIS8344B376 ①③	15	JPIS8344B354 ③⑨	16
1	3/4	5.2	5.6	10	130	149	JPIS8344B378 ①③	15	JPIS8344B356 ③⑨	16

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1/20", exhaust port is 1/4".

③ **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

⑤ Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 15 psi Operating Pressure Differential when selection gasket is in the internal position.

⑥ Normally closed = 130 psi / Normally open = 105 psi.

⑦ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑧ SIL 3 Capable per IEC 61508, Certified by Exida, only valid when used as Normally Closed.

⑨ Dual solenoid 8344 requires minimum pressure of 20 psi. Single solenoid version has 10 psi minimum pressure requirement.

Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – SIL 3 Capable, Certified by Exida ①					Dual Solenoid				
				Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals													
Aluminum 3/2	1/4	1/4	.86	35	130	149	JPIS8551B305	17	30	130	149	JPIS8551B306	17
Aluminum 5/2							JPIS8551B317	18				JPIS8551B318	18
Aluminum 5/3 Center Closed							-	-				JPIS8551B367	18
Aluminum 5/3 Center Open							-	-				JPIS8551B368	18
Brass 3/2							JPIS8551B307	17				JPIS8551B308	17
Brass 5/2							JPIS8551B319	18				JPIS8551B320	18
316L Stainless Steel 3/2							JPIS8551B313	17				JPIS8551B314	17
316L Stainless Steel 5/2							JPIS8551B321	18				JPIS8551B322	18
Aluminum 3/2	1/2	1/2	3.7				JPIS8553B305	17				JPIS8553B306	17
Aluminum 5/2							JPIS8553B317	18				JPIS8553B318	18
316L Stainless Steel 3/2							JPIS8553B313	17				JPIS8553B314	17
316L Stainless Steel 5/2							JPIS8553B321	18				JPIS8553B322	18

① Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – SIL 3 Capable, Certified by Exida ②					Dual Solenoid				
				Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount													
Aluminum 3/2, 5/2	1/4	1/4	.86	35	130	149	JPIS8551B301 ①	19	30	130	149	JPIS8551B302 ①	19
Aluminum 5/3 Center Closed							-	-				JPIS8551B365	20
Aluminum 5/3 Center Open							-	-				JPIS8551B366	20
Brass 3/2, 5/2							JPIS8551B303 ①	19				JPIS8551B304 ①	19
316L Stainless Steel 3/2, 5/2							JPIS8551B309	20				JPIS8551B310	20
Aluminum 3/2, 5/2	1/2	1/2	3.7				JPIS8553B301	20				JPIS8553B302	20
316L Stainless Steel 3/2, 5/2							JPIS8553B309	20				JPIS8553B310	20

① 1/8" NPT exhaust for 1/4" aluminum and brass.
② Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)		Operating Pressure Differential (bar)		Max. Fluid and Ambient Temp. °C	Brass Body		Stainless Steel Body	
				Air-Inert Gas						
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/4	1.3	.07		0	9	65	JPIS8262B320	1	JSIS8262B386	1
3/8	8	1.3		0.7	9	65	JPIS8223B323	2	-	-
1/2	10	2.7		1.7	9	65	JPIS8223B303	3	JSIS8223B310	3
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦ ⑧										
1/4	1.3	.05	.05	0	9/7 ⑥	65	JPIS8314B300	4	JSIS8314B301	5
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc – SIL 3 Capable, Certified by Exida ⑧										
1/4	8	1.3	1.3	⑤	9	65	JPIS8316B301 ③	6	JSIS8316B381 ④	6
3/8	8	1.6	1.6	⑤	9	65	JPIS8316B302 ③	6	JSIS8316B382 ④	6
3/8	16	3.5	3.5	⑤	9	65	JPIS8316B303 ③	6	-	-
1/2	16	3.5	3.5	⑤	9	65	JPIS8316B304 ③	6	JSIS8316B384 ④	6
3/4	17	4.7	4.7	0.7	9	65	JPIS8316B374 ③	7	-	-
1	25	11.2	11.2	0.7	9	65	JPIS8316B334 ③	8	-	-
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc										
1/4	②	.07	.63	0.3	9	65	JPIS8317B307 ①	9	JSIS8317B308 ①	10
4/2 VALVES, Brass Body with NBR Disc										
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)		Operating Pressure Differential (bar)		Max. Fluid and Ambient Temp. °C	Single Solenoid		Dual Solenoid	
				Air-Inert Gas						
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
1/4	6	.69	.86	0.7	9	65	JPIS8344B370 ①③	11	JPIS8344B344 ③⑨	12
3/8	10	1.3	1.9	0.7	9	65	JPIS8344B372 ①③	13	JPIS8344B380 ③⑨	14
1/2	10	1.3	1.9	0.7	9	65	JPIS8344B374 ①③	13	JPIS8344B382 ③⑨	14
3/4	19	4.5	4.8	0.7	9	65	JPIS8344B376 ①③	15	JPIS8344B354 ③⑨	16
1	19	4.5	4.8	0.7	9	65	JPIS8344B378 ①③	15	JPIS8344B356 ③⑨	16

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1.3 mm, exhaust port is 6.4 mm.

③ **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

⑤ Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 1.0 bar Operating Pressure Differential when selection gasket is in the internal position.

⑥ Normally closed = 9 bar / Normally open = 7 bar.

⑦ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑧ SIL 3 Capable per IEC 61508, Certified by Exida, only valid when used as Normally Closed.

⑨ Dual solenoid 8344 requires minimum pressure of 1.4 bar. Single solenoid version has 0.7 bar minimum pressure requirement.

Specifications (Metric units)

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Single Solenoid – SIL 3 Capable, Certified by Exida ①					Dual Solenoid				
				Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals													
Aluminum 3/2	1/4	6	.74	2.4	9	65	JPIS8551B305	17	2	9	65	JPIS8551B306	17
Aluminum 5/2							JPIS8551B317	18				JPIS8551B318	18
Aluminum 5/3 Center Closed							-	-				JPIS8551B367	18
Aluminum 5/3 Center Open							-	-				JPIS8551B368	18
Brass 3/2							JPIS8551B307	17				JPIS8551B308	17
Brass 5/2							JPIS8551B319	18				JPIS8551B320	18
316L Stainless Steel 3/2							JPIS8551B313	17				JPIS8551B314	17
316L Stainless Steel 5/2							JPIS8551B321	18				JPIS8551B322	18
Aluminum 3/2	1/2	13	3.2				JPIS8553B305	17				JPIS8553B306	17
Aluminum 5/2							JPIS8553B317	18				JPIS8553B318	18
316L Stainless Steel 3/2							JPIS8553B313	17				JPIS8553B314	17
316L Stainless Steel 5/2							JPIS8553B321	18				JPIS8553B322	18

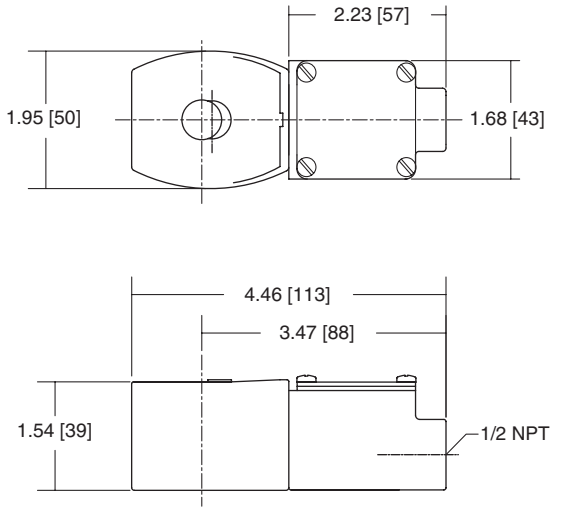
① Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Single Solenoid – SIL 3 Capable, Certified by Exida ②					Dual Solenoid				
				Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount													
Aluminum 3/2, 5/2	1/4	6	.74	2.4	9	65	JPIS8551B301 ①	19	2	9	65	JPIS8551B302 ①	19
Aluminum 5/3 Center Closed							-	-				JPIS8551B365	20
Aluminum 5/3 Center Open							-	-				JPIS8551B366	20
Brass 3/2, 5/2							JPIS8551B303 ①	19				JPIS8551B304 ①	19
316L Stainless Steel 3/2, 5/2							JPIS8551B309	20				JPIS8551B310	20
Aluminum 3/2, 5/2	1/2	13	3.2				JPIS8553B301	20				JPIS8553B302	20
316L Stainless Steel 3/2, 5/2							JPIS8553B309	20				JPIS8553B310	20

① 1/8" NPT exhaust for 1/4" aluminum and brass.
② Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Dimensions: inches (mm)

JUNCTION BOX



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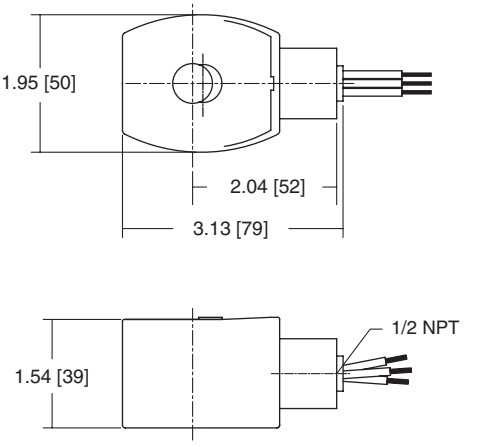

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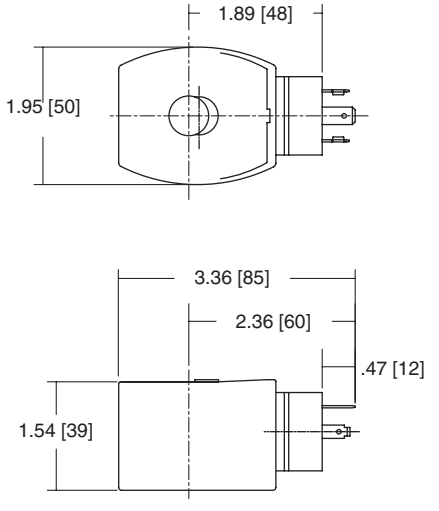

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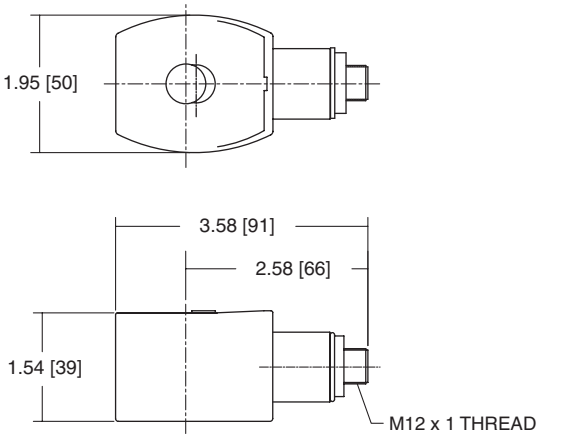
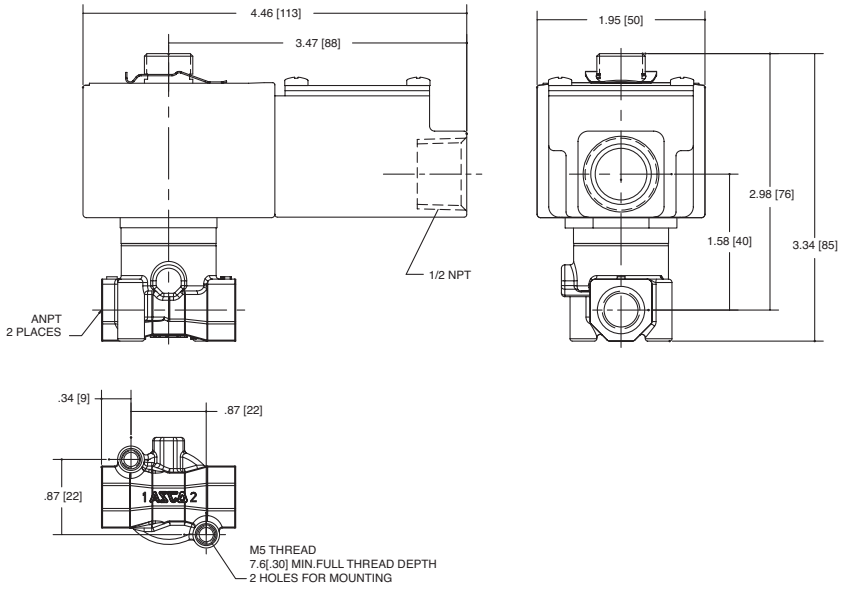


Dimensions: inches (mm)

Const. Ref. 1



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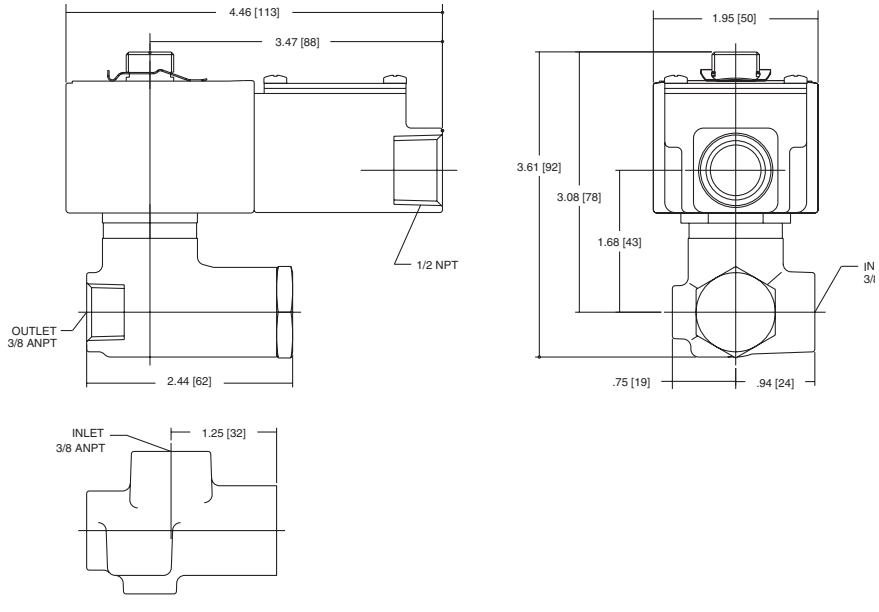

Dimensions: inches (mm)

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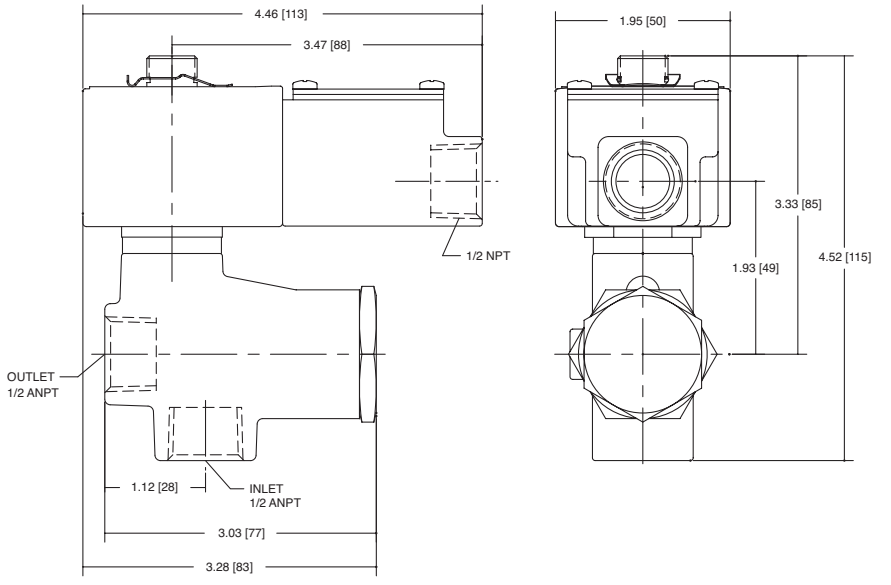
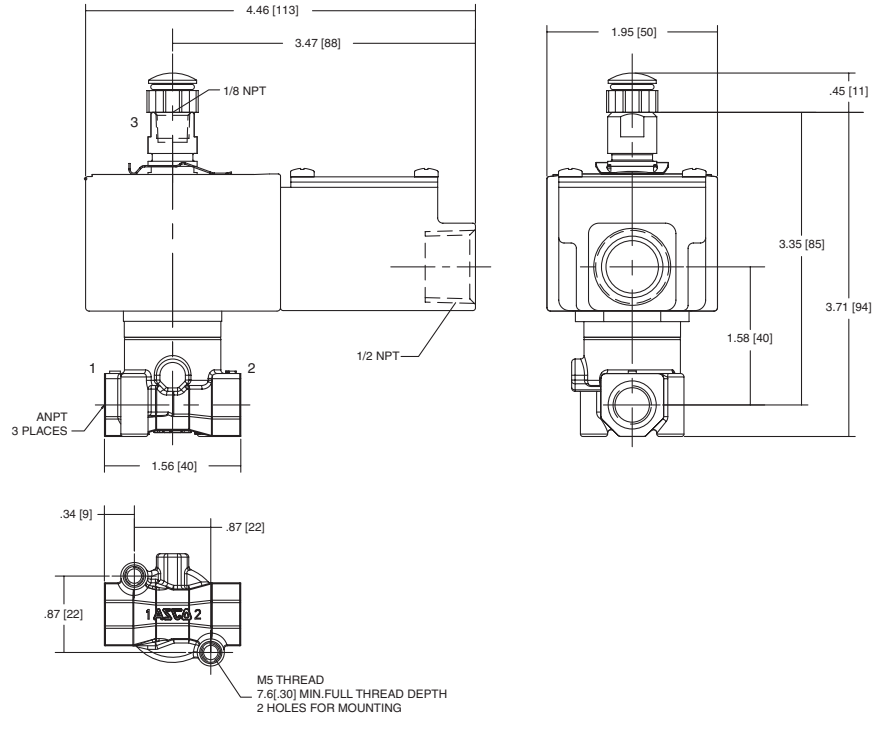


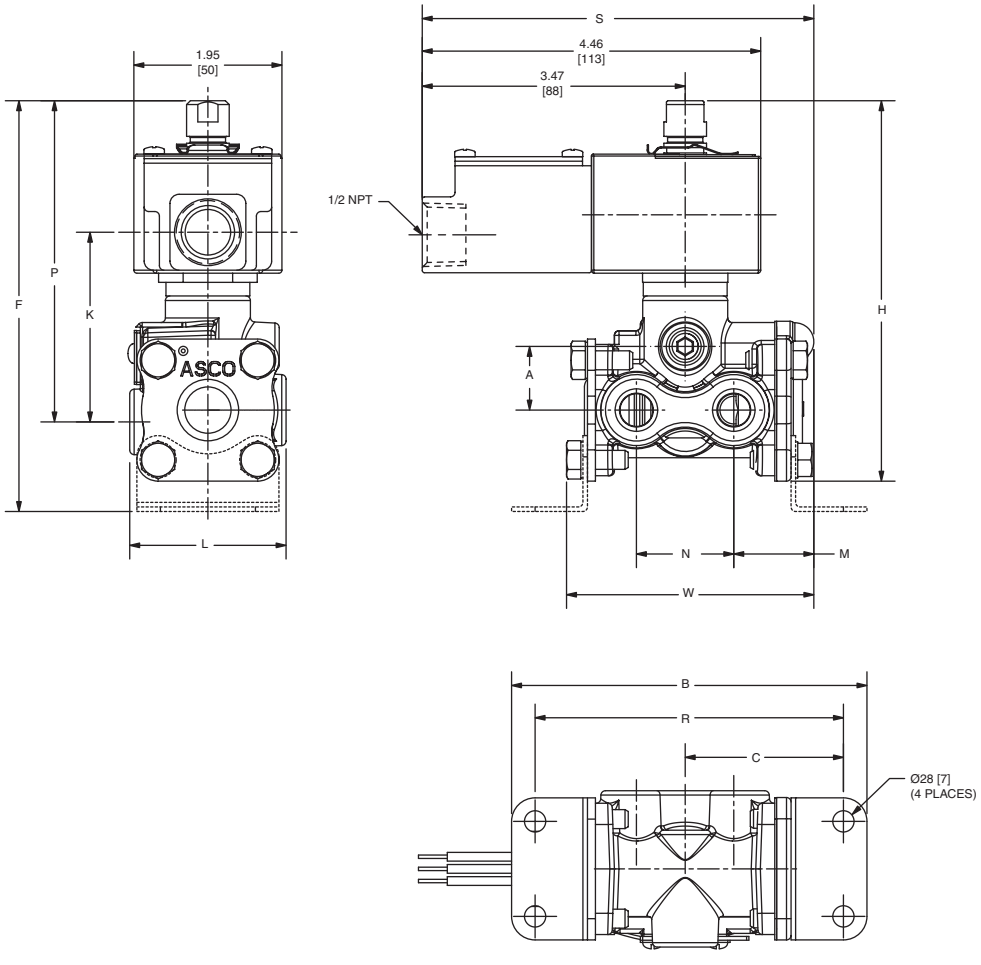
Const. Ref. 4, 5



Dimensions: inches (mm)

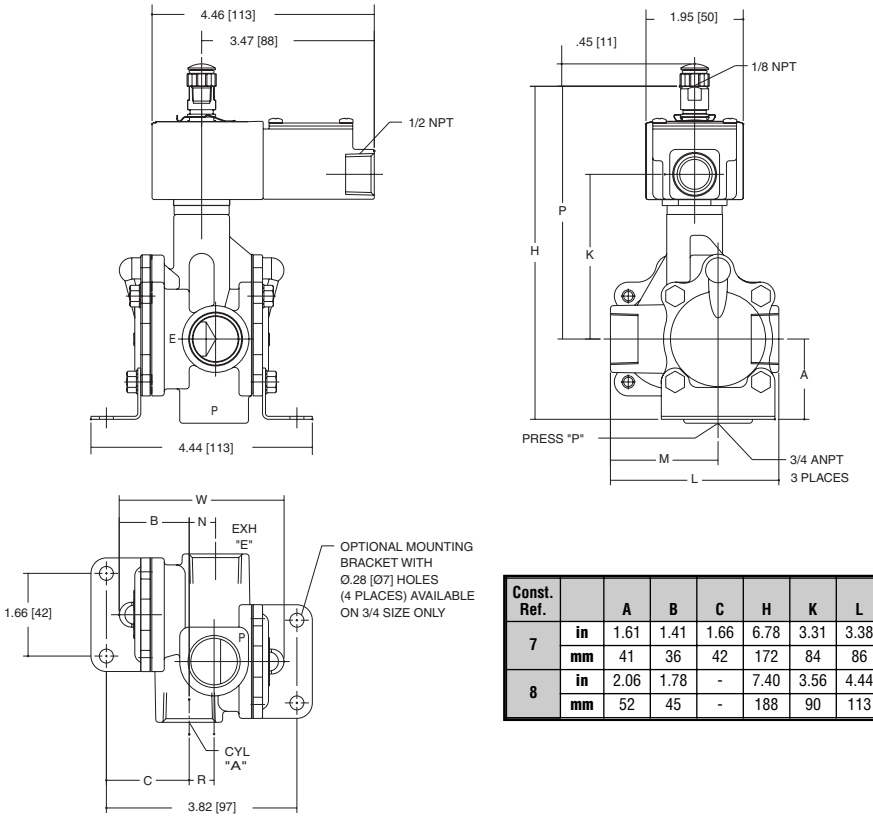
Catalog Number		A	B	C	F	H	K	L	M	N	P	R	S	W
JPIS8316B301, 302	in	.84	4.68	2.08	5.41	5.01	2.47	2.60	1.06	1.28	4.23	4.06	5.16	3.26
	mm	21	119	53	137	127	63	52	27	33	108	103	131	83
JPIS8316B303, 304	in	1.19	4.88	2.18	5.90	5.40	2.72	2.72	1.24	1.32	4.48	4.26	5.36	3.59
	mm	30	124	56	150	137	69	69	31	34	114	108	136	91
JPIS8316B381, 382	in	1.00	4.71	1.98	5.57	5.17	2.47	2.06	1.08	1.28	4.24	4.09	5.19	3.28
	mm	25	120	50	141	131	63	52	27	33	108	104	132	83
JPIS8316B384	in	1.11	4.88	2.18	5.98	5.48	2.58	2.72	1.24	1.32	4.34	4.26	5.37	3.59
	mm	28	124	55	152	139	66	69	31	34	110	108	136	91

Const. Ref. 6



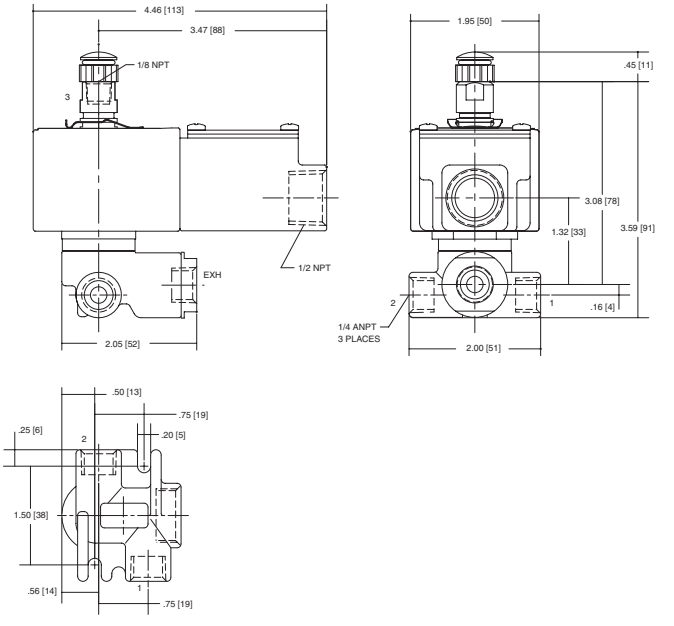
Dimensions: inches (mm)

Const. Ref. 7, 8



Const. Ref.		A	B	C	H	K	L	M	N	P	R	W
7	in	1.61	1.41	1.66	6.78	3.31	3.38	2.16	.53	5.09	.50	3.31
	mm	41	36	42	172	84	86	55	13	129	13	84
8	in	2.06	1.78	-	7.40	3.56	4.44	2.70	.87	5.34	1.74	5.31
	mm	52	45	-	188	90	113	69	22	136	44	135

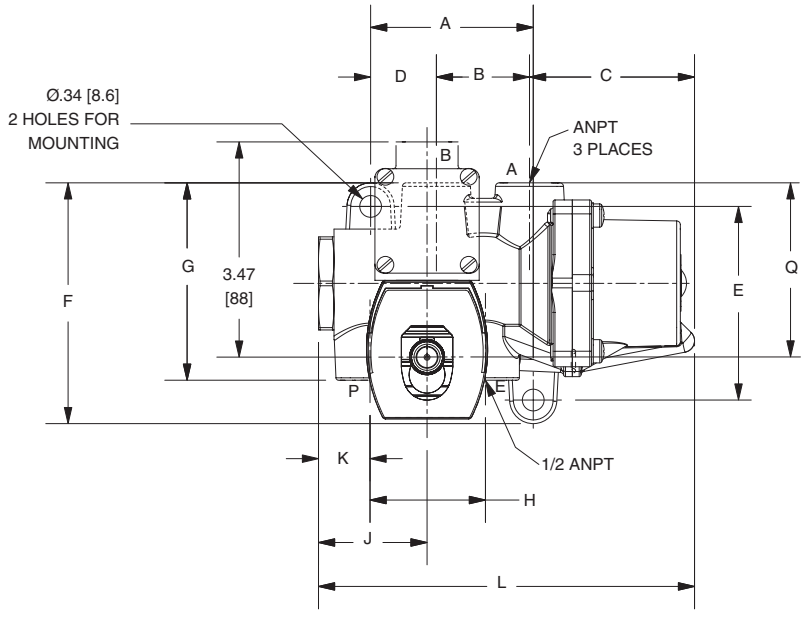
Const. Ref. 9. 10

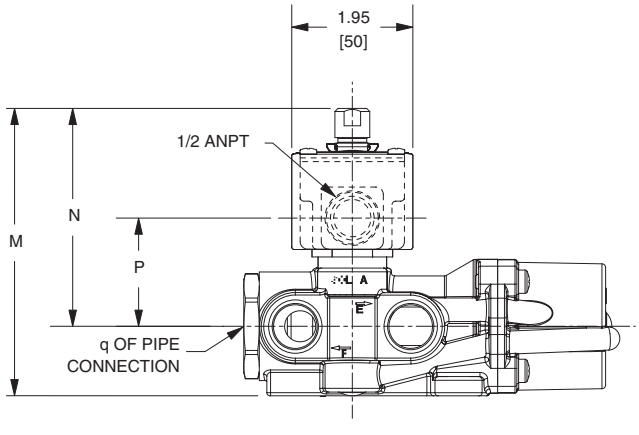


Dimensions: inches (mm)

Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
JPIS8344B370	in	1.88	1.03	2.15	0.72	2.41	3.21	3.13	1.41	1.36	0.72	4.71	4.65	3.70	1.93	2.22
	mm	48	26	55	18	61	82	80	36	35	18	120	118	94	49	57
JPIS8344B372, 374	in	2.62	1.50	2.66	1.06	3.12	3.88	3.18	1.86	1.75	0.83	6.06	4.63	3.51	1.75	2.81
	mm	67	38	68	27	79	99	81	47	45	21	154	118	89	44	71
JPIS8344B376, 378	in	3.89	2.10	3.53	1.48	3.79	4.69	4.56	2.12	2.49	1.52	8.22	5.41	3.86	2.10	3.38
	mm	99	53	90	38	96	119	116	54	63	39	209	137	98	53	86

Const. Ref. 11, 13, 15





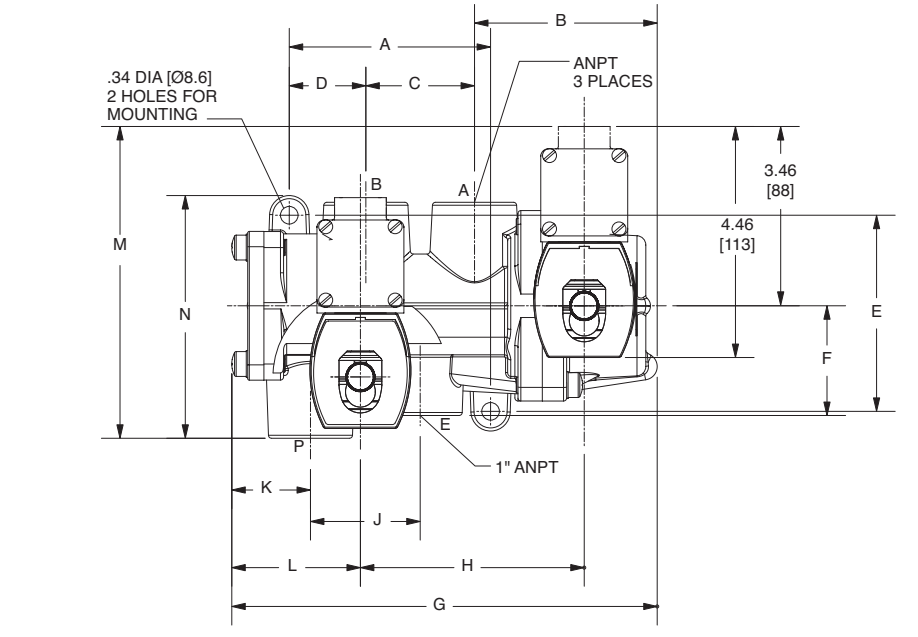
SPECIAL SERVICE PILOT

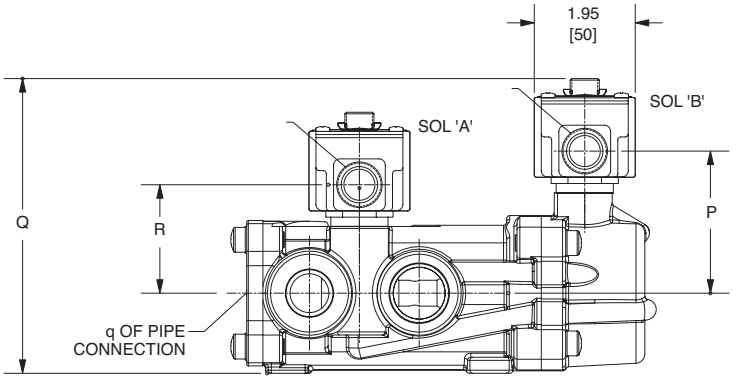
ASCO®

Dimensions: inches (mm)

Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
JPIS8344B344	in	1.88	2.16	1.03	0.75	2.41	1.69	4.91	2.61	1.41	0.72	1.36	5.35	3.13	2.36	4.46	2.02
	mm	48	55	26	19	61	43	125	66	36	18	35	136	80	60	113	51
JPIS8344B354, 356	in	3.88	3.53	2.09	1.47	3.81	2.12	8.25	4.34	2.12	1.55	2.51	6.03	4.56	2.83	5.47	2.38
	mm	99	90	53	37	97	54	210	110	54	39	64	153	116	72	139	60
JPIS8344B380, 382	in	2.62	2.66	1.50	1.06	3.12	1.56	6.06	3.09	1.86	0.83	1.75	5.74	3.18	2.50	4.65	2.11
	mm	67	68	38	27	79	40	154	78	47	21	45	146	81	64	118	54

Const. Ref. 12, 14, 16



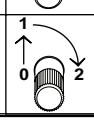


SPECIAL SERVICE PILOT

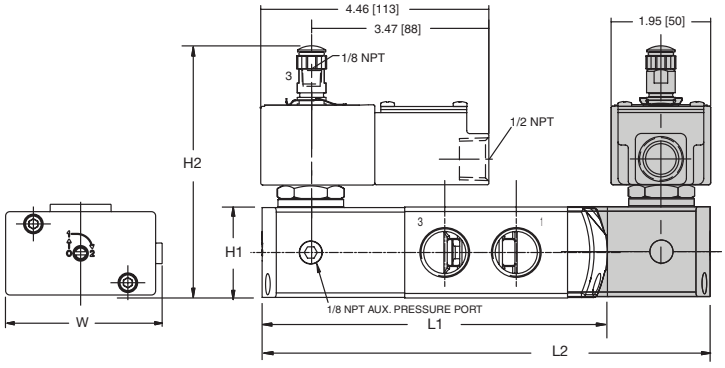
Dimensions: inches (mm)

Series	8551	8553
NPT	1/4	1/2
L1 ①	5.12 (132)	6.00 (153)
L2 ①	6.73 (171)	7.80 (198)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

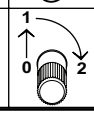
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 17

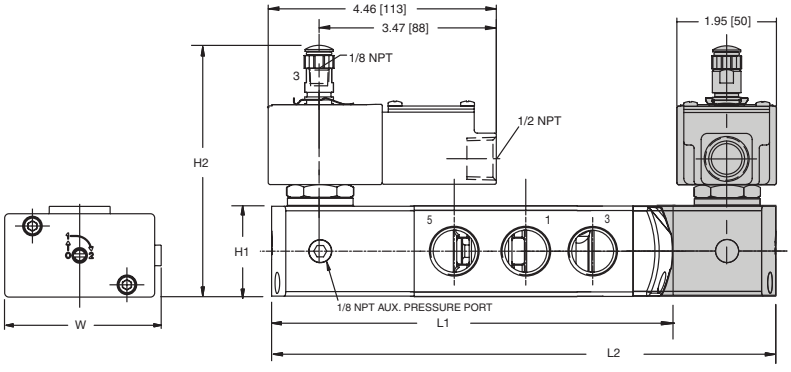


Series	8551	8553
NPT	1/4	1/2
L1 ①	5.63 (144)	7.06 (180)
L2 ①	7.20 (183)	8.86 (225)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

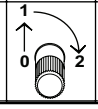
Const. Ref. 18



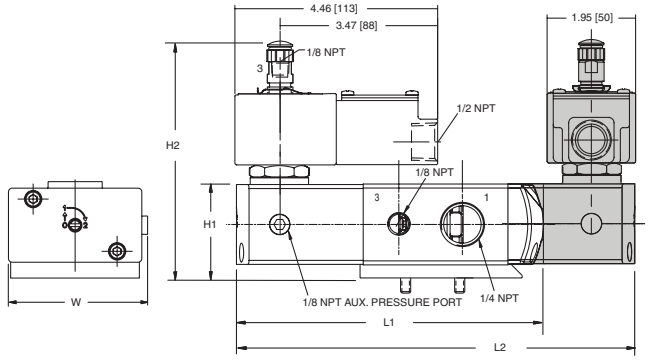
Dimensions: inches (mm)

Series	8551 (Aluminum, Brass)
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.49 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

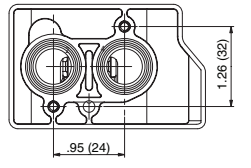
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 19

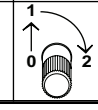


8551 NAMUR Footprint

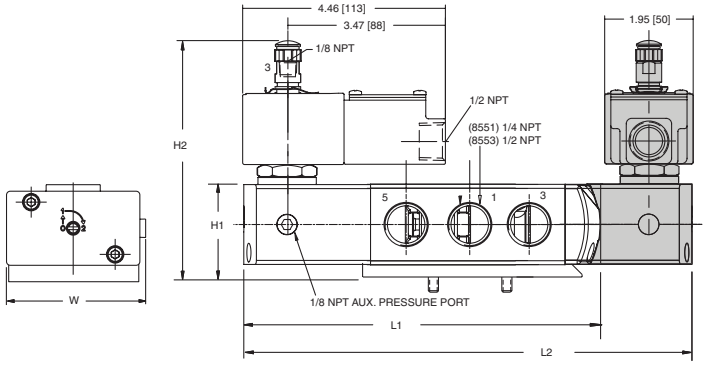


Series	8551 (316L SS)	8551 (5/3)	8553
NPT	1/4	1/4	1/2
L1 ①	5.20 (132)	-	7.08 (180)
L2 ①	6.73 (171)	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.38 (111)	4.77 (121)
H1	1.57 (40)	1.57 (40)	2.08 (53)
W	1.77 (45)	1.77 (45)	2.87 (73)

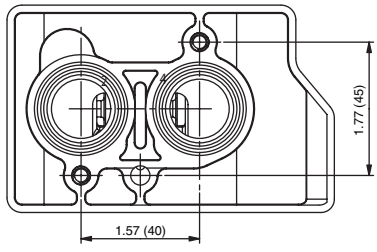
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

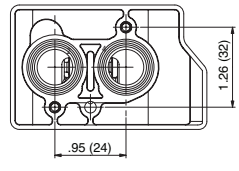
Const. Ref. 20



8553 NAMUR Footprint



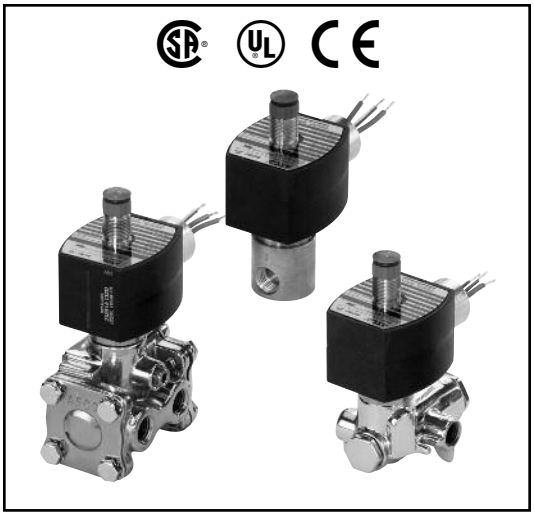
8551 NAMUR Footprint

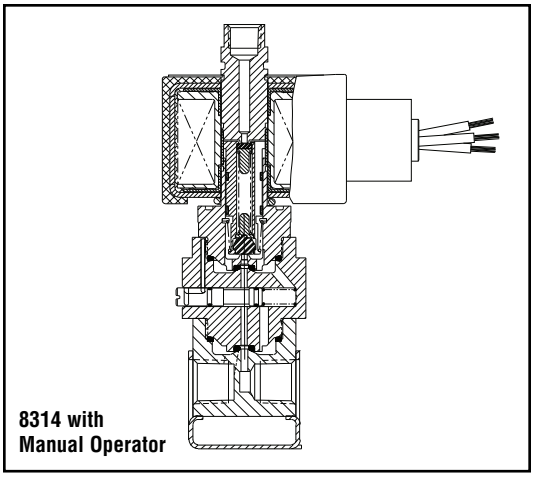


SPECIAL SERVICE PILOT

Features

- Molded one-piece solenoid with highly efficient solenoid cartridge and special low wattage coil
- Increased ambient temperature capabilities up to 175˚F (80˚C)
- Designed for use in automation of plant control systems to provide:
  - -PLC compatibility
  - -Reduced battery drain
  - -Reduced heat rise
  - -Reduced wiring cost
- Wide selection includes 2/2 normally closed, 3/2 normally closed (including Quick Exhaust), 3/2 universal, 4/2, 5/2, & 5/3
- Air or inert gas only
- Lower-cost alternative to intrinsically safe valves in critical applications not requiring a safety barrier





8314 with Manual Operator

Construction

Valve Parts in Contact with Fluids			
Body	Aluminum	Brass	Stainless Steel
Seals and Discs	PUR, NBR, CR, as listed		
Sleeve	304L Stainless Steel		
Core and Plugnut	430F Stainless Steel		
Core Springs	302 Stainless Steel		
Pilot Seat Cartridge (Series 8316 & 8344 only)	POM		
Rider Rings	PTFE		
Spring Retainer	POM		

Electrical

Description	Wattage	Max. Ambient Temp.	T Code	Insulation Class	TPL
Standard Ambient Version	1.4 W	140˚F (60˚C)	T6	F	-
High Ambient Version	1.8 W	179˚F (80˚C)	T5	F	#23033
Surge Suppession Version	1.7 W	140˚F (60˚C)	T6	F	-
Surge Suppession High Ambient Version	2.0 W	179˚F (80˚C)	T5	F	#23033

① **IMPORTANT:** Supervisory and leakage current above the drop out current listed will cause improper operation. ***Consult your local ASCO sales office for additional assistance.***

Description	Wattage	Voltage (DC)	Min. Pull In (mA)	3-Way Drop Out (mA) ①	2-Way Drop Out (mA) ①	Coil resistance @ 68˚F (20˚C) (ohms)
Standard Ambient Version	1.4 W	12V	83.5	13.9	3.2	102
		24V	42.0	7.0	1.6	410
		48V	21.4	3.6	0.8	1640
		120V	8.7	1.4	0.3	10000
High Ambient Version	1.8 W	12V	94.3	15.7	3.6	80
		24V	47.9	8.0	1.8	320
		48V	24.0	4.0	0.9	1260
Surge Suppersion Version	1.7 W	12V	94.3	15.7	3.6	80
		24V	47.9	8.0	1.8	320
		48V	22.7	3.8	0.9	1470
Surge Suppession High Ambient Version	2.0 W	12V	105.3	17.6	4.0	64
		24V	54.1	9.0	2.1	270
		48V	24.0	4.0	0.9	1260

24VDC Spare Coil P/N	Standard Ambient Temp. Version	High Ambient Temp Version
General Purpose	238710-902-D*	238710-908-D*
Explosion Proof	238714-902-D*	238714-905-D*
Explosion Proof, Corrosion Resistant	274714-902-D*	274714-905-D*
Explosion Proof, Surge Suppression	276006-006-D*	276006-106-D*
Explosion Proof, Corrosion Resistant, Surge Suppression	276007-006-D*	276007-106-D*

Ordering

Normal Ambient Version
EV8551G322 24VDC

High Ambient Version (always add TPL #23033)
EF**X**8316G301-23033 24VDC

Solenoid Enclosures

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
(To order, add prefix "EF" to catalog number. For explosionproof with 316 Stainless Steel hub and trim, specify prefix "EV".) Surge suppression coils also available "MF" prefix.
See Optional Features Section for other available options.

Approvals

UL listed General Purpose Valves (Hazardous Location Classified). EV8345G381 solenoid only UL listed. CSA certified; nonincendive for Class I, Division 2 UL E25549. Meets applicable CE directives.

SIL 3 capable per IEC 61508 on 8314 and 8316 const. Third party certification provided by EXIDA.
Refer to Engineering Section for details.

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

Nominal Ambient Temp. Ranges

Series	Body Material	Normal Temperature Range	High Ambient Temp Version
8553	Stainless Steel	-40°F to 140°F (-40°C to 60°C)	Not Available
8551	Brass		
8553	Aluminum	-13°F to 140°F (-25°C to 60°C)	
8551		5°F to 140°F (-15°C to 60°C)	
8551	Stainless Steel	-40°F to 140°F (-40°C to 60°C)	Low Limit is the same as Normal Temperature Ratings, but High Limit is 176°F (80°C)
8262	Brass / Stainless Steel		
8314			
8317			
8316*		-20°F to 140°F (-29°C to 60°C)	
8223		-4°F to 140°F (-20°C to 60°C)	
8344	Brass only		
8316G334			

*Does not include 8316G334; Includes 8316H374. **Note**: 8553 not available in brass

Important

These solenoid valves are intended for use on clean dry air or inert gas, filtered to 40 micrometres or better. The dew point of the media should be at least 10°C (18° F) below the minimum temperature to which any portion of the clean air/inert gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with Nitrile elastomers. Diester oils may cause operational problems. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/4	1/16	.08		0	150	140	8262G320	18	8262G386 ⑥⑨	18
3/8	5/16	1.5		10	150	140	8223G323	19	-	-
1/2	3/8	3.2		25	150	140	8223G303 ⑨	20	8223G310 ⑥⑨	20
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦ ⑧										
1/4	1/16	.08	.08	0	150	140	8314G300	1	8314G301 ⑥⑨	2
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦										
1/4	5/16	1.5	1.5	⑤	150	140	8316G301 ③⑨	3	EV8316G381 ⑥⑨	3
3/8	5/16	1.8	1.8	⑤	150	140	8316G302 ③⑨	3	EV8316G382 ⑥⑨	3
3/8	5/8	4	4	⑤	150	140	8316G303 ③⑨	3A	-	-
1/2	5/8	4	4	⑤	150	140	8316G304 ③⑨	3A	EV8316G384 ⑥⑨	3A
3/4	11/16	5.5	5.5	10	150	140	8316H374 ③	4	-	-
1	1	13	13	10	150	140	8316G334 ③⑨	5	-	-
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with CR Diaphragm and NBR Disc										
1/4	②	.08	.73	5	150	140	8317G307 ①	6	8317G308 ①⑥	7
4/2 VALVES, with NBR Disc and Seals										
1/4	1/16	.08	.08	10	150	140	8345G301 ①③	6	EV8345G381 ①③⑥	8
4/2 VALVES, Brass Body with NBR Disc										
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
1/4	1/4	.80	1	10	150	140	8344G370 ①③	9	8344G344 ③	12
3/8	3/8	1.4	2.2	10	150	140	8344G372 ①③⑨	11	8344G380 ③⑨	10
1/2	3/8	1.4	2.2	10	150	140	8344G374 ①③⑨	11	8344G382 ③⑨	10
3/4	3/4	5.2	5.6	10	150	140	8344G376 ①③	13	8344G354 ③	14
1	3/4	5.2	5.6	10	150	140	8344G378 ①③	13	8344G356 ③	14

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1/16", exhaust port is 1/4".

③ **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

⑤ Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 15 psi Operating Pressure Differential when selection gasket is in the internal position.

⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix.

⑦ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑧ SIL 3 Capable, Certified by Exida, only valid when used as Normally Closed.

⑨ ATEX/IECEx certified with prefix "EV".

Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid					Dual Solenoid				
				Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals													
Aluminum 3/2	1/4	1/4	.86	30	150	140	8551G305 ⑦	21	30	150	140	8551G306 ⑦	21
Aluminum 5/2							8551G317 ⑦	22				8551G318 ⑦	22
Aluminum 5/3 Center Closed							-	22				8551G367 ⑦	22
Aluminum 5/3 Center Open							-	22				8551G368 ⑦	22
Brass 3/2							EF8551G307 ②⑦	21				EF8551G308 ②⑦⑧	21
Brass 5/2							EF8551G319 ②⑦⑧	22				EF8551G320 ②⑦	22
316L Stainless Steel 3/2							EV8551G313 ③⑥⑦⑧	21				EV8551G314 ③⑥⑦⑧	21
316L Stainless Steel 5/2							EV8551G321 ③⑥⑧	22				EV8551G322 ③⑥⑧	22
Aluminum 3/2	1/2	1/2	3.7				8553G305 ⑦	21				8553G306 ⑦	21
Aluminum 5/2							8553G317 ⑦	22				8553G318 ⑦	22
316L Stainless Steel 3/2							EV8553G313 ③⑥⑦⑧	21				EV8553G314 ③⑥⑦⑧	21
316L Stainless Steel 5/2							EV8553G321 ③⑥⑦⑧	22				EV8553G322 ③⑥⑦⑧	22

② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix. ⑦ Solenoid only approvals with EF of EV prefix, no approvals with general purpose coil (no prefix).
⑧ ATEX/IECEx certified with prefix "EV".

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid					Dual Solenoid				
				Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount													
Aluminum 3/2, 5/2	1/4	1/4	.86	30	150	140	8551G301 ①	23	30	150	140	8551G302 ①	23
Aluminum 5/3 Center Closed							-	-				8551G365 ⑦	24
Aluminum 5/3 Center Open							-	-				8551G366 ⑦	24
Brass 3/2, 5/2							EF8551G303 ②①⑦	23				EF8551G304 ②①⑦	23
316L Stainless Steel 3/2, 5/2							EV8551G309 ③⑥⑧	24				EV8551G310 ③⑥⑧	24
Aluminum 3/2, 5/2	1/2	1/2	3.7				8553G301 ⑦	24				8553G302 ⑦	24
316L Stainless Steel 3/2, 5/2							EV8553G309 ③⑥⑦⑧	24				EV8553G310 ③⑥⑦⑧	24

① 1/8" NPT exhaust for 1/4" aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix. ⑦ Solenoid only approvals with EF of EV prefix, no approvals with general purpose coil (no prefix).
⑧ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)		Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid and Ambient Temp. °C	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/4	2	.07		0	10	60	8262G320	18	8262G386 ⑥⑨	18
3/8	8	1.29		0.7	10	60	8223G323	19	-	-
1/2	10	2.74		1.7	10	60	8223G303 ⑨	20	8223G310 ⑥⑨	20
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦ ⑧										
1/4	2	.07	.07	0	10	60	8314G300	1	8314G301 ⑥⑨	2
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦										
1/4	8	1.29	1.29	⑤	10	60	8316G301 ③⑨	3	EV8316G381 ⑥⑨	3
3/8	8	1.37	1.37	⑤	10	60	8316G302 ③⑨	3	EV8316G382 ⑥⑨	3
3/8	16	2.57	2.57	⑤	10	60	8316G303 ③⑨	3A	-	-
1/2	16	3.43	3.43	⑤	10	60	8316G304 ③⑨	3A	EV8316G384 ⑥⑨	3A
3/4	17	4.71	4.71	0.7	10	60	8316H374 ③	4	-	-
1	25	11.14	11.14	0.7	10	60	8316G334 ③⑨	5	-	-
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with CR Diaphragm and NBR Disc										
1/4	②	.07	.63	0.3	10	60	8317G307 ①	6	8317G308 ①⑥⑨	7
4/2 VALVES, with NBR Disc and Seals										
1/4	2	.07	.07	0.7	10	60	8345G301 ①③	6	EV8345G381 ①③⑥⑨	8
4/2 VALVES, Brass Body with NBR Disc										

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)		Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid and Ambient Temp. °C	Single Solenoid		Dual Solenoid	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
1/4	6	0.69	0.86	0.7	10	60	8344G370 ①③	9	8344G344 ③	12
3/8	10	1.20	1.89	0.7	10	60	8344G372 ①③⑨	11	8344G380 ③⑨	10
1/2	10	1.20	1.89	0.7	10	60	8344G374 ①③⑨	11	8344G382 ③⑨	10
3/4	19	4.46	4.80	0.7	10	60	8344G376 ①③	13	8344G354 ③	14
1	19	4.46	4.80	0.7	10	60	8344G378 ①③	13	8344G356 ③	14

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1/16", exhaust port is 1/4".

③ **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

⑤ Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 1.0 bar Operating Pressure Differential when selection gasket is in the internal position.

⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix.

⑦ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑧ SIL 3 Capable, Certified by Exida, only valid when used as Normally Closed.

⑨ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Single Solenoid					Dual Solenoid				
				Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals													
Aluminum 3/2	1/4	6	.7	2	10	60	8551G305 ⑦	21	2	10	60	8551G306 ⑦	21
Aluminum 5/2							8551G317 ⑦	22				8551G318 ⑦	22
Aluminum 5/3 Center Closed							-	22				8551G367 ⑦	22
Aluminum 5/3 Center Open							-	22				8551G368 ⑦	22
Brass 3/2							EF8551G307 ②⑦	21				EF8551G308 ②⑦⑧	21
Brass 5/2							EF8551G319 ②⑦⑧	22				EF8551G320 ②⑦	22
316L Stainless Steel 3/2							EV8551G313 ③⑥⑦⑧	21				EV8551G314 ③⑥⑦⑧	21
316L Stainless Steel 5/2							EV8551G321 ③⑥⑧	22				EV8551G322 ③⑥⑧	22
Aluminum 3/2	1/2	13	3.15				8553G305 ⑦	21				8553G306 ⑦	21
Aluminum 5/2							8553G317 ⑦	22				8553G318 ⑦	22
316L Stainless Steel 3/2							EV8553G313 ③⑥⑦⑧	21				EV8553G314 ③⑥⑦⑧	21
316L Stainless Steel 5/2							EV8553G321 ③⑥⑦⑧	22				EV8553G322 ③⑥⑦⑧	22

② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix. ⑦ Solenoid only approvals with EF of EV prefix, no approvals with general purpose coil (no prefix).
⑧ ATEX/IECEx certified with prefix "EV".

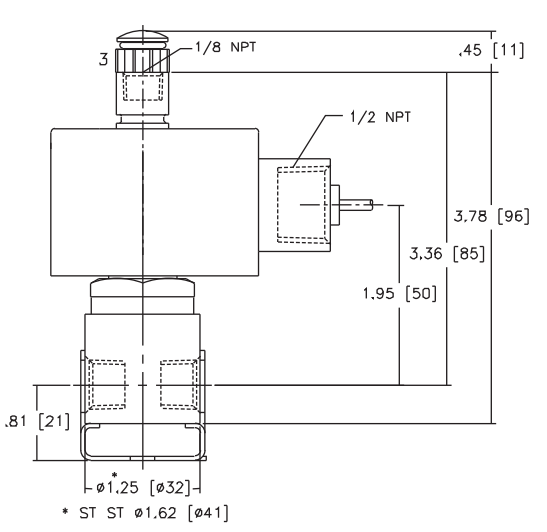
Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Single Solenoid					Dual Solenoid				
				Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount													
Aluminum 3/2, 5/2	1/4 ①	6	.7	2	10	60	8551G301 ①	23	2	10	60	8551G302 ①	23
Aluminum 5/3 Center Closed							-	-				8551G365 ⑦	24
Aluminum 5/3 Center Open							-	-				8551G366 ⑦	24
Brass 3/2, 5/2							EF8551G303 ②①⑦	23				EF8551G304 ②①⑦	23
316L Stainless Steel 3/2, 5/2							EV8551G309 ③⑥⑧	24				EV8551G310 ③⑥⑧	24
Aluminum 3/2, 5/2	1/2	13	3.15				8553G301 ⑦	24				8553G302 ⑦	24
316L Stainless Steel 3/2, 5/2							EV8553G309 ③⑥⑦⑧	24				EV8553G310 ③⑥⑦⑧	24

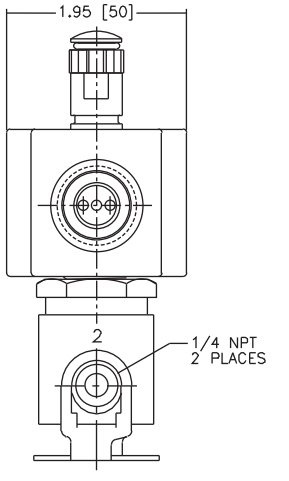
① 1/8" NPT exhaust for 1/4" aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix. ⑦ Solenoid only approvals with EF of EV prefix, no approvals with general purpose coil (no prefix).
⑧ ATEX/IECEx certified with prefix "EV".

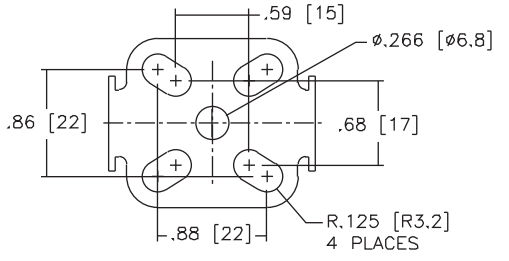
ASCO®

Dimensions: inches (mm)

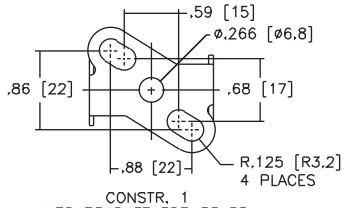
Const. Ref. 1, 2



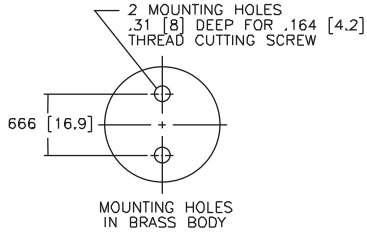




CONSTR. 2
MTG BRACKET FOR ST ST.



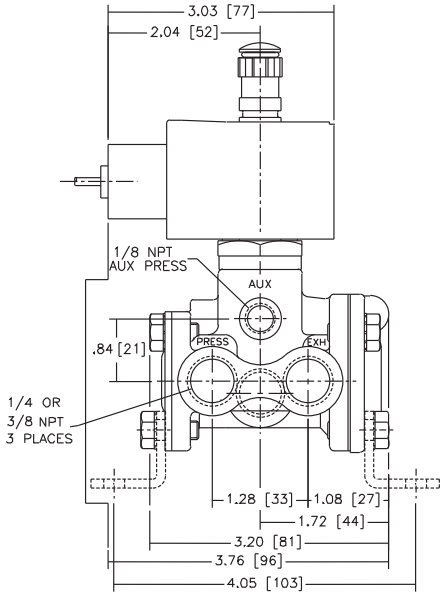
CONSTR. 1
MTG BRACKET FOR BRASS

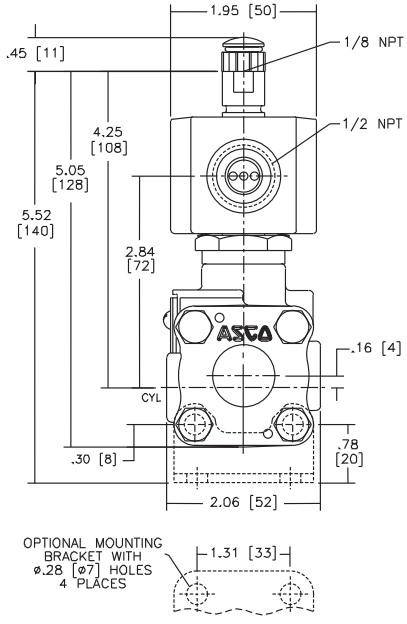


MOUNTING HOLES
IN BRASS BODY

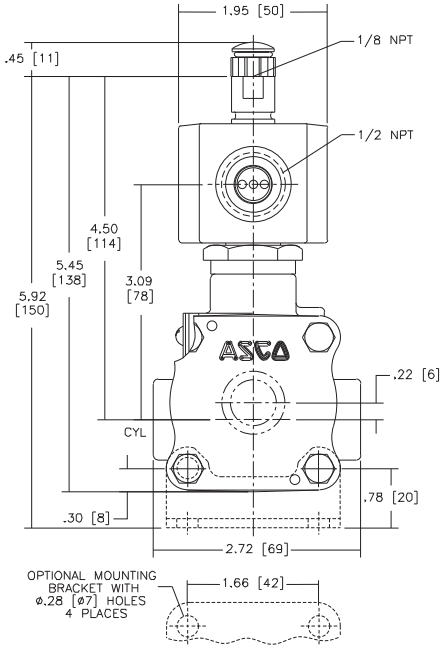
Dimensions: inches (mm)

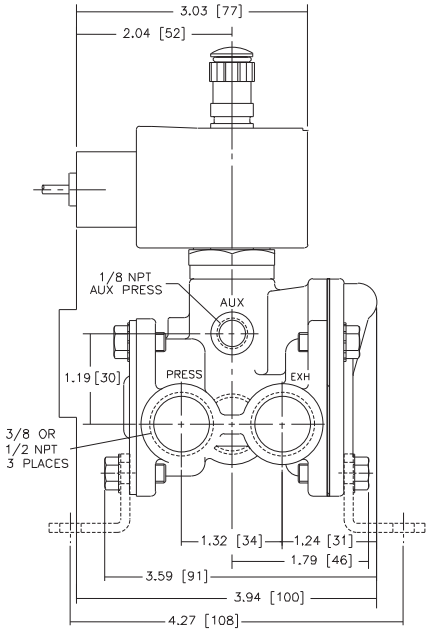
Const. Ref. 3





Const. Ref. 3A



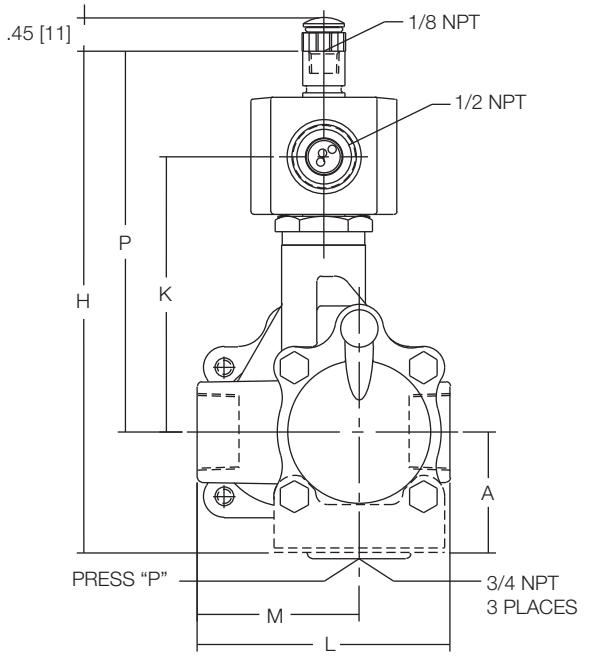


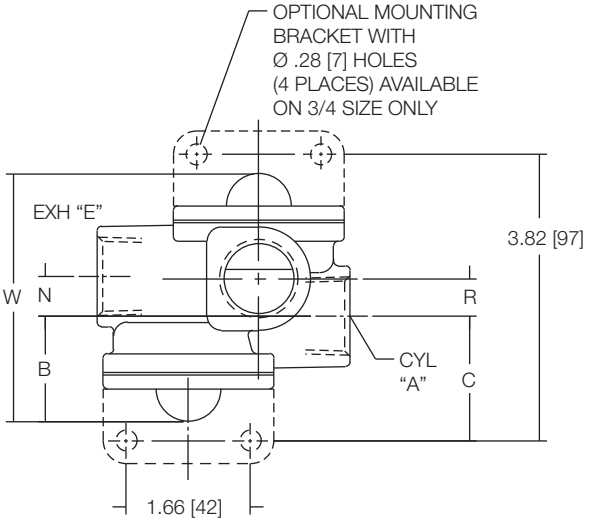
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

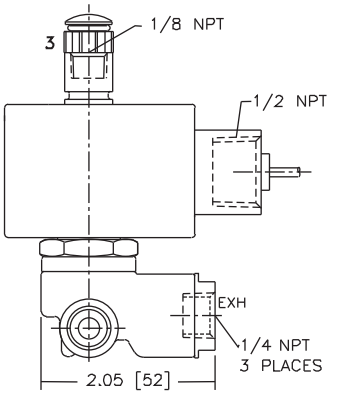
Const. Ref.		A	B	C	H	K	L	M	N	P	R	W
4	in	1.61	1.41	1.66	6.78	3.68	3.38	2.16	.53	5.09	.50	3.31
	mm	41	36	42	172	93	86	55	13	129	13	84
5	in	X	1.78	X	7.40	3.93	4.44	2.81	.87	5.34	1.74	5.31
	mm	X	45	X	188	100	113	71	22	136	44	135

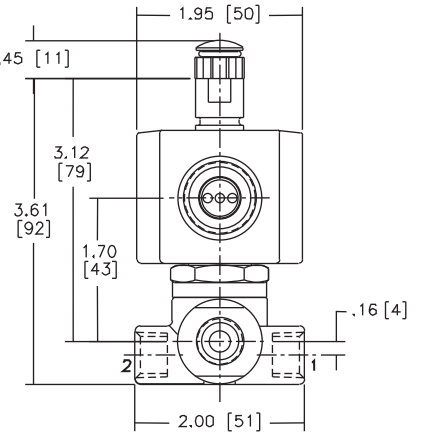
Const. Ref. 4, 5





Const. Ref. 6. 7

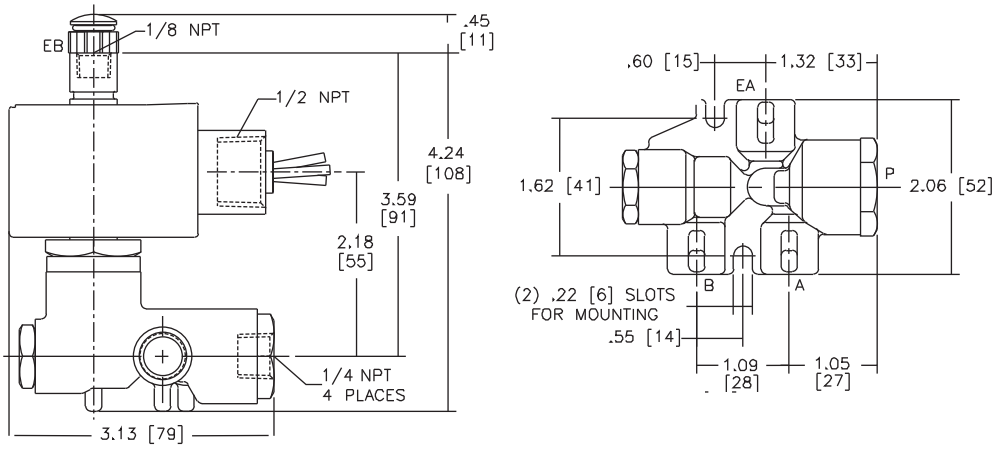




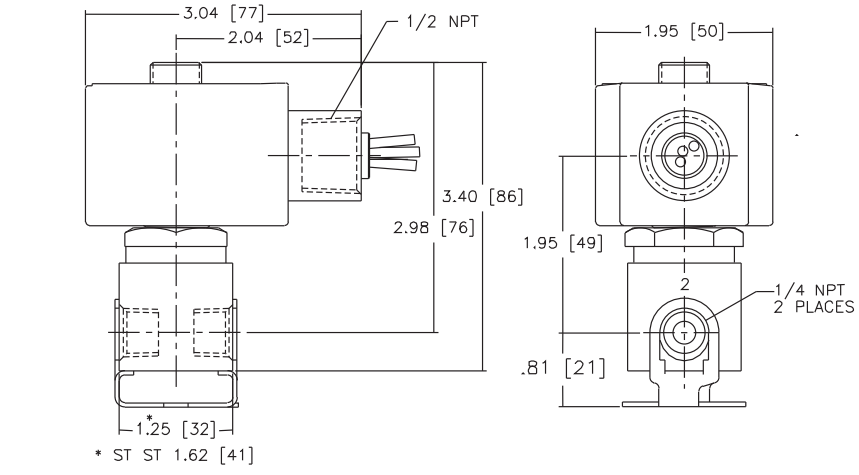
SPECIAL SERVICE PILOT

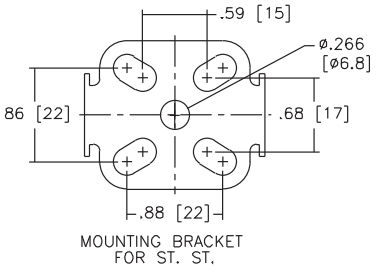
Dimensions: inches (mm)

Const. Ref. 8



Const. Ref. 18



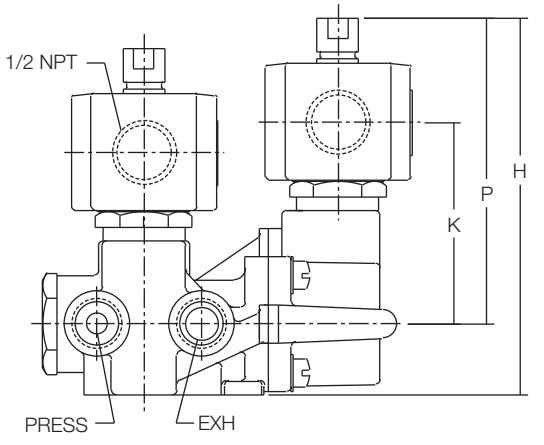


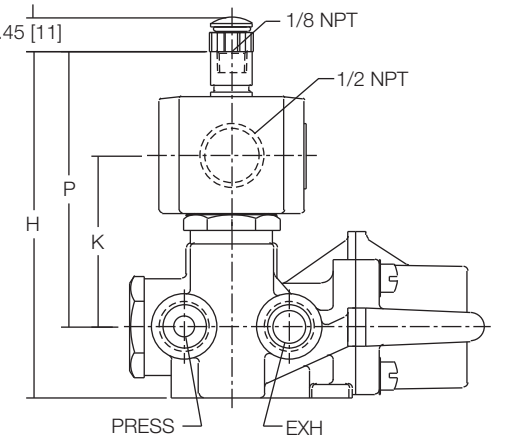
SPECIAL SERVICE PILOT

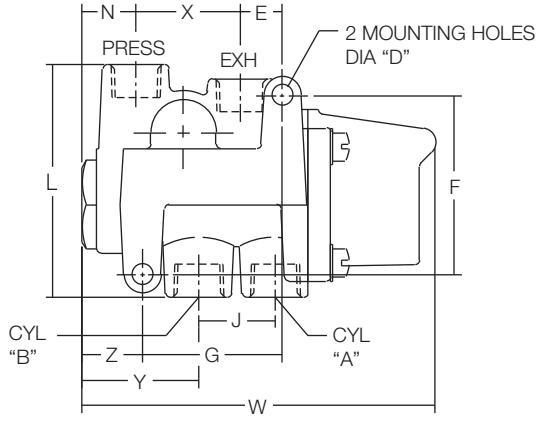
Dimensions: inches (mm)

Const. Ref.		Dia "D"	E	F	G	H	J	K	L	N	P	W	X	Y	Z	Exhaust Pipe Size
9	in	Ø .28	.56	2.41	1.88	4.67	1.03	2.30	3.12	.72	3.72	4.75	1.41	1.56	.81	3/8
	mm	7	14	61	48	119	26	58	79	18	95	121	36	40	21	
10	in	Ø .34	.76	3.12	2.62	4.89	1.50	2.11	3.18	.83	3.77	6.06	1.86	1.89	.83	1/2
	mm	9	16	79	67	118	38	70	81	21	90	154	48	49	21	
11	in	Ø .34	.76	3.12	2.62	4.65	1.50	2.11	3.18	.83	3.53	6.06	1.86	1.89	.83	1/2
	mm	9	35	97	99	138	53	54	116	40	99	210	54	67	30	
12	in	Ø .28	.56	2.41	1.88	5.06	1.03	2.71	3.12	.72	4.12	4.81	1.41	1.56	.81	3/8
	mm	7	14	61	48	129	26	69	79	18	105	122	36	40	21	
13	in	Ø .34	.78	3.12	2.62	5.27	1.50	2.49	3.19	.84	4.16	6.06	1.88	1.91	.84	1
	mm	9	16	79	67	134	38	63	81	21	106	154	48	49	21	
14	in	Ø .34	1.38	3.81	3.88	6.09	2.09	3.18	4.56	1.56	4.59	8.25	2.12	2.62	1.16	1
	mm	9	35	97	99	155	53	81	116	40	117	210	54	67	30	

Const. Ref. 9, 10, 11, 12, 13, 14





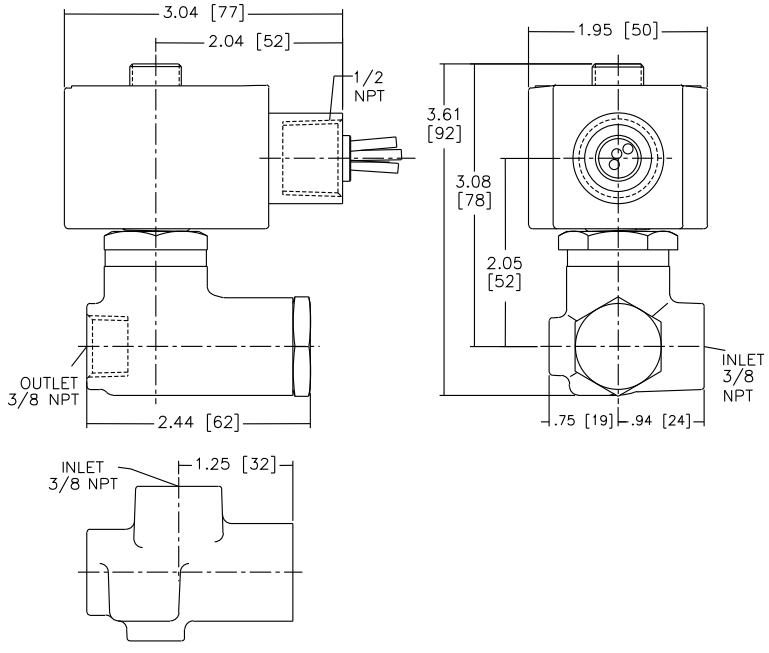


BOTTOM VIEW OF VALVE

SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Const. Ref. 19



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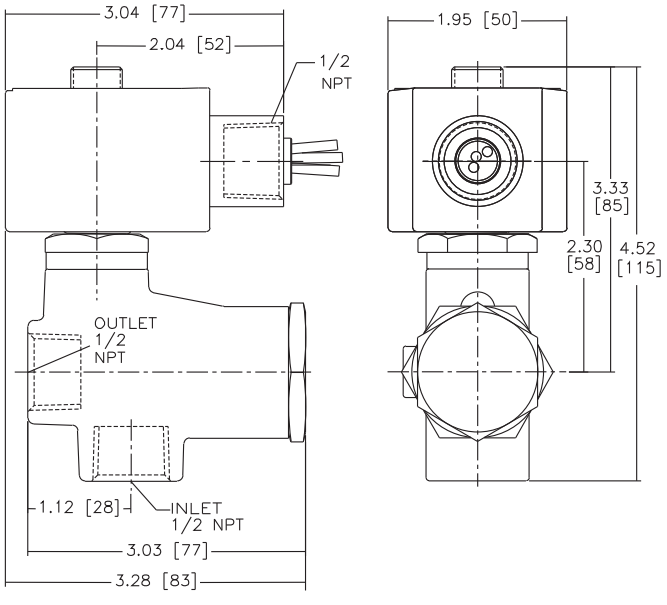
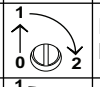
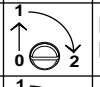
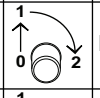
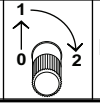


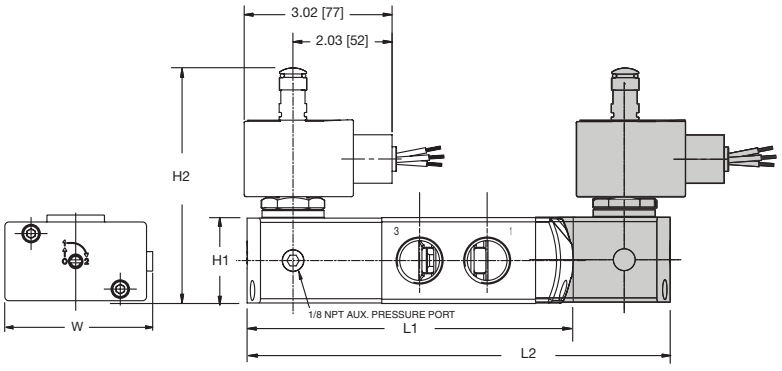
Dimensions: inches (mm)

Series	8551	8553
NPT	1/4	1/2
L1 ①	5.12 (132)	6.00 (153)
L2 ①	6.73 (171)	7.80 (198)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

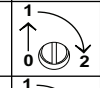
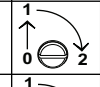
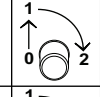
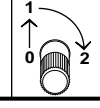
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 21

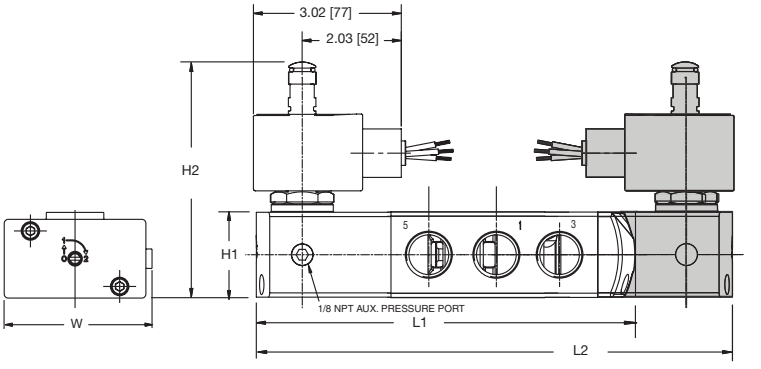


Series	8551	8553
NPT	1/4	1/2
L1 ①	5.63 (144)	7.06 (180)
L2 ①	7.20 (183)	8.86 (225)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 22

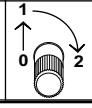


SPECIAL SERVICE PILOT

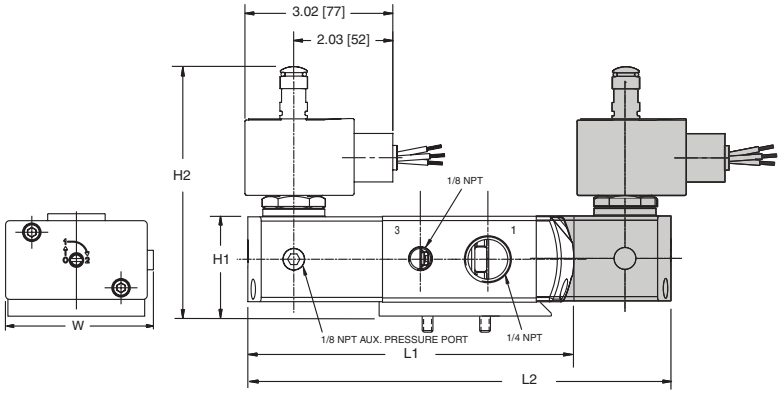
Dimensions: inches (mm)

Series	8551 (Aluminum, Brass)
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.49 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

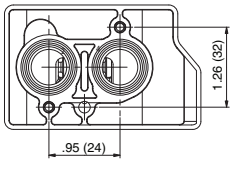
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 23

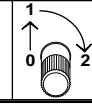


8551 NAMUR Footprint

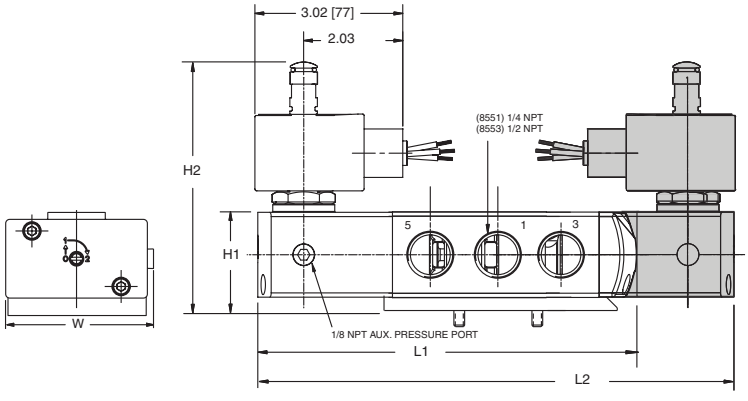


Series	8551 (316L SS)	8551 (5/3)	8553
NPT	1/4	1/4	1/2
L1 ①	5.20 (132)	-	7.08 (180)
L2 ①	6.73 (171)	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.38 (111)	4.77 (121)
H1	1.57 (40)	1.57 (40)	2.08 (53)
W	1.77 (45)	1.77 (45)	2.87 (73)

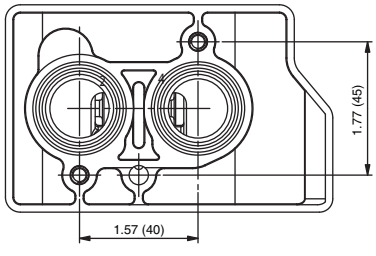
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

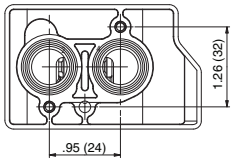
Const. Ref. 24



8553 NAMUR Footprint



8551 NAMUR Footprint



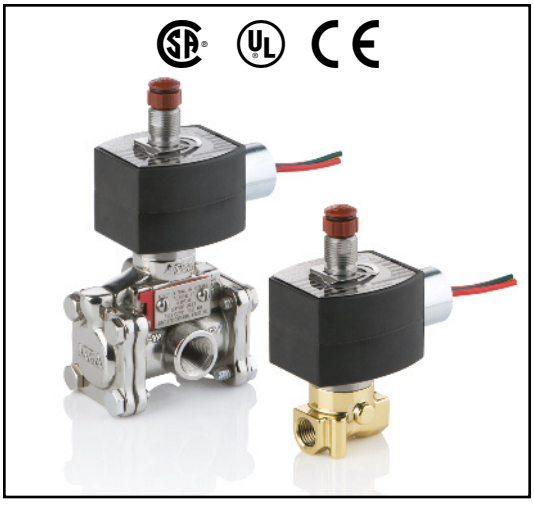
SPECIAL SERVICE PILOT

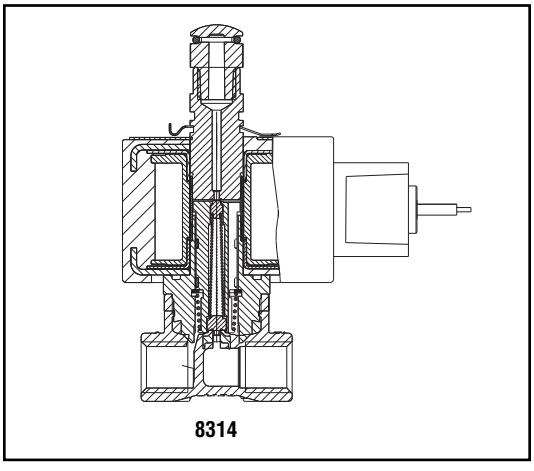
0.55 W Low Power Solenoid Valves

Aluminum, Brass, or Stainless Steel Bodies
1/4" to 1" NPT

Features

- Molded one-piece solenoid with highly efficient solenoid cartridge and 0.55 W low wattage coil
- Standard ambient temperature of 149˚F (65˚C)
- Optional 176˚F (80˚C) high ambient temperature version
- Designed for use in automation of plant control systems to provide:
  - PLC and DCS① compatibility for BUS network and traditional wiring
  - Reduced temperature rise
  - Increase battery life
  - Reduce wiring cost
  - Energy savings
- Wide selection includes 2/2, 3/2 normally closed (including Quick Exhaust), 3/2 universal, 4/2, 5/2, & 5/3





8314

Construction

Valve Parts in Contact with Fluids			
Body	Aluminum	Brass	Stainless Steel
Seals and Discs	PUR, NBR		
Sleeve	304L Stainless Steel		
Core and Plugnut	430F Stainless Steel		
Core Springs	302 Stainless Steel		
Pilot Seat Insert (Series 8316 & 8344 only)	POM		
Rider Rings	PTFE		
Spring Retainer	POM		

Electrical

Description	Wattage	Max. Ambient Temp.	T Code	Insulation Class	Prefix
Standard Ambient Version	.55 W	149˚F (65˚C)	T6	F	-
High Ambient Version	.70 W	176˚F (80˚C)	T6	H	HT
Surge Suppression Version	.75 W	149˚F (65˚C)	T6	F	MF

① **IMPORTANT: Supervisory and leakage current above the drop out current listed will cause improper operation.** ***Consult your local ASCO sales office for additional assistance.***

Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA) ①	Coil Resistance @68˚F (20˚C) (ohms)
Standard Ambient Version	.55W	12V	34	3.63	255
		24V	17	1.80	1025
		48V	8.5	0.91	4080
		125V ②	3.2	0.34	27,400
High Ambient Version	.70W	12V	37	3.97	206
		24V	19	1.98	830
		48V	9.7	1.03	3185
		125V ②	3.7	0.39	21150
Surge Suppression Version (Available only in Explosionproof version)	.75W	12V	41	4.41	165 ③
		24V	19	1.98	830 ③
		48V	9.7	1.03	3185 ③
		125V ②	3.7	0.39	21150 ③

Note: ② Not for battery applications. ③ Surge suppression contains diode bridge.

24VDC Spare Coil P/N	Standard Ambient Temp. Version	High Ambient Temp. Version
General Purpose	238710-913-D*	238910-906-D*
Explosion Proof	238714-914-D*	238914-906-D*
Explosion Proof, Corrosion Resistant	274714-909-D*	274914-906-D*
Explosion Proof, Surge Suppression	276006-206-D*	Not Available
Explosion Proof, Corrosion Resistant, Surge Suppression	276007-206-D*	Not Available
Note: For 12VDC, 48VDC and 125VDC coil PN consult factory		

Ordering

Normal Ambient Version: EV8551H322 24VDC
High Ambient Version: EF HT 8316H301 24VDC
Surge Suppression Version: EV MF 8314H301 24VDC

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X.
Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
(To order, add prefix "EF" to catalog number. For explosionproof with 316 Stainless Steel hub and trim, specify prefix "EV".) Surge suppression coils also available "MF" prefix.
See Optional Features Section for other available options.

Approvals

UL & CSA Approved for Class I Div. 1 Locations & Class I Div. 2 Non-Incendive Solenoid for Hazardous Locations.
UL Listed General Purpose Valves.
Meets applicable CE directives.

SIL 3 capable per IEC 61508 on 8314, 8316, 8551, and 8553 const. Third party certification provided by EXIDA. *Refer to Engineering Section for details.*

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

ASCO®

Nominal Ambient Temp. Ranges

Series	Body Material	Normal Temperature Range	High Ambient Temp Version
8553	Stainless Steel	-40°F to 140°F (-40°C to 60°C)	Not Available
8551	Brass		
8553	Aluminum	-13°F to 140°F (-25°C to 60°C)	
8551		5°F to 140°F (-15°C to 60°C)	
8551	Stainless Steel	-40°F to 149°F (-40°C to 65°C)	Low Limit is the same as Normal Temperature Ratings, but High Limit is 176°F (80°C)
8262	Brass / Stainless Steel		
8314			
8317			
8316*		-20°F to 149°F (-29°C to 65°C)	
8223		-4°F to 149°F (-20°C to 65°C)	
8344	Brass only		
8316H334			

*Does not include 8316H334; Includes 8316J374. **Note**: 8553 not available in brass

Important

These solenoid valves are intended for use on clean dry air or inert gas, filtered to 40 micrometres or better. The dew point of the media should be at least 10°C (18° F) below the minimum temperature to which any portion of the clean air/inert gas system could be exposed to prevent freezing. If lubricated air is used, the lubricants must be compatible with Nitrile elastomers. Diester oils may cause operational problems. Instrument air in compliance with ANSI/ISA Standard 7.0.01-1996 exceeds the above requirements and is, therefore, an acceptable media for these valves.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/4	1/16	.06		0	130	149	8262H320 ††	1	8262H386 †† ✓	1
3/8	5/16	1.5		10	130	149	8223H323	2	-	-
1/2	3/8	3.2		25	130	149	8223H303	3	8223H310 ⑥	3
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑨ ⑩										
1/4	1/20	.06	.06	0	130/105 ⑦	149	8314H300 ††	4	8314H301 †† ✓	5
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc – SIL 3 Capable, Certified by Exida ⑨										
1/4	5/16	1.5	1.5	⑤	130	149	8316H301 ③ ✓	6	EV8316H381 ⑥ ✓	6
3/8	5/16	1.8	1.8	⑤	130	149	8316H302 ③ ✓	6	EV8316H382 ⑥ ✓	6
3/8	5/8	4	4	⑤	130	149	8316H303 ③ ✓	6	-	-
1/2	5/8	4	4	⑤	130	149	8316H304 ③ ✓	6	EV8316H384 ⑥ ✓	6
3/4	11/16	5.5	5.5	10	130	149	8316J374 ③	7	-	-
1	1	13	13	10	130	149	8316H334 ③⑧	8	-	-
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc										
1/4	②	.06	.73	5	130	149	8317H307 ①	9	8317H308 ①⑥ ✓	10
4/2 VALVES, Brass Body with NBR Disc										

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
1/4	1/4	.80	1	10	130	149	8344H370 ①③	11	8344H344 ③†	12
3/8	3/8	1.5	2.2	10	130	149	8344H372 ①③ ✓	13	8344H380 ③†	14
1/2	3/8	1.5	2.2	10	130	149	8344H374 ①③	13	8344H382 ③†	14
3/4	3/4	5.2	5.6	10	130	149	8344H376 ①③	15	8344H354 ③†	16
1	3/4	5.2	5.6	10	130	149	8344H378 ①③	15	8344H356 ③†	16

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1/16", exhaust port is 1/4".

③ **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

⑤ Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 15 psi Operating Pressure Differential when selection gasket is in the internal position.

⑥ Can be used for ***dry*** natural gas service (no agency approvals) with the EF or EV prefix without manual operator.

⑦ Normally closed = 130 psi. Normally open = 105 psi.

⑧ Solenoid only approvals with EF or EV prefix, no approvals with general purpose coil (no prefix).

⑨ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑩ SIL 3 Capable, Certified by Exida, only valid when used as Normally Closed.

† Dual solenoid 8344 requires minimum pressure of 20 psi. Single solenoid version has 10 psi minimum pressure requirement.

†† UL/CSA approved for use with dry natural gas or propane gas with EF or EV prefix without manual operator.

✓ ATEX/IECEx certified with prefix "EV".

Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – SIL 3 Capable, Certified by Exida ⑨					Dual Solenoid				
				Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals													
Aluminum 3/2	1/4	1/4	.86	35	130	149	8551H305 ⑧	17	30	130	149	8551H306 ⑧	17
Aluminum 5/2							8551H317 ⑧	18				8551H318 ⑧	18
Aluminum 5/3 Center Closed							-	18				8551H367 ⑧	18
Aluminum 5/3 Center Open							-	18				8551H368 ⑧	18
Brass 3/2							EF8551H307 ②⑧✓	17				EF8551H308 ②⑧✓	17
Brass 5/2							EF8551H319 ②⑧	18				EF8551H320 ②⑧	18
316L Stainless Steel 3/2							EV8551H313 ③⑥⑧✓	17				EV8551H314 ③⑥⑧✓	17
316L Stainless Steel 5/2							EV8551H321 ③⑥✓	18				EV8551H322 ③⑥✓	18
Aluminum 3/2	1/2	1/2	3.7				8553H305 ⑧	17				8553H306 ⑧	17
Aluminum 5/2							8553H317 ⑧	18				8553H318 ⑧	18
316L Stainless Steel 3/2							EV8553H313 ③⑥⑧✓	17				EV8553H314 ③⑥⑧✓	17
316L Stainless Steel 5/2							EV8553H321 ③⑥⑧✓	18				EV8553H322 ③⑥⑧✓	18

② Brass construction supplied standard with EF solenoid.
③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service (no agency approvals) with the EF or EV prefix without manual operator.
⑧ Solenoid only approvals with EF or EV prefix, no approvals with (no prefix) general purpose coil.
⑨ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.
✓ ATEX/IECEx certified with prefix "EV".

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – SIL 3 Capable, Certified by Exida ⑨					Dual Solenoid				
				Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas		Max. Fluid Temp.˚F	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount													
Aluminum 3/2, 5/2	1/4	1/4	.86	35	130	149	8551H301 ①	19	30	130	149	8551H302 ①	19
Aluminum 5/3 Center Closed							-	-				8551H365 ⑧	20
Aluminum 5/3 Center Open							-	-				8551H366 ⑧	20
Brass 3/2, 5/2							EF8551H303 ①②⑧	19				EF8551H304 ①②⑧	19
316L Stainless Steel 3/2, 5/2							EV8551H309 ③⑥✓	20				EV8551H310 ③⑥✓	20
Aluminum 3/2, 5/2	1/2	1/2	3.7				8553H301 ⑧	20				8553H302 ⑧	20
316L Stainless Steel 3/2, 5/2							EV8553H309 ③⑥⑧✓	20				EV8553H310 ③⑥⑧✓	20

① 1/8" NPT exhaust for 1/4" aluminum and brass.
② Brass construction supplied standard with EF solenoid.
③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service (no agency approvals) with the EF or EV prefix without manual operator.
⑧ Solenoid only approvals with EF or EV prefix, no approvals with (no prefix) general purpose coil.
⑨ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.
✓ ATEX/IECEx certified with prefix "EV".

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Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h) Pressure to Cylinder	Kv Flow Factor (m^3/h) Cylinder to Exhaust	Operating Pressure Differential (bar) Air-Inert Gas Min.	Operating Pressure Differential (bar) Air-Inert Gas Max.	Max. Fluid and Ambient Temp. °C	Brass Body Catalog Number	Brass Body Const. Ref.	Stainless Steel Body Catalog Number	Stainless Steel Body Const. Ref.
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/4	2	.07		0	9	65	8262H320 ††	1	8262H386 ††	1
3/8	8	1.3		0.7	9	65	8223H323	2	-	-
1/2	10	2.7		1.7	9	65	8223H303	3	8223H310 ⑥	3
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑨ ⑩										
1/4	1.3	.05	.05	0	9/7 ⑦	65	8314H300 ††	4	8314H301 ††	5
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc – SIL 3 Capable, Certified by Exida ⑨										
1/4	8	1.3	1.3	⑤	9	65	8316H301 ③	6	EV8316H381 ⑥	6
3/8	8	1.6	1.6	⑤	9	65	8316H302 ③	6	EV8316H382 ⑥	6
3/8	16	3.5	3.5	⑤	9	65	8316H303 ③	6	-	-
1/2	16	3.5	3.5	⑤	9	65	8316H304 ③	6	EV8316H384 ⑥	6
3/4	17	4.7	4.7	0.7	9	65	8316J374 ③	7	-	-
1	25	11.2	11.2	0.7	9	65	8316H334 ③⑧	8	-	-
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc										
1/4	②	.07	.63	0.3	9	65	8317H307 ①	9	8317H308 ①⑥	10
4/2 VALVES, Brass Body with NBR Disc										

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h) Pressure to Cylinder	Kv Flow Factor (m^3/h) Cylinder to Exhaust	Operating Pressure Differential (bar) Air-Inert Gas Min.	Operating Pressure Differential (bar) Air-Inert Gas Max.	Max. Fluid and Ambient Temp. °C	Single Solenoid Catalog Number	Single Solenoid Const. Ref.	Dual Solenoid Catalog Number	Dual Solenoid Const. Ref.
1/4	6	.69	.86	0.7	9	65	8344H370 ①③	11	8344H344 ③†	12
3/8	10	1.3	1.9	0.7	9	65	8344H372 ①③	13	8344H380 ③†	14
1/2	10	1.3	1.9	0.7	9	65	8344H374 ①③	13	8344H382 ③†	14
3/4	19	4.5	4.8	0.7	9	65	8344H376 ①③	15	8344H354 ③†	16
1	19	4.5	4.8	0.7	9	65	8344H378 ①③	15	8344H356 ③†	16

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1/16", exhaust port is 1/4".

③ **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

⑤ Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 1.0 bar Operating Pressure Differential when selection gasket is in the internal position.

⑥ Can be used for ***dry*** natural gas service with the EF or EV prefix.

⑦ Normally closed = 9 bar / Normally open = 7 bar.

⑧ Solenoid only approvals with EF or EV prefix, no approvals with general purpose coil (no prefix).

⑨ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑩ SIL 3 Capable, Certified by Exida, only valid when used as Normally Closed.

† Dual solenoid 8344 requires minimum pressure of 20 psi. Single solenoid version has 10 psi minimum pressure requirement.

†† UL/CSA approved for use with dry natural gas or propane gas with EF or EV prefix without manual operator.

Specifications (Metric units)

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Single Solenoid – SIL 3 Capable, Certified by Exida ⑨					Dual Solenoid				
				Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals													
Aluminum 3/2	1/4	6	.74	2.4	9	65	8551H305 ⑧	17	2	9	65	8551H306 ⑧	17
Aluminum 5/2							8551H317 ⑧	18				8551H318 ⑧	18
Aluminum 5/3 Center Closed							-	18				8551H367 ⑧	18
Aluminum 5/3 Center Open							-	18				8551H368 ⑧	18
Brass 3/2							EF8551H307 ②⑧	17				EF8551H308 ②⑧	17
Brass 5/2							EF8551H319 ②⑧	18				EF8551H320 ②⑧	18
316L Stainless Steel 3/2							EV8551H313 ③⑥⑧	17				EV8551H314 ③⑥⑧	17
316L Stainless Steel 5/2							EV8551H321 ③⑥	18				EV8551H322 ③⑥	18
Aluminum 3/2	1/2	13	3.2				8553H305 ⑧	17				8553H306 ⑧	17
Aluminum 5/2							8553H317 ⑧	18				8553H318 ⑧	18
316L Stainless Steel 3/2							EV8553H313 ③⑥⑧	17				EV8553H314 ③⑥⑧	17
316L Stainless Steel 5/2							EV8553H321 ③⑥⑧	18				EV8553H322 ③⑥⑧	18

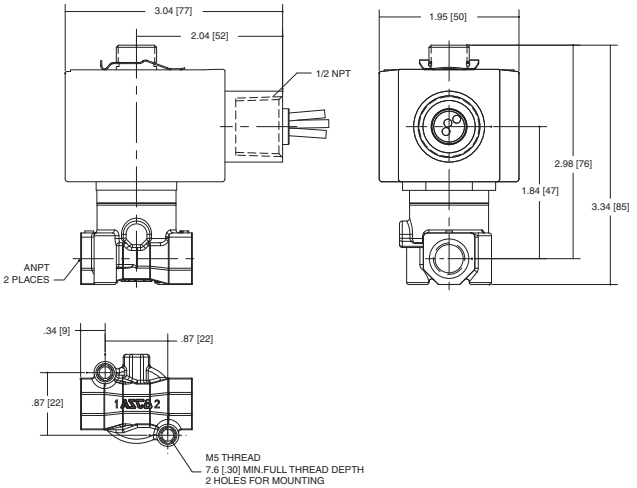
② Brass construction supplied standard with EF solenoid.
③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service (no agency approvals) with the EF or EV prefix without manual operator.
⑧ Solenoid only approvals with EF or EV prefix, no approvals with general purpose coil (no prefix).
⑨ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Single Solenoid – SIL 3 Capable, Certified by Exida ⑨					Dual Solenoid				
				Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas		Max. Fluid Temp.˚C	Catalog Number	Const. Ref.
				Min.	Max.				Min.	Max.			
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount													
Aluminum 3/2, 5/2	1/4 ①	6	.74	2.4	9	65	8551H301 ①	19	2	9	65	8551H302 ①	19
Aluminum 5/3 Center Closed							-	-				8551H365 ⑧	20
Aluminum 5/3 Center Open							-	-				8551H366 ⑧	20
Brass 3/2, 5/2							EF8551H303 ①②⑧	19				EF8551H304 ①②⑧	19
316L Stainless Steel 3/2, 5/2							EV8551H309 ③⑥	20				EV8551H310 ③⑥	20
Aluminum 3/2, 5/2	1/2	13	3.2				8553H301 ⑧	20				8553H302 ⑧	20
316L Stainless Steel 3/2, 5/2							EV8553H309 ③⑥⑧	20				EV8553H310 ③⑥⑧	20

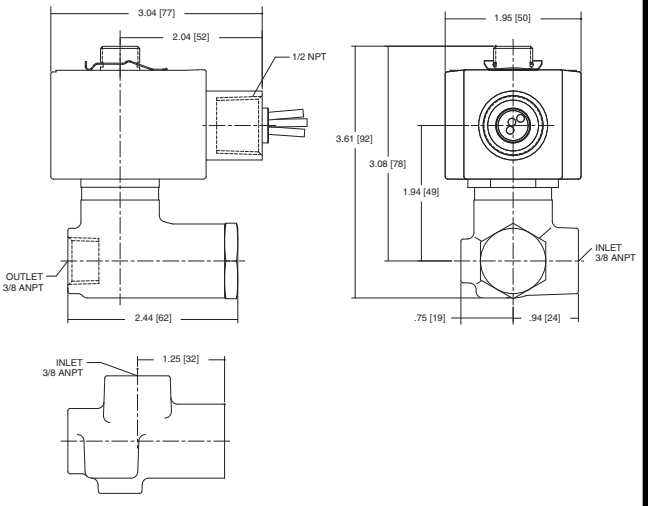
① 1/8" NPT exhaust for 1/4" aluminum and brass.
② Brass construction supplied standard with EF solenoid.
③ Stainless steel construction supplied standard with EV solenoid.
⑥ Can be used for ***dry*** natural gas service (no agency approvals) with the EF or EV prefix without manual operator.
⑧ Solenoid only approvals with EF or EV prefix, no approvals with general purpose coil (no prefix).
⑨ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Dimensions: inches (mm)

Const. Ref. 1



Const. Ref. 2



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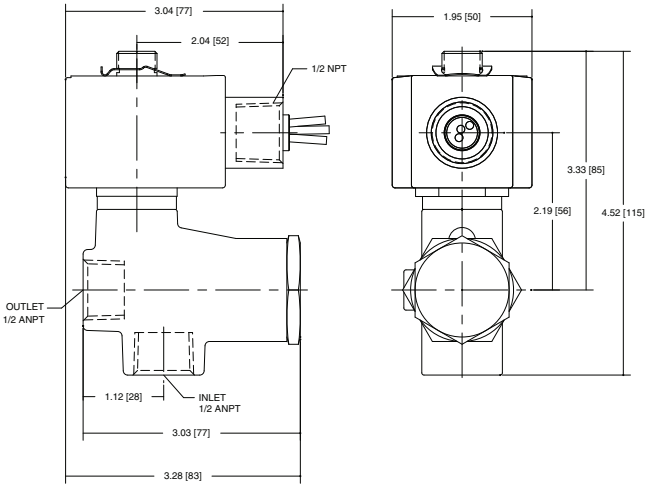
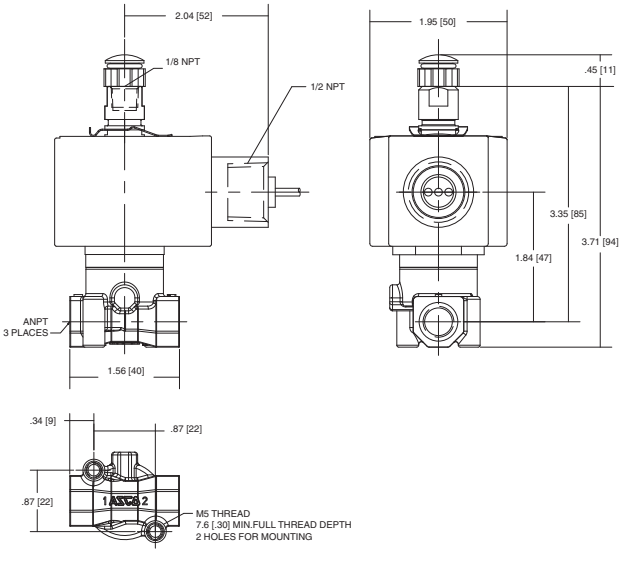


Const. Ref. 4, 5

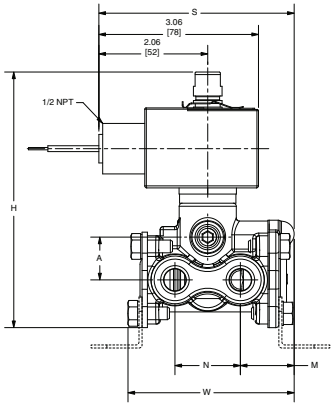


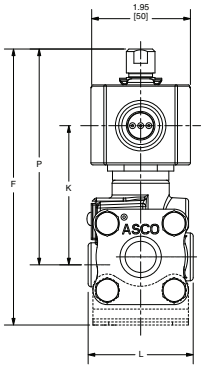
8314H300
8314H301

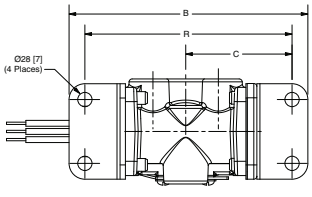
Dimensions: inches (mm)

Catalog Number		A	B	C	F	H	K	L	M	N	P	R	S	W
8316H301, 302	in	.84	4.68	2.08	5.41	5.01	2.73	2.06	1.06	1.28	4.23	4.06	3.83	3.26
	mm	21	119	53	137	127	69	52	27	33	107	103	97	83
8316H303, 304	in	1.19	4.88	2.18	5.90	5.40	2.98	2.72	1.24	1.32	4.48	4.26	4.03	3.59
	mm	30	124	56	150	167	76	69	31	34	114	108	102	91
8316H381, 382	in	1.00	4.71	2.11	5.57	5.17	2.73	2.06	1.08	1.28	4.24	4.09	3.86	3.28
	mm	25	120	54	141	131	69	52	27	33	108	104	98	83
8316H384	in	1.11	4.88	2.18	5.98	5.48	2.84	2.72	1.24	1.37	4.34	4.26	4.04	3.59
	mm	28	124	55	152	139	72	69	31	35	110	108	102	91

Const. Ref. 6

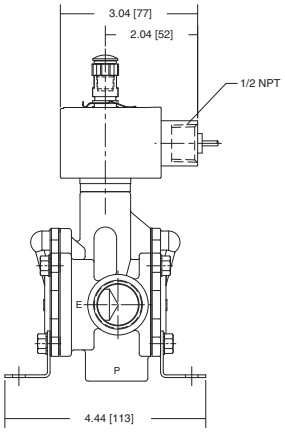


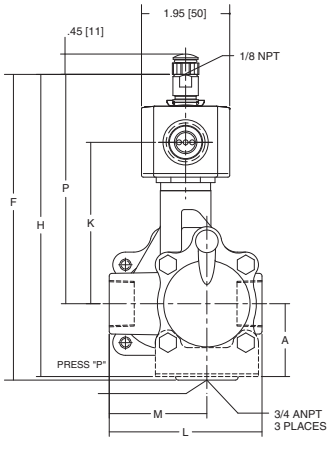


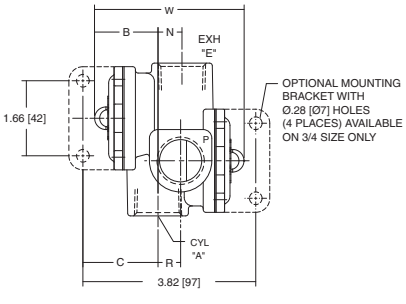


Const. Ref.		A	B	C	H	K	L	M	N	P	R	W
7	in	1.61	1.41	1.66	6.78	3.68	3.38	2.16	.53	5.09	.50	3.31
	mm	41	36	42	172	93	86	55	13	129	13	84
8	in	-	1.78	-	7.40	3.93	4.44	2.81	.87	5.34	1.74	5.31
	mm	-	45	-	188	100	113	71	22	136	44	135

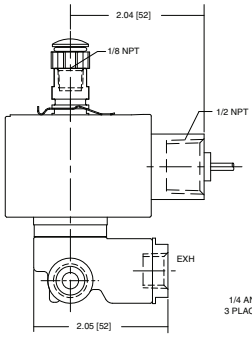
Const. Ref. 7, 8

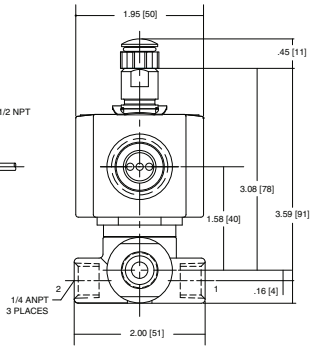


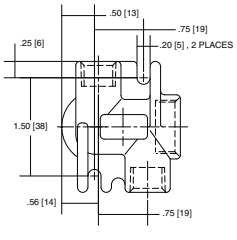




Const. Ref. 9. 10







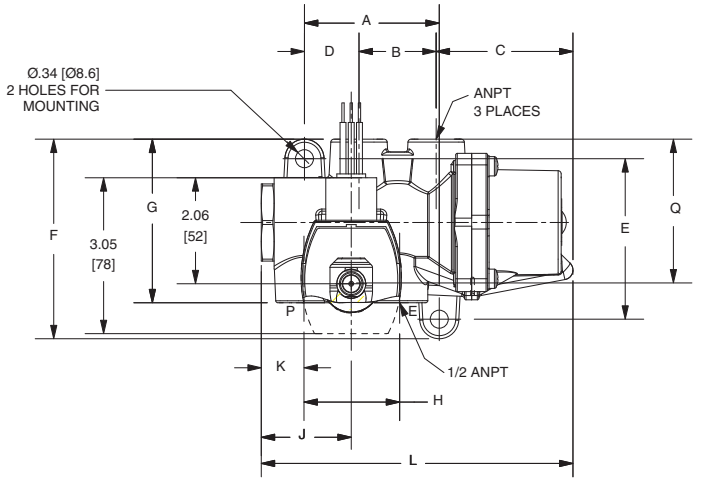
SPECIAL SERVICE PILOT

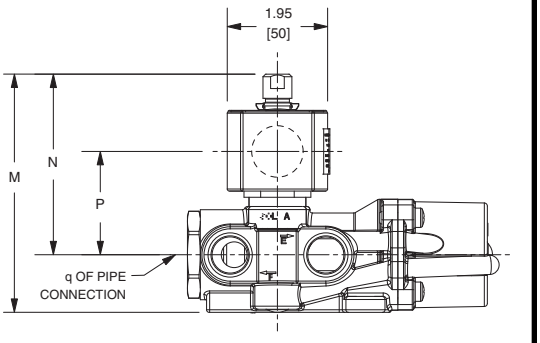
ASCO®

Dimensions: inches (mm)

Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
8344H370	in	1.88	1.03	2.15	0.72	2.41	3.21	3.13	1.41	1.36	0.72	4.71	4.65	3.70	2.19	2.22
	mm	48	26	55	18	61	82	80	36	35	18	120	118	94	56	57
8344H372, 374	in	2.62	1.50	2.66	1.06	3.12	3.88	3.18	1.86	1.75	0.83	6.06	4.63	3.51	2.01	2.81
	mm	67	38	68	27	79	99	81	47	45	21	154	118	89	51	71
8344H376, 378	in	3.89	2.10	3.53	1.48	3.79	4.69	4.56	2.12	2.49	1.52	8.22	5.41	3.86	2.36	3.38
	mm	99	53	90	38	96	119	116	54	63	39	209	137	98	60	86

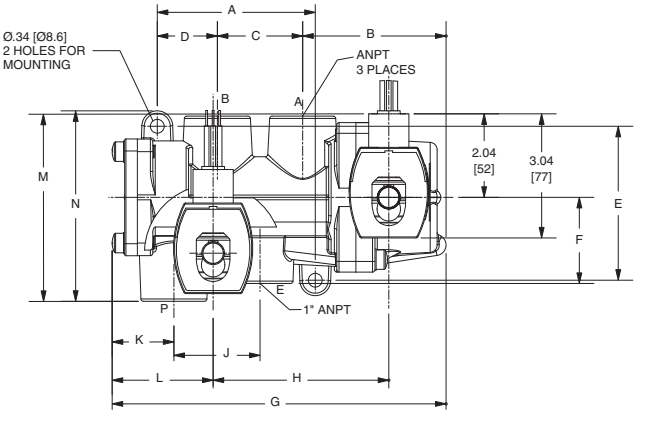
Const. Ref. 11, 13, 15

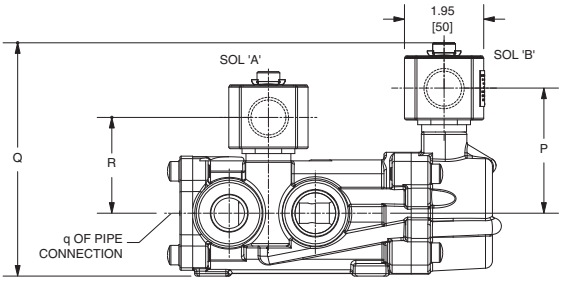




Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
8344H344	ins.	1.88	2.16	1.03	0.75	2.41	1.69	4.91	2.61	1.41	0.72	1.36	3.92	3.13	2.60	4.70	2.02
	mm	48	55	26	19	61	43	125	66	36	18	35	100	80	51	119	51
8344H354, 356	ins.	3.88	3.53	2.09	1.47	3.81	2.12	8.25	4.34	2.12	1.55	2.51	4.60	4.56	3.07	5.71	2.38
	mm	99	90	53	37	97	54	210	110	54	39	64	125	116	80	145	60
8344H380, 382	ins.	2.62	2.66	1.50	1.06	3.12	1.56	6.06	3.09	1.86	0.83	1.75	4.31	3.18	2.74	4.89	2.11
	mm	67	68	38	27	79	40	154	78	47	21	45	109	81	70	124	54

Const. Ref. 12, 14, 16



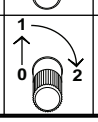


SPECIAL SERVICE PILOT

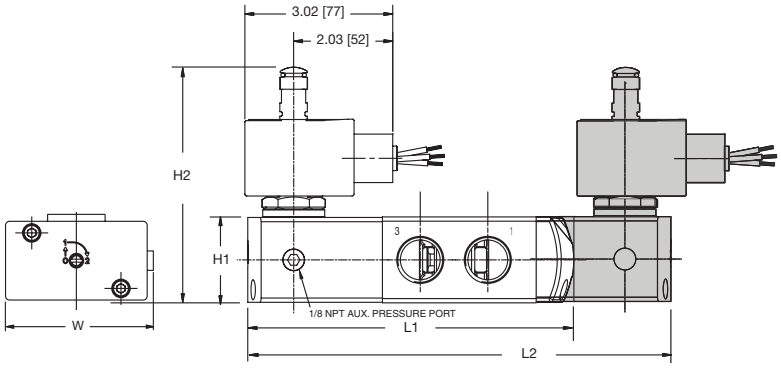
Dimensions: inches (mm)

Series	8551	8553
NPT	1/4	1/2
L1 ①	5.12 (132)	6.00 (153)
L2 ①	6.73 (171)	7.80 (198)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

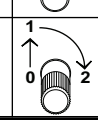
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 17

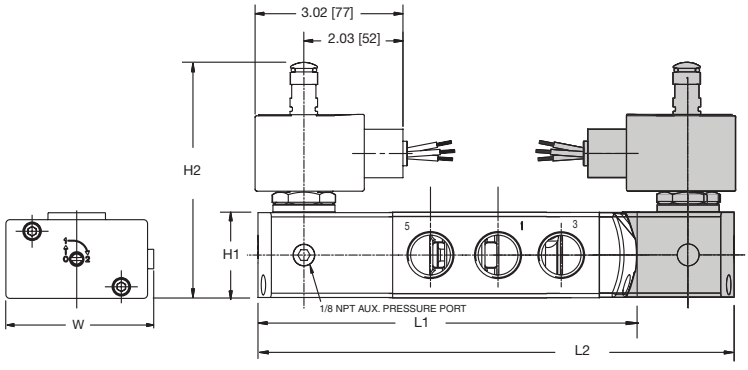


Series	8551	8553
NPT	1/4	1/2
L1 ①	5.63 (144)	7.06 (180)
L2 ①	7.20 (183)	8.86 (225)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 18



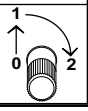
SPECIAL SERVICE PILOT

ASCO®

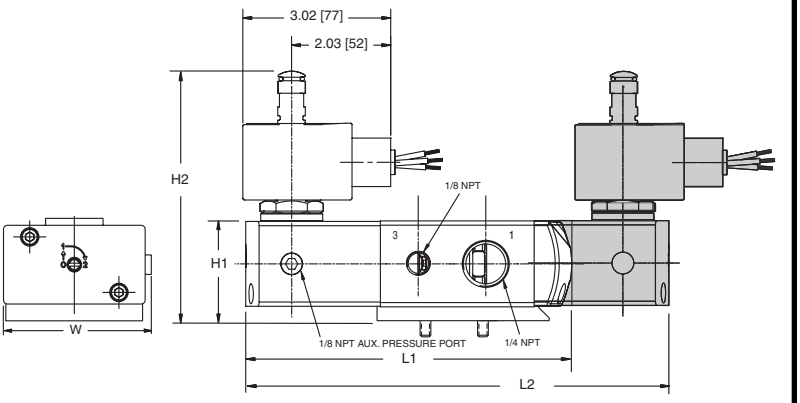
Dimensions: inches (mm)

Series	8551 (Aluminum, Brass)
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.49 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

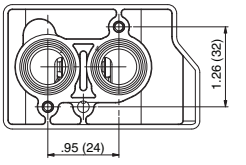
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

Const. Ref. 19

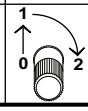


8551 NAMUR Footprint

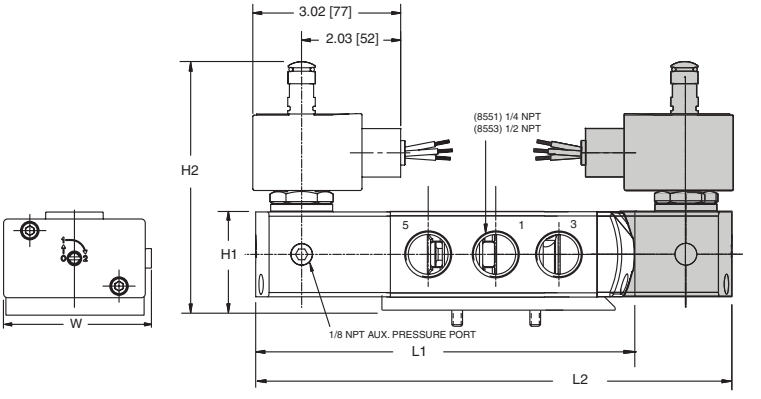


Series	8551 (316L SS)	8551 (5/3)	8553
NPT	1/4	1/4	1/2
L1 ①	5.20 (132)	-	7.08 (180)
L2 ①	6.73 (171)	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.38 (111)	4.77 (121)
H1	1.57 (40)	1.57 (40)	2.08 (53)
W	1.77 (45)	1.77 (45)	2.87 (73)

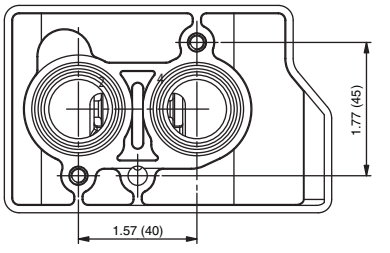
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

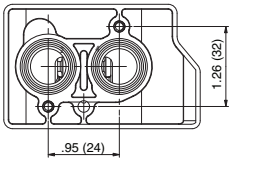
Const. Ref. 20



8553 NAMUR Footprint



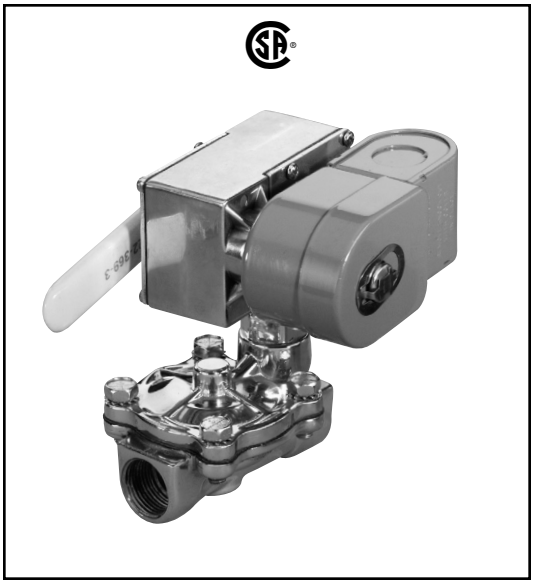
8551 NAMUR Footprint

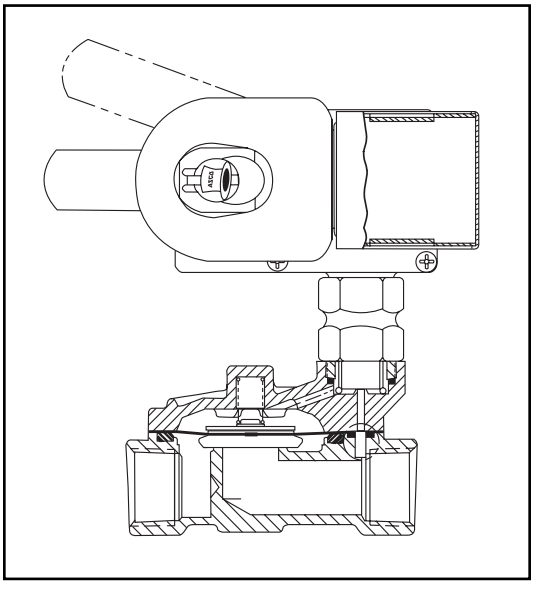


SPECIAL SERVICE PILOT

Features

- Designed to prevent inadvertent valve start-up
- Once tripped, requires electrical power restoration and manual operation to reset
- Electrically Tripped (trips when energized) or No Voltage Release (trips when de-energized) constructions
- Available for Latched Open or Latched Closed operation.
- Ideal for controlling critical processes
- Handles air, inert gas, water, light oil, steam, and corrosive fluids





Construction

Valve Parts in Contact with Fluids		
Body	Brass	Stainless Steel
Stem	303 Stainless Steel	
Springs	302 Stainless Steel	
Disc, Diaphragm, Seat, & Seal Material	FKM, NBR, PTFE, or EPDM, as listed	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
	DC Watts	AC				
		Watts	VA Holding	VA Inrush	AC	DC
F	-	20	45	96	99257	-
H	36.2	-	-	-	-	222184

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Notes: 125 and 250 volts DC are battery voltages applied in power plants. Special valves are available to pilot control valves in power plants.

Consult your local ASCO sales office for a listing.

Solenoid Enclosures

Standard: RedHat metal solenoid enclosure.
Type 1 General Purpose Junction Box.

Optional: Explosionproof and Watertight, Types 3, 7(C and D), and 9.
(To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

-20˚F to 104˚F (-29˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. Meets shock and vibration ISA S71.03C2.

Refer to Engineering Section for details.

Operation Alternatives

Electrically Tripped – Valves move to latched position when the solenoid is de-energized, trips when they receive a continuous or momentary (at least 0.3 sec.) electrical signal. When tripped, they can be manually cycled open/closed, but must be reset when the solenoid has once again been de-energized.

No Voltage Release – Valves move to latched position when the solenoid is energized, trips when de-energized. When tripped, they can be manually cycled open/ closed, but must be reset when the solenoid has once again been energized.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. Fluid Temp. °F		Latched Open		Latched Closed		Watt Rating/ Class of Coil Insulation	
								No Voltage Release (closes when coil is de-energized)	Electrically Tripped (closes when coil is energized)	No Voltage Release (opens when coil is de-energized)	Electrically Tripped (opens when coil is energized)		
			Min.	Max. AC	Max. DC	AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number	AC	DC
BRASS BODY with NBR Diaphragm for Air, Inert Gas, Water, and Light Oil													
3/4	3/4	6.5	5	250	250	180	180	8025B201	8015B201	8025B214	8015B214	20/F	36.2/H
1	1	13	5	125	125	180	180	8025B202	8015B202	8025B215	8015B215	20/F	36.2/H
1 1/4	1 1/8	15	5	125	125	180	180	8025B203	8015B203	8025B216	8015B216	20/F	36.2/H
1 1/2	1 1/4	22.5	5	125	125	180	180	8025B204	8015B204	8025B217	8015B217	20/F	36.2/H
2	1 3/4	43	5	125	125	180	180	8025B205	8015B205	8025B218	8015B218	20/F	36.2/H
2 1/2	1 3/4	45	5	125	125	180	180	8025B206	8015B206	8025B219	8015B219	20/F	36.2/H
BRASS BODY with PTFE Disc (EPDM, FPM and PTFE Seals) for Steam Service													
3/4	3/4	7.8	5	125	125	353	353	8025B207	8015B207	8025B220	8015B220	20/F	36.2/H
1	1	13.5	5	125	125	353	353	8025B208	8015B208	8025B221	8015B221	20/F	36.2/H
1 1/4	1 1/8	15	5	125	125	353	353	8025B209	8015B209	8025B222	8015B222	20/F	36.2/H
1 1/2	1 1/4	22.5	5	125	125	353	353	8025B210	8015B210	8025B223	8015B223	20/F	36.2/H
STAINLESS STEEL BODY with PTFE Disc (FPM Seals) for Corrosive Service													
1/2	3/8	3.2	5	250	250	350	350	8025B211	8015B211	8025B224	8015B224	20/F	36.2/H
3/4	3/4	7.8	5	250	250	350	350	8025B212	8015B212	8025B225	8015B225	20/F	36.2/H
1	1	11.2	5	125	125	350	350	8025B213	8015B213	8025B226	8015B226	20/F	36.2/H

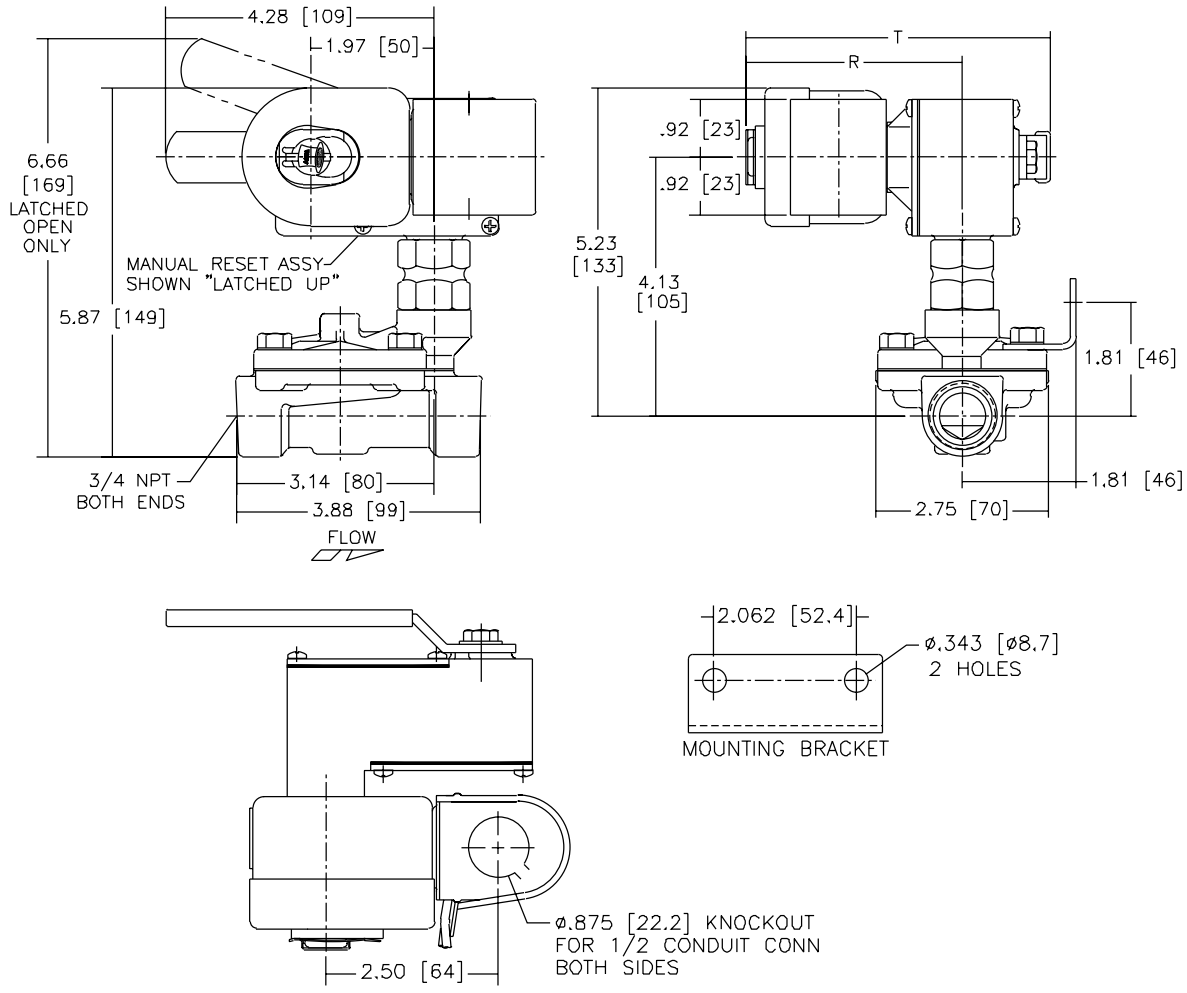
SPECIAL SERVICE PILOT

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)			Max. Fluid Temp. °C		Latched Open		Latched Closed		Watt Rating/ Class of Coil Insulation	
								No Voltage Release (closes when coil is de-energized)	Electrically Tripped (closes when coil is energized)	No Voltage Release (opens when coil is de-energized)	Electrically Tripped (opens when coil is energized)		
			Min.	Max. AC	Max. DC	AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number	AC	DC
BRASS BODY with NBR Diaphragm for Air, Inert Gas, Water, and Light Oil													
3/4	19	5.57	0.3	17	17	82	82	8025B201	8015B201	8025B214	8015B214	20/F	36.2/H
1	25	11.14	0.3	9	9	82	82	8025B202	8015B202	8025B215	8015B215	20/F	36.2/H
1 1/4	29	12.86	0.3	9	9	82	82	8025B203	8015B203	8025B216	8015B216	20/F	36.2/H
1 1/2	32	19.29	0.3	9	9	82	82	8025B204	8015B204	8025B217	8015B217	20/F	36.2/H
2	44	36.86	0.3	9	9	82	82	8025B205	8015B205	8025B218	8015B218	20/F	36.2/H
2 1/2	44	38.57	0.3	9	9	82	82	8025B206	8015B206	8025B219	8015B219	20/F	36.2/H
BRASS BODY with PTFE Disc (EPDM, FPM and PTFE Seals) for Steam Service													
3/4	19	6.69	0.3	9	9	177	177	8025B207	8015B207	8025B220	8015B220	20/F	36.2/H
1	25	11.57	0.3	9	9	177	177	8025B208	8015B208	8025B221	8015B221	20/F	36.2/H
1 1/4	29	12.86	0.3	9	9	177	177	8025B209	8015B209	8025B222	8015B222	20/F	36.2/H
1 1/2	32	19.29	0.3	9	9	177	177	8025B210	8015B210	8025B223	8015B223	20/F	36.2/H
STAINLESS STEEL BODY with PTFE Disc (FPM Seals) for Corrosive Service													
1/2	10	2.74	0.3	17	17	175	175	8025B211	8015B211	8025B224	8015B224	20/F	36.2/H
3/4	19	6.69	0.3	17	17	175	175	8025B212	8015B212	8025B225	8015B225	20/F	36.2/H
1	25	9.60	0.3	9	9	175	175	8025B213	8015B213	8025B226	8015B226	20/F	36.2/H

Dimensions: inches (mm)

Catalog Number		R	T
8025B201 8025B214	in	3.44	4.84
	mm	87	123
8015B201 8015B214	in	3.22	4.62
	mm	82	117

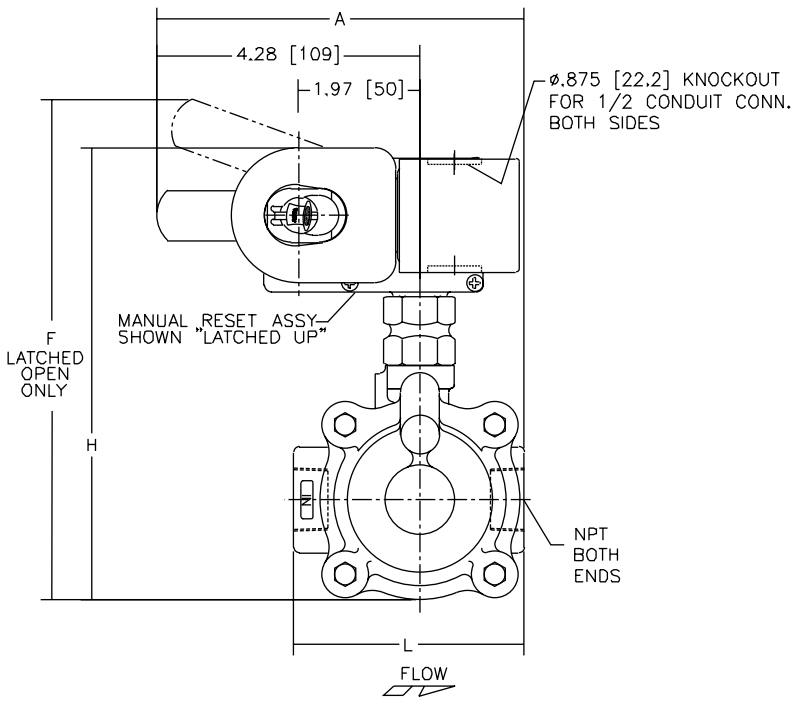


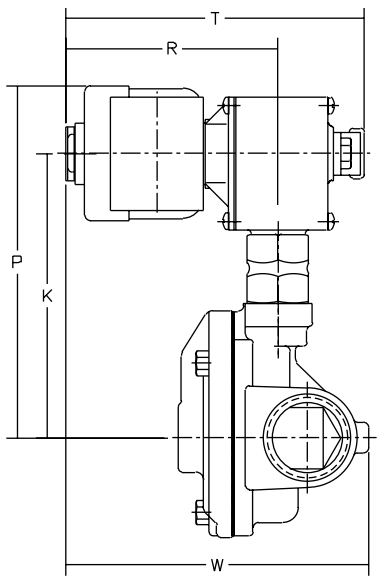
ASCO®

Dimensions: inches (mm)

Catalog Number		A	F	H	K	L	P	R	T	W
8025B215	in	5.98	8.13	7.36	4.63	3.75	5.74	3.44	4.84	4.91
	mm	152	207	187	118	95	146	87	123	125
8025B202	in	5.98	8.13	7.63	4.63	3.75	5.74	3.44	4.84	4.91
	mm	152	207	187	118	95	146	87	123	125
8015B215	in	5.98	8.13	7.36	4.63	3.75	5.74	3.22	4.62	4.69
	mm	152	207	187	118	95	146	82	117	119
8015B202	in	5.98	8.13	7.36	4.63	3.75	5.74	3.22	4.62	4.69
	mm	152	207	187	118	95	146	82	117	119
8025B216	in	5.91	8.13	7.36	4.63	3.66	5.74	3.44	4.84	5.11
	mm	150	207	187	118	93	146	87	123	130
8025B203	in	5.91	8.13	7.36	4.63	3.66	5.74	3.44	4.84	5.11
	mm	150	207	187	118	93	146	87	123	130
8015B216	in	5.91	8.13	7.36	4.63	3.66	5.74	3.22	4.62	4.89
	mm	150	207	187	118	93	146	82	117	124
8015B203	in	5.91	8.13	7.36	4.63	3.66	5.74	3.22	4.62	4.89
	mm	150	207	187	118	93	146	82	117	124
8025B217	in	6.47	8.60	7.84	4.78	4.38	5.89	3.44	4.84	5.47
	mm	164	219	199	121	111	150	87	123	139
8025B204	in	6.47	8.60	7.84	4.78	4.38	5.89	3.44	4.84	5.47
	mm	164	219	199	121	111	150	87	123	139
8015B217	in	6.47	8.60	7.84	4.78	4.38	5.89	3.22	4.62	5.25
	mm	164	219	199	121	111	150	82	117	133
8015B204	in	6.47	8.60	7.84	4.78	4.38	5.89	3.22	4.62	5.25
	mm	164	219	199	121	111	150	82	117	133
8025B221	in	5.75	8.13	7.63	4.63	3.75	5.74	3.44	4.84	5.48
	mm	146	207	194	118	95	146	87	123	139

Catalog Number		A	F	H	K	L	P	R	T	W
8025B208	in	5.75	8.13	7.63	4.63	3.75	5.74	3.44	4.84	5.48
	mm	146	207	194	118	95	146	87	123	139
8015B221	in	5.75	8.13	7.63	4.63	3.75	5.74	3.22	4.62	5.27
	mm	146	207	194	118	95	146	82	117	134
8015B208	in	575	8.13	7.63	4.63	3.75	5.74	3.22	4.62	5.27
	mm	146	207	194	118	95	146	82	117	134
8025B222	in	5.95	8.13	7.63	4.63	3.66	5.74	3.44	4.84	5.47
	mm	151	207	194	118	93	146	87	123	139
8025B209	in	5.95	8.13	7.63	4.63	3.66	5.74	3.44	4.84	5.47
	mm	151	207	194	118	93	146	87	123	139
8015B222	in	5.95	8.13	7.63	4.63	3.66	5.74	3.22	4.62	5.25
	mm	151	207	194	118	93	146	82	117	133
8015B209	in	5.95	8.13	7.63	4.63	3.66	5.74	3.22	4.62	5.63
	mm	151	207	194	118	93	146	82	117	143
8025B223	in	6.31	8.60	8.10	4.78	4.36	5.89	3.44	4.84	5.25
	mm	160	219	206	121	111	150	87	123	133
8025B210	in	6.31	8.60	8.10	4.78	4.38	5.89	3.44	4.84	5.63
	mm	160	219	206	121	111	150	87	123	143
8015B223	in	6.31	8.60	8.10	4.78	4.38	5.89	3.22	4.62	5.41
	mm	160	219	260	121	111	150	82	117	137
8015B210	in	6.31	8.60	8.10	4.78	4.38	5.89	3.22	4.62	5.41
	mm	160	219	206	121	111	150	82	117	137

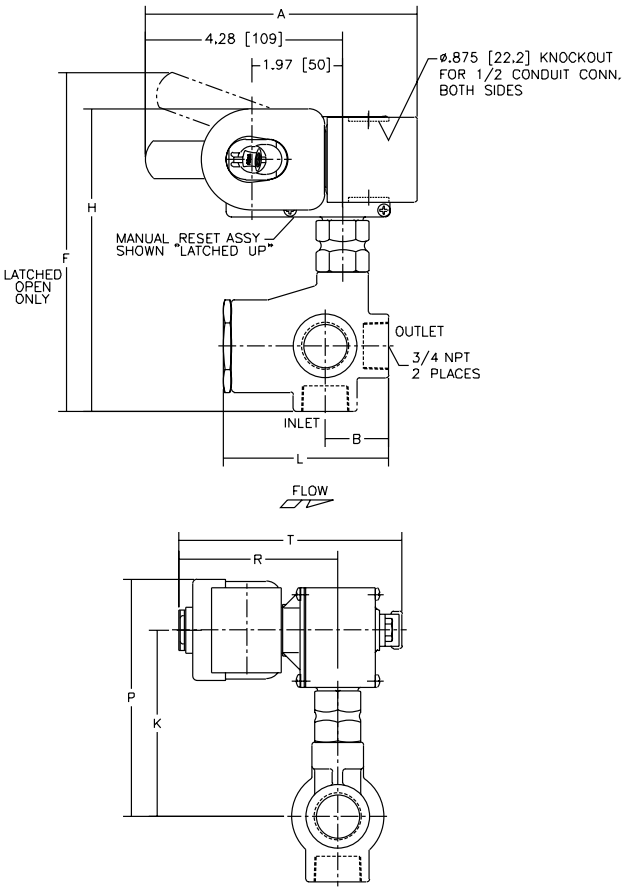




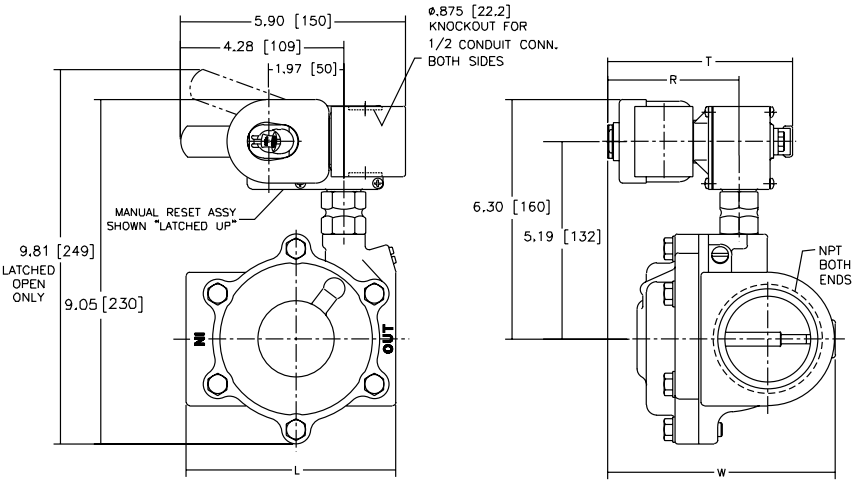
SPECIAL SERVICE PILOT

Dimensions: inches (mm)

Catalog Number		A	B	F	H	K	L	P	R	T
8015B207	in	5.31	1.38	7.34	6.58	4.05	3.59	5.16	3.22	4.62
	mm	135	35	186	167	103	91	131	82	117
8015B220	in	5.31	1.38	7.34	6.58	4.05	3.59	5.16	3.22	4.62
	mm	135	35	186	167	103	91	131	82	117
8025B207	in	5.31	1.38	7.34	6.58	4.05	3.59	5.16	3.44	4.84
	mm	135	35	186	167	103	91	131	87	123
8025B220	in	5.31	1.38	7.34	6.58	4.05	3.59	5.16	3.44	4.84
	mm	135	35	186	167	103	91	131	87	123
8015B211	in	5.90	1.19	6.66	5.89	3.56	3.13	4.67	3.22	4.62
	mm	150	30	169	150	90	80	119	82	117
8015B224	in	5.90	1.19	6.66	5.89	3.56	3.13	4.67	3.22	4.62
	mm	150	30	169	150	90	80	119	82	117
8025B211	in	5.90	1.19	6.66	5.89	3.56	3.13	4.67	3.44	4.84
	mm	150	30	169	150	90	80	119	87	123
8025B224	in	5.90	1.19	6.66	5.89	3.56	3.13	4.67	3.44	4.84
	mm	150	30	169	150	90	80	119	87	123



Catalog Number		L	R	T	W
8025B218	in	5.06	3.44	4.84	5.47
	mm	129	87	123	139
8025B205	in	5.06	3.44	4.84	5.47
	mm	129	87	123	139
8015B218	in	5.06	3.22	4.62	5.25
	mm	129	82	117	113
8015B205	in	5.06	3.22	4.62	5.25
	mm	129	82	117	113
8025B219	in	5.50	3.44	4.84	5.94
	mm	140	87	123	151
8025B206	in	5.50	3.44	4.84	5.94
	mm	140	87	123	151
8015B219	in	5.50	3.22	4.62	5.72
	mm	140	82	117	145
8015B206	in	5.50	3.22	4.62	5.72
	mm	140	82	117	145

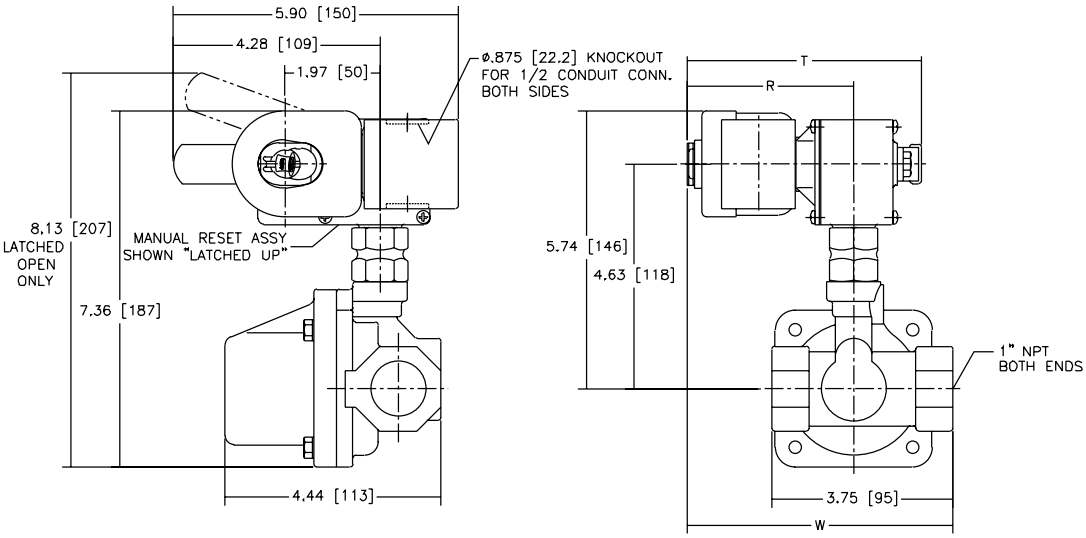


SPECIAL SERVICE PILOT

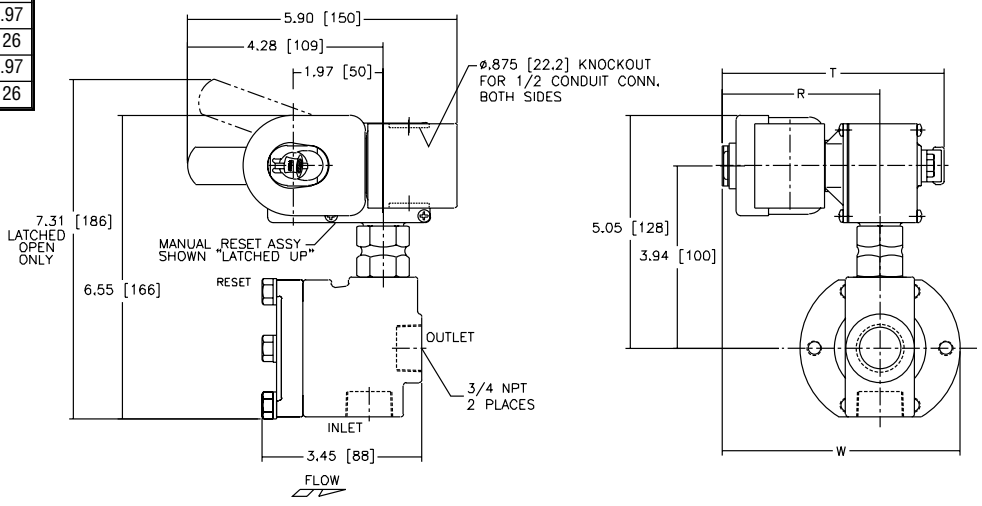
ASCO®

Dimensions: inches (mm)

Catalog Number		R	T	W
8025B213	in	3.44	4.84	5.48
	mm	87	123	139
8025B226	in	3.44	4.84	5.48
	mm	87	123	139
8015B213	in	3.22	4.62	5.27
	mm	82	117	134
8015B226	in	3.22	4.62	5.27
	mm	82	117	134

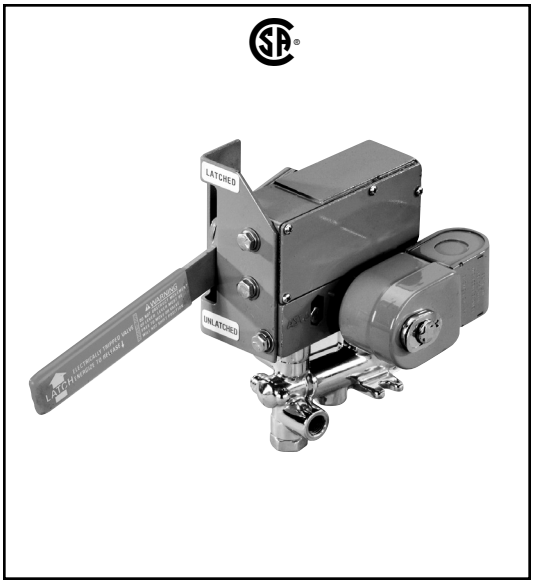


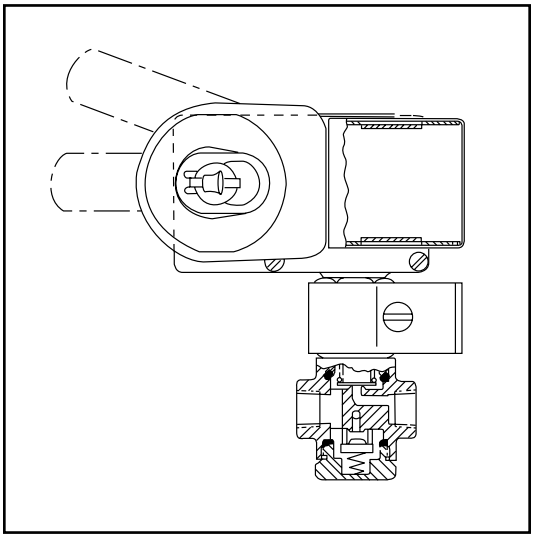
Catalog Number		R	T	W
8025B212	in	3.44	4.84	5.19
	mm	87	123	132
8025B225	in	3.44	4.84	5.19
	mm	87	123	132
8015B212	in	3.22	4.62	4.97
	mm	82	117	126
8015B225	in	3.22	4.62	4.97
	mm	82	117	126



Features

- High flow/high-pressure bodies with manual reset to prevent inadvertent valve start-up
- Once tripped, can only be manually reset
- Electrically Tripped (trips when energized), No Voltage Release (trips when de-energized), or Free Handle constructions
- Available for Latched Open or Latched Closed operation
- Ideal for controlling critical processes
- Some constructions can control aggressive fluids, including steam
- Intrinsically Safe constructions are available





Construction

Valve Parts in Contact with Fluids		
Body	Brass	Stainless Steel
Stem	303 Stainless Steel	
Springs	302 Stainless Steel	
Pilot Seat Cartridge	CA (when listed)	
Disc, Diaphragm, Seat	NBR, PA, PTFE, or Stainless Steel, as listed	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
		AC				
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC
F	-	20	45	96	99257	-
H	36.2	-	-	-	-	222184

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Notes: 125 and 250 volts DC are battery voltages applied in power plants. Special valves are available to pilot control valves in power plants.

Consult your local ASCO sales office for a listing.

Solenoid Enclosures

Standard: RedHat metal solenoid enclosure.
Type 1 General Purpose Junction Box.

Optional: Explosionproof and Watertight, Types 3, 7 (C and D), and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: -20˚F to 104˚F (-29˚C to 40˚C)
DC: -20˚F to 77˚F (-29˚C to 25˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. Some constructions meet shock and vibration ISA S71.03C2.

Refer to Engineering Section for details.

Operation Alternatives

Electrically Tripped – Valves move to latched position when the solenoid is de-energized, trips when they receive a continuous or momentary (at least 0.3 seconds) electrical signal. When tripped, they can be manually cycled open/closed, but must be reset when the solenoid has once again been de-energized.

No Voltage Release – Valves move to latched position when the solenoid is energized, trips when de-energized. When tripped, they can be manually cycled open/closed, but must be reset when the solenoid has once again been energized.

Free Handle – Valves move to latched position when the solenoid is energized, trips when de-energized. They cannot be manally cycled open/closed when de-energized. They can be manually cycled open/closed or reset only when energized.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. Fluid Temp. °F		No Voltage Release	Electrically Tripped	Const. Ref.	Flow Diagram	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC	Max.DC	AC	DC	Catalog Number	Catalog Number			AC	DC
UNIVERSAL OPERATION (Except as Noted ①), Brass Body with NBR Disc/Diaphragm (CA Pilot Cartridge) for Air-Inert Gas and Water. This group of valves meets shock and vibration ISA S71.03C2.													
1/4	11/64	.38	0	125	125	180	180	8308B040	8310B040	1	B	20/F	36.2/H
3/8	5/8	3	10	250	250	180	180	8308C041 ① ②	8310C041 ① ②	2	C	20/F	36.2/H
1/2	5/8	4	10	250	250	180	180	8308C042 ① ②	8310C042 ① ②	2	C	20/F	36.2/H
3/4	11/16	5.5	10	250	250	180	180	8308C043 ① ②	8310C043 ① ②	3	C	20/F	36.2/H
1	1	13	10	125	125	180	180	8308A050 ① ②	8310A050 ① ②	8	C	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with Stainless Steel Seats and Discs for Air-Inert Gas, Water and Light Oil													
1/4	1/4	.45	0	125	125	200	200	8308044	8310044	4	A	20/F	36.2/H
3/8	1/4	.45	0	125	125	200	200	8308045	8310045	4	A	20/F	36.2/H
1/2	5/16	.75	0	125	125	200	200	8308046	8310046	5	A	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with NBR Seats and PA Discs for Air-Inert Gas, Water and Light Oil													
1/4	1/4	.39	0	125	125	180	180	8308044R	8310044R	4	A	20/F	36.2/H
3/8	1/4	.39	0	125	125	180	180	8308045R	8310045R	4	A	20/F	36.2/H
1/2	5/16	.53	0	125	125	180	180	8308046R	8310046R	5	A	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with FKM Discs for Air-Inert Gas and Water													
1/4	1/8	.21	0	125	125	180	180	8308A011	8310A011	1	B	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with Stainless Steel Seats and Discs for Corrosive Service													
1/2	5/16	.75	0	125	125	200	200	8308047	8310047	5	A	20/F	36.2/H
Free Handle Construction													
UNIVERSAL OPERATION, Brass Body with NBR Discs for Air-Inert Gas and Water													
1/4	11/64	.38	0	125	125	180	180	8037014		6	D	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with PTFE Seats and FKM Discs for Air-Inert Gas, Water and Light Oil													
1/4	3/16	.70	0	125	125	160	160	8037A008 ①		7	E	20/F	36.2/H
3/8	3/16	.70	0	125	125	160	160	8037A010 ①		7	E	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with FKM Discs for Air-Inert Gas and Water													
1/4	1/8	.21	0	125	125	180	180	8037012		6	D	20/F	36.2/H

① When ordering, specify suffix "F" for Normally Closed construction or Suffix "G" for Normally Open construction. ② Supplied with CA pilot cartridge.

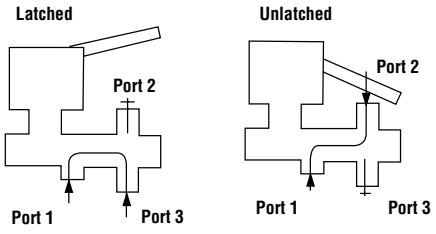
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)			Max. Fluid Temp. °C		No Voltage Release	Electrically Tripped	Const. Ref.	Flow Diagram	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC	Max.DC	AC	DC	Catalog Number	Catalog Number			AC	DC
UNIVERSAL OPERATION (Except as Noted ①), Brass Body with NBR Disc/Diaphragm (CA Pilot Cartridge) for Air-Inert Gas and Water. This group of valves meets shock and vibration ISA S71.03C2.													
1/4	4	.33	0.0	9	9	82	82	8308B040	8310B040	1	B	20/F	36.2/H
3/8	16	2.57	0.7	17	17	82	82	8308C041 ① ②	8310C041 ① ②	2	C	20/F	36.2/H
1/2	16	3.43	0.7	17	17	82	82	8308C042 ① ②	8310C042 ① ②	2	C	20/F	36.2/H
3/4	17	4.71	0.7	17	17	82	82	8308C043 ① ②	8310C043 ① ②	3	C	20/F	36.2/H
1	25	11.14	0.7	9	9	82	82	8308A050 ① ②	8310A050 ① ②	8	C	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with Stainless Steel Seats and Discs for Air-Inert Gas, Water and Light Oil													
1/4	6	.39	0	9	9	93	93	8308044	8310044	4	A	20/F	36.2/H
3/8	6	.39	0	9	9	93	93	8308045	8310045	4	A	20/F	36.2/H
1/2	8	.64	0	9	9	93	93	8308046	8310046	5	A	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with NBR Seats and PA Discs for Air-Inert Gas, Water and Light Oil													
1/4	6	.33	0	9	9	82	82	8308044R	8310044R	4	A	20/F	36.2/H
3/8	6	.33	0	9	9	82	82	8308045R	8310045R	4	A	20/F	36.2/H
1/2	8	.45	0	9	9	82	82	8308046R	8310046R	5	A	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with FKM Discs for Air-Inert Gas and Water													
1/4	8	.18	0	9	9	82	82	8308A011	8310A011	1	B	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with Stainless Steel Seats and Discs for Corrosive Service													
1/2	8	.64	0	9	9	93	93	8308047	8310047	5	A	20/F	36.2/H
Free Handle Construction													
UNIVERSAL OPERATION, Brass Body with NBR Discs for Air-Inert Gas and Water													
1/4	4	.33	0	9	9	82	82	803714		6	D	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with PTFE Seats and FKM Discs for Air-Inert Gas, Water and Light Oil													
1/4	5	.60	0	9	9	71	71	8037A008 ①		7	E	20/F	36.2/H
3/8	5	.60	0	9	9	71	71	8037A010 ①		7	E	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with FKM Discs for Air-Inert Gas and Water													
1/4	3	.18	0	9	9	82	82	8037012		6	D	20/F	36.2/H

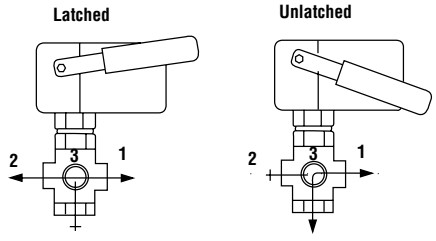
Flow Diagrams

Electrically Tripped and No Voltage Release Constructions

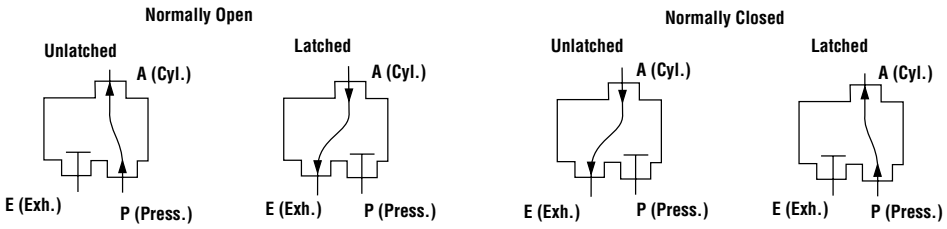
Flow Diagram A



Flow Diagram B

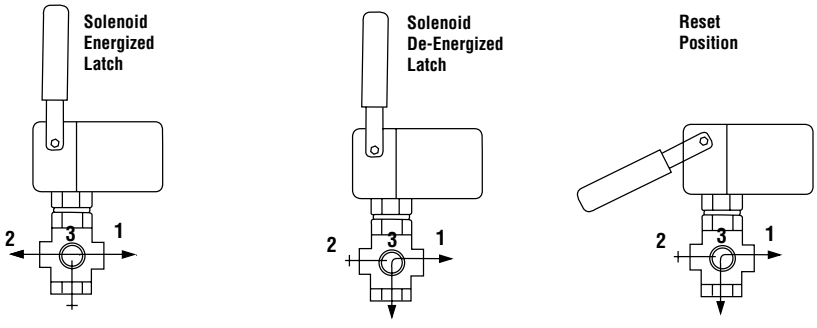


Flow Diagram C

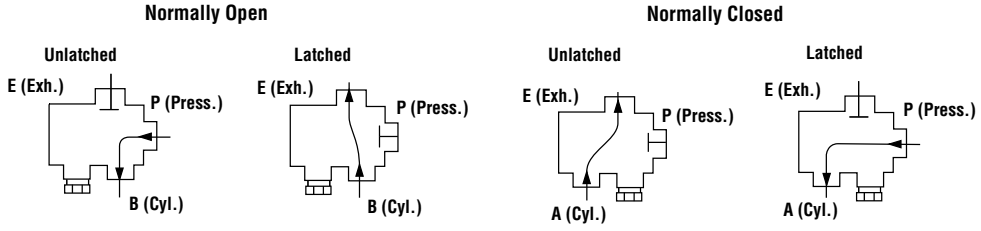


Free Handle Construction

Flow Diagram D



Flow Diagram E



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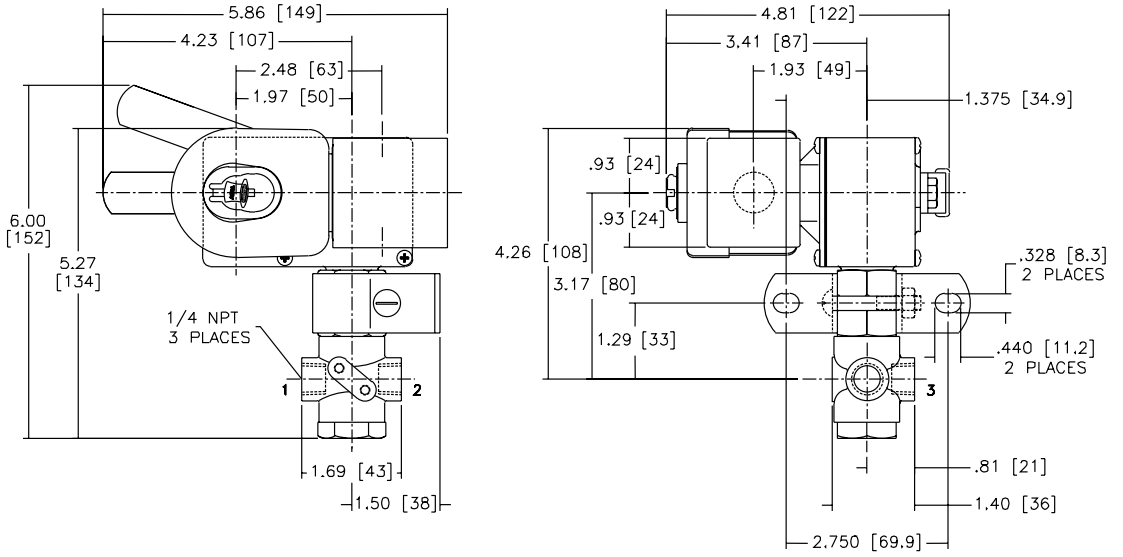
Dimensions: inches (mm)

Const. Ref. 1



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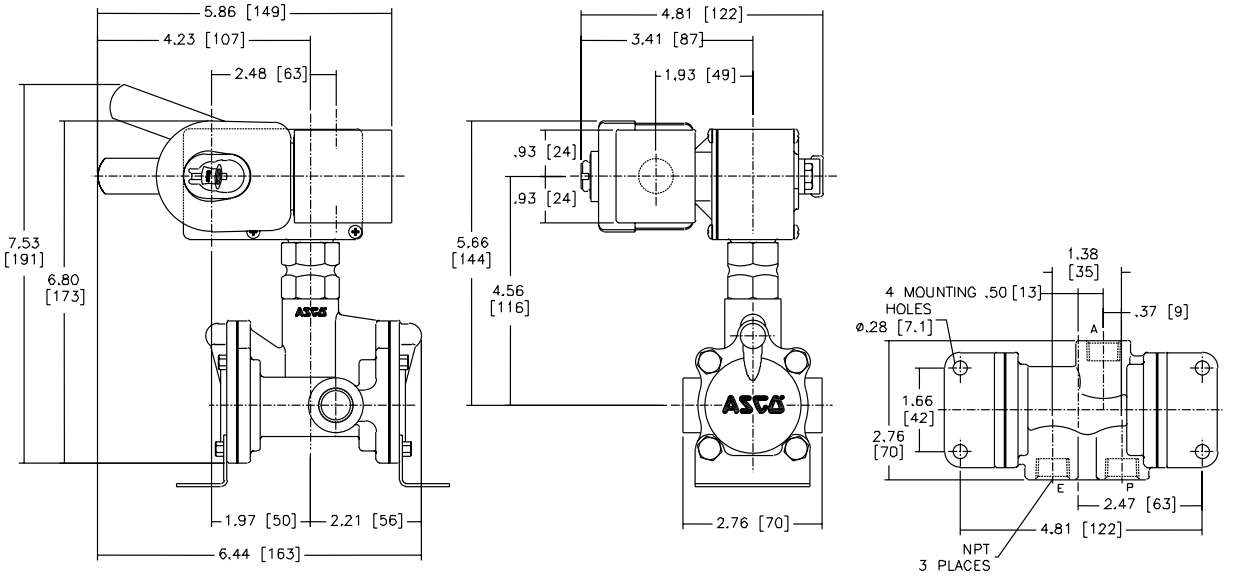
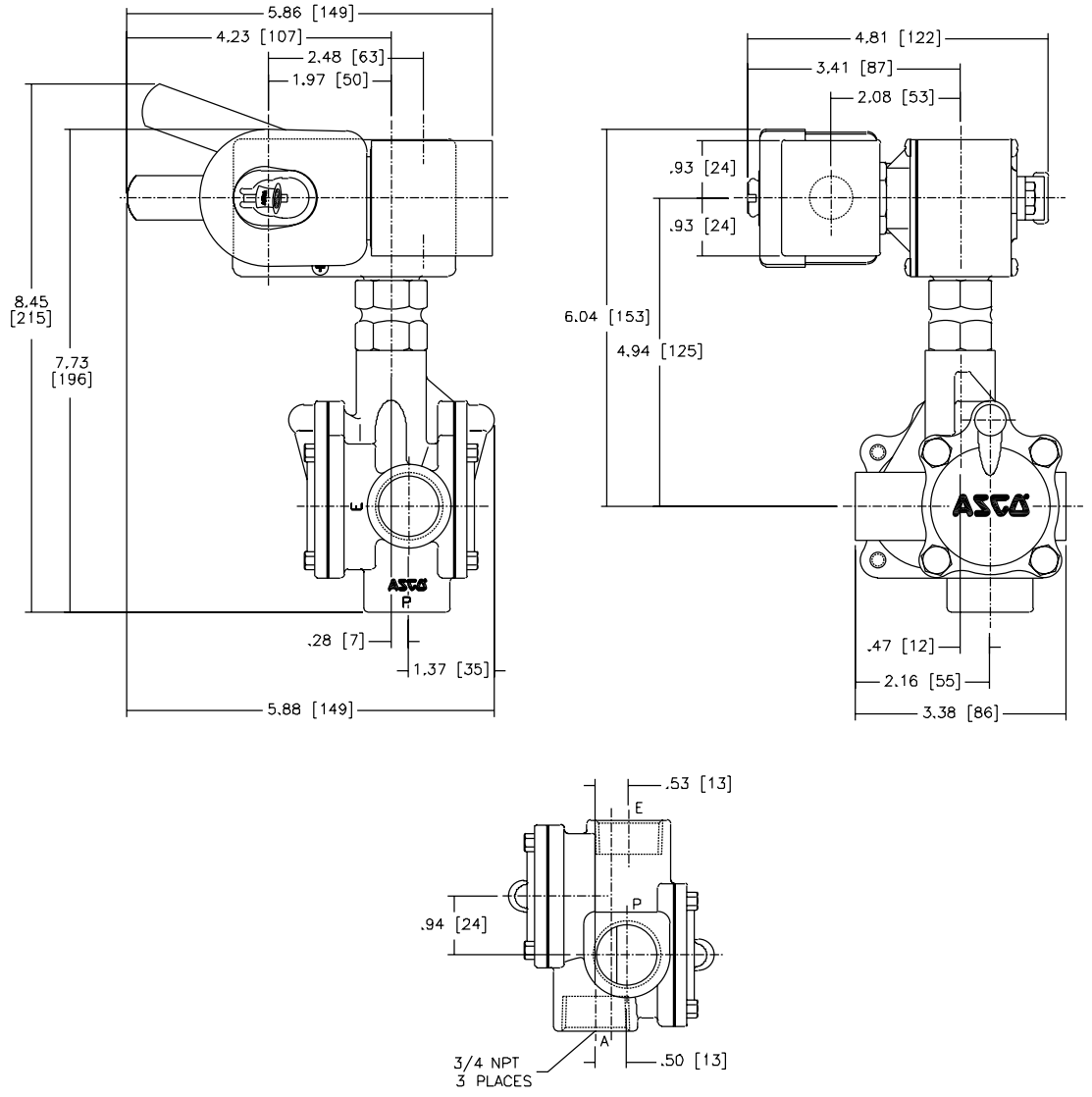


Dimensions: inches (mm)

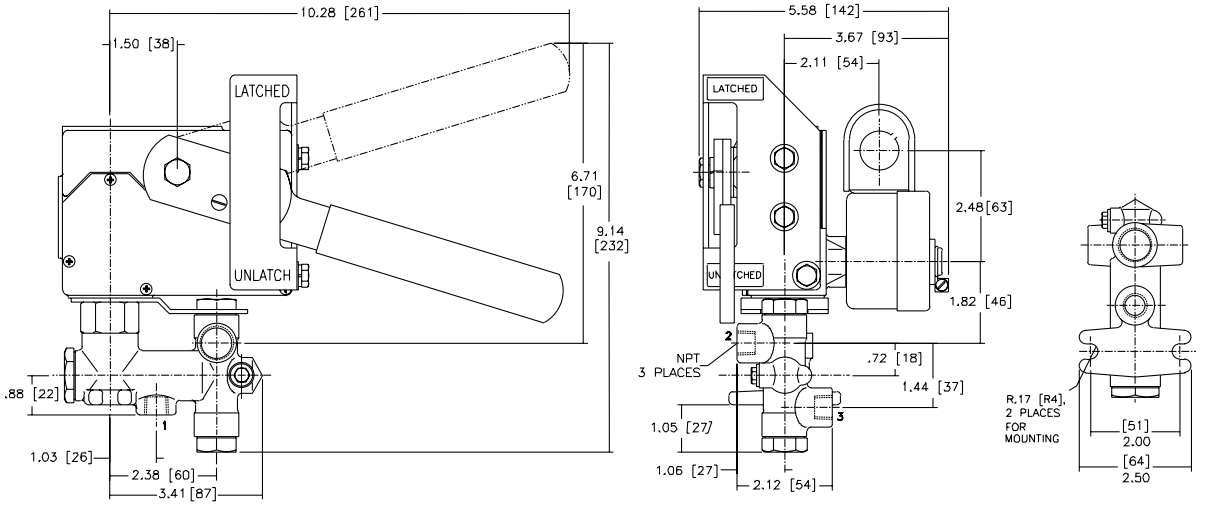
Const. Ref. 3



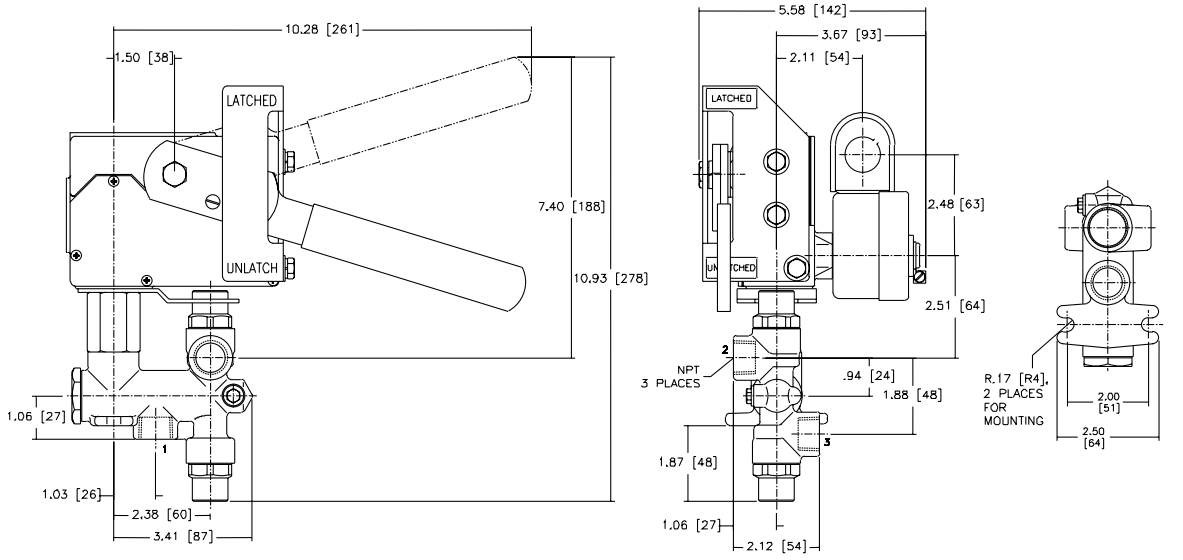
ASCO®

Dimensions: inches (mm)

Const. Ref. 4 ①



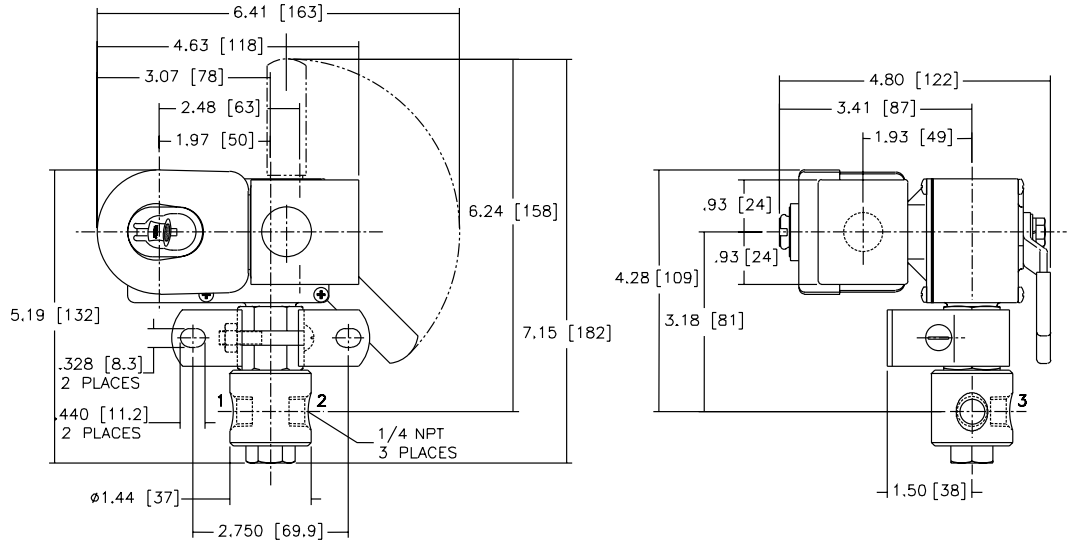
Const. Ref. 5 ①



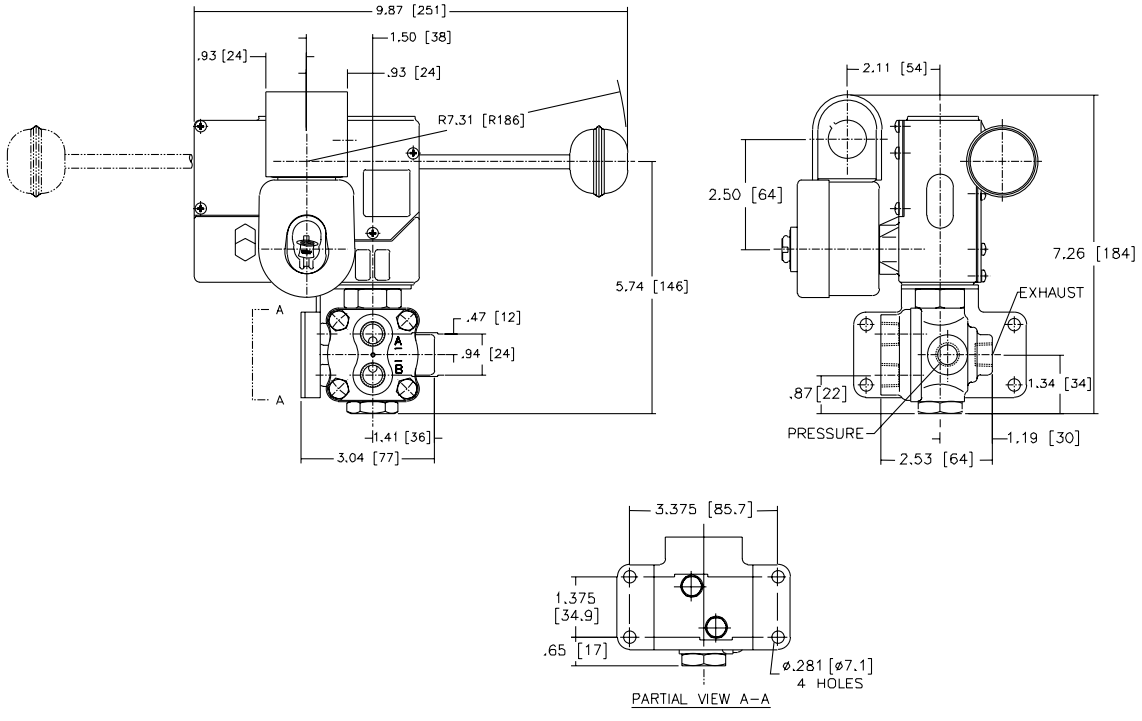
① IMPORTANT: Valves must be mounted with manual reset operator vertical and upright.

Dimensions: inches (mm)

Const. Ref. 6 ①



Const. Ref. 7 ①

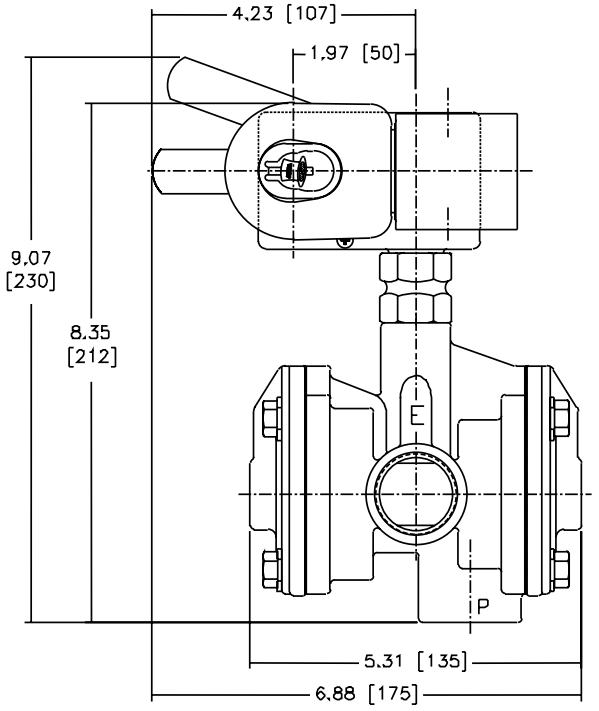


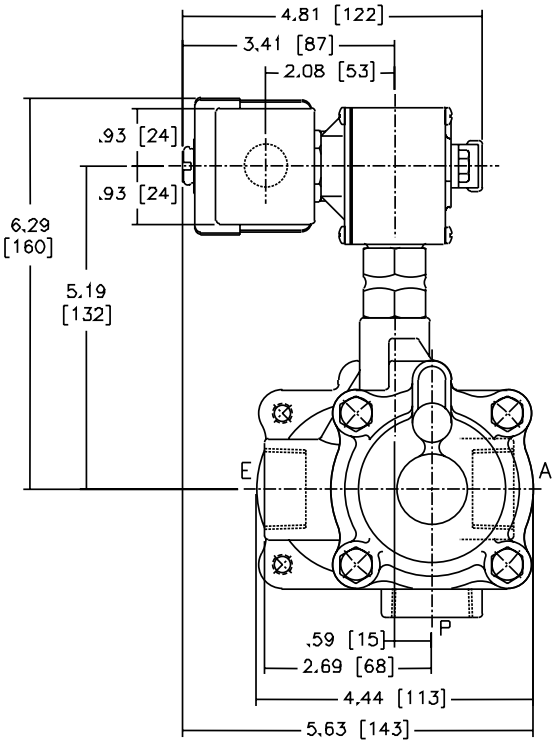
① IMPORTANT: Valves must be mounted with manual reset operator vertical and upright.

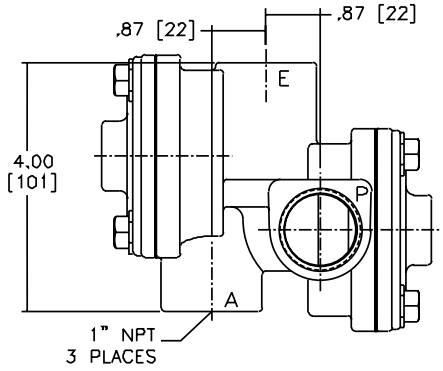
ASCO®

Dimensions: inches (mm)

Const. Ref. 8

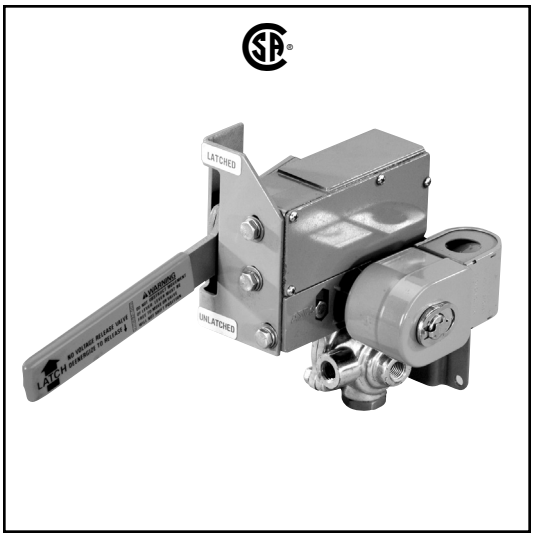


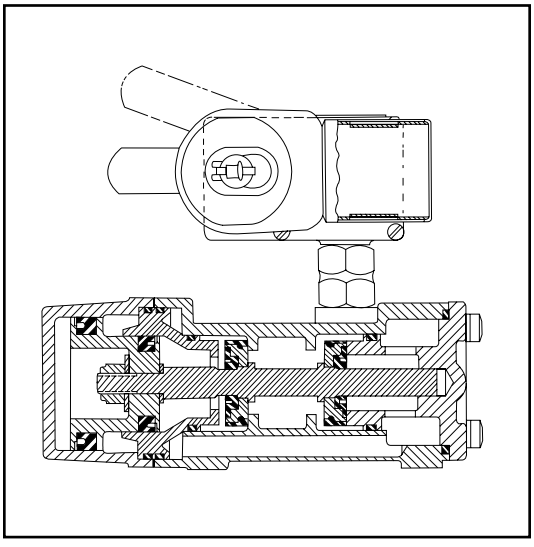




Features

- Manual reset versions of sturdy ASCO 8342 Series (1/4" and 3/8" NPT) and Series 8344 (1/2" to 1" NPT)
- 1/4" and 3/8" NPT are direct acting to provide maximum flow for their size
- 1/2" to 1" NPT have Poppet construction for high flows and tight shutoff
- Once tripped, can only be manually reset to automatic operation
- Electrically Tripped (trips when energized), No Voltage Release (trips when de-energized), or Free Handle constructions
- Intrinsically Safe constructions are available





Construction

Valve Parts in Contact with Fluids	
Body	Brass
Stem	303 Stainless Steel
Springs	302 Stainless Steel
Pilot Seat Cartridge	CA (when listed)
Disc, Diaphragm, Seat	PTFE, FKM, or NBR (as listed)

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
	DC	AC				
	Watts	Watts	VA Holding	VA Inrush	AC	DC
F	-	20	45	96	99257	-
H	36.2	-	-	-	-	222184

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available whenrequired.

Note: 125 and 250 volts DC are battery voltages applied in power plants. Special valves are available to pilot control valves in power plants. *Consult your local ASCO sales office for a listing.*

Solenoid Enclosures

Standard: RedHat metal solenoid enclosure. Type 1 General Purpose Junction Box.

Optional: Explosionproof and Watertight, Types 3, 7 (C and D), and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: -20˚F to 104˚F (-29˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. Some constructions meet shock and vibration ISA S71.03C2

Refer to Engineering Section for details.

Operation Alternatives

Electrically Tripped – Valves move to latched position when the solenoid is de-energized, trips when they receive a continuous or momentary (at least 0.3 seconds) electrical signal. When tripped, they can be manually cycled open/closed, but must be reset when the solenoid has once again been de-energized.

No Voltage Release – Valves move to latched position when the solenoid is energized, trips when de-energized. When tripped, they can be manually cycled open/closed, but must be reset when the solenoid has once again been energized.

Free Handle – Valves move to latched position when the solenoid is energized, trips when de-energized. They cannot be manally cycled open/closed when de-energized. They can be manually cycled open/closed or reset only when energized.

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Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. Fluid Temp. °F		No Voltage Release	Electrically Tripped	Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC	Max. DC	AC	DC	Catalog Number	Catalog Number		AC	DC
BRASS BODY with PTFE + FKM Seats and Discs for Air and Inert Gas												
1/4	3/16	.70	0	250	250	160	160	8408B006	8410B006	1	20/F	36.2/H
3/8	3/16	.70	0	250	250	160	160	8408B007	8410B007	1	20/F	36.2/H
BRASS BODY with NBR Seats and Discs (CA Pilot Cartridge) for Air, Inert Gas, Water, and Light Oil. This group of valves meets shock and vibration ISA S71.03C2.												
1/2	3/8	2.2	10	250	250	200	200	8408A008 ①	8410A008 ①	4	20/F	36.2/H
3/4	3/4	5.6	10	250	250	200	200	8408A009 ①	8410A009 ①	3	20/F	36.2/H
1	3/4	5.6	10	250	250	200	200	8408A010 ①	8410A010 ①	3	20/F	36.2/H
BRASS BODY with PTFE + FKM Seats and Discs for Air								**Free Handle Construction**				
1/4	3/16	.70	0	125	125	160	160	8047A001		2	20/F	36.2/H
3/8	3/16	.70	0	125	125	160	160	8047A002		2	20/F	36.2/H

① A Minimum Operating Pressure DIfferential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

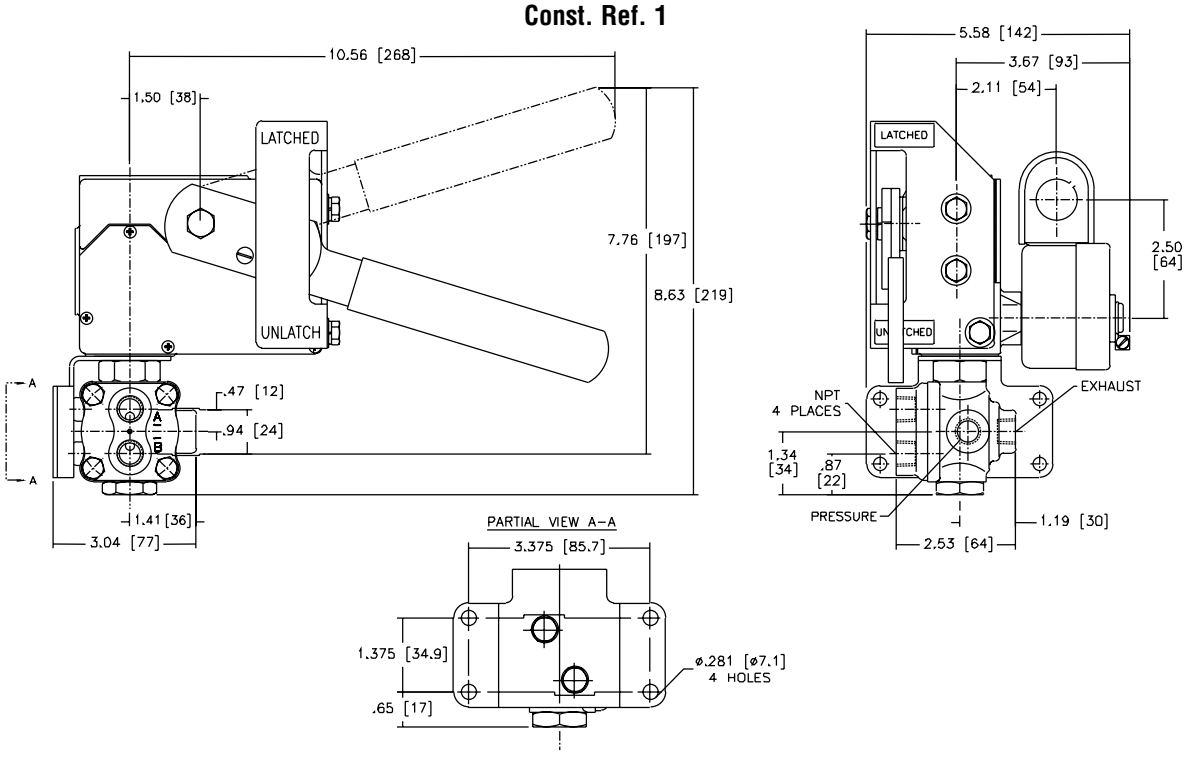
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)			Max. Fluid Temp. °C		No Voltage Release	Electrically Tripped	Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC	Max. DC	AC	DC	Catalog Number	Catalog Number		AC	DC
BRASS BODY with PTFE + FKM Seats and Discs for Air and Inert Gas												
1/4	5	.60	0	17	17	71	71	8408B006	8410B006	1	20/F	36.2/H
3/8	5	.60	0	17	17	71	71	8408B007	8410B007	1	20/F	36.2/H
BRASS BODY with NBR Seats and Discs (CA Pilot Cartridge) for Air, Inert Gas, Water, and Light Oil. This group of valves meets shock and vibration ISA S71.03C2.												
1/2	10	1.89	0.7	17	17	93	93	8408A008 ①	8410A008 ①	4	20/F	36.2/H
3/4	19	4.80	0.7	17	17	93	93	8408A009 ①	8410A009 ①	3	20/F	36.2/H
1	19	4.80	0.7	17	17	93	93	8408A010 ①	8410A010 ①	3	20/F	36.2/H
BRASS BODY with PTFE + FKM Seats and Discs for Air								**Free Handle Construction**				
1/4	5	.60	0	9	9	71	71	8047A001		2	20/F	36.2/H
3/8	5	.60	0	9	9	71	71	8047A002		2	20/F	36.2/H

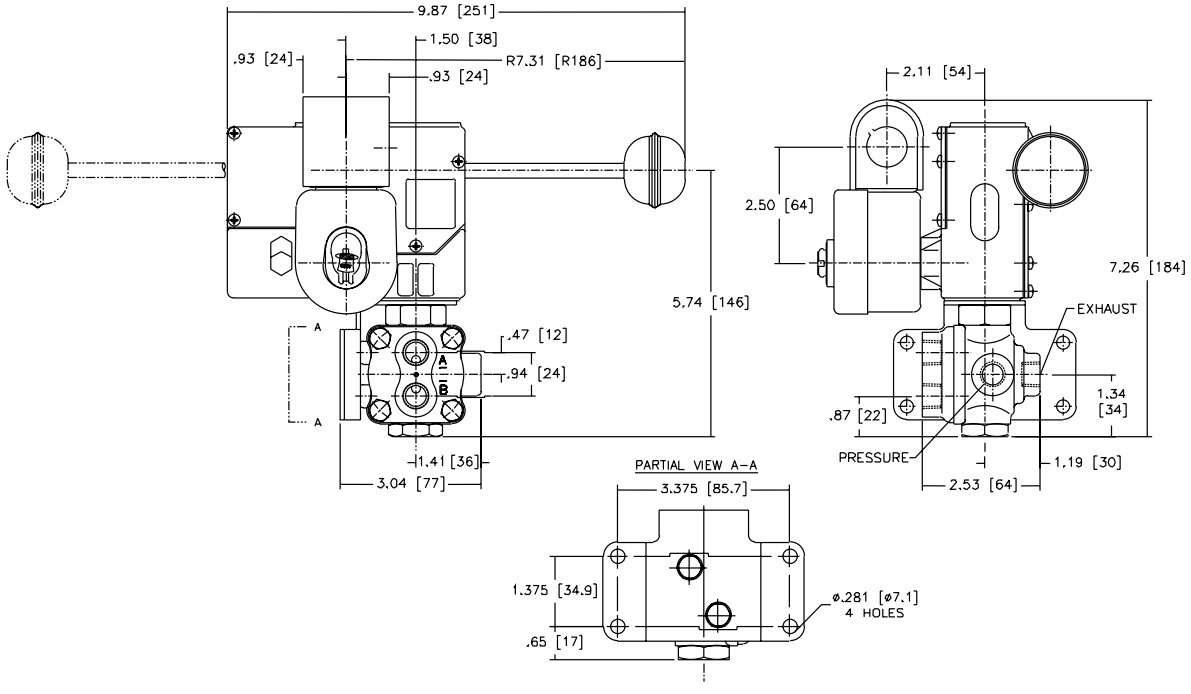
① A Minimum Operating Pressure DIfferential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Dimensions inches (mm)

Const. Ref. 1



Const. Ref. 2 ①



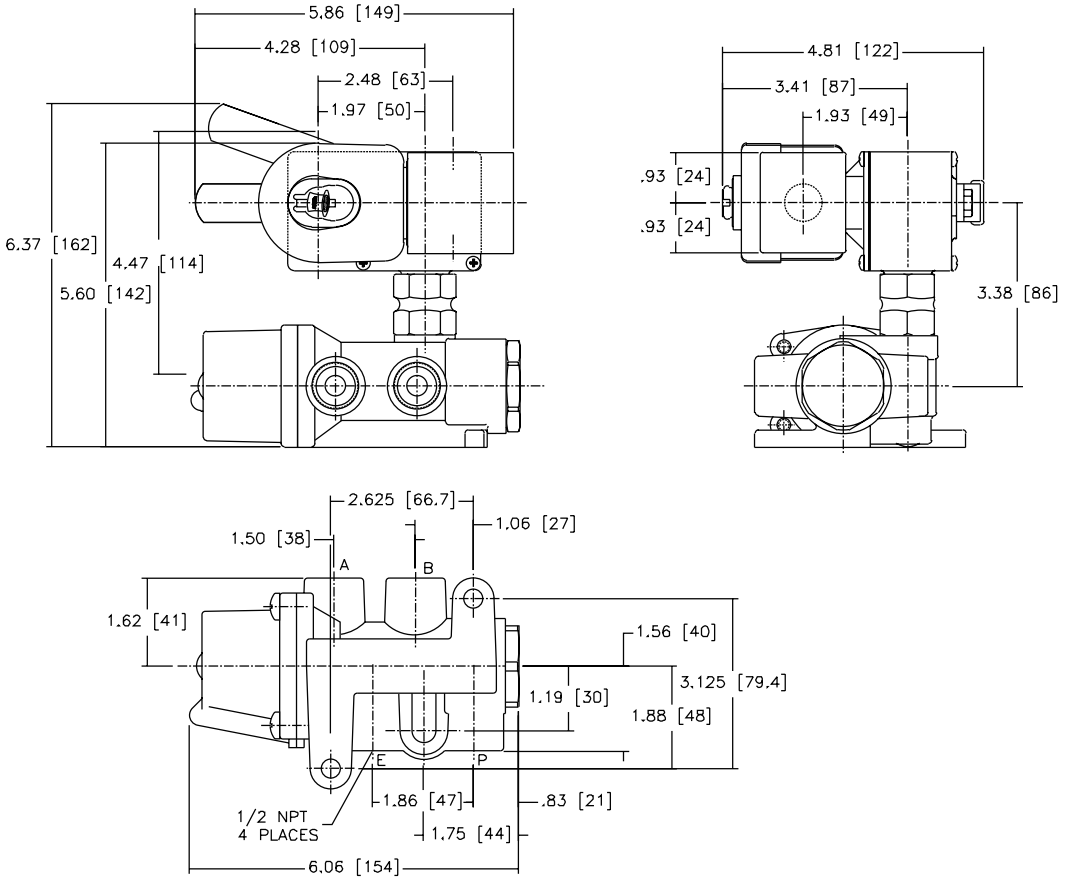
① **IMPORTANT: Valves must be mounted with manual reset operator vertical and upright.**

SPECIAL SERVICE PILOT

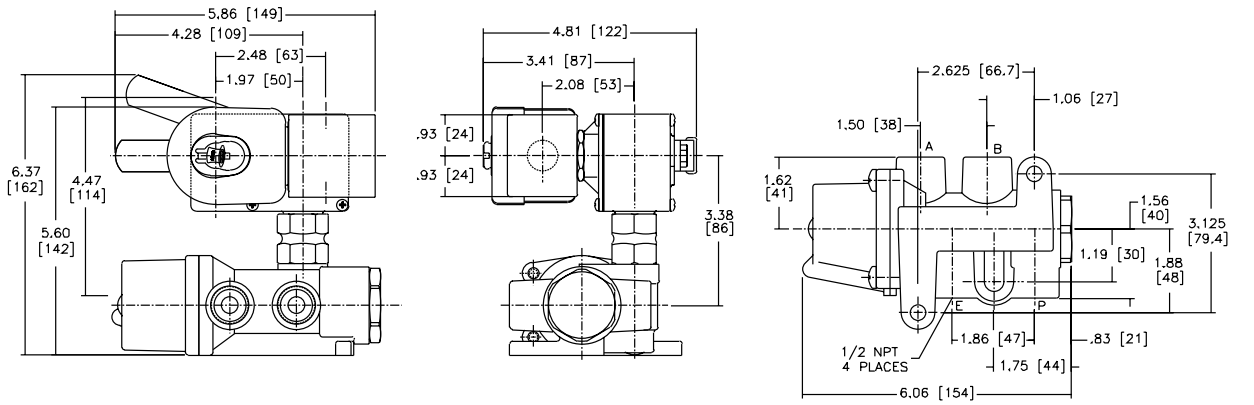
ASCO®

Dimensions inches (mm)

Const. Ref. 3
No Voltage Release

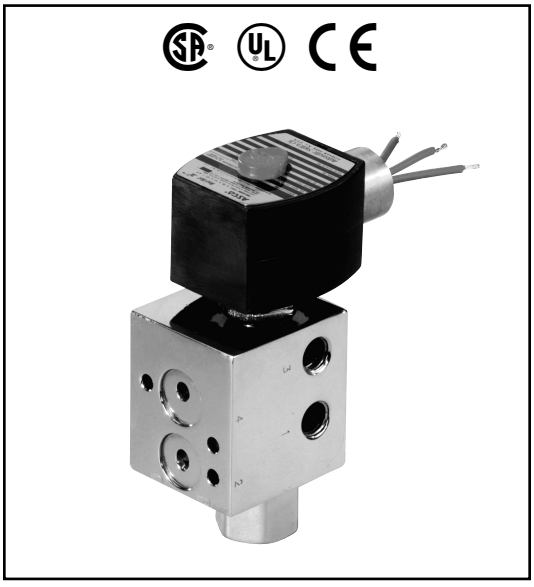


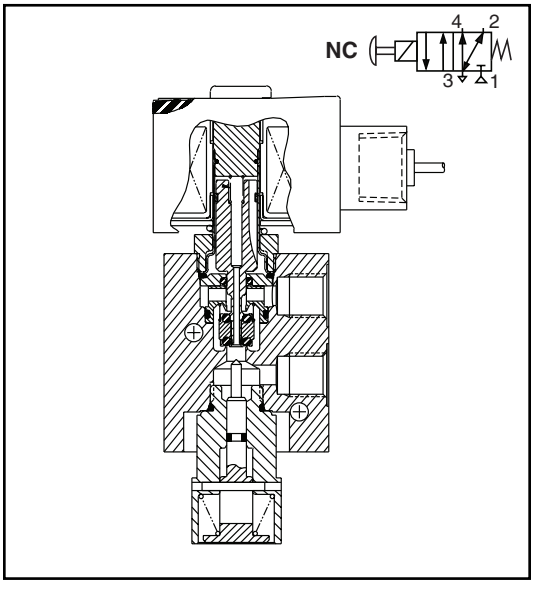
Const. Ref. 4
Electrically Tripped



Features

- NAMUR direct mount construction
- Balanced Poppet construction provides high flow with low power consumption
- PTFE rider rings and graphite-filled PTFE seals reduce friction and eliminate sticking for long life
- No minimum pressure required
- Tamperproof no-voltage release manual reset provides added safety





Construction

Valve Parts in Contact with Fluids		
Body	Aluminum	316 Stainless Steel
Seals and Discs	NBR	FKM
Core Tube	305 Stainless Steel	
Stem and Insert	303 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Rider Rings	PTFE	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	12	12	12	276000	238710	276002	238714

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Solenoid Enclosures

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" to catalog number. For explosionproof with 316 Stainless Steel hub and trim, specify prefix "EV".)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

-4˚F to +131˚F (-20˚C to +55˚C)

Refer to Engineering Section for details.

Approvals

General Purpose Solenoid:
UL recognized component,
CSA certified (8327G033 pending).

Explosionproof Solenoid: (Prefix EF and EV)
UL listed solenoid.

CSA certified for use in hazardous locations.

Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

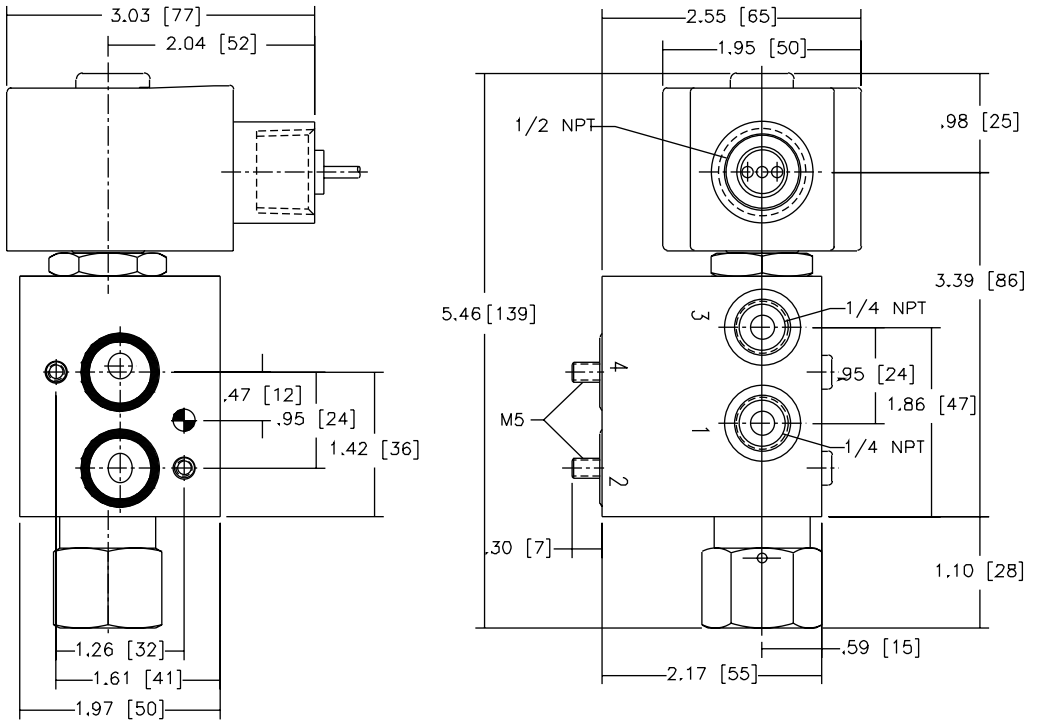
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Maximum Operating Pressure Diff. (psi)	Fluid Temp. Range °F	Aluminum Body	Stainless Steel Body	Const. Ref.	Watt Rating/ Class of Coil Insulation	
		Ports 1-2	Ports 2-3	Air- Inert Gas		Catalog Number	Catalog Number		AC	DC
NORMALLY CLOSED MANUAL RESET - Tamperproof No-Voltage Release										
1/4	1/4	.62	.43	150	-4 to 176	8327G033	-	1	12.0/F	11.6/H
1/4	1/4	.62	.43	150	-4 to 248	-	EV8327G035	1	12.0/F	11.6/H

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)		Maximum Operating Pressure Diff. (bari)	Fluid Temp. Range °C	Aluminum Body	Stainless Steel Body	Const. Ref.	Watt Rating/ Class of Coil Insulation	
		Ports 1-2	Ports 2-3	Air- Inert Gas		Catalog Number	Catalog Number		AC	DC
NORMALLY CLOSED MANUAL RESET - Tamperproof No-Voltage Release										
1/4	6.4	.53	.37	10	-20 to 80	8327G033	-	1	12.0/F	11.6/H
1/4	6.4	.53	.37	10	-20 to 120	-	EV8327G035	1	12.0/F	11.6/H

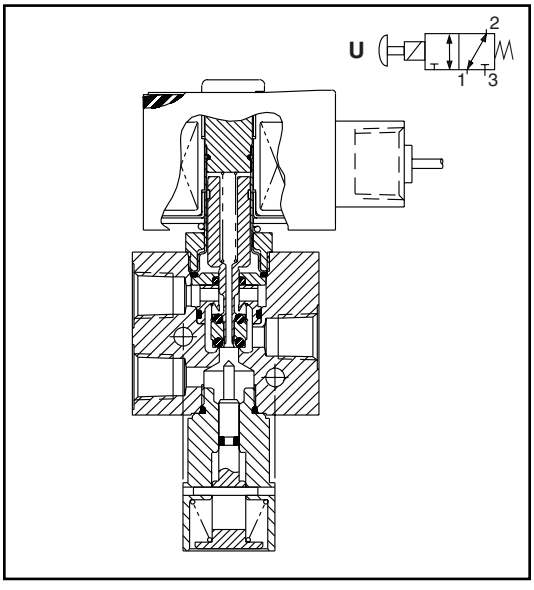
Dimensions: inches (mm)

Const. Ref. 1



Features

- Designed for high-flow piloting with no minimum operating pressure required; e.g. power plants, refineries, chemical processing
- Balanced poppet construction for high flow at minimum power levels
- PTFE rider rings and graphite-filled seals reduce friction and eliminate sticking to provide exceptional service life
- 316 Stainless Steel construction for highly corrosive atmospheres



Construction

Valve Parts in Contact with Fluids		
Body	Brass	316 Stainless Steel
Core Tube	305 Stainless Steel	
Stem and Insert	303 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
O-Ring Holder	430F Stainless Steel	
Springs	302 Stainless Steel	
Seals and Discs	NBR	FKM
Rider Ring	PTFE	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	12.0	12	12	276000	238710	276002	238714

Standard Voltages: 24/50-60, 120/50-60, 240/50-60, and 480/50-60 volts AC, or 6, 12, 24, 120 and 240 volts DC.

Solenoid Enclosures

Standard: Brass valves: Types, 1, 2, 3, 3S, 4, and 4X.
316 Stainless Steel valves: Explosionproof and Watertight Types 3, 3S, 4, 4X, 6, and 6P.

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" to catalog number. For explosionproof with 316 Stainless Steel hub and trim, specify prefix "EV".)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

-4˚F to 131˚F (-20˚C to 55˚C)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed General Purpose Valves. Meets applicable CE directives.

Refer to Engineering Section for details.

Operation Alternatives

No Voltage Release - valves must be manually moved to the "open" latched position with the solenoid energized.

Tamperproof No Voltage Release - valves operate as above, but cannot be held open manually with solenoid de-energized.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor Ports 1-2	Cv Flow Factor Ports 2-3	Maximum Operating Pressure Differential (psi) Air-Inert Gas	Water	Light Oil @ 300 SSU	Max. Fluid Temp. °F	Brass Body Catalog Number	316 Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	DC
UNIVERSAL MANUAL RESET- No Voltage Release												
1/4	1/4	.60	.73	150	150	150	176	8327G021	-	1	12.0/F	11.6/F
1/4	1/4	.60	.73	150	150	150	248	-	EV8327G022	1	12.0/F	11.6/F
UNIVERSAL MANUAL RESET- Tamperproof No Voltage Release												
1/4	1/4	.60	.73	150	150	150	176	8327G031	-	1	12.0/F	11.6/F
1/4	1/4	.60	.73	150	150	150	248	-	EV8327G032	1	12.0/F	11.6/F

Specifications (Metric units)

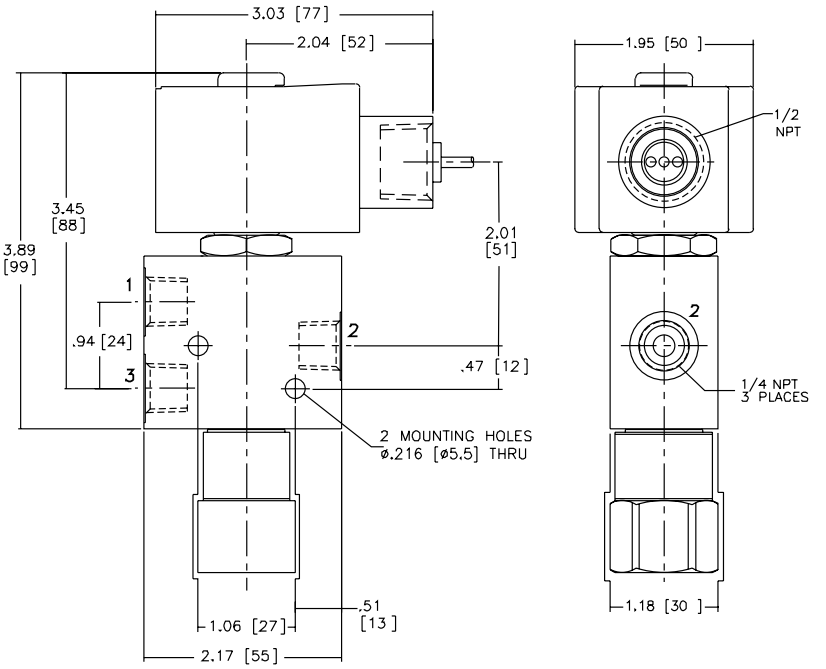
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h) Ports 1-2	Kv Flow Factor (m^3/h) Ports 2-3	Maximum Operating Pressure Differential (bar) Air-Inert Gas	Water	Light Oil @ 300 SSU	Max. Fluid Temp. °C	Brass Body Catalog Number	316 Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	DC
UNIVERSAL MANUAL RESET- No Voltage Release												
1/4	6	.51	.63	10	10	10	80	8327G021	-	1	12.0/F	11.6/F
1/4	6	.51	.63	10	10	10	120	-	EV8327G022	1	12.0/F	11.6/F
UNIVERSAL MANUAL RESET- Tamperproof No Voltage Release												
1/4	6	.51	.63	10	10	10	80	8327G031	-	1	12.0/F	11.6/F
1/4	6	.51	.63	10	10	10	120	-	EV8327G032	1	12.0/F	11.6/F

Dimensions: inches (mm)

FLOW DIAGRAMS

OPERATION	DE-ENERGIZED	ENERGIZED
NORMALLY CLOSED PRESSURE AT 3		
NORMALLY OPEN PRESSURE AT 1		
UNIVERSAL PRESSURE AT ANY PORT		

Const. Ref. 1



IMPORTANT: Valves may be mounted in any position.

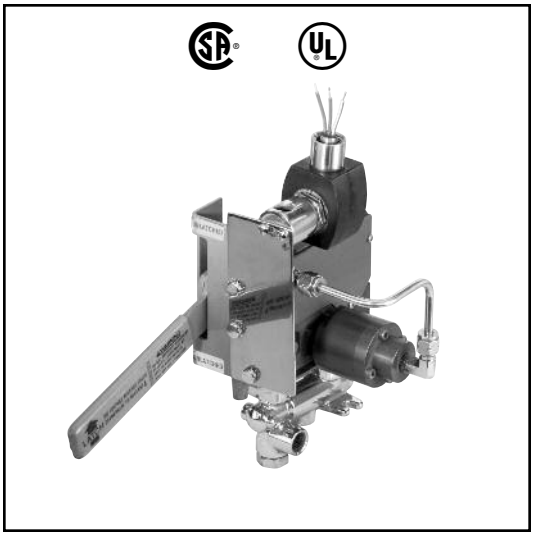
High-Shock Manual Reset Valves

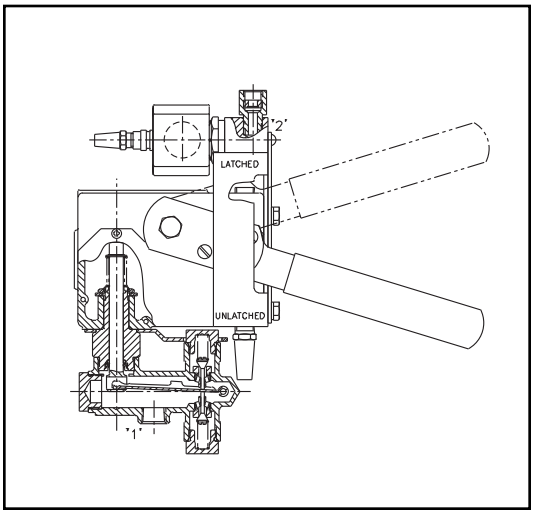
Brass and Stainless Steel Bodies
3/8" NPT

Features

- Once the solenoid is de-energized, it requires power to be restored to the solenoid then the valve to be manually reset. Ideal for controlling critical processes
- Designed to meet vibration and/or shock per ISA specification S71.03C2
- Handles aggressive atmosphere per salt resistance testing (ASTM B117)
- Most hardware is stainless steel, and all aluminum components are hard anodized and Nituff® coated
- Manual reset housing is sealed with closed-cell CR sponge rubber and equipped with sintered bronze breather to prevent accumulation of condensation
- Last chance filter installed in auxiliary air port of the pilot valve

Nituff is a registered trademark of Nimet Industries, Inc.





Construction

Valve Parts in Contact with Fluids		
Main Valve		
Body	Brass / Stainless Steel	
Disc	303 Stainless Steel	
Seats	Phosphor Bronze	
Springs	17-7 PH Stainess Steel	
Seals	Buna-N / FKM	
Air Operator Diaphragm	FMQ	
Bearing Screw	430 Stainless Steel	
Lever	302 Stainless Steel	
Pilot Valve	**AC 10.1 W**	**DC 1.4 W**
Body	Brass / 303 Stainless Steel	Brass / 303 Stainless Steel
Shading Coil	Silver / Coper	Not Applicable
Seals	NBR	Buna-N/PTFE
Core Tube	305 Stainess Steel	305 Stainess Steel
Core and Plugnut	430F Stainless Steel	430F Stainless Steel
Core Guide	CA	CA
Core Springs	302 & 17-7PH Stainess Steel	302 Stainess Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	10.1	25	76	238610	-	238614	-
F	1.4	-	-	-	-	-	274714-902-D*	

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 12, 24 volts DC.
Must be specified when ordering. * 24 VDC. *For other voltages contact factory.*

Solenoid Enclosures

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

Approvals

CSA certified and UL listed General Purpose Valve (pilot).

ATEX/IECEx certified with prefix "EV" as listed. Refer to Optional Features Electrical Section for details.

Options

Position indicator switch (suffix SP);
Redundant pilot valves.

Contact factory for ordering information.

Operation Alternatives

Electrically Tripped – With the pilot valve solenoid de-energized, the handle is raised manually and latches the operator in the "up" (latched) position. Upon energizing the pilot valve solenoid, the latch is tripped returning the operator to the "down" (unlatched) position.

No Voltage Release – With the pilot valve solenoid energized, the handle is raised manually and latches the operator in the "up" (latched) position. Upon loss of voltage, the latch is tripped returning the operator to the "down" (unlatched) position.

Once tripped, the lever may be cycled causing the valve discs to open and close.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Fluid Temp. °F		Max. Ambient Temp. °F	Catalog Number	Const. Ref.	Body Material	Pilot Construction	Watt Rating/ Class of Coil Insulation per Solenoid	
			Pilot Min.	Pilot Max.	Main Max.	Min.	Max.						AC	DC
3/2 High-Shock Manual Reset Valves														
3/8	1/4	0.45	25	125	125	-40	140	140	EV8308G385 ①	1	Brass	No Voltage Release (NVR)	-	1.4/F
3/8	1/4	0.45	25	125	125	-40	140	140	EV8310G385 ①	1	Brass	Electrically Tripped (TSO)	-	1.4/F
3/8	1/4	0.45	25	125	125	-4	200	125	EV8308G085 ①	1	Brass	No Voltage Release (NVR)	10.1/F	-
3/8	1/4	0.45	25	125	125	-4	200	125	EV8310G085 ①	1	Brass	Electrically Tripped (TSO)	10.1/F	-
3/8	1/4	0.45	25	125	125	-40	140	140	EV8308G386 ①	2	Stainless Steel	No Voltage Release (NVR)	-	1.4/F
3/8	1/4	0.45	25	125	125	-40	140	140	EV8310G386 ①	2	Stainless Steel	Electrically Tripped (TSO)	-	1.4/F
3/8	1/4	0.45	25	125	125	-4	200	125	EV8308G086 ①	2	Stainless Steel	No Voltage Release (NVR)	10.1/F	-
3/8	1/4	0.45	25	125	125	-4	200	125	EV8310G086 ①	2	Stainless Steel	Electrically Tripped (TSO)	10.1/F	-

① ATEX/IECEx certified with prefix "EV".

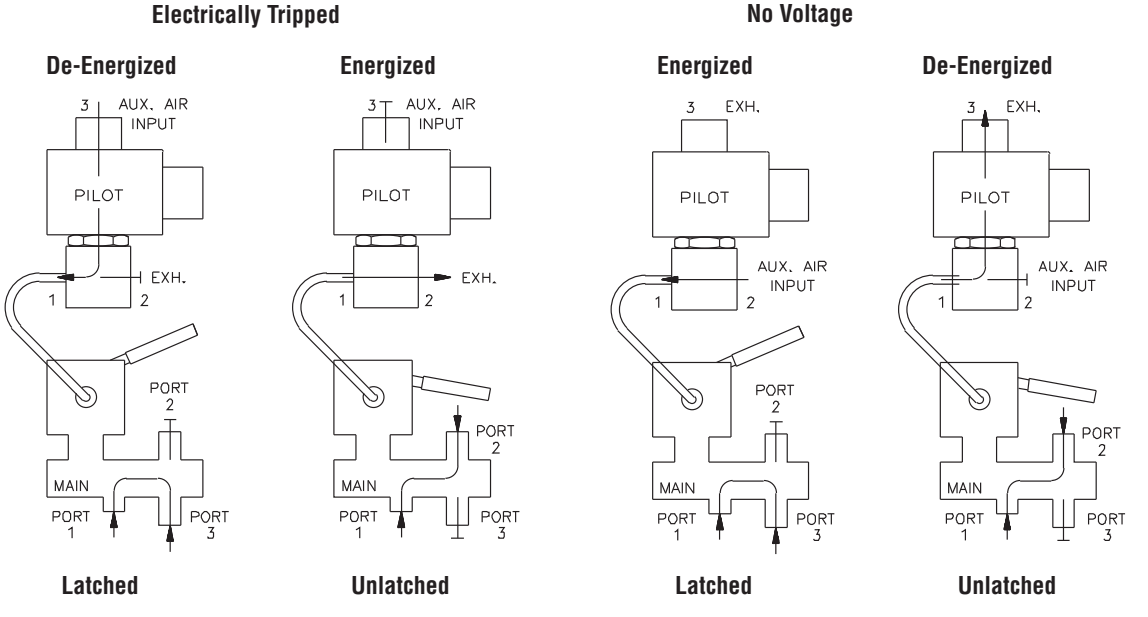
Specifications (Metric units)

Pipe Size (in)	Orifice Size (in)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)			Fluid Temp. °C		Max. Ambient Temp. °F	Catalog Number	Const. Ref.	Body Material	Pilot Construction	Watt Rating/ Class of Coil Insulation per Solenoid	
			Pilot Min.	Pilot Max.	Main Max.	Min.	Max.						AC	DC
3/2 High-Shock Manual Reset Valves														
3/8	1/4	0.39	1.7	9	9	-40	60	60	EV8308G385 ①	1	Brass	No Voltage Release (NVR)	-	1.4/F
3/8	1/4	0.39	1.7	9	9	-40	60	60	EV8310G385 ①	1	Brass	Electrically Tripped (TSO)	-	1.4/F
3/8	1/4	0.39	1.7	9	9	-20	93	52	EV8308G085 ①	1	Brass	No Voltage Release (NVR)	10.1/F	-
3/8	1/4	0.39	1.7	9	9	-20	93	52	EV8310G085 ①	1	Brass	Electrically Tripped (TSO)	10.1/F	-
3/8	1/4	0.39	1.7	9	9	-40	60	60	EV8308G386 ①	2	Stainless Steel	No Voltage Release (NVR)	-	1.4/F
3/8	1/4	0.39	1.7	9	9	-40	60	60	EV8310G386 ①	2	Stainless Steel	Electrically Tripped (TSO)	-	1.4/F
3/8	1/4	0.39	1.7	9	9	-20	93	52	EV8308G086 ①	2	Stainless Steel	No Voltage Release (NVR)	10.1/F	-
3/8	1/4	0.39	1.7	9	9	-20	93	52	EV8310G086 ①	2	Stainless Steel	Electrically Tripped (TSO)	10.1/F	-

① ATEX/IECEx certified with prefix "EV".

SPECIAL SERVICE PILOT

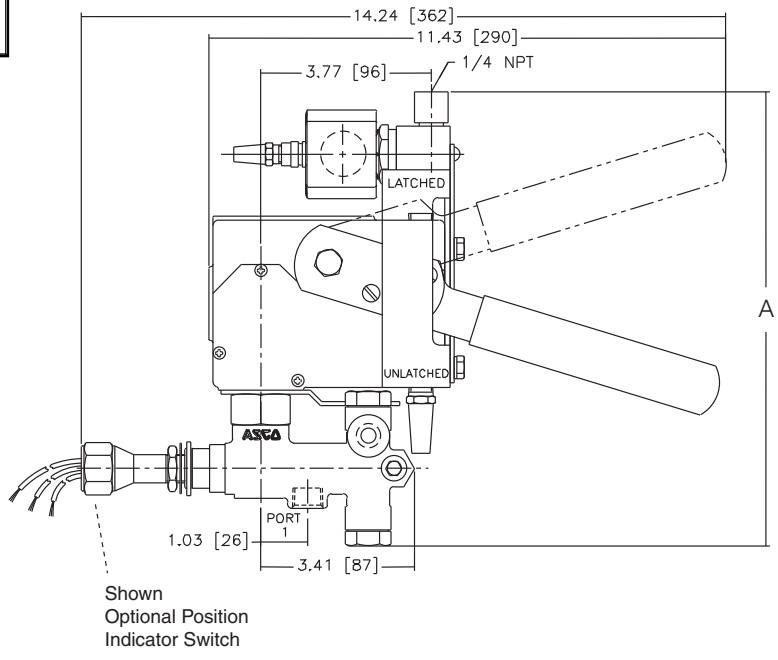
Flow Diagrams

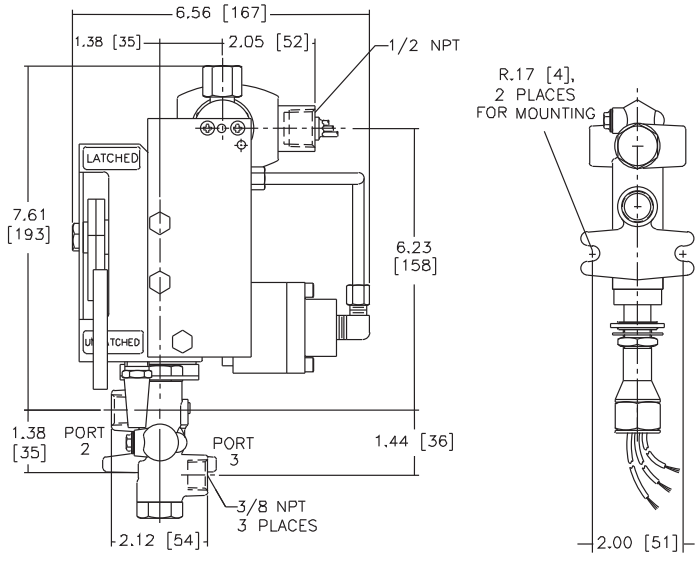


Dimensions inches (mm)

Const. Ref.		A	Body Material
1	in	10.04	Brass
	mm	255	
2	in	11.83	Stainless Steel
	mm	301	

Const. Ref. 1, 2





IMPORTANT: Mount with manual reset assembly vertical and upright.

SPECIAL SERVICE PILOT

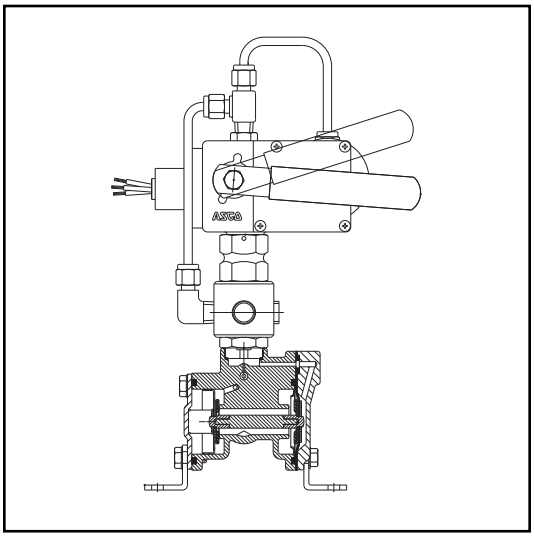
Tamperproof High-Shock Manual Reset Valves

Stainless Steel Bodies
1/4" and 1/2" NPT

Features

- Designed to keep the valve in the shut-off position when the solenoid is de-energized, even if the handle is lifted. The valve will not be in the open position until the solenoid is energized and auxiliary air is present.
- Once the solenoid is de-energized, it requires power to be restored to the solenoid then the valve to be manually reset. Ideal for controlling critical processes
- Designed to meet vibration and/or shock per ISA specification S71.03C2
- Handles aggressive atmosphere per salt resistance testing (ASTM B117)
- Most hardware is stainless steel, and all aluminum components are hard anodized and Nituff® coated

Nituff is a registered trademark of Nimet Industries, Inc.



Construction

Valve Parts in Contact with Fluids		
Main Valve		
Body	316 Stainless Steel	
Springs	302 Stainless Steel	
Seals	NBR / FKM	
Air Operator Diaphragm	FMQ	
Pilot Valve	**AC 10.1 W**	**DC 1.4 W**
Body	303 Stainless Steel	303 Stainless Steel
Shading Coil	Silver	NA
Seals	NBR	NBR / PTFE
Core Tube	305 Stainless Steel	305 Stainless Steel
Core and Plugnut	430F Stainless Steel	430F Stainless Steel
Core Guide	CA	CA
Core Springs	302 Stainless Steel	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	25	76	238610	238710	238614	238714
F	1.4	-	-	-	-	-	274714-902-D*	

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 12, 24 volts DC.
Must be specified when ordering.
* 24 VDC. *For other voltages contact factory.*

Solenoid Enclosures

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

Approvals

CSA certified and UL listed General Purpose Valve (solenoid only).

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

Options

Position indicator switch (suffix SP);
Redundant pilot valves.
Contact factory for ordering information.

Operation Alternatives

No Voltage Release – With the pilot valve solenoid energized, the handle is raised manually and latches the operator in the "up" (latched) position. Upon loss of voltage, the latch is tripped returning the operator to the "down" (unlatched) position. If auxiliary air supply to the pilot valve is lost, the main valve will shift position.

Moving the handle while the valve is in the tripped state will not cause the actuator/process valve to shift.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Fluid Temp. °F		Max. Ambient Temp. ˚F	Catalog Number	Const. Ref.	Body Material	Pilot Construction	Watt Rating/ Class of Coil Insulation per Solenoid	
			Pilot Min.	Pilot Max.	Main Max.	Min.	Max.						AC	DC
3/2 Tamperproof High-Shock Manual Reset Valves														
1/4	5/16	1.5	25	125	150	-4	180	125	EV8308G060 ①	1	Stainless Steel	No Voltage Release (NVR)	10.1/F	-
1/4	5/16	1.5	25	125	150	-4	140	140	EV8308G360 ①	1	Stainless Steel	No Voltage Release (NVR)	-	1.4/F
1/2	5/8	4	25	125	150	-4	180	125	EV8308G061 ①	2	Stainless Steel	No Voltage Release (NVR)	10.1/F	-
1/2	5/8	4	25	125	150	-4	140	140	EV8308G361 ①	2	Stainless Steel	No Voltage Release (NVR)	-	1.4/F

① ATEX/IECEx certified with prefix "EV".

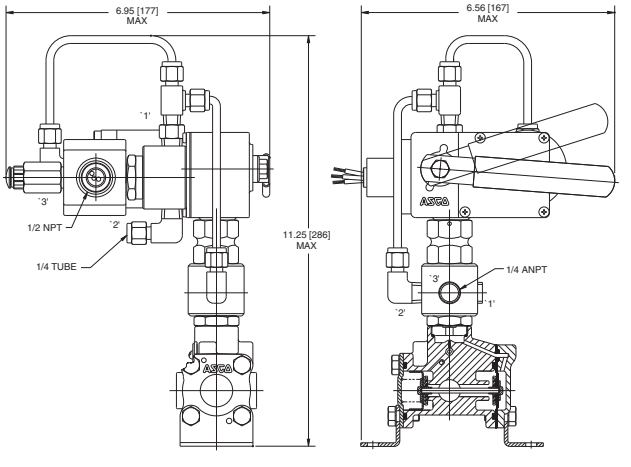
Specifications (Metric units)

Pipe Size (in)	Orifice Size (in)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)			Fluid Temp. °C		Max. Ambient Temp. ˚C	Catalog Number	Const. Ref.	Body Material	Pilot Construction	Watt Rating/ Class of Coil Insulation per Solenoid	
			Pilot Min.	Pilot Max.	Main Max.	Min.	Max.						AC	DC
3/2 Tamperproof High-Shock Manual Reset Valves														
1/4	5/16	1.3	1.7	9	10	-20	82	52	EV8308G060 ①	1	Stainless Steel	No Voltage Release (NVR)	10.1/F	-
1/4	5/16	1.3	1.7	9	10	-20	60	60	EV8308G360 ①	1	Stainless Steel	No Voltage Release (NVR)	-	1.4/F
1/2	5/8	3.4	1.7	9	10	-20	82	52	EV8308G061 ①	2	Stainless Steel	No Voltage Release (NVR)	10.1/F	-
1/2	5/8	3.4	1.7	9	10	-20	60	60	EV8308G361 ①	2	Stainless Steel	No Voltage Release (NVR)	-	1.4/F

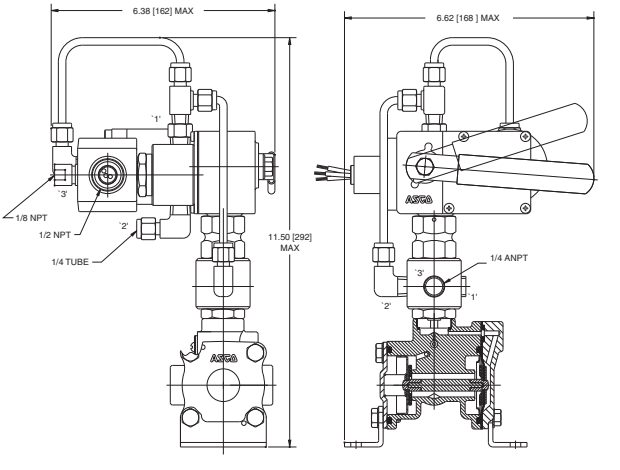
① ATEX/IECEx certified with prefix "EV".

Dimensions Inches (mm)

Const. Ref. 1



Const. Ref. 2



Special Service Pilot Valves

ASCO has a complete line of 3 and 4-way pilot valves to meet these stringent demands. From harsh offshore platforms to the clean corridors of biotech manufacturing, ASCO has the pilot valve for your application. In this section, you will find the most complete line of low power, intrinsically safe, and non-incendive pilot valves in the world.

If you cannot find the pilot valve you are looking for, please try our website at www.ascovalve.com and click on process control pilot valves.

Index

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Because Time Matters

ASCO Today delivers the great products you need, when you need them.
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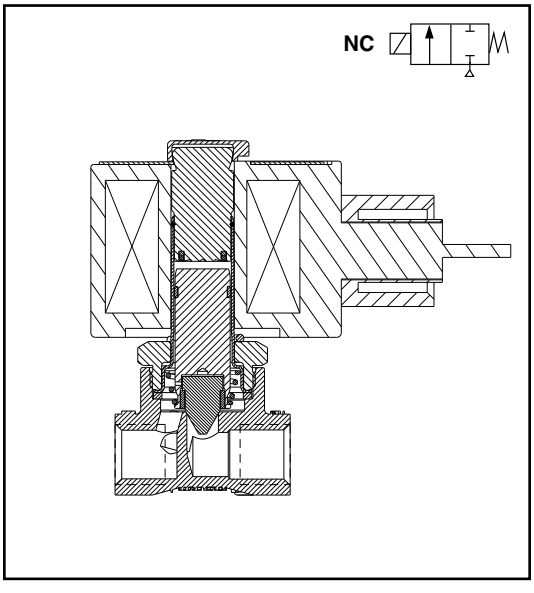
Products may vary in Canada, please call 1-519-758-2700 to check availability of specific catalog numbers.

For more information on how you can have the ASCO products you want when you want them, visit us online to see our complete listing of ASCO Today products or call 1-800-972-2726.

 ASCO Today is registered in the United States.

Features

- "LT" suffix valves are built to control cryogenic fluids, including liquid nitrogen (-320˚F/-194˚C), liquid argon (-303˚F/-184˚C), and liquid oxygen (-297˚F/-181˚C)
- All suffix "LT" valves are degreased, cleaned, tested free of moisture, and black light tested for hydrocarbons
- Liquid CO_2 valves are suitable for remote mounting or for direct mounting to the refrigerated component by using four-hole bracket, provided



Construction

Valve Parts in Contact with Fluids	
Body: Cryogenic Valves	Brass
Body: LCO_2 Valves	Nickel-Plated Brass
Seals	PTFE and/or Clad Copper/UR
Disc	PTFE/UR (8264 only)
Core and Plugnut	430F Stainless Steel or 49 FM Alloy
Core Spring	302 Stainless Steel
Shading Coil	Copper
Seats	Stainless Steel (8264 Series)

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	23	47	238610	238710	238614	238714
F	18.6	13.8	27	43	238210	238310	238214	238314
F	-	17.1	34	64	238610	-	238614	-
H	40.6	17.1	34	64	238810	238910	238814	238914

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Fluid Temp. Ranges

AC Cryogenic Valves: -320˚F to 150˚F (-196˚C to 66˚C)
DC Cryogenic Valves: -320˚F to 120˚F (-196˚C to 49˚C)
All Liquid CO_2 Valves: -75˚F to 120˚F (-59˚C to 49˚C)
Refer to Engineering Section for details.

Nominal Ambient Temp. Ranges

AC Construction: -40˚F to 125˚F (-40˚C to 52˚C)
8262/8263 Series: -40˚F to 131˚F (-40˚C to 55˚C)
DC Construction: -40˚F to 104˚F (-40˚C to 40˚C)
8262/8263 Series: -40˚F to 131˚F (-40˚C to 55˚C)
Refer to Engineering Section for details.

Approvals

CSA certified. UL listed as indicated.
Meets applicable CE directives.
Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)				Catalog Number	Const. Ref.	UL Listed ③	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC ②	Max. DC @ 104˚F	Max. DC @ 131˚F				AC	DC
CRYOGENIC SERVICE - NORMALLY CLOSED (Closed when de-energized)											
1/8	1/8	0.35	0	155	75	68	8263H240LT	1	●	10.1/F	11.6/H
1/8	1/8	0.35	0	250	130	120	8262H105LT	1	●	17.1/F	22.6/H
1/4	1/8	0.35	0	155	75	68	8262H232LT	1	●	10.1/F	11.6/H
1/4	1/8	0.35	0	250	130	120	8262H110LT	1	●	17.1/F	22.6/H
1/4	7/32	0.73	0	48	30	22	8262H208LT	1	●	10.1/F	11.6/H
1/4	7/32	0.73	0	100	42	40	8262H114LT	1	●	17.1/F	22.6/H
1/4	9/32	0.88	0	40	18	14	8262H210LT	1	●	10.1/F	11.6/H
1/4	9/32	0.88	0	58	27	18	8262H212LT	1	●	17.1/F	22.6/H
3/8	1/8	0.35	0	155	75	68	8263H232LT	2	●	10.1/F	11.6/H
3/8	1/8	0.35	0	250	130	120	8263H115LT	2	●	17.1/F	22.6/H
3/8	7/32	0.73	0	48	30	22	8263H124LT	2	●	10.1/F	11.6/H
3/8	7/32	0.73	0	90	42	40	8263H206LT	2	●	17.1/F	22.6/H
3/8	9/32	0.88	0	40	18	14	8263H125LT	2	●	10.1/F	11.6/H
3/8	9/32	0.88	0	58	27	18	8263H210LT	2	●	17.1/F	22.6/H
1/2	5/8	3.8	0	90	50	-	8222G002LT	3	-	17.1/H	40.6/H
3/4	3/4	5.8	0	90	50	-	8222G003LT	3	-	17.1/H	40.6/H
1	1	13.5	5	200	100	-	8210G078LT	4	-	17.1/F	40.6/H
1 1/4	1 1/8	15	5	200	100	-	8210G080LT	5	-	17.1/F	40.6/H
1 1/2	1 1/4	22.5	5	200	100	-	8210G082LT	6	-	17.1/F	40.6/H
LIQUID CO_2 SERVICE - NORMALLY CLOSED (Closed when de-energized)											
1/8	3/64	.06	0	1000	1000	-	8264G009 ①	7	-	13.8/F	18.6/F
1/8	3/32	.20	0	300	300	-	8264G010 ①	7	-	13.8/F	18.6/F

① Must use tubing with an I.D. no larger than the outlet port orifice to locate the refrigeration point downstream and to prevent freezing of the CO_2 inside the valve.
② For 8262 & 8263 Series, AC pressure ratings are at 131˚F ambinet; for all other series, AC pressure ratings are at 125˚F. ③ ● General purpose valve.

Specifications (Metric units)

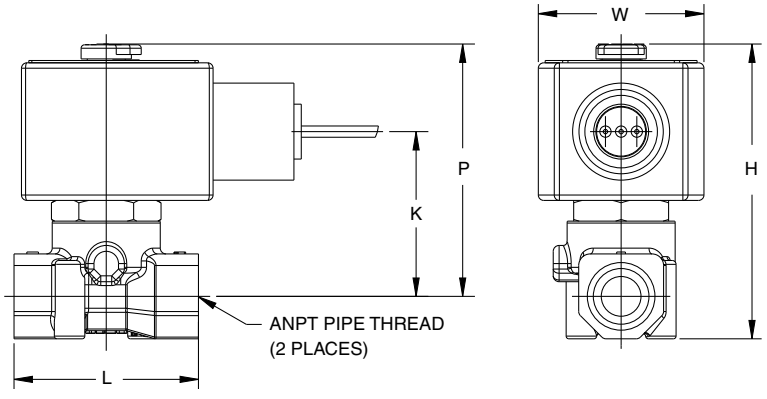
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/hr)	Operating Pressure Differential (bar)				Catalog Number	Const. Ref.	UL Listed ③	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC ②	Max. DC @ 40˚C	Max. DC @ 55˚C				AC	DC
CRYOGENIC SERVICE - NORMALLY CLOSED (Closed when de-energized)											
1/8	3.2	0.30	0	11	5	5	8263H240LT	1	●	10.1/F	11.6/H
1/8	3.2	0.30	0	17	9	8	8262H105LT	1	●	17.1/F	22.6/H
1/4	3.2	0.30	0	11	5	5	8262H232LT	1	●	10.1/F	11.6/H
1/4	3.2	0.30	0	17	9	8	8262H110LT	1	●	17.1/F	22.6/H
1/4	5.6	0.63	0	3	2	2	8262H208LT	1	●	10.1/F	11.6/H
1/4	5.6	0.63	0	7	3	3	8262H114LT	1	●	17.1/F	22.6/H
1/4	7.0	0.76	0	3	1	1	8262H210LT	1	●	10.1/F	11.6/H
1/4	7.0	0.76	0	4	2	1	8262H212LT	1	●	17.1/F	22.6/H
3/8	3.2	0.30	0	11	5	5	8263H232LT	2	●	10.1/F	11.6/H
3/8	3.2	0.30	0	17	9	8	8263H115LT	2	●	17.1/F	22.6/H
3/8	5.6	0.63	0	3	2	2	8263H124LT	2	●	10.1/F	11.6/H
3/8	5.6	0.63	0	6	3	3	8263H206LT	2	●	17.1/F	22.6/H
3/8	7.0	0.76	0	3	1	1	8263H125LT	2	●	10.1/F	11.6/H
3/8	7.0	0.76	0	4	2	1	8263H210LT	2	●	17.1/F	22.6/H
1/2	16	3.2	0	6	3	-	8222G002LT	3	-	17.1/H	40.6/H
3/4	19	5	0	6	3	-	8222G003LT	3	-	17.1/H	40.6/H
1	25	11.6	5	14	7	-	8210G078LT	4	-	17.1/F	40.6/H
1 1/4	29	13	5	14	7	-	8210G080LT	5	-	17.1/F	40.6/H
1 1/2	32	19	5	14	7	-	8210G082LT	6	-	17.1/F	40.6/H
LIQUID CO_2 SERVICE - NORMALLY CLOSED (Closed when de-energized)											
1/8	1	.05	0	69	69	-	8264G009 ①	7	-	13.8/F	18.6/F
1/8	2	.17	0	21	21	-	8264G010 ①	7	-	13.8/F	18.6/F

① Must use tubing with an I.D. no larger than the outlet port orifice to locate the refrigeration point downstream and to prevent freezing of the CO_2 inside the valve.
② For 8262 & 8263 Series, AC pressure ratings are at 55˚C ambinet; for all other series, AC pressure ratings are at 52˚C. ● General purpose valve.

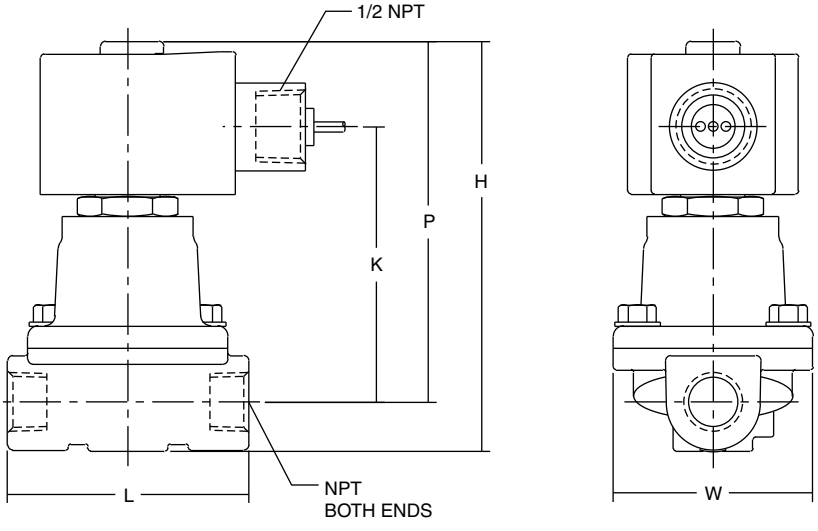
Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.16	1.81	1.56	2.81	1.95
	mm	77	46	40	71	50
2	in	3.23	1.81	1.88	2.81	1.95
	mm	82	46	48	71	50
3	in	4.67	3.15	2.75	4.11	1.95
	mm	119	80	70	104	50
4	in	5.82	3.22	3.75	4.19	4.44
	mm	148	82	95	106	113
5	in	5.82	3.22	3.66	4.19	4.86
	mm	148	82	93	106	123
6	in	6.29	3.37	4.38	4.34	5.81
	mm	160	86	111	110	148
7	in	2.82	1.27	Ø1.12	2.13	1.69
	mm	72	32	Ø28	54	43
IMPORTANT: Valves may be mounted in any position.						
8222G002LT 8222G003LT	Mount vertical and upright.					

Const. Ref. 1, 2



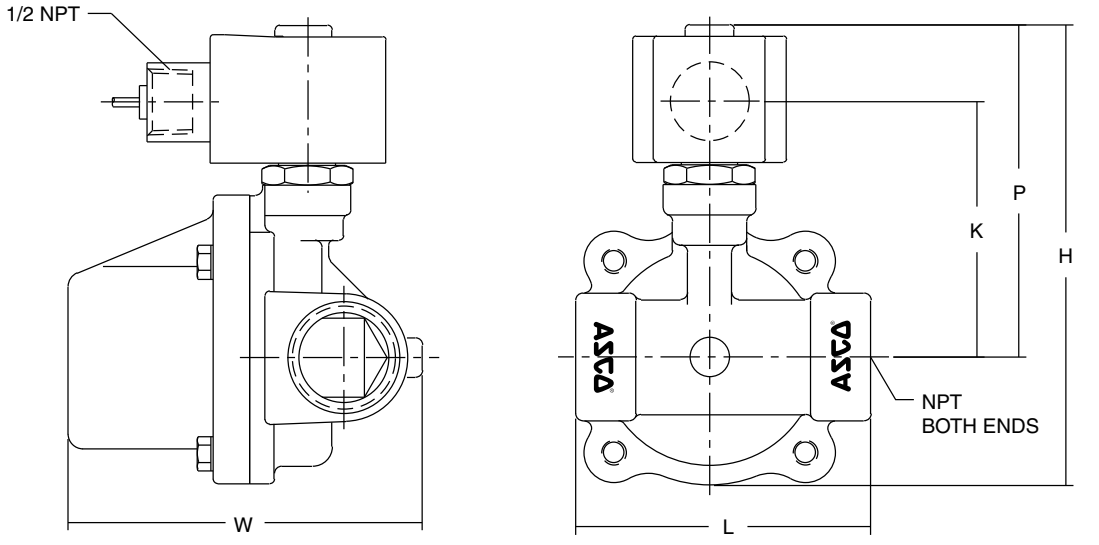
Const. Ref. 3



SPECIAL SERVICE VALVES

Dimensions inches (mm)

Const. Ref. 4, 5, 6



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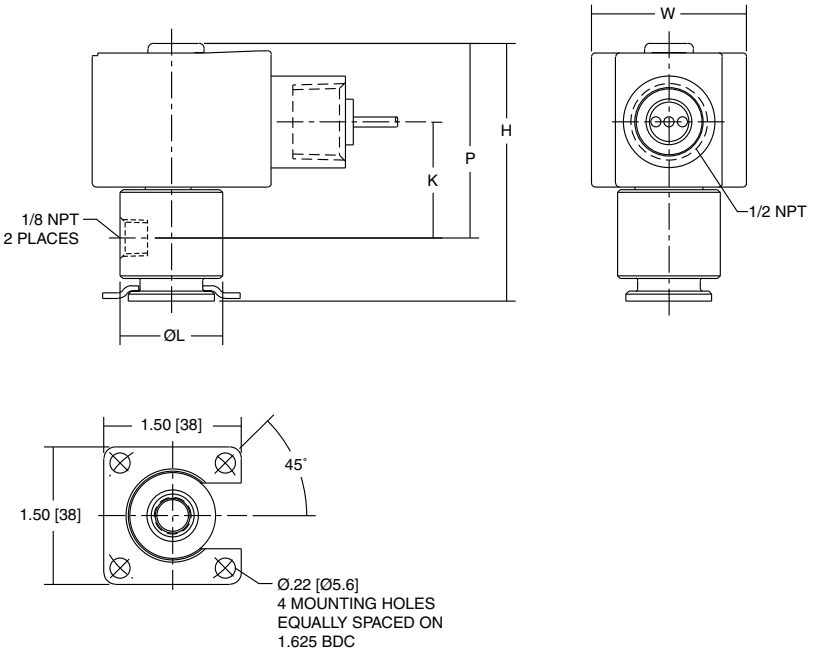
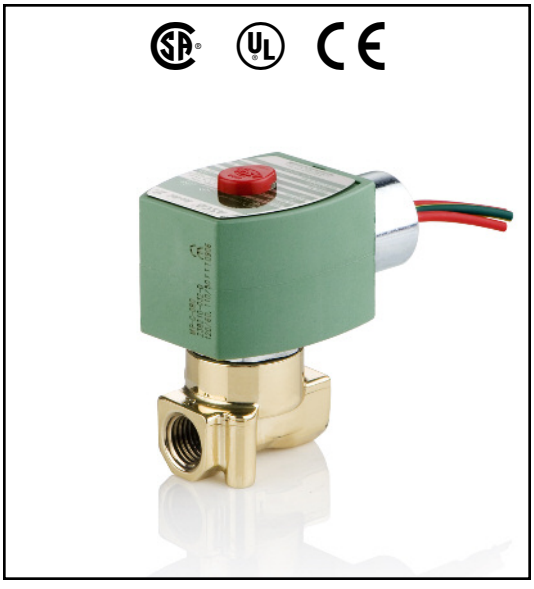
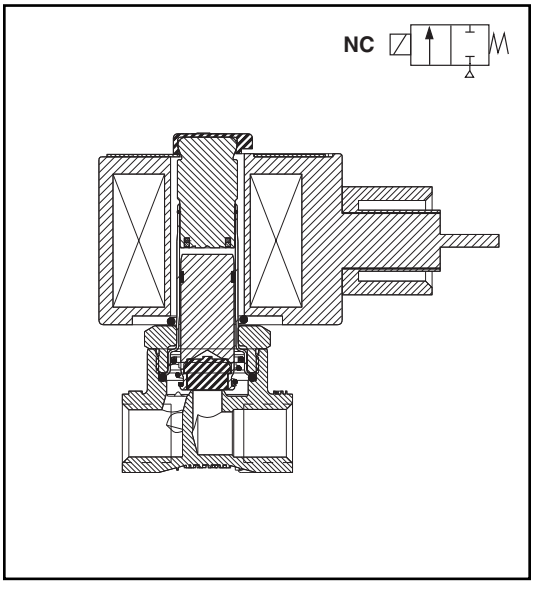


Features

- 2-way normally closed operation
- Pressures up to 540 psi
- UL and CSA agency approvals
- Suitable for low ambient environments (-13˚F standard, -40˚F optional)





Construction

Valve Parts in Contact with Fluids		
Body	Brass	Cast 304 Stainless Steel
Seals and Discs	NBR	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Guide	Acetel	
Rider Ring	PTFE	
Springs	Inconel 600	
Shading Coil	Copper	Silver

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part No.	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	10.1	25	50	238610	238614
F	17.1	40	70	238610	238614

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

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Options

Panel Mount (prefix GP)

Mounting bracket (suffix MB)

Vacuum Service (suffix VH; *see Vacuum Section for more details.*)

Silicone Free Service (suffix SF)

Elastomers: FKM (suffix V), Low Temp. NBR (suffix A)

Refer to Engineering Section for fluid and temperature compatibility.

Nominal Ambient Temp. Ranges

Standard: -13˚F to 131˚F (-25˚C to 55˚C)*
*Max ambient for explosionproof (EF) is 125˚F (52˚C)

Optional: For AC, the max. ambient temp. is 140˚F (60˚C) with Class H coil (with or without prefix EF)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed, Safety Shutoff Valves.
Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. ˚F	Catalog Number		Const. Ref.	UL Listing	Watt Rating/ Class of Coil Insulation
			Min.	Max. AC		Brass	Stainless Steel			
Dry Air										
1/4	3/32	0.21	0	540	180	8262H109P	8262H183P	1	❍	17.1/F
1/4	3/32	0.21	0	380	180	8262H108P	8262H182P	1	❍	10.1/F
1/4	1/8	0.35	0	325	180	8262H110P	8262H185P	1	❍	17.1/F
1/4	1/8	0.35	0	265	180	8262H232P	8262H184P	1	❍	10.1/F
1/4	5/32	0.60	0	175	180	8262H112P	8262H187P	1	❍	17.1/F
1/4	5/32	0.60	0	140	180	8262H202P	8262H220P	1	❍	10.1/F
1/4	7/32	0.87	0	125	180	8262H114P	8262H188P	1	❍	17.1/F
1/4	7/32	0.87	0	90	180	8262H208P	8262H226P	1	❍	10.1/F
1/4	9/32	1	0	75	180	8262H212P	8262H230P	1	❍	17.1/F
1/4	9/32	1	0	50	180	8262H210P	8262H189P	1	❍	10.1/F

❍ = Safety Shutoff Valve

Specifications (Metric units)

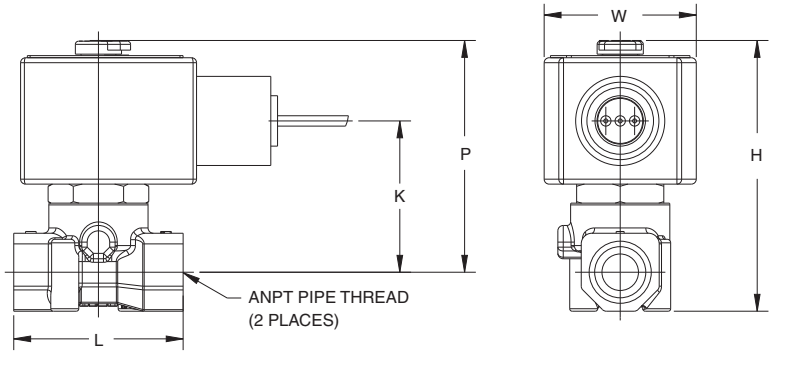
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Max. Fluid Temp. ˚C	Catalog Number		Const. Ref.	UL Listing	Watt Rating/ Class of Coil Insulation
			Min.	Max. AC		Brass	Stainless Steel			
Dry Air										
1/4	2.4	0.18	0	37	82	8262H109P	8262H183P	1	❍	17.1/F
1/4	2.4	0.18	0	26	82	8262H108P	8262H182P	1	❍	10.1/F
1/4	3.2	0.30	0	22	82	8262H110P	8262H185P	1	❍	17.1/F
1/4	3.2	0.30	0	18	82	8262H232P	8262H184P	1	❍	10.1/F
1/4	4.0	0.52	0	12	82	8262H112P	8262H187P	1	❍	17.1/F
1/4	4.0	0.52	0	10	82	8262H202P	8262H220P	1	❍	10.1/F
1/4	5.6	0.75	0	9	82	8262H114P	8262H188P	1	❍	17.1/F
1/4	5.6	0.75	0	6	82	8262H208P	8262H226P	1	❍	10.1/F
1/4	7.1	0.86	0	5	82	8262H212P	8262H230P	1	❍	17.1/F
1/4	7.1	0.86	0	3	82	8262H210P	8262H189P	1	❍	10.1/F

❍ = Safety Shutoff Valve

Dimensions: inches (mm)

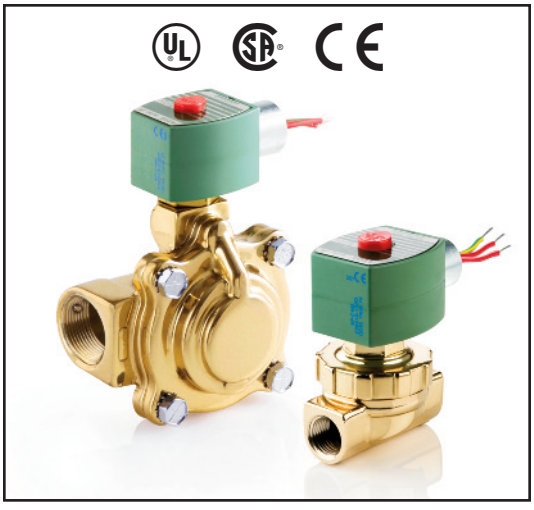
Const. Ref.		H	K	L	P	W
1	ins	3.12	1.77	1.56	2.76	1.95
	mm	79	45	40	70	50

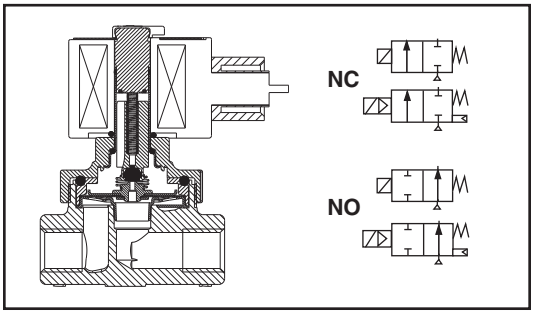
Const. Ref. 1



Features

- Hot water service to 210 psi differential @ 210˚F; Steam sevice to 125 psi differential @ 353˚F
- Specify these valves for the high-temperature applications found in laundries, molding, steam atomization, sterilizers, autoclaves, and many others
  - Series 8263: direct acting miniature valves
  - Series 8267: direct acting straight-through, self-cleaning design
  - Series 8210/8220: pilot operated diaphragm valves
  - Lead-free versions available on 8210 Hot Water valves for Safe Drinking Water Act compliance
  - Series 8220: pilot operated diaphragm and piston valves; floating PTFE diaphragms or stainless steel pistons with EPDM or PTFE discs, available in both AC & DC voltages
  - Series 8221: slow-closing, anti-water hammer design
  - Series 8222: pilot operated diaphragm and piston valves. Y-body floating piston design





Construction

Valve Parts in Contact with Fluids		
Common Parts		
Body	Brass	Stainless Steel
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
8210HW Series		
Seals, Discs, and Diaphragms	EPDM	
8263 Series		
Seals	EPDM or PTFE	
Disc	EPDM or PTFE	
8220/8221 Series		
Piston/Diaphragm	Stainless Steel/PTFE	
Discs	EPDM or PTFE	
Seals	EPDM, PTFE or TFE/P	
8222 Series		
Seals, Discs, and Diaphragms	TFE/P, EPDM and/or PTFE	
Piston	Brass or PTFE	
8267 Series		
Seals	FKM, PTFE	
Disc	Stainless Steel	
Seat	Glass-Filled PTFE	

Electrical

Standard Coil and Class of Insulation	Const. Ref.	Watt Rating and Power Consumption				Spare Coil Part Number			
			AC			General Purpose		Explosionproof	
		DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	1,2,36,38,39, 40,41,42	-	6.1	16	30	238210	-	238214	-
F	4, 8, 33, 50	-	6.1	16	40	238210	-	238214	-
H	4	-	6.1	16	40	238410	-	238414	-
F	32-35	11.6	-	-	-	-	238710	-	238714
F	5,7,10,14,15, 28,30,32,34, 51,52,53	-	10.1	25	70	238610	-	238614	-
F	16,17,18	-	10.1	25	50	238610	-	238614	-
H	3,31	-	10.1	25	50	238810	-	238814	-
H	9,12,14,51, 52,53	-	10.1	25	70	238810	-	238814	-
H	51-52	15.6	-	-	-	-	238910	-	238914
F	21-27,43-49	-	16.1	35	95	272610	-	272614	-
H	21-27	-	16.1	35	95	272810	-	272814	-
H	19-20	-	16.1	35	180	272810	-	272814	-
H	3,31	-	17.1	40	70	238810	-	238814	-
H	6,11,29	-	17.1	40	93	238810	-	238814	-
H	13	-	28.2	55	220	224195	-	224195	-

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; Red-Hat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

RedHat II AC: 32˚F to 125˚F (0˚C to 52˚C)

For 8263 Steam/Hot Water Series
RedHat II AC: 32˚F to 131˚F (0˚C to 55˚C)

For 8210 Hot Water Series
RedHat II DC: 32˚F to 104˚F (0˚C to 40˚C)

For 8220 Steam/Hot Water Series
RedHat II DC: 32˚F to 125˚F (0˚C to 52˚C)

Refer to Engineering Section for details.

Approvals

Most are UL listed, CSA certified, and meet applicable CE directives. *Contact ASCO for details.*

Important: Explosionproof Catalog Numbers EF8210HW, EF8220, EF8221HW, and EF8263 (except H300-306) are not UL listed. They are suitable for Types 4 & 7 (A-D), and 9 (E, F, & G for Class F; E for class H coils) only, and have a temperature range code of T3B (Class F) or T3A (Class H).

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Hot Water Min.	Max. AC	Max. DC	Max. Fluid Temp. ˚F Hot Water AC	DC	Brass Body Catalog Number	Const. Ref.	AC Watt Rating/ Class of Coil Insulation AC	DC
HOT WATER SERVICE ONLY - NORMALLY CLOSED (Closed when de-energized), EPDM Diaphragm											
3/8	5/8	3	0 ②	100	40	210	150	8210G093HW	32	10.1/F	11.6/F
3/8	5/8	3	5	125	100	210	150	8210G001HW	33	6.1/F	11.6/F
1/2	5/8	4	0 ②	100	40	210	150	8210G094HW ♦	32	10.1/F	11.6/F
1/2	5/8	4	5	125	100	210	150	8210G002HW ♦	33	6.1/F	11.6/F
3/4	3/4	5	0 ②	100	40	210	150	8210G095HW ♦	34	10.1/F	11.6/F
3/4	3/4	5	5	125	100	210	150	8210G009HW ♦	35	6.1/F	11.6/F
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY CLOSED (Closed when de-energized), EPDM Disc											
3/8	9/16	3	5 ①	150	-	210	-	8221G001HW	36	6.1/F	-
1/2	9/16	3.5	5 ①	150	-	210	-	8221G003HW	36	6.1/F	-
3/4	3/4	5.5	5 ①	150	-	210	-	8221G005HW	36	6.1/F	-
1	1	11.5	5 ①	150	-	210	-	8221G007HW	38	6.1/F	-
1 1/4	1 1/8	13	5 ①	150	-	210	-	8221G009HW	39	6.1/F	-
1 1/2	1 1/4	24	5 ①	150	-	210	-	8221G011HW	40	6.1/F	-
2	1 3/4	36	5 ①	150	-	210	-	8221G013HW	41	6.1/F	-
2 1/2	1 3/4	38	5 ①	150	-	210	-	8221G015HW ④	42	6.1/F	-
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY OPEN (Open when de-energized), EPDM Disc											
3/8	9/16	3	5 ①	150	-	210	-	8221G021HW	43	16.1/F	-
1/2	9/16	3.5	5 ①	150	-	210	-	8221G023HW	43	16.1/F	-
3/4	3/4	5.5	5 ①	150	-	210	-	8221G025HW	44	16.1/F	-
1	1	11.5	5 ①	150	-	210	-	8221G027HW	45	16.1/F	-
1 1/4	1 1/8	13	5 ①	150	-	210	-	8221G029HW	46	16.1/F	-
1 1/2	1 1/4	24	5 ①	150	-	210	-	8221G031HW	47	16.1/F	-
2	1 3/4	36	5 ①	150	-	210	-	8221G033HW	48	16.1/F	-
2 1/2	1 3/4	38	5 ①	150	-	210	-	8221G035HW ④	49	16.1/F	-

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Min.	Max. AC Steam	Max. AC Hot Water	Max. DC Steam	Max. DC Hot Water	Max. Fluid Temp. ˚F AC Steam	AC Hot Water	DC Steam	DC Hot Water	Brass Body Catalog Number	Const. Ref.	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/Class of Coil Insulation AC	DC
STEAM/HOT WATER SERVICE - DIRECT ACTING - NORMALLY CLOSED (Closed when de-energized), Stainless Steel Seat, EPDM ③, or PTFE Disc																	
1/4	1/8	0.35	0	50	150	-	-	298	210	-	-	8263H053 ③	1	-	-	6.1/H	-
1/4	1/8	0.35	0	90	150	-	-	331	210	-	-	8263H059	1	-	-	6.1/H	
1/4	5/32	0.52	0	110	210	-	-	344	210	-	-	8263H300	2	-	-	10.1/H	-
1/4	7/32	0.73	0	70	95	-	-	316	210	-	-	8263H301	2	-	-	10.1/H	-
1/4	9/32	0.88	0	60	60	-	-	307	210	-	-	8263H303	2	-	-	17.1/H	-
3/8	1/8	0.35	0	125	210	-	-	353	210	-	-	8263H304	3	8263H318	3	10.1/H	-
3/8	5/32	0.52	0	110	200	-	-	344	210	-	-	8263H305	3	8263H319	3	10.1/H	-
3/8	7/32	0.85	0	70	95	-	-	316	210	-	-	8263H306	3	8263H320	3	10.1/H	-
3/8	9/32	1.0	0	60	60	-	-	307	210	-	-	8263H308	3	8263H321	3	17.1/H	-
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																	
1/4	3/8	1.2	1	80	-	-	-	324	-	-	-	8222G068	4	-	-	6.1/F	-
1/4	3/8	1.2	1	125	-	-	-	353	-	-	-	8222G070	4	-	-	6.1/H	-
3/8	3/8	2.5	1	80	-	-	-	324	-	-	-	8222G064	4	-	-	6.1/F	-
3/8	3/8	2.5	1	125	-	-	-	353	-	-	-	8222G074	4	-	-	6.1/H	-
3/8	1/2	4.4	5	50	150	-	-	300	210	-	-	8220G401	50	-	-	6.1/F	-
3/8	1/2	4.4	0	50	150	50	100	300	210	300	210	8220G402	51	-	-	10.1/F	15.6/H
3/8	1/2	4.4	5	125	150	110	150	353	210	344	210	8220G403 ⑥	51	-	-	10.1/H	15.6/H
3/8	5/8	3.0	5	50	150	-	-	300	210	-	-	8222G001	5	-	-	10.1/F	-
1/2	3/8	2.5	1	80	-	-	-	324	-	-	-	8222G066	4	-	-	6.1/F	-
1/2	3/8	2.5	1	125	-	-	-	353	-	-	-	8222G076	4	-	-	6.1/H	-
1/2	1/2	3.6	2	125	-	-	-	353	-	-	-	8222G047	9	-	-	10.1/H	-
1/2	5/8	4.0	0	50	-	-	-	300	-	-	-	8222G094	7	8222G060	28	10.1/F	-
1/2	5/8	4.0	0	125	-	-	-	353	-	-	-	8222G002	6	-	-	17.1/H	-
1/2	1/2	4.7	5	50	150	-	-	300	210	-	-	8220G404	50	-	-	6.1/F	-
1/2	1/2	4.7	0	50	150	50	100	300	210	300	210	8220G405	51	-	-	10.1/F	15.6/H
1/2	1/2	4.7	5	125	150	110	150	353	210	344	210	8220G406 ⑥	51	-	-	10.1/H	15.6/H

Specifications (English units continued)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)					Max. Fluid Temp. ˚F				Brass Body		Stainless Steel Body		Watt Rating/Class of Coil Insulation	
			Min.	Max. AC		Max. DC		AC		DC							
				Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																	
3/4	5/8	4.5	0	50	-	-	-	300	-	-	-	-	-	8222G062	28	10.1/F	-
3/4	5/8	4.5	0	125	-	-	-	353	-	-	-	-	-	8222G088	29	17.1/H	-
3/4	3/4	5.0	0	50	-	-	-	300	-	-	-	8222G095 ♦	10	-	-	10.1/F	-
3/4	3/4	8.8	5	50	150	-	-	300	210	-	-	8220G407	8	-	-	6.1/F	-
3/4	3/4	8.8	0	50	150	50	100	300	210	300	210	8220G408	52	-	-	10.1/F	15.6/H
3/4	3/4	8.8	5	125	150	110	150	353	210	344	210	8220G409 ⑥	52	-	-	10.1/H	15.6/H
3/4	3/4	5.0	0	125	-	-	-	353	-	-	-	8222G003	11	-	-	17.1/H	-
3/4	1/2	4.6	2	125	-	-	-	353	-	-	-	8222G049	9	-	-	10.1/H	-
3/4	1/2	4.6	5	200	-	-	-	388	-	-	-	8222G005	12	-	-	10.1/H	-
1	1	11.2	5	125	-	-	-	353	-	-	-	-	-	8222G089	30	10.1/F	-
1	1	13.5	5 ①	50	150	-	-	300	210	-	-	8220G007	14	-	-	10.1/F	-
1	1	13.5	5 ①	125	150	-	-	353	210	-	-	8220G025	14	-	-	10.1/H	-
1	1	11.5	5	50	150	-	-	300	210	-	-	8220G410	53	-	-	10.1/F	-
1	1	11.5	5	125	150	-	-	353	210	-	-	8220G411 ⑥	53	-	-	10.1/H	-
1	1	13.0	0	200	-	-	-	388	-	-	-	8222 099 ⑦	13	-	-	28.2/H	-
1 1/4	1 1/8	15	5 ①	50	150	-	-	300	210	-	-	8220G009 ③	15	-	-	10.1/F	-
1 1/4	1 1/8	15	5 ①	125	150	-	-	353	210	-	-	8220G027	15	-	-	10.1/H	-
1 1/2	1 1/4	22.5	5 ①	50	150	-	-	300	210	-	-	8220G011 ③	16	-	-	10.1/F	-
1 1/2	1 1/4	22.5	5 ①	125	150	-	-	353	210	-	-	8220G029	16	-	-	10.1/H	-
2	1 3/4	43	5 ①	50	150	-	-	300	210	-	-	8220G013 ③	17	-	-	10.1/F	-
2	1 3/4	43	5 ①	125	150	-	-	353	210	-	-	8220G031	17	-	-	10.1/H	-
2 1/2	1 3/4	45	5 ①	50	150	-	-	300	210	-	-	8220G015 ③ ⑤	18	-	-	10.1/F	-
2 1/2	1 3/4	45	5 ①	125	150	-	-	353	210	-	-	8220G033 ⑤	18	-	-	10.1/H	-
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY CLOSED (Closed when de-energized)																	
3/8	1/4	1.5	0	75	-	-	-	320	-	-	-	8267G001	19	-	-	16.1/H	-
3/8	3/8	5.1	0	30	-	-	-	280	-	-	-	8267G003	19	-	-	16.1/H	-
1/2	1/4	1.4	0	75	-	-	-	320	-	-	-	8267G005	19	-	-	16.1/H	-
1/2	3/8	4.5	0	15	-	-	-	250	-	-	-	8267G007	19	-	-	16.1/H	-
3/4	3/8	5.4	0	30	-	-	-	280	-	-	-	8267G017	20	-	-	16.1/H	-
3/4	1/2	9.7	0	15	-	-	-	250	-	-	-	8267G019	20	-	-	16.1/H	-
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY OPEN (Open when de-energized)																	
3/8	1/4	1.5	0	75	-	-	-	320	-	-	-	8267G009	19	-	-	16.1/H	-
3/8	3/8	5.1	0	30	-	-	-	280	-	-	-	8267G011	19	-	-	16.1/H	-
1/2	1/4	1.4	0	75	-	-	-	320	-	-	-	8267G013	19	-	-	16.1/H	-
1/2	3/8	4.5	0	15	-	-	-	250	-	-	-	8267G015	19	-	-	16.1/H	-
3/4	3/8	5.4	0	25	-	-	-	267	-	-	-	8267G021	20	-	-	16.1/H	-
3/4	1/2	9.7	0	15	-	-	-	250	-	-	-	8267G023	20	-	-	16.1/H	-
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY OPEN (Open when de-energized)																	
3/8	9/16	3	5	125	150	-	-	353	210	-	-	8220G091	21	-	-	16.1/H	-
1/2	9/16	4	5	125	150	-	-	353	210	-	-	8220G093	21	-	-	16.1/H	-
3/4	3/4	5	5	125	150	-	-	353	210	-	-	8220G095	22	-	-	16.1/H	-
1	1	13.5	5	125	150	-	-	353	210	-	-	8220G097	23	-	-	16.1/H	-
1 1/4	1 1/8	15	5	125	150	-	-	353	210	-	-	8220G099	24	-	-	16.1/H	-
1 1/2	1 1/4	22.5	5	125	150	-	-	353	210	-	-	8220G101	25	-	-	16.1/H	-
2	1 3/4	43	5	125	150	-	-	353	210	-	-	8220G103	26	-	-	16.1/H	-
2 1/2	1 3/4	45	5	125	150	-	-	353	210	-	-	8220G105 ⑤	27	-	-	16.1/F	-

① Once opened at higher pressure, valve will remain open to 3 psi at inlet.
② 0 psi on AC construction, 1/4 psi on DC construction.
③ EPDM disc.
④ Not CSA certified.
⑤ Not CSA certified for water.
⑥ Ambient temperature range 32˚F - 140˚F; ⑦ Ambient temperature range 32˚F - 77˚F
♦ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

ASCO®

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Hot Water Min.	Max. AC	Max. DC	Max. Fluid Temp. °C Hot Water AC	DC	Brass Body Catalog Number	Const. Ref.	AC Watt Rating/ Class of Coil Insulation AC	DC
HOT WATER SERVICE ONLY - NORMALLY CLOSED (Closed when de-energized), EPDM Diaphragm											
3/8	16	2.57	0 ②	6.9	2.8	99	65	8210G093HW	32	10.1/F	11.6/F
3/8	16	2.57	0.3	8.6	6.9	99	65	8210G001HW	33	6.1/F	11.6/F
1/2	16	3.43	0 ②	6.9	2.8	99	65	8210G094HW ♦	32	10.1/F	11.6/F
1/2	16	3.43	0.3	8.6	6.9	99	65	8210G002HW ♦	33	6.1/F	11.6/F
3/4	19	4.29	0 ②	6.9	2.8	99	65	8210G095HW ♦	34	10.1/F	11.6/F
3/4	19	4.29	0.03	8.6	6.9	99	65	8210G009HW ♦	35	6.1/F	11.6/F
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY CLOSED (Closed when de-energized), EPDM Disc											
3/8	14	2.57	0.3 ①	10.3	-	99	-	8221G001HW	36	6.1/F	-
1/2	14	3.00	0.3 ①	10.3	-	99	-	8221G003HW	36	6.1/F	-
3/4	19	4.71	0.3 ①	10.3	-	99	-	8221G005HW	36	6.1/F	-
1	25	9.86	0.3 ①	10.3	-	99	-	8221G007HW	38	6.1/F	-
1 1/4	29	11.14	0.3 ①	10.3	-	99	-	8221G009HW	39	6.1/F	-
1 1/2	32	20.57	0.3 ①	10.3	-	99	-	8221G011HW	40	6.1/F	-
2	44	30.86	0.3 ①	10.3	-	99	-	8221G013HW	41	6.1/F	-
2 1/2	44	32.57	0.3 ①	10.3	-	99	-	8221G015HW ④	42	6.1/F	-
HOT WATER SERVICE ONLY - SLOW CLOSING - NORMALLY OPEN (Open when de-energized), EPDM Disc											
3/8	14	2.57	0.3 ①	10.3	-	99	-	8221G021HW	43	16.1/F	-
1/2	14	3.00	0.3 ①	10.3	-	99	-	8221G023HW	43	16.1/F	-
3/4	19	4.71	0.3 ①	10.3	-	99	-	8221G025HW	44	16.1/F	-
1	25	9.86	0.3 ①	10.3	-	99	-	8221G027HW	45	16.1/F	-
1 1/4	29	11.14	0.3 ①	10.3	-	99	-	8221G029HW	46	16.1/F	-
1 1/2	32	20.57	0.3 ①	10.3	-	99	-	8221G031HW	47	16.1/F	-
2	44	30.86	0.3 ①	10.3	-	99	-	8221G033HW	48	16.1/F	-
2 1/2	44	32.57	0.3 ①	10.3	-	99	-	8221G035HW ④	49	16.1/F	-

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Min.	Max. AC Steam	Max. AC Hot Water	Max. DC Steam	Max. DC Hot Water	Max. Fluid Temp. °C AC Steam	AC Hot Water	DC Steam	DC Hot Water	Brass Body Catalog Number	Const. Ref.	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/Class of Coil Insulation AC	DC
STEAM/HOT WATER SERVICE - DIRECT ACTING - NORMALLY CLOSED (Closed when de-energized), Stainless Steel Seat, EPDM ③, or PTFE Disc																	
1/4	3	0.30	0	3.4	10.3	-	-	146	99	-	-	8263H053 ③	1	-	-	6.1/H	-
1/4	3	0.30	0	6.2	10.3	-	-	164	99	-	-	8263H059	1	-	-	6.1/H	
1/4	4	0.45	0	7.6	14.5	-	-	172	99	-	-	8263H300	2	-	-	10.1/H	-
1/4	6	0.63	0	4.8	6.6	-	-	156	99	-	-	8263H301	2	-	-	10.1/H	-
1/4	7	0.76	0	4.1	4.1	-	-	151	99	-	-	8263H303	2	-	-	17.1/H	-
3/8	3	0.30	0	8.6	14.5	-	-	177	99	-	-	8263H304	3	8263H318	3	10.1/H	-
3/8	4	0.45	0	7.6	13.8	-	-	172	99	-	-	8263H305	3	8263H319	3	10.1/H	-
3/8	6	0.74	0	4.8	6.6	-	-	156	99	-	-	8263H306	3	8263H320	3	10.1/H	-
3/8	7	0.87	0	4.1	4.1	-	-	151	99	-	-	8263H308	3	8263H321	3	17.1/H	-
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																	
1/4	10	1.03	0.07	6	-	-	-	161	-	-	-	8222G068	4	-	-	6.1/F	-
1/4	10	1.03	0.07	9	-	-	-	178	-	-	-	8222G070	4	-	-	6.1/H	-
3/8	10	2.14	0.07	6	-	-	-	161	-	-	-	8222G064	4	-	-	6.1/F	-
3/8	10	2.14	0.07	9	-	-	-	178	-	-	-	8222G074	4	-	-	6.1/H	-
3/8	12.7	3.8	0.3	3	10.3	-	-	149	99	-	-	8220G401	50	-	-	6.1/F	-
3/8	12.7	3.8	0	3	10.3	3.4	6.9	149	99	147	99	8220G402	51	-	-	10.1/F	15.6/H
3/8	12.7	3.8	0.3	9	10.3	7.6	10.3	178	99	172	99	8220G403 ⑥	51	-	-	10.1/H	15.6/H
3/8	16	2.57	0	9	-	-	-	178	-	-	-	8222G001	6	-	-	17.1/H	-
1/2	10	2.14	0.07	6	-	-	-	161	-	-	-	8222G066	4	-	-	6.1/F	-
1/2	10	2.14	0.07	9	-	-	-	178	-	-	-	8222G076	4	-	-	6.1/H	-
1/2	13	3.09	0.14	9	-	-	-	178	-	-	-	8222G047	9	-	-	10.1/H	-
1/2	16	3.43	0	3	-	-	-	149	-	-	-	8222G094	7	8222G060	28	10.1/F	-
1/2	16	3.43	0	9	-	-	-	178	-	-	-	8222G002	6	-	-	17.1/H	-
1/2	12.7	4	0.3	3	10.3	-	-	149	99	-	-	8220G404	50	-	-	6.1/F	-
1/2	12.7	4	0	3	10.3	3.4	6.9	149	99	147	99	8220G405	51	-	-	10.1/F	15.6/H
1/2	12.7	4	0.3	9	10.3	7.6	10.3	178	99	172	99	8220G406 ⑥	51	-	-	10.1/H	15.6/H

Specifications (Metric units continued)

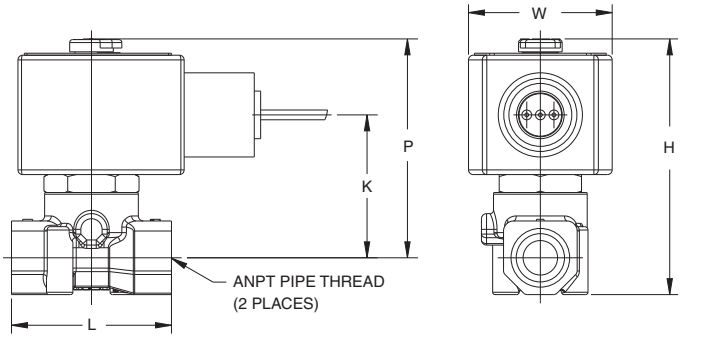
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)					Max. Fluid Temp. ˚C				Brass Body		Stainless Steel Body		Watt Rating/Class of Coil Insulation	
				Max. AC		Max. DC		AC		DC							
			Min.	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Steam	Hot Water	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	AC	DC
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY CLOSED (Closed when de-energized)																	
3/4	16	3.86	0	3	-	-	-	149	-	-	-	-	-	8222G062	28	10.1/F	-
3/4	16	3.86	0	9	-	-	-	178	-	-	-	-	-	8222G088	29	17.1/H	-
3/4	19	4.29	0	3	-	-	-	149	-	-	-	8222G095 ♦	10	-	-	10.1/F	-
3/4	19	7.5	0.3	3	10.3	-	-	149	99	-	-	8220G407	8	-	-	6.1/F	-
3/4	19	7.5	0	3	10.3	3.4	6.9	149	99	147	99	8220G408	52	-	-	10.1/F	15.6/H
3/4	19	7.5	0.3	9	10.3	7.6	10.3	178	99	172	99	8220G409 ⑥	52	-	-	10.1/H	15.6/H
3/4	19	4.29	0	9	-	-	-	178	-	-	-	8222G003	11	-	-	17.1/H	-
3/4	13	3.94	0.14	9	-	-	-	178	-	-	-	8222G049	9	-	-	10.1/H	-
3/4	13	3.94	0.3	14	-	-	-	198	-	-	-	8222G005	12	-	-	10.1/H	-
1	25	9.60	0.3	9	-	-	-	178	-	-	-	-	-	8222G089	30	10.1/F	-
1	25	11.57	0.3①	3	10.3	-	-	149	99	-	-	8220G007	14	-	-	10.1/F	-
1	25	11.57	0.3①	9	10.3	-	-	178	99	-	-	8220G025	14	-	-	10.1/H	-
1	25	10	0.3	3	10.3	-	-	149	99	-	-	8220G410	53	-	-	10.1/F	-
1	25	10	0.3	9	10.3	-	-	178	99	-	-	8220G411⑥	53	-	-	10.1/H	-
1	25	11.57	0.3	9	-	-	-	198	-	-	-	8222 099 ⑦	13	-	-	28.2/H	-
1 1/4	25	11.14	0	3	10.3	-	-	149	-	-	-	8220G009 ③	15	-	-	10.1/F	-
1 1/4	29	12.86	0.3①	3	10.3	-	-	178	99	-	-	8220G027	15	-	-	10.1/H	-
1 1/2	29	12.86	0.3①	9	10.3	-	-	149	99	-	-	8220G011 ③	16	-	-	10.1/F	-
1 1/2	32	19.29	0.3①	3	10.3	-	-	178	99	-	-	8220G029	16	-	-	10.1/H	-
2	32	19.29	0.3①	9	10.3	-	-	149	99	-	-	8220G013 ③	17	-	-	10.1/F	-
2	44	36.86	0.3①	3	10.3	-	-	178	99	-	-	8220G031	17	-	-	10.1/H	-
2 1/2	44	36.86	0.3①	9	10.3	-	-	149	99	-	-	8220G015 ③ ⑤	18	-	-	10.1/F	-
2 1/2	44	38.57	0.3①	3	10.3	-	-	178	99	-	-	8220G033 ⑤	18	-	-	10.1/H	-
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY CLOSED (Closed when de-energized)																	
3/8	6	1.29	0	5	-	-	-	158	-	-	-	8267G001	19	-	-	16.1/H	-
3/8	10	4.37	0	2	-	-	-	136	-	-	-	8267G003	19	-	-	16.1/H	-
1/2	6	1.20	0	5	-	-	-	158	-	-	-	8267G005	19	-	-	16.1/H	-
1/2	10	3.86	0	1	-	-	-	120	-	-	-	8267G007	19	-	-	16.1/H	-
3/4	10	4.63	0	2	-	-	-	136	-	-	-	8267G017	20	-	-	16.1/H	-
3/4	13	8.31	0	1	-	-	-	120	-	-	-	8267G019	20	-	-	16.1/H	-
STEAM SERVICE - DIRECT ACTING, STRAIGHT-THROUGH DESIGN - NORMALLY OPEN (Open when de-energized)																	
3/8	6	1.29	0	5	-	-	-	158	-	-	-	8267G009	19	-	-	16.1/H	-
3/8	10	4.37	0	2	-	-	-	136	-	-	-	8267G011	19	-	-	16.1/H	-
1/2	6	1.20	0	5	-	-	-	158	-	-	-	8267G013	19	-	-	16.1/H	-
1/2	10	3.86	0	1	-	-	-	120	-	-	-	8267G015	19	-	-	16.1/H	-
3/4	10	4.63	0	2	-	-	-	129	-	-	-	8267G021	20	-	-	16.1/H	-
3/4	13	8.31	0	1	-	-	-	120	-	-	-	8267G023	20	-	-	16.1/H	-
STEAM/HOT WATER SERVICE - PILOT OPERATED - NORMALLY OPEN (Open when de-energized)																	
3/8	14	2.57	0.3	9	10.3	-	-	178	99	-	-	8220G091	21	-	-	16.1/H	-
1/2	14	3.43	0.3	9	10.3	-	-	178	99	-	-	8220G093	21	-	-	16.1/H	-
3/4	19	4.29	0.3	9	10.3	-	-	178	99	-	-	8220G095	22	-	-	16.1/H	-
1	25	11.57	0.3	9	10.3	-	-	178	99	-	-	8220G097	23	-	-	16.1/H	-
1 1/4	29	12.86	0.3	9	10.3	-	-	178	99	-	-	8220G099	24	-	-	16.1/H	-
1 1/2	32	19.29	0.3	9	10.3	-	-	178	99	-	-	8220G101	25	-	-	16.1/H	-
2	44	36.86	0.3	9	10.3	-	-	178	99	-	-	8220G103	26	-	-	16.1/H	-
2 1/2	44	38.57	0.3	9	10.3	-	-	178	99	-	-	8220G105 ⑤	27	-	-	16.1/F	-

① Once opened at higher pressure, valve will remain open to 0.2 bar at inlet.
② 0 bar on AC construction, 0.02 bar on DC construction.
③ EPDM disc.
④ Not CSA certified.
⑤ Not CSA certified for water.
⑥ Ambient temperature range 0˚C - 60˚C; ⑦ Ambient temperature range 0˚C - 25˚C
♦ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

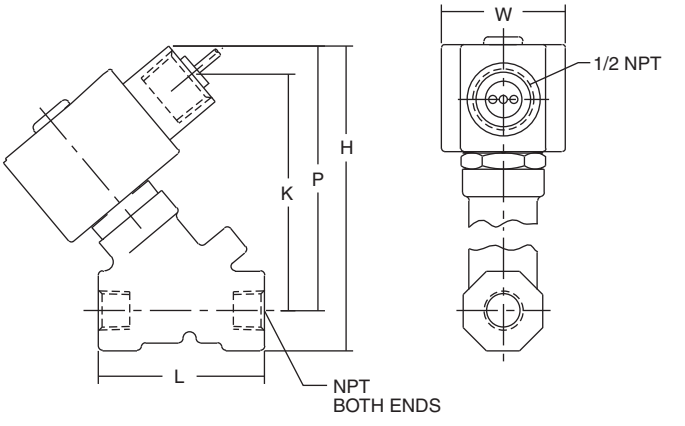
Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50
2	in	2.96	1.72	1.56	2.60	1.69
	mm	75	44	40	66	43
3	in	3.01	1.68	1.88	2.57	1.69
	mm	76	43	48	65	43
4	in	4.17	3.25	2.28	3.63	1.69
	mm	106	83	58	92	43
5	in	4.05	2.52	2.75	3.48	2.28
	mm	103	64	70	88	58
7	in	3.84	2.31	2.75	3.28	2.29
	mm	98	59	70	83	58
8	in	4.00	2.45	2.88	3.34	2.83
	mm	102	62	73	85	72
9	in	4.81	3.62	2.75	4.01	1.95
	mm	122	92	70	102	50
10	in	4.14	2.47	2.81	3.44	2.29
	mm	105	63	71	87	58
12	in	4.81	3.63	2.75	4.01	1.95
	mm	122	92	70	102	50
32	in	3.84	2.31	2.75	3.28	2.29
	mm	98	59	70	83	58
33	in	3.36	1.94	2.75	2.80	2.28
	mm	85	49	70	71	58
34	in	4.13	2.47	2.81	3.44	2.29
	mm	105	63	71	87	58
35	in	3.66	2.10	2.81	2.96	2.28
	mm	93	53	71	75	58
50	in	3.94	2.5	2.88	3.4	2.25
	mm	100	63.3	73	86	57
51	in	4.1	2.56	2.88	3.54	2.25
	mm	104	65	73	90	57
52	in	4.2	2.52	2.88	3.5	2.83
	mm	106	64	73	89	72

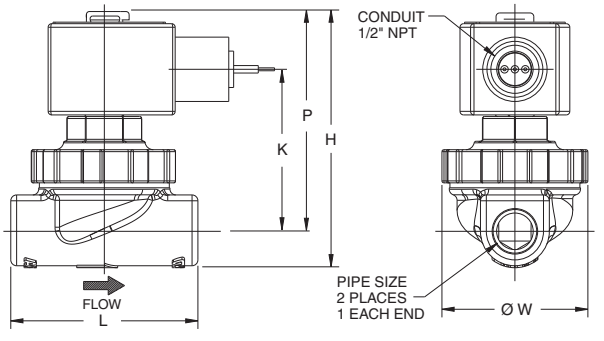
Const. Ref. 1, 2, 3



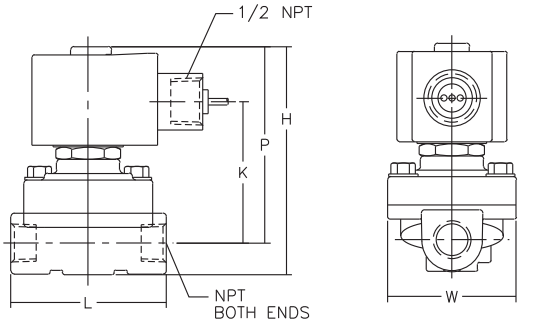
Const. Ref. 4, 9, 12



Const. Ref. 8, 50, 51, 52



Const. Ref. 5, 7, 10, 32-35



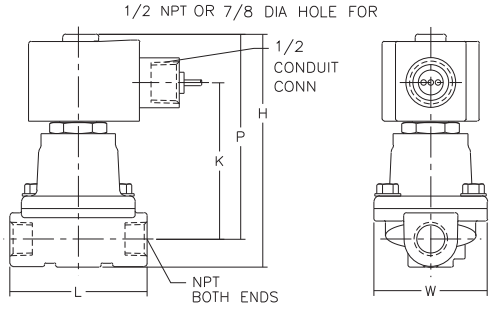
SPECIAL SERVICE VALVES

Dimensions inches (mm)

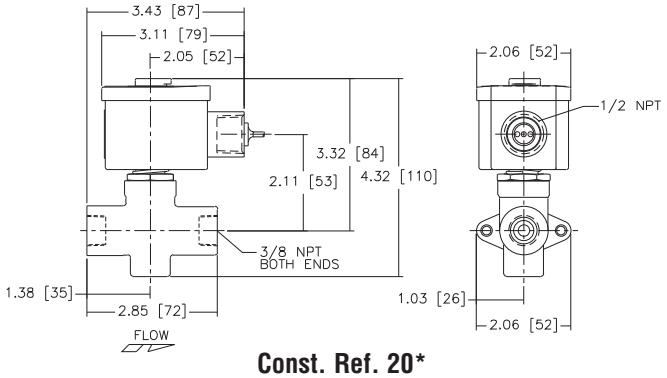
Const. Ref.		H	K	L	P	W
6	in	4.68	3.15	2.75	4.12	2.28
	mm	119	80	70	105	58
11	in	4.97	3.45	2.81	4.28	2.28
	mm	126	88	71	109	58
13	in	5.82	3.22	3.75	4.19	3.31
	mm	148	82	95	106	84
14	in	5.81	3.22	3.75	4.19	3.14
	mm	148	82	95	106	80
15	in	5.81	3.22	3.66	4.19	3.56
	mm	148	82	93	106	90
16	in	6.29	3.37	4.38	4.34	4.10
	mm	160	86	111	110	104
17	in	7.51	3.78	5.06	4.75	4.71
	mm	191	96	129	121	120
18	in	7.51	3.78	5.50	4.75	5.18
	mm	191	96	140	121	132
23	in	6.46	3.36	3.75	4.86	3.14
	mm	164	85	95	123	80
24	in	6.39	3.36	3.66	4.86	3.56
	mm	162	85	93	123	90
25	in	6.97	3.51	4.38	5.01	4.10
	mm	177	89	111	127	104
26	in	8.18	3.92	5.06	5.42	4.71
	mm	208	100	129	138	120
27	in	8.18	3.92	5.50	5.42	5.18
	mm	208	100	140	138	132
29	in	5.04	3.34	2.81	4.31	2.28
	mm	128	85	71	109	58
38	in	5.64	3.15	3.75	4.01	3.14
	mm	143	80	95	102	80
39	in	5.64	3.15	3.66	4.01	3.56
	mm	143	80	93	102	90
40	in	6.11	3.30	4.38	4.16	4.10
	mm	155	84	111	106	104
41	in	7.35	3.63	5.06	4.58	4.71
	mm	187	92	129	116	120
42	in	7.35	3.63	5.50	4.58	5.18
	mm	187	92	140	116	132
45	in	6.53	3.36	3.75	4.91	3.14
	mm	166	85	95	125	80
46	in	6.46	3.36	3.66	4.91	3.56
	mm	164	85	93	25	90
47	in	7.03	3.51	4.38	5.06	4.10
	mm	179	89	111	129	104
48	in	8.22	3.97	5.06	5.47	4.71
	mm	209	101	129	139	120
49	in	8.22	3.97	5.50	5.47	5.18
	mm	209	101	140	139	132
53	in	5.82	3.21	3.75	4.2	3.27
	mm	148	82	95	106	83

*** Valves must be mounted with solenoid vertical and upright.**

Const. Ref. 6, 11, 13, 29



Const. Ref. 19*



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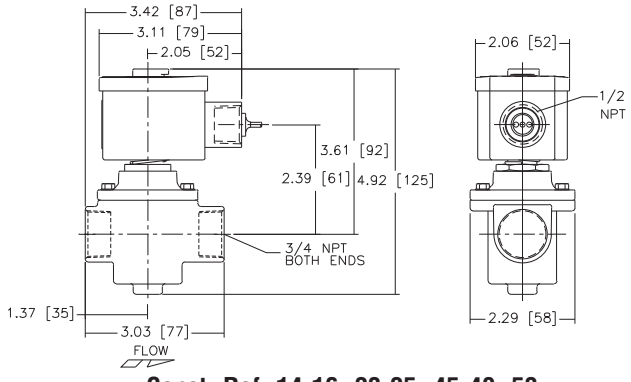
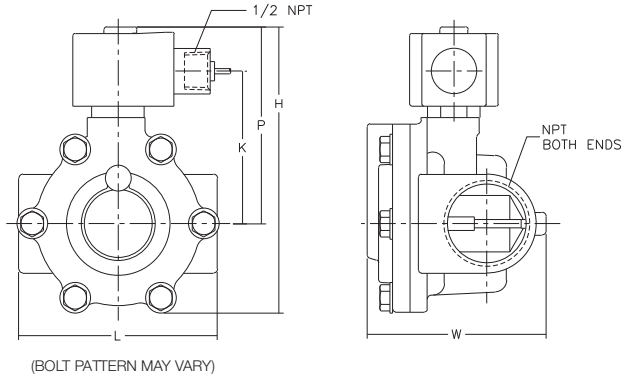


Const. Ref. 14-16, 23-25, 45-49, 53



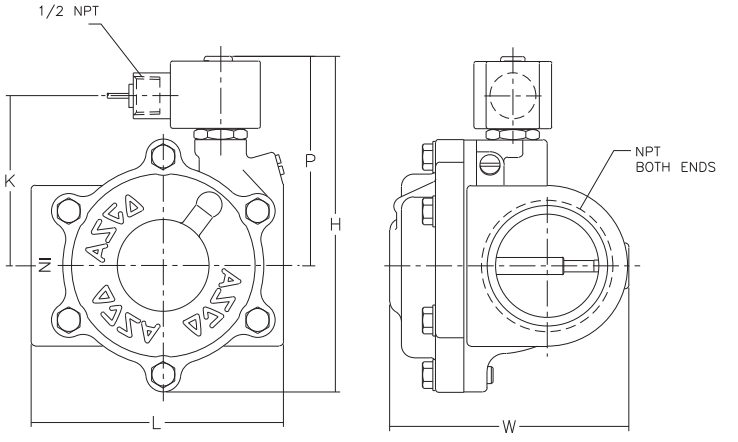
(BOLT PATTERN MAY VARY)

SPECIAL SERVICE VALVES

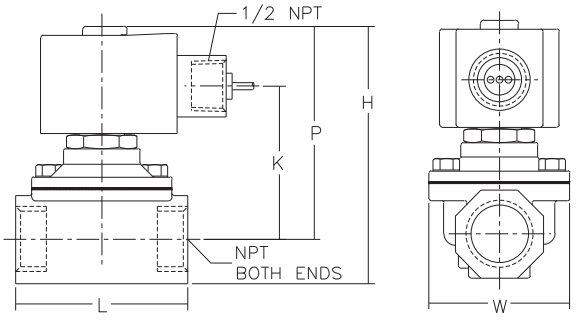
Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
21	in	5.11	3.13	2.71	4.35	3.58
	mm	130	80	69	111	91
22	in	5.30	3.29	2.78	4.51	3.58
	mm	135	84	71	115	91
28	in	4.17	2.47	2.81	3.44	2.28
	mm	106	63	71	87	58
30	in	5.82	3.22	3.75	4.19	4.44
	mm	148	82	95	106	113
31	in	3.25	1.70	2.00	2.67	1.95
	mm	83	43	51	68	50
36	in	4.32	2.69	2.71	3.56	3.45
	mm	110	68	69	90	88
43	in	5.12	3.14	2.71	4.35	3.65
	mm	130	80	69	111	93
44	in	5.30	3.30	2.78	4.51	3.65
	mm	135	84	71	115	93

Const. Ref. 17, 18, 26, 27, 38-42



Const. Ref. 28



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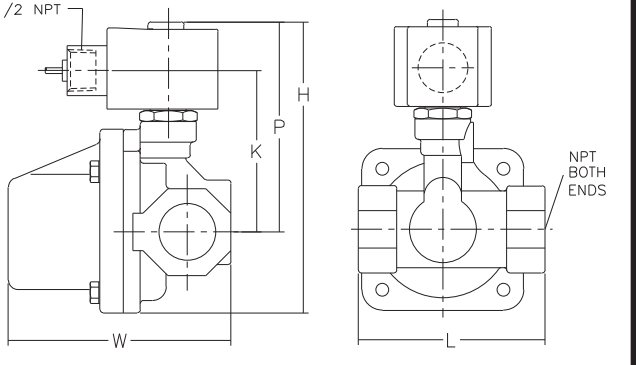

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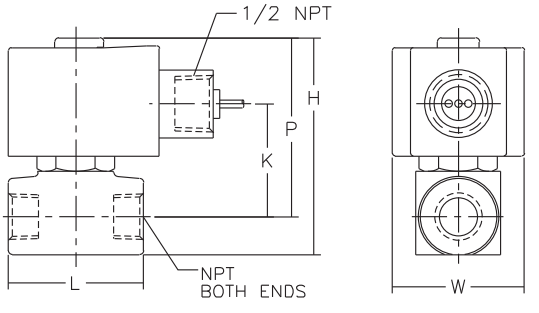
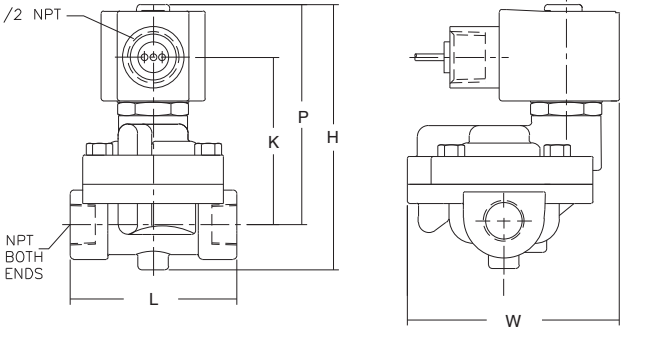


Const. Ref. 21, 22, 36, 43, 44



SPECIAL SERVICE VALVES

Features

- Design eliminates metal-to-metal contact to extend life up to 20 million cycles in dry air or gas applications
- Internal AC hum and metallic click at energization are eliminated. Quiet operating
- Easily handles applications involving rapid cycling or continuous energization

Construction

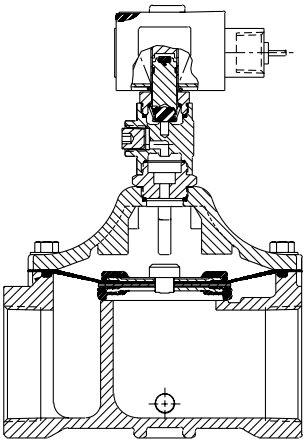
Valve Parts in Contact with Fluids	
Core Bumpers	UR
Rider Rings	PTFE
For more information, see individual Series in General Service Valve Section.	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
		AC			General Purpose	Explosionproof
	DC Watts	Watts	VA Holding	VA Inrush	AC	AC
F	①	15.1	22	22	270110	270114

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). Must be specified when ordering.

Note: ① *Consult your local ASCO sales office for DC voltages.*



8215

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Series 8262: 32˚F to 131˚F (0˚C to 55˚C)*
* Max. ambient for explosionproof (EF) is 125˚F (52˚C)
All others: 32˚F to 104˚F (0˚C to 40˚C)
Refer to Engineering Section for details.

Approvals

CSA certified. UL listed General Purpose Valves.
Meets applicable CE directives.

Installation

For optimum life, the valve should be installed with the solenoid positioned upright and vertical.
Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max. AC (DC) Air-Inert Gas	Max. Fluid Temp. °F	Catalog Number Brass	Catalog Number Stainless Steel	Catalog Number Aluminum	Watt Rating/Class of Coil Insulation AC (DC)
2/2 VALVES (5 MILLION CYCLE CAPABILITY)									
NORMALLY CLOSED (Closed when de-energized)									
3/8	5/8	3	5	125	140	8210G001Q	-	-	15.1/F
1/2	5/8	4	5	125	140	8210G002Q	-	-	15.1/F
3/4	3/4	4.5	5	125	140	8210G009Q	-	-	15.1/F
1	1 5/8	13	1	20	140	-	-	8215G095Q	15.1/F
1 1/4	1 5/8	15	1	20	140	-	-	8215G096Q	15.1/F
1 1/2	1 5/8	20	1	20	140	-	-	8215G097Q	15.1/F
2	2 3/32	34	1	20	140	-	-	8215G098Q	15.1/F
NORMALLY OPEN (Open when de-energized)									
3/8	5/8	3	5	125	140	8210G011Q	-	-	15.1/F
1/2	5/8	4	5	125	140	8210G012Q	-	-	15.1/F
3/4	3/4	4.5	5	125	140	8210G013Q	-	-	15.1/F
1	1 5/8	13	1	20	140	-	-	8215G099Q	15.1/F
1 1/4	1 5/8	15	1	20	140	-	-	8215G100Q	15.1/F
1 1/2	1 5/8	20	1	20	140	-	-	8215G101Q	15.1/F
2	2 3/32	34	1	20	140	-	-	8215G102Q	15.1/F
2/2 VALVES (20 MILLION CYCLE CAPABILITY)									
NORMALLY CLOSED (Closed when de-energized)									
1/8	1/8	0.35	0	125 (60)	140	8262H077Q	8262H179Q	-	15.1/F (11.6)
1/4	3/32	0.21	0	150 (110)	140	8262H108Q	8262H182Q	-	15.1/F (11.6)
1/4	1/8	0.35	0	125 (60)	140	8262H232Q	8262H184Q	-	15.1/F (11.6)
1/4	5/32	0.52	0	50 (40)	140	8262H202Q	8262H220Q	-	15.1/F (11.6)
1/4	7/32	0.73	0	50 (20)	140	8262H208Q	8262H226Q	-	15.1/F (11.6)
1/4	9/32	0.88	0	20 (13)	140	8262H210Q	8262H189Q	-	15.1/F (11.6)
3/8	1/8	0.35	0	125 (60)	140	8263H232Q	8263H190Q	-	15.1/F (11.6)
3/8	5/32	0.52	0	50 (40)	140	8263H200Q	8263H331Q	-	15.1/F (11.6)
3/8	7/32	0.73	0	50 (20)	140	8263H124Q	8263H195Q	-	15.1/F (11.6)
3/8	9/32	0.88	0	20 (13)	140	8263H125Q	8263H197Q	-	15.1/F (11.6)
NORMALLY OPEN (Open when de-energized)									
1/8	1/16	.09	0	125	140	8262G091Q	-	-	15.1/F
1/4	1/16	.09	0	125	140	8262G032Q	-	-	15.1/F
3/2 VALVES (5 MILLION CYCLE CAPABILITY)									
NORMALLY CLOSED (Closed when de-energized)									
3/8	5/8	3	10	125	140	8316G014Q ②	-	-	15.1/F
1/2	5/8	4	10	125	140	8316G024Q ②	-	-	15.1/F
NORMALLY OPEN (Open when de-energized)									
3/8	5/8	3	10	125	140	8316G016Q ②	-	-	15.1/F
1/2	5/8	4	10	125	140	8316G026Q ②	-	-	15.1/F
3/2 VALVES (20 MILLION CYCLE CAPABILITY)									
UNIVERSAL OPERATION (Pressure at any port)									
1/8	1/16	.09	0	70	140	8320G001Q	-	-	15.1/F
1/4	1/16	.09	0	70	140	8320G172Q	-	-	15.1/F
1/4	3/32	.15	0	40	140	8320G174Q	-	-	15.1/F
NORMALLY CLOSED (Closed when de-energized)									
1/8	1/16	.09	0	125	140	8320G013Q	-	-	15.1/F
1/4	1/16	.09	0	125	140	8320G182Q	-	-	15.1/F
1/4	1/8	.31	0	35	140	8320G186Q	-	-	15.1/F
NORMALLY OPEN (Open when de-energized)									
1/8	1/16	.09	0	125	140	8320G027Q	-	-	15.1/F
1/4	1/16	.09	0	125	140	8320G192Q	-	-	15.1/F
1/4	1/8	.31	0	35	140	8320G196Q	-	-	15.1/F
4/2 VALVES (5 MILLION CYCLE CAPABILITY)									
SINGLE SOLENOID									
1/4	1/4	.53	10	125	140	8344G070Q ②	-	-	15.1/F
3/8	1/4	.53	10	125	140	8344G001Q ②	-	-	15.1/F
1/2	3/8	1.3	10	125	140	8344G074Q ②	-	-	15.1/F
4/2 VALVES (20 MILLION CYCLE CAPABILITY)									
SINGLE SOLENOID									
1/4	1/16	①	10	100	140	8345G002Q ②	-	-	15.1/F

① Inlet Cv is 0.036; exhaust Cv is 0.092. ② **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Max. Fluid Temp.˚C	Catalog Number			Watt Rating/Class of Coil Insulation
			Min.	Max. AC Air-Inert Gas		Brass	Stainless Steel	Aluminum	AC (DC)
2/2 VALVES (5 MILLION CYCLE CAPABILITY)									
NORMALLY CLOSED (Closed when de-energized)									
3/8	16	2.57	0.3	8.6	60	8210G001Q	-	-	15.1/F
1/2	16	3.43	0.3	8.6	60	8210G002Q	-	-	15.1/F
3/4	19	3.86	0.3	8.6	60	8210G009Q	-	-	15.1/F
1	41	11.14	0.1	1.4	60	-	-	8215G095Q	15.1/F
1 1/4	41	12.86	0.1	1.4	60	-	-	8215G096Q	15.1/F
1 1/2	41	17.14	0.1	1.4	60	-	-	8215G097Q	15.1/F
2	53	29.14	0.1	1.4	60	-	-	8215G098Q	15.1/F
NORMALLY OPEN (Open when de-energized)									
3/8	16	2.57	0.3	8.6	60	8210G011Q	-	-	15.1/F
1/2	16	3.43	0.3	8.6	60	8210G012Q	-	-	15.1/F
3/4	19	3.86	0.3	8.6	60	8210G013Q	-	-	15.1/F
1	41	11.14	0.1	1.4	60	-	-	8215G099Q	15.1/F
1 1/4	41	12.86	0.1	1.4	60	-	-	8215G100Q	15.1/F
1 1/2	41	17.14	0.1	1.4	60	-	-	8215G101Q	15.1/F
2	53	29.14	0.1	1.4	60	-	-	8215G102Q	15.1/F
2/2 VALVES (20 MILLION CYCLE CAPABILITY)									
NORMALLY CLOSED (Closed when de-energized)									
1/8	1/8	0.30	0	8.6 (4.1)	60	8262H077Q	8262H179Q	-	15.1/F (11.6)
1/4	3/32	0.18	0	10.3 (7.6)	60	8262H108Q	8262H182Q	-	15.1/F (11.6)
1/4	1/8	0.30	0	8.6 (4.1)	60	8262H232Q	8262H184Q	-	15.1/F (11.6)
1/4	5/32	0.45	0	3.4 (2.8)	60	8262H202Q	8262H220Q	-	15.1/F (11.6)
1/4	7/32	0.63	0	3.4 (1.4)	60	8262H208Q	8262H226Q	-	15.1/F (11.6)
1/4	9/32	0.76	0	1.4 (0.9)	60	8262H210Q	8262H189Q	-	15.1/F (11.6)
3/8	1/8	0.30	0	8.6 (4.1)	60	8263H232Q	8263H190Q	-	15.1/F (11.6)
3/8	5/32	0.45	0	3.4 (2.8)	60	8263H200Q	8263H331Q	-	15.1/F (11.6)
3/8	7/32	0.63	0	3.4 (1.4)	60	8263H124Q	8263H195Q	-	15.1/F (11.6)
3/8	9/32	0.76	0	1.4 (0.9)	60	8263H125Q	8263H197Q	-	15.1/F (11.6)
NORMALLY OPEN (Open when de-energized)									
1/8	2	.08	0.0	8.6	60	8262G091Q	-	-	15.1/F
1/4	2	.08	0.0	8.6	60	8262G032Q	-	-	15.1/F
3/2 VALVES (5 MILLION CYCLE CAPABILITY)									
NORMALLY CLOSED (Closed when de-energized)									
3/8	16	2.57	0.7	8.6	60	8316G014Q ②	-	-	15.1/F
1/2	16	3.43	0.7	8.6	60	8316G024Q ②	-	-	15.1/F
NORMALLY OPEN (Open when de-energized)									
3/8	16	2.57	0.7	8.6	60	8316G016Q ②	-	-	15.1/F
1/2	16	3.43	0.7	8.6	60	8316G026Q ②	-	-	15.1/F
3/2 VALVES (20 MILLION CYCLE CAPABILITY)									
UNIVERSAL OPERATION (Pressure at any port)									
1/8	2	.08	0.0	4.8	60	8320G001Q	-	-	15.1/F
1/4	2	.08	0.0	4.8	60	8320G172Q	-	-	15.1/F
1/4	2	.13	0.0	2.8	60	8320G174Q	-	-	15.1/F
NORMALLY CLOSED (Closed when de-energized)									
1/8	2	.08	0.0	8.6	60	8320G013Q	-	-	15.1/F
1/4	2	.08	0.0	8.6	60	8320G182Q	-	-	15.1/F
1/4	3	.27	0.0	2.4	60	8320G186Q	-	-	15.1/F
NORMALLY OPEN (Open when de-energized)									
1/8	2	.08	0.0	8.6	60	8320G027Q	-	-	15.1/F
1/4	2	.08	0.0	8.6	60	8320G192Q	-	-	15.1/F
1/4	3	.27	0.0	2.4	60	8320G196Q	-	-	15.1/F
4/2 VALVES (5 MILLION CYCLE CAPABILITY)									
SINGLE SOLENOID									
1/4	6	.45	0.7	8.6	60	8344G070Q ②	-	-	15.1/F
3/8	6	.45	0.7	8.6	60	8344G001Q ②	-	-	15.1/F
1/2	10	1.11	0.7	8.6	60	8344G074Q ②	-	-	15.1/F
4/2 VALVES (20 MILLION CYCLE CAPABILITY)									
SINGLE SOLENOID									
1/4	2	①	0.7	6.9	60	8345G002Q ②	-	-	15.1/F

① Inlet Kv is 0.031; exhaust Kv is 0.079. ② **IMPORTANT:** A Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and other similar components must be installed in the cylinder lines only.

Dimensions inches (mm)

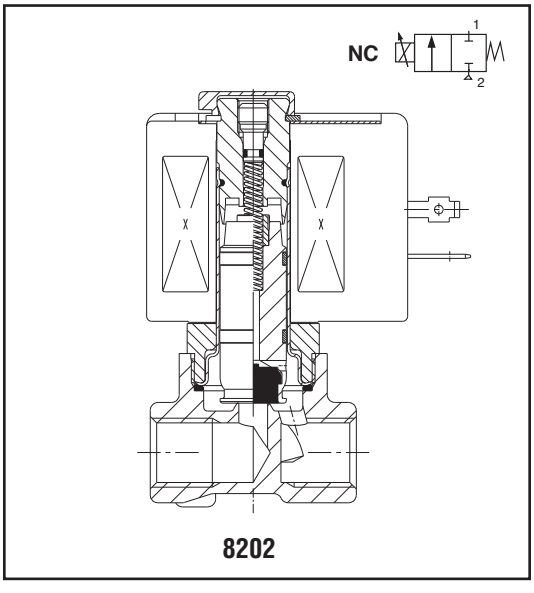
Note: *Please see General Service Section for applicable 2-way, 3-way, and 4-way valve dimensions.*

Posiflow® Proportional Solenoid Valves

Brass or Stainless Steel Bodies
1/4" to 1/2" NPT

Features

- Flow rates adjustable between 0% and 100% of rating
- Flow rate can also be regulated by a range of electrical inputs (sensors, transmitters, PLC, etc.) via an ASCO Electronic Control Unit or similar circuit
- Suitable for use in air/gas, low vacuum service, as well as to precisely control flow of water



8202

Construction

Valve Parts in Contact with Fluids			
	8202		8203
Body	Brass	303 Stainless Steel	Brass
Seals and Disc/Diaphragm*	FKM		NBR
Core Tube	305 Stainless Steel		
Core and Plugnut	430F Stainless Steel		
Springs	302 Stainless Steel		
Rider Rings	PTFE		
Breaker Piece	Brass	303 Stainless Steel	Brass

Electrical

Standard voltage: 24 VDC
Coil: Molded Class F
Coil resistance: 25 Ohm at 68˚F (20˚C)
Operating current: 100 - 500 mA
Recommended PWM frequency: 300 Hz Air/Gas; 200 Hz Water/Light Oil
Hysteresis: <5% (<7.5% for 8203 Valves) ①
Repeatability: <3% (<1% for 1/8" NPT Valves) ①
Sensitivity: <2% (<1% for 1/8" NPT Valves) ①
① Based on ASCO Electronic Control Unit at constant differential pressure.

Solenoid Enclosures

Standard: RedHat II Class F coil with DIN connection (meets ISO 4400/DIN 43650A standards). For 22.6 watt solenoids.

Optional: For Class H coil, use prefix "SV" (for use with customer supplied electronics): General Purpose and Watertight, Types 1, 2, 3, 3S, and 4X on 22.6 watt solenoids.

Nominal Ambient Temp. Ranges

14˚F to 104˚F (-10˚C to 40˚C) for 22.6 watt solenoid.

Approvals (8202 1/4" to 3/8" only)

UL Recognized Component with DIN solenoid (prefix SD or SV).

UL Listed with threaded conduit (no prefix)

CSA certified.

Note: The Electronic Control Unit (sold separately) is only compatible with DIN connectors

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. Fluid Temp.°F	Catalog Number		UL ② Listing	Const. Ref.	Watt Rating/ Class of Coil Insulation ③
			Min.	Max. Low Vacuum (Hg) ①	Max. Air/Gas/ Water/Oil		Air-Inert Gas	Water/Light Oil			
Brass Body											
1/4	3/64	.06	0	29	230	150	SD8202G001V	SD8202G051V	●	1	22.6/F
1/4	3/32	.14	0	29	115	150	SD8202G002V	SD8202G052V	●	1	22.6/F
1/4	1/8	.28	0	29	60	150	SD8202G003V	SD8202G053V	●	1	22.6/F
1/4	5/32	.50	0	29	35	150	SD8202G004V	SD8202G054V	●	1	22.6/F
1/4	7/32	.85	0	29	20	150	SD8202G006V	SD8202G056V	●	1	22.6/F
1/4	9/32	1.1	0	29	15	150	SD8202G007V	SD8202G057V	●	1	22.6/F
3/8	1/8	.28	0	29	60	150	SD8202G023V	SD8202G073V	●	2	22.6/F
3/8	5/32	.50	0	29	35	150	SD8202G024V	SD8202G074V	●	2	22.6/F
3/8	7/32	.85	0	29	20	150	SD8202G026V	SD8202G076V	●	2	22.6/F
3/8	9/32	1.1	0	29	15	150	SD8202G027V	SD8202G077V	●	2	22.6/F
Stainless Steel Body											
1/4	3/64	.06	0	29	230	150	SD8202G011V	SD8202G061V	●	3	22.6/F
1/4	3/32	.14	0	29	115	150	SD8202G012V	SD8202G062V	●	3	22.6/F
1/4	1/8	.28	0	29	60	150	SD8202G013V	SD8202G063V	●	3	22.6/F
1/4	5/32	.50	0	29	35	150	SD8202G014V	SD8202G064V	●	3	22.6/F
1/4	7/32	.85	0	29	20	150	SD8202G016V	SD8202G066V	●	3	22.6/F
1/4	9/32	1.1	0	29	15	150	SD8202G017V	SD8202G067V	●	3	22.6/F
3/8	1/8	.28	0	29	60	150	SD8202G033V	SD8202G083V	●	4	22.6/F
3/8	5/32	.50	0	29	35	150	SD8202G034V	SD8202G084V	●	4	22.6/F
3/8	7/32	.85	0	29	20	150	SD8202G036V	SD8202G086V	●	4	22.6/F
3/8	9/32	1.1	0	29	15	150	SD8202G037V	SD8202G087V	●	4	22.6/F

① Applicable to air-Inert gas valves only.
② ● General Purpose valve. Refer to Engineering Section (Approvals) for more details.
③ Will vary with duty cycle (8.5 watts at 500 mA with ambient temp. = 104°F (40°C).

SPECIAL SERVICE VALVES

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Catalog Number	UL ② Listing	Const. Ref.	Watt Rating/ Class of Coil Insulation ③
			Min.	Max Water/ Light Oil		Water/Light Oil			
Brass Body									
3/8	1/2	2.4	5	150	150	SD8203G001	-	5	22.6/F
1/2	1/2	2.4	5	150	150	SD8203G002	-	5	22.6/F

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)			Max. Fluid Temp.°C	Catalog Number		UL ② Listing	Const. Ref.	Watt Rating/ Class of Coil Insulation ③
			Min.	Max. Low Vacuum (Hg) ①	Max. Air/Gas/ Water/Oil		Air-Inert Gas	Water/Light Oil			
Brass Body											
1/4	1.2	.05	0	2	16	65	SD8202G001V	SD8202G051V	●	1	22.6/F
1/4	2.4	.12	0	2	8	65	SD8202G002V	SD8202G052V	●	1	22.6/F
1/4	3.2	.24	0	2	4	65	SD8202G003V	SD8202G053V	●	1	22.6/F
1/4	4.0	.42	0	2	2	65	SD8202G004V	SD8202G054V	●	1	22.6/F
1/4	5.6	.72	0	2	1	65	SD8202G006V	SD8202G056V	●	1	22.6/F
1/4	7.1	.90	0	2	1	65	SD8202G007V	SD8202G057V	●	1	22.6/F
3/8	3.2	.24	0	2	4	65	SD8202G023V	SD8202G073V	●	2	22.6/F
3/8	4.0	.42	0	2	2	65	SD8202G024V	SD8202G074V	●	2	22.6/F
3/8	5.6	.72	0	2	1	65	SD8202G026V	SD8202G076V	●	2	22.6/F
3/8	7.1	.90	0	2	1	65	SD8202G027V	SD8202G077V	●	2	22.6/F
Stainless Steel Body											
1/4	1.2	.05	0	2	16	65	SD8202G011V	SD8202G061V	●	3	22.6/F
1/4	2.4	.12	0	2	8	65	SD8202G012V	SD8202G062V	●	3	22.6/F
1/4	3.2	.24	0	2	4	65	SD8202G013V	SD8202G063V	●	3	22.6/F
1/4	4.0	.42	0	2	2	65	SD8202G014V	SD8202G064V	●	3	22.6/F
1/4	5.6	.72	0	2	1	65	SD8202G016V	SD8202G066V	●	3	22.6/F
1/4	7.1	.90	0	2	1	65	SD8202G017V	SD8202G067V	●	3	22.6/F
3/8	3.2	.24	0	2	4	65	SD8202G033V	SD8202G083V	●	4	22.6/F
3/8	4.0	.42	0	2	2	65	SD8202G034V	SD8202G084V	●	4	22.6/F
3/8	5.6	.72	0	2	1	65	SD8202G036V	SD8202G086V	●	4	22.6/F
3/8	7.1	.90	0	2	1	65	SD8202G037V	SD8202G087V	●	4	22.6/F

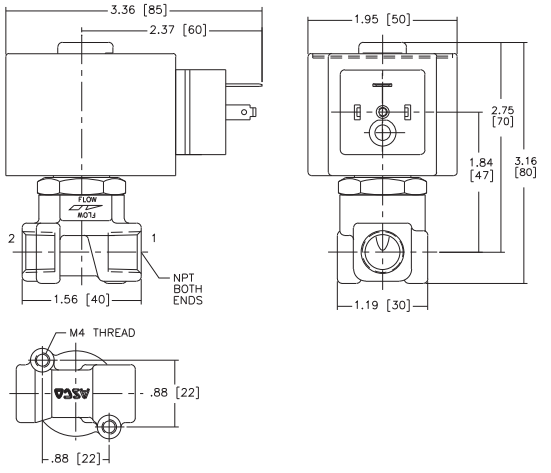
① Applicable to air-Inert gas valves only.
② ● General Purpose valve. Refer to Engineering Section (Approvals) for more details.
③ Will vary with duty cycle (8.5 watts at 500 mA with ambient temp. = 104°F (40°C).

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Catalog Number	UL ② Listing	Const. Ref.	Watt Rating/ Class of Coil Insulation ③
			Min.	Max. Water/Light Oil		Water/Light Oil			
Brass Body									
3/8	12.7	2.1	.3	10	65	SD8203G001	-	5	22.6/F
1/2	12.7	2.1	.3	10	65	SD8203G002	-	5	22.6/F

ASCO®

Dimensions inches (mm)

Const. Ref. 1



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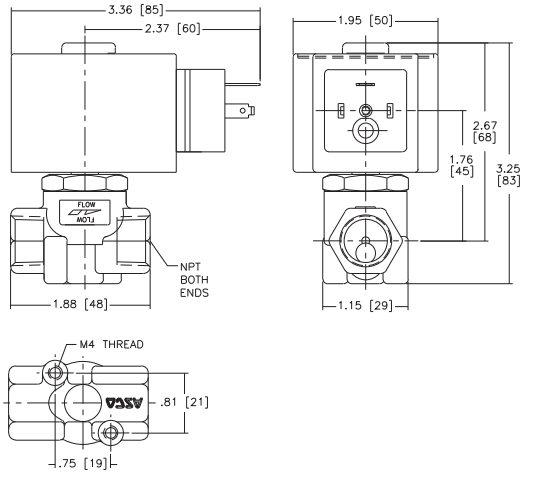

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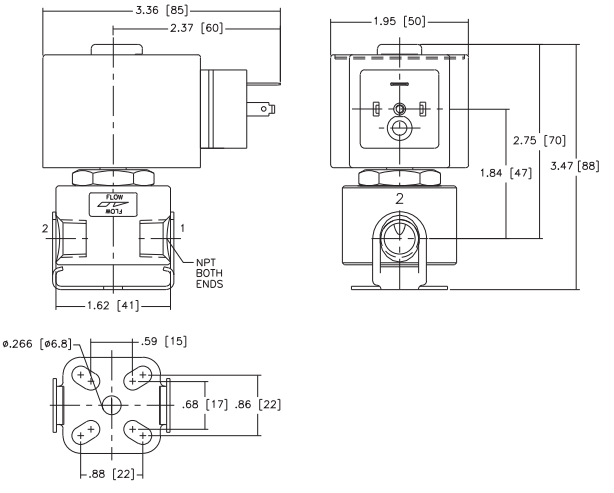

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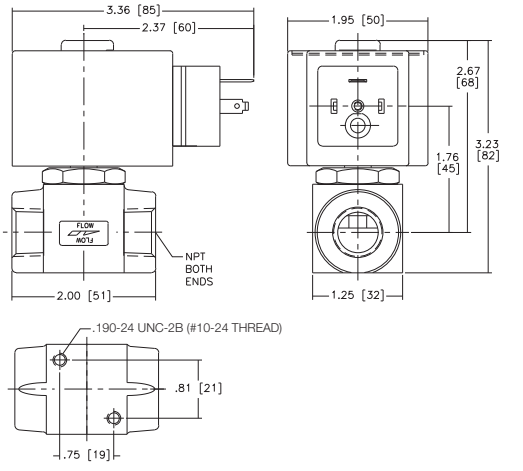

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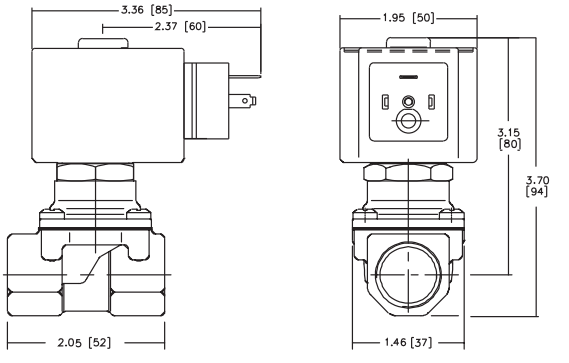


SPECIAL SERVICE VALVES

Description

One unit, Catalog Number 8908A001, can be used for all 1/4" to 1/2" Posiflow valves with DIN solenoids.

To maintain a specific flow rate, current through the coil must be kept constant and substantially independent from changes in the coil winding resistance (caused by temperature variation). The Electronic Control Unit will accomplish this quite efficiently via pulse width modulation. Voltage to the coil is cut into rectangular pulses by rapidly switching it on and off. By varying the "on" time (pulse width) percentage to compensate for temperature variations, current through the coil is kept constant.

Electrical Characteristics

Nominal supply voltage:
24 VDC ± 10%,maximum ripple 10%

Maximum full-load current:
1100 mA (factory set at 500 mA)

Input control signal (selectable):
0-10 VDC or 0-20 mA or 4-20 mA

Switch-off current:
<2% of max. input control signal

Adjustable off-set:
15-50% of pulse width modulation voltage

Adjustable full-load:
30-100% of pulse width modulation voltage

Ramp time:
Manually activated via on/off switch; adjustable 0.1-3 seconds

Adjustable PWM frequency:
40-700 Hz

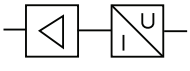
Power consumption:
0.8 watts

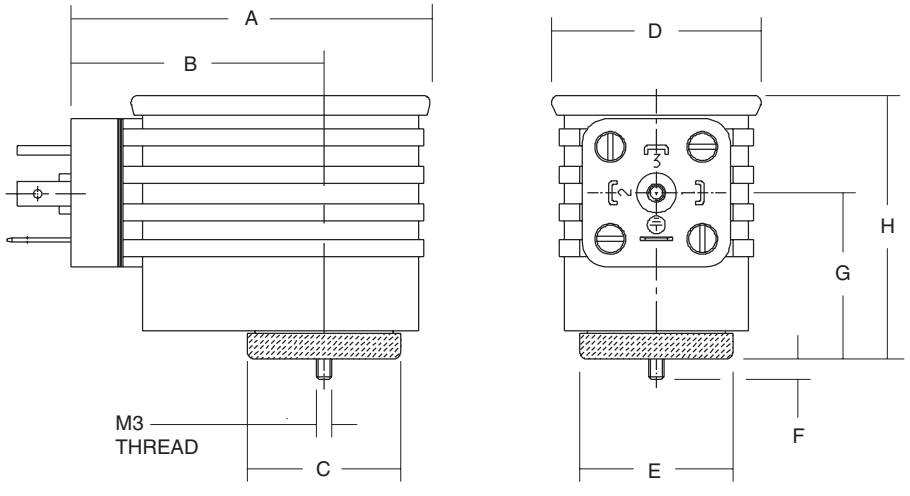
Construction

Housing Assembly	PA + FV
Cover	PA + FV
Screw	Zinc plated steel
Gasket	NBR
Connector Specification	ISO 4400/DIN 43650
Protection	IP 65 (Dust-tight Protection against water jets from any direction)

Dimensions inches (mm)

Catalog No.	A	B	C	D	E	F	G	H
8908A001	2.76 (70)	1.89 (48)	1.18 (30)	1.61 (41)	1.18 (30)	0.16 (4)	1.26 (32)	2.03 (51.5)



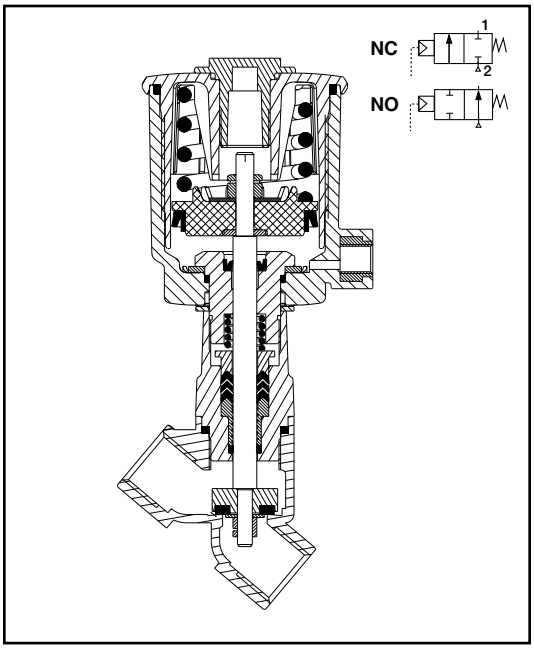


SPECIAL SERVICE VALVES

The 8290 Series consists of 2-way direct acting valves available in normally closed or normally open constructions. Built for demanding applications, these valves come in a straight-through body design made of bronze or stainless steel. There are many optional features including visual/electrical position indicator or a stroke limiter.

The 8290 Series is suitable for the following applications:

- General Service (air, inert gas, water, oil, light slurries)
- Steam and Hot Water
- Auxiliary fluids within the food and beverage process (suffix "FB")



Construction

Valve Parts in Contact with Fluids			
Part	**32mm**	**50mm-125mm**	**50mm-125mm ①**
Body	316L Stainless Steel	Bronze	316L Stainless Steel
Stem	316L Stainless Steel	431 Stainless Steel	431 Stainless Steel
Stuffing Box	316L Stainless Steel	Brass	303 Stainless Steel
Stuffing Box Seal	PTFE	PTFE Chevron	PTFE Chevron
Wiper Seal	FKM	FKM	FKM
Disc	316L Stainless Steel	Brass	304L Stainless Steel
Disc Seal	PTFE	PTFE	PTFE
Screw	316L Stainless Steel	-	-

① *For all optional AISI 316L Stainless Steel constructions, contact ASCO*

Specifications

Ambient Temperature Range: 15˚F to 140˚F
(32˚F to 122˚F for proportional valves and water service)

Pilot Fluid Temperature Range: 15˚F to 140˚F
(32˚F to 122˚F for proportional valves and water service)

Maximum Viscosity: 2,700 SSU
For higher viscosity applications, please consult ASCO.

Alternate Valve Constructions

- Oxygen service, add suffix "N"
- Medium vacuum service up to 7 x 10^{-3} Torr, add suffix "VM"
- Visual Position Indicator for normally closed valve with 32mm or 50mm operator, add suffix "VI" (note: position indicator standard on 63mm through 125mm operators).
- FDA CFR21 Compliant, add suffix "FB". *See specifications table.*
- NET-INOX treatment (stainless steel valve body pickled in nitric/hydrofluoric acid bath), add suffix "NI"
- All 316L Stainless Steel versions (available on request).

See page 222 for the following constructions:
Compact Positioner for proportional control
Signaling Box
Linear Position Indicator
Stroke Limiter

Visit www.asco.com/8290Configurator to create an 8290 assembly that fits your needs. Options include position indication, pilot valves, and other accessories.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow		Operating Pressure Differential (psi)			Max. Fluid Temp.°F	Bronze	Stainless Steel ① ④	Air or Water Pilot Pressure (psi)		Approx. Shipping Weight (lbs.)
		On-Off	Prop.	Min.	Max. Fluids	Max. Steam				Min.	Max.	
32 mm Operator												
Normally Closed - Entry Under the Disc ③												
3/8	3/8	2.3	-	0	240	150	366	-	8290A791	60	150	1.3
1/2	1/2	4.1	-	0	180	150	366	-	8290A792	60	150	1.4
3/4	3/4	7.6	-	0	90	90	366	-	8290A793	60	150	1.6
Normally Open - Entry Under the Disc												
3/8	3/8	2.3	-	0	240	150	366	-	8290A794	I ②	150	1.3
1/2	1/2	4.1	-	0	240	150	366	-	8290A795	I ②	150	1.4
3/4	3/4	7.6	-	0	200	150	366	-	8290A796	I ②	150	1.6
Normally Closed - Entry Above the Disc for Rapid Cycling Steam Applications												
3/8	3/8	2.3	-	0	-	150	366	-	8290A797	II ②	150	1.6
1/2	1/2	4.1	-	0	-	150	366	-	8290A798	II ②	150	1.4
3/4	3/4	7.6	-	0	-	150	366	-	8290A799	II ②	150	1.6
50 mm Operator												
Normally Closed - Entry Under the Disc ③												
1/2	1/2	5.7	5.3	0	240	150	366	8290A384	8290A393	60	150	2.7
3/4	3/4	11	8.3	0	150	150	366	8290A385	8290A394	60	150	2.9
1	1	15	-	0	90	90	366	8290A386	8290A395	60	150	3.7
Normally Open - Entry Under the Disc												
1/2	1/2	5.7	-	0	240	150	366	8290A387	8290A396	III ②	150	2.7
3/4	3/4	11	-	0	240	150	366	8290A388	8290A397	III ②	150	2.9
1	1	15	-	0	240	150	366	8290A389	8290A398	III ②	150	3.7
Normally Closed - Entry Above the Disc for Rapid Cycling Steam Applications ③												
1/2	1/2	5.7	-	0	-	150	366	8290A390	8290A399	IV ②	150	2.7
3/4	3/4	11	-	0	-	150	366	8290A391	8290A400	IV ②	150	2.9
1	1	15	-	0	-	150	366	8290A392	8290A401	IV ②	150	3.7
63 mm Operator												
Normally Closed - Entry Under the Disc												
1/2	1/2	5.7	-	0	240	150	366	8290B002	8290B045	38	150	3.6
3/4	3/4	11	8.3	0	240	150	366	8290B005	8290B048	60	150	3.9
1	1	19	17	0	150	150	366	8290B010	8290B053	60	150	4.7
1 1/4	1 1/4	32	24	0	90	90	366	8290A016	8290A059	60	150	6.0
1 1/2	1 1/2	52	33	0	60	60	366	8290A020	8290A063	60	150	8.0
2	2	68	46	0	40	40	366	8290A024	8290A067	60	150	10.0
Normally Open - Entry Under the Disc												
1/2	1/2	5.7	-	0	240	150	366	8290B026	8290B069	V ②	150	3.6
3/4	3/4	11	-	0	240	150	366	8290B027	8290B070	V ②	150	3.9
1	1	19	-	0	240	150	366	8290B028	8290B071	V ②	150	4.7
1 1/4	1 1/4	32	-	0	240	150	366	8290A030	8290A073	V ②	150	6.0
1 1/2	1 1/2	52	-	0	160	150	366	8290A032	8290A075	V ②	150	8.0
2	2	68	-	0	105	105	366	8290A034	8290A077	V ②	150	10.0
Normally Closed - Entry Above the Disc for Rapid Cycling Steam Applications												
1/2	1/2	5.7	-	0	-	150	366	8290B036	8290B079	VI ②	150	3.6
3/4	3/4	11	-	0	-	150	366	8290B037	8290B080	VI ②	150	3.9
1	1	19	-	0	-	150	366	8290B038	8290B081	VI ②	150	4.7
1 1/4	1 1/4	32	-	0	-	150	366	8290A039	8290A082	VI ②	150	6.0
1 1/2	1 1/2	52	-	0	-	150	366	8290A040	8290A083	VI ②	150	8.0
2	2	68	-	0	-	135	366	8290A042	8290A085	VI ②	150	10.0

① Available with NET-INOX treatment, add suffix "NI"; ② Minimum pilot pressure varies, see identified graph for appropriate values;
③ For Visual Position Indicator add suffix "VI". ④ For FDA CFR21 Compliance, add suffix "FB".

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow		Operating Pressure Differential (psi)			Max. Fluid Temp.°F	Bronze	Stainless Steel ① ④	Air or Water Pilot Pressure (psi) ②		Approx. Shipping Weight (lbs.)
		On-Off	Prop.	Min.	Max. Fluids	Max. Steam				Min.	Max.	
90 mm Operator												
Normally Closed - Entry Under the Disc												
1	1	19	17	0	240	150	366	8290B011	8290B054	60	150	6.5
1 1/4	1 1/4	32	24	0	180	150	366	8290A017	8290A060	60	150	7.7
1 1/2	1 1/2	52	33	0	120	120	366	8290A021	8290A064	60	150	9.5
2	2	68	46	0	90	90	366	8290A025	8290A068	60	150	16.0
Normally Open - Entry Under the Disc												
1	1	19	-	0	240	150	366	8290B029	8290B072	VII ②	150	6.5
1 1/4	1 1/4	32	-	0	240	150	366	8290A031	8290A074	VII ②	150	7.7
1 1/2	1 1/2	52	-	0	240	150	366	8290A033	8290A076	VII ②	150	9.5
2	2	68	-	0	200	150	366	8290A035	8290A078	VII ②	150	16.0
Normally Closed - Entry Above the Disc for Rapid Cycling Steam Applications												
1 1/4	1 1/4	32	-	0	-	150	366	8290A136	8290A137	VIII ②	150	7.7
1 1/2	1 1/2	52	-	0	-	150	366	8290A041	8290A084	VIII ②	150	9.5
2	2	68	-	0	-	150	366	8290A043	8290A086	VIII ②	150	16.0
125 mm Operator												
Normally Closed - Entry Under the Disc												
1 1/2	1 1/2	56	56	0	240	150	366	8290A482	8290A495	60	150	15.0
2	2	77	77	0	150	150	366	8290A485	8290A498	60	150	17.0
2 1/2	2 1/2	130	86	0	90	90	366	8290A488	8290A501	60	150	21.5
Normally Open - Entry Under the Disc												
2	2	77	-	0	240	150	366	8290A490	8290A503	IX ②	150	17.0
2 1/2	2 1/2	130	-	0	240	150	366	8290A492	8290A505	IX ②	150	21.5

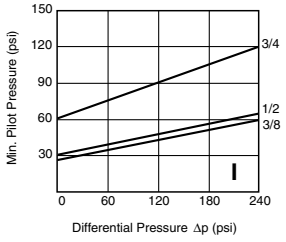
① Available with NET-INOX treatment, add suffix "NI"; ② Minimum pilot pressure varies, see identified graph for appropriate values. ④ For FDA CFR21 Compliance, add suffix "FB".

Dimensions inches (mm)

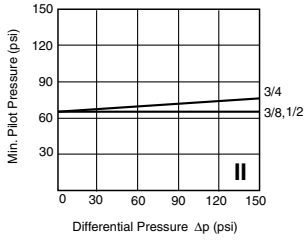
32 mm Operator						
	ØA	B	C	D	E	ØF
in	3/8	3.62	3.66	3.21	2.17	0.93
in	1/2	3.90	3.82	3.29	2.56	1.10
in	3/4	4.21	4.11	3.46	2.95	1.26

32 mm Operator Graphs for Steam and Fluids

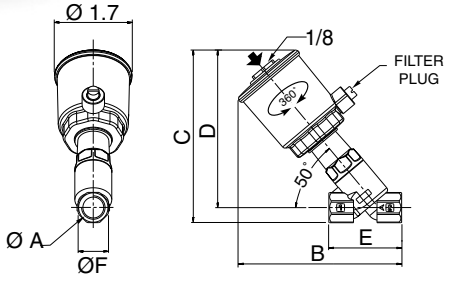
Normally Open Valve - Entry under Disc



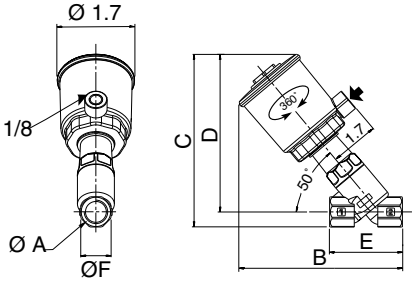
Normally Closed Valve - Entry above Disc



Normally Open



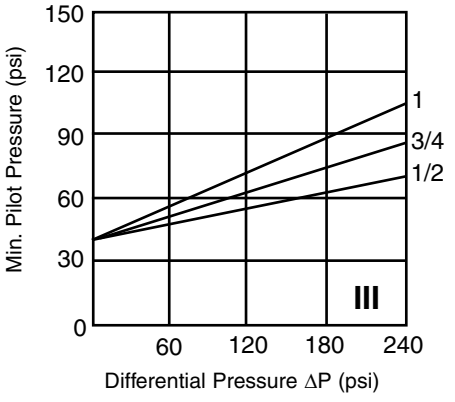
Normally Closed



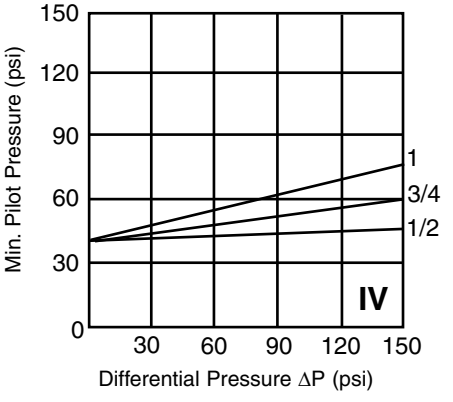
Dimensions inches (mm)

50 mm Operator Graphs for Steam and Fluids

Normally Open Valve - Entry Under Disc

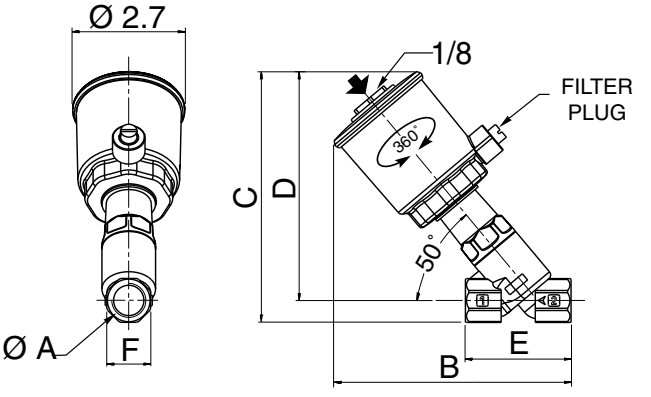


Normally Closed Valve - Entry Above Disc

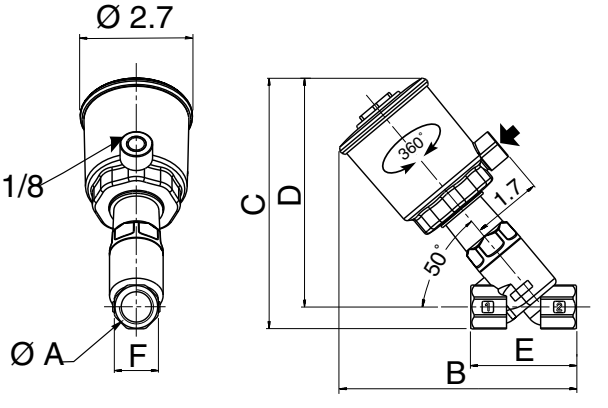


50 mm Operator						
	ØA	B	C	D	E	F
in	1/2	5.59	6.08	5.55	2.56	1.06
in	3/4	5.92	6.26	5.63	2.95	1.26
in	1	6.10	6.50	5.71	3.54	1.61

Normally Open



Normally Closed

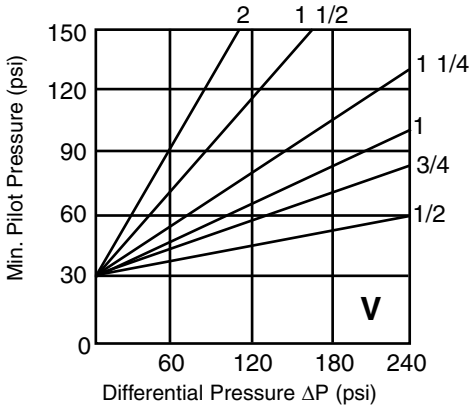


SPECIAL SERVICE VALVES

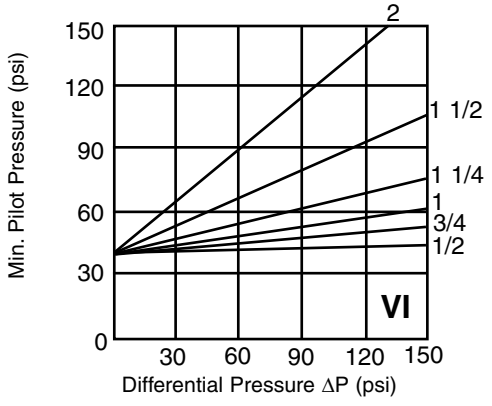
Dimensions inches (mm)

63 mm Operator Graphs for Steam and Fluids

Normally Open Valve - Entry Under Disc

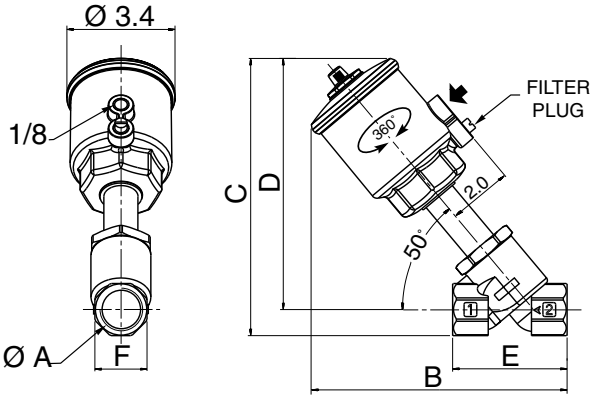


Normally Closed Valve - Entry Above Disc

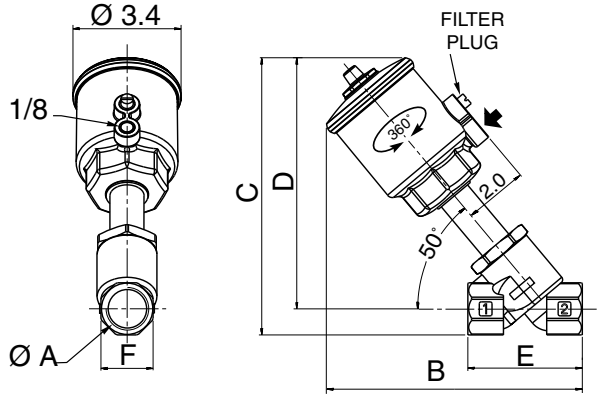


63 mm Operator						
	ØA	B	C	D	E	F
in	1/2	6.70	7.20	6.60	2.56	1.06
in	3/4	6.80	7.30	6.70	2.95	1.26
in	1	7.20	7.70	6.90	3.54	1.61
in	1 1/4	8.54	9.01	8.03	4.33	1.97
in	1 1/2	8.82	9.64	8.46	4.72	2.36
in	2	9.80	10.20	8.82	5.90	2.76

Normally Open



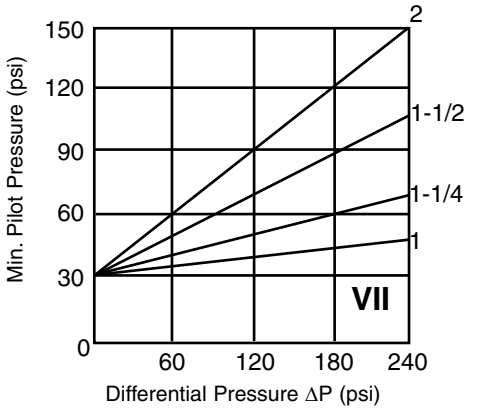
Normally Closed



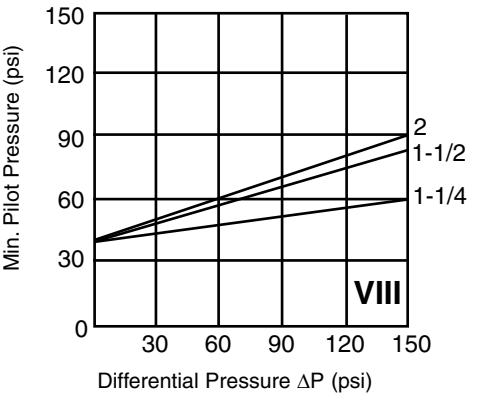
Dimensions inches (mm)

90 mm Operator Graphs for Steam and Fluids

Normally Open Valve - Entry Under Disc

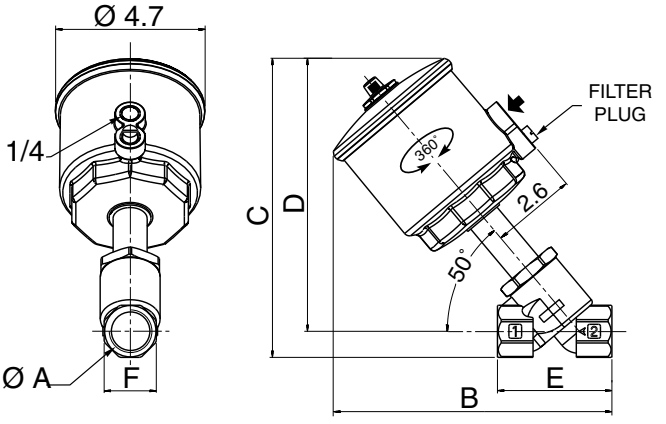


Normally Closed Valve - Entry Above Disc

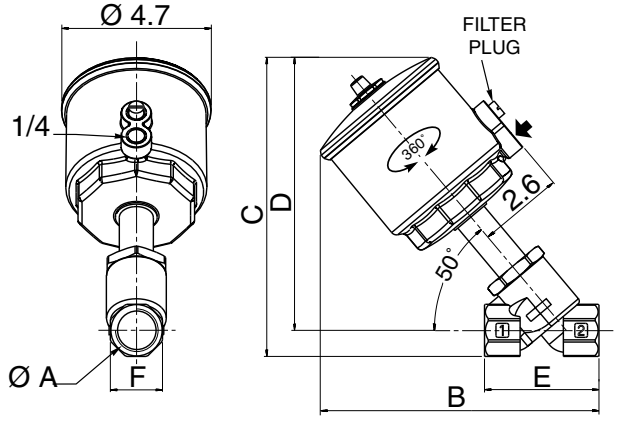


90 mm Operator						
	ØA	B	C	D	E	F
in	1	8.00	8.50	7.70	3.54	1.61
in	1 1/4	9.29	9.69	8.70	4.33	1.97
in	1 1/2	9.57	10.31	9.13	4.72	2.36
in	2	10.51	10.87	9.49	5.91	2.76

Normally Open



Normally Closed

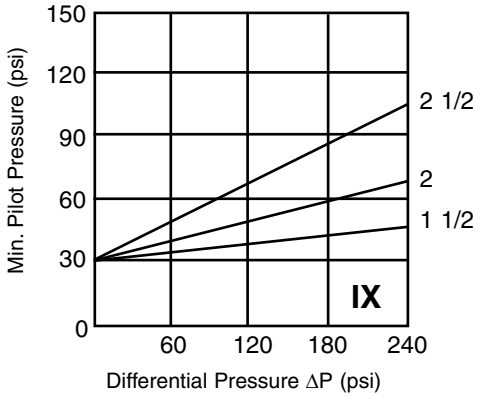


SPECIAL SERVICE VALVES

Dimensions inches (mm)

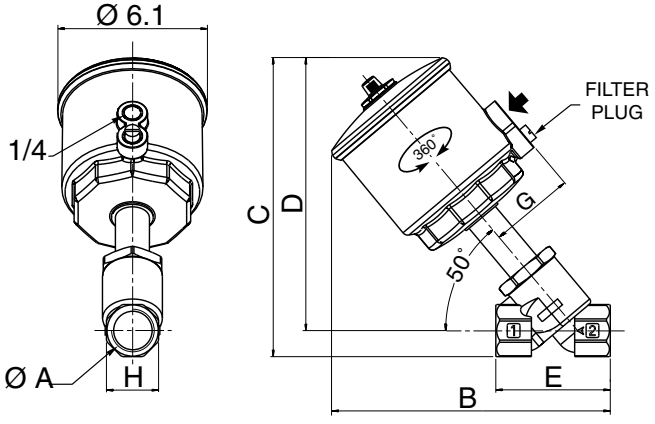
125 mm Operator Graphs for Steam and Fluids

Normally Open Valve - Entry Under Disc

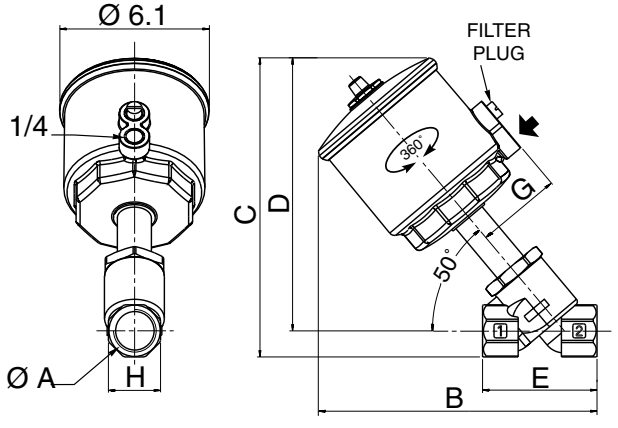


125 mm Operator							
	ØA	B	C	D	E	G	H
in	1 1/2	11.50	12.30	11.20	4.70	3.10	2.40
in	2	12.40	12.90	11.50	6.00	3.10	2.80
in	2 1/2	13.70	13.90	12.10	7.50	3.10	3.10

Normally Open

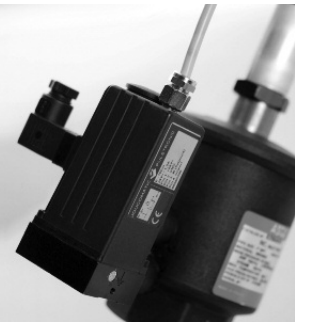


Normally Closed



SPECIAL SERVICE VALVES

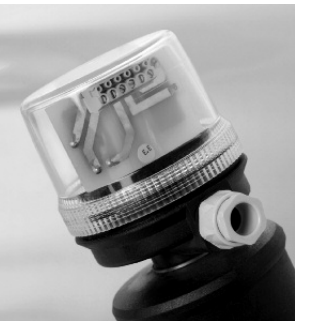
Compact Positioners for Proportional control



Varies flow proportional to a 0-10 VDC, 0-20 mA or 4-20 mA control signal. Feedback of valve stem position via a linear potentiometer. Uses a profiled disc for flow characterization. Assembly available on 50mm through 125mm operators, normally closed with fluid entry under disc. Positioner not suitable for water piloting. (e.g., 8290A384PDB04)

Control Signal	Add Suffix
0-10 VDC	PDB04
0-20 mA	PDB05
4-20 mA	PDB06

Signaling Box



Supplied with two mechanical or inductive switches with LEDs, and mounts on top of the valve operator in place of the standard visual indicator. As the valve cycles, cams on the signaling box lengthening stem operate the switches to provide electrical signaling of the valve position. The signaling box can rotate 360˚. Assembly available on 50mm normally closed and 63mm through 125mm normally open and normally closed. (e.g., 8290A384SM2)

Switches	Add Suffix
Two Mechanical	SM2
Two Inductive	SI2
Two Intrinsically Safe	SH2

Linear Position Indicator (HS4 Series)

Supplied with two mechanical switches and mounts on top of the valve operator in place of the standard visual indicator. Provides a wiring box with 1/2" NPT conduit connections. The HS4 linear position indicator is Type 4, 4X and IP 66 suitable for indoor and outdoor use in non-hazardous locations.

Switches	Part Number
Two (2) Mechanical SPDT Gold (IS) Switches	HS4D1YCH2NGA
Two (2) Mechanical SPDT Silver (15A) Switches	HS4D1YCA2NGA

Stroke limiter

The stroke limiter allows Cv flow to be adjusted from 0% to 100%, and mounts on top of the 8290 Series valve in place of the position indicator. Assembly available onto 50mm (normally closed) and 63mm through 125mm normally closed valves with fluid entry under the disc. Add suffix M: (e.g., 8290B002M)

Pilot Valves

ASCO offers a variety of 3-way direct acting normally closed pilot valves to pilot 32mm through 125mm 8290 valves. Available in direct, in-line, and remote mounting.

To order, specify catalog number and voltage:
24, 120, 240 AC/60Hz or 110, 220 AC/50Hz or 6, 12, 24, 120/DC

Series 189

- Direct mount
- Swivel “Banjo” fittings, 1/8" NPT male
- Inlet for 4mm plastic tube
- DIN plug connection

Series 8320

- In-line mount
- 1/8" or 1/4" NPT
- Brass or stainless steel
- (Explosionproof optional, add prefix EF)

Numatics® G3

- Remote mount
- 4 to 16 valves
- Compatible with AS-interface®, DeviceNet™, Profibus® DP, FOUNDATION Fieldbus™, and others
- Air service only

AS-interface is a registered trademark of AS-International.
DeviceNet is a trademark of ODVA.
Profibus is a registered trademark of Profibus International.
FOUNDATION Fieldbus is a trademark of Fieldbus Foundation.

Please use our Online Configurator at:

www.asco.com/8290Configurator

Motorized Valves

Stainless Steel Body • 3/8" to 3/4" NPT

2/2 SERIES 290

Features

- High flow due to angled seat design
- Anti-water hammer design (fluid entry under the disc)
- Actuator rotatable through 360˚
- 2-way normally closed operation
- Fluid isolation between electrical actuator and valve body
- LEDs identify valve position and status
- Vacuum service up to 7 x 10^{-3} Torr
- RoHS 2 compliant
- Ideal for "Lead Free" applications
- Feedback signal for 24 VDC and 24 to 48 AC

General

Fluid: Air, inert gas, liquids (water, oil, light slurries)
Fluid Temperature Range: 14˚F to 194˚F (-10˚C to 90˚C)
Ambient Temperature Range: 14˚F to 122˚F (-10˚C to 50˚C)
Maximum Viscosity: 2,700 SSU
Response Time: < 1.3 sec. (opening) / < 1.3 sec. (closing)

Construction

Valve Parts in Contact with Fluids	
Valve Body	316L Stainless Steel
Operator	Translucent Polyamide (PA)
Stuffing Box Housing	PBT (Thermoplastic Polyester Resin), 30% fiberglass reinforced
Stem Valve	303 Stainless Steel
Stuffing Box Packing	NBR
Wiper Seal	NBR
Disc Seal	NBR

Electrical

Connector	DIN Plug (ISO 4400 Form A)
Power Consumption	12 W (operating), 0 W (holding) Max peak current: 0.7 A (startup)
Visual Indication	LED
Enclosure	IP65
Standard Voltages	DC: 24V AC: 110 to 250V / 50-60 Hz 24 to 48V / 50-60 Hz
Duty Cycle	12 cycles/min at 14˚F (-10˚C) 4 cycles/min at 122˚F (50˚C)

How to Order

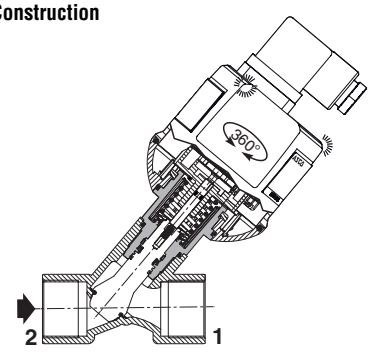
8290C52V0KEFC + **V1**

Base Catalog Number
Refer to the Specifications Section

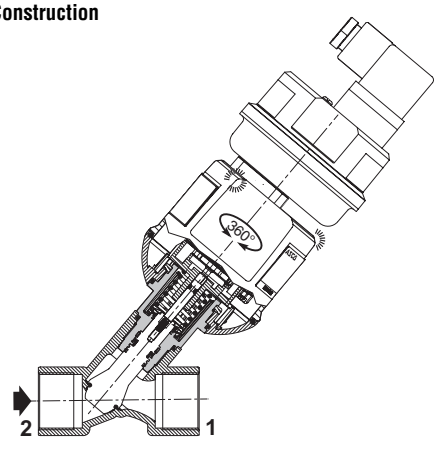
Voltage Code

V1	24 VDC
VW	110 to 250V / 50-60 Hz
UA	24 to 40V / 50-60 Hz

DC Construction



AC Construction



Approvals

Meets applicable CE directives with provisions of ROHS 2 directive.

SPECIAL SERVICE VALVES

Specifications (English units)

Pipe Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Base Catalog Number	Voltage Code			Const. Ref.		Approx. Shipping Weight (lbs)	
		Min.	Max.			24V (DC)	110 to 250V (50-60 Hz)	24 to 48V (50-60 Hz)	DC	AC	DC	AC
Normally Closed - Entry under the disc												
3/8	3.1	0	87	194	8290C52V0KEFC	V1	VW	UA	1	2	1.2	1.4
1/2	4.4	0	72	194	8290C53V0KEFC				1	2	1.2	1.4
3/4	6.9	0	58	194	8290C54V0KEFC				1	2	1.2	1.4

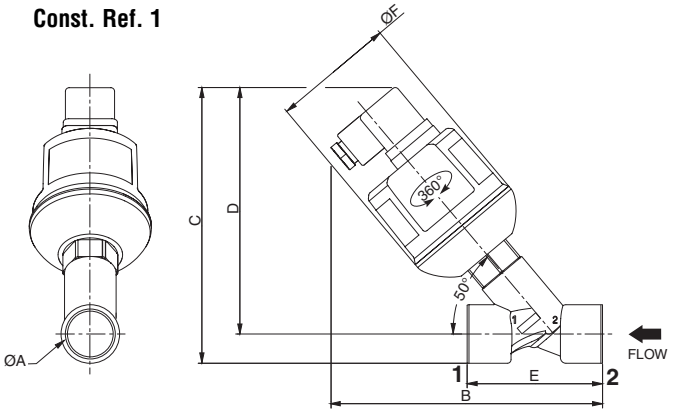
Specifications (Metric units)

Pipe Size (in)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Max. Fluid Temp. °C	Base Catalog Number	Voltage Code			Const. Ref.		Approx. Shipping Weight (kgs)	
		Min.	Max.			24V (DC)	110 to 250V (50-60 Hz)	24 to 48V (50-60 Hz)	DC	AC	DC	AC
Normally Closed - Entry under the disc												
3/8	2.7	0	6	90	8290C52V0KEFC	V1	VW	UA	1	2	0.55	0.65
1/2	3.8	0	5	90	8290C53V0KEFC				1	2	0.55	0.65
3/4	6	0	4	90	8290C54V0KEFC				1	2	0.55	0.65

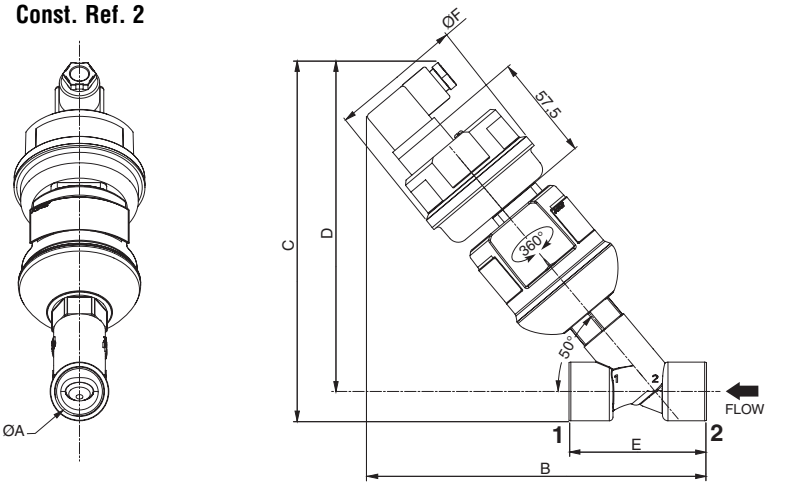
Dimensions inches (mm)

Const. Ref.		ØA	B	C	D	E	ØF
DC Version							
1	in	3/8	5.3	5.6	5.1	2.2	2.6
	mm		135	141	129	55	67
	in	1/2	5.6	5.7	5.2	2.6	2.6
	mm		142	145	131	65	67
	in	3/4	5.9	6	5.4	3	2.6
	mm		150	152	136	75	67
AC Version							
2	in	3/8	6.7	7.4	6.9	2.2	2.8
	mm		171	189	175	55	71
	in	1/2	7	7.5	7	2.6	2.8
	mm		178	191	177	65	71
	in	3/4	7.3	7.7	7.1	3	2.8
	mm		186	196	180	75	71

Const. Ref. 1



Const. Ref. 2



Replacement DC to AC Adapter

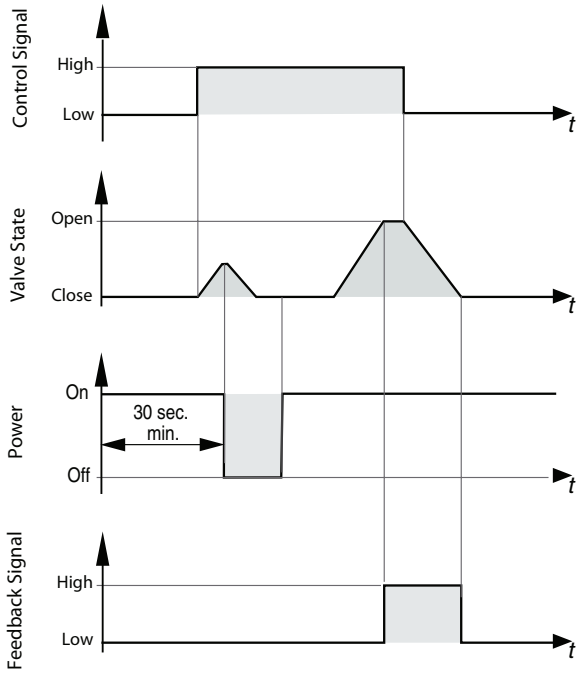
Catalog Number	Voltage
P290CA430078001	110 to 250V/50-60 Hz
P290CA438907007	24 to 48V/50-60 Hz

Valves can be mounted in any position.

SPECIAL SERVICE VALVES

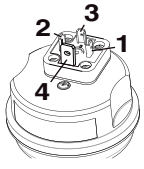
OPERATING DIAGRAM

Fail Close Construction



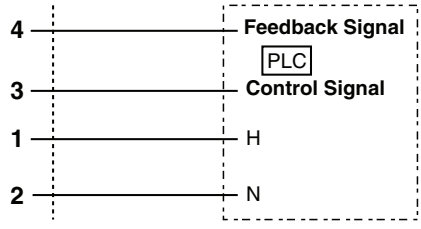
WIRING DC

24 VDC

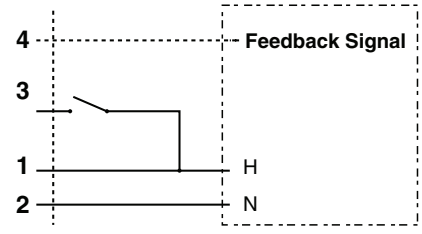


1	Hot (H)
2	Neutral (N)
3	Control Signal
4	Feeback Signal

With PLC

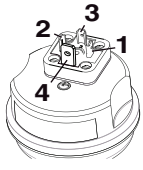


Without PLC



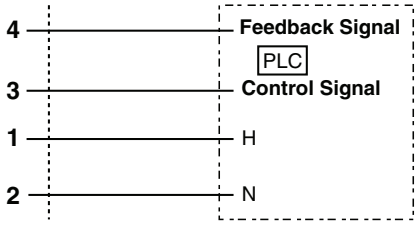
WIRING AC

24 V to 48 V / AC 50/60 Hz

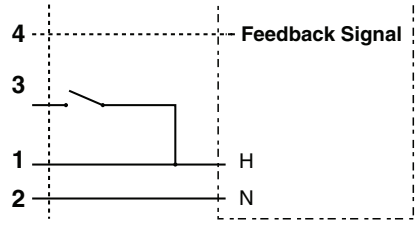


1	Hot (H)
2	Neutral (N)
3	Control Signal
4	Feeback Signal

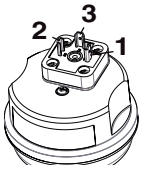
With PLC



Without PLC

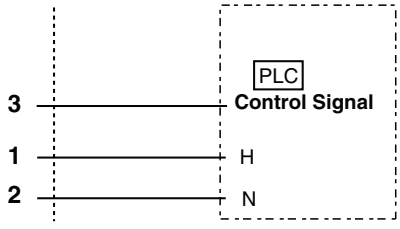


110 V to 250 V / AC 50/60 Hz

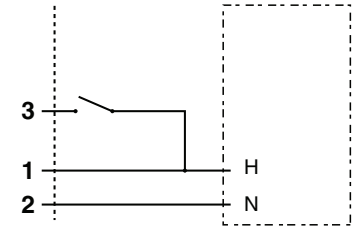


1	Hot (H)
2	Neutral (N)
3	Control Signal
-	-

With PLC



Without PLC



Features

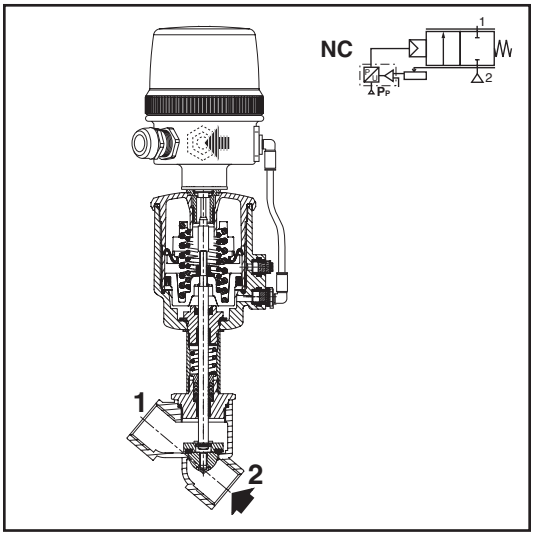
- Variable flow proportional to the control signal (open loop)
- Closed loop control via external process sensor
- Fail-close construction: Valve closes upon loss of power
- Supplied factory-assembled
- LED indicators for valve status display
- Manual opening and closing function
- Position feedback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

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.*

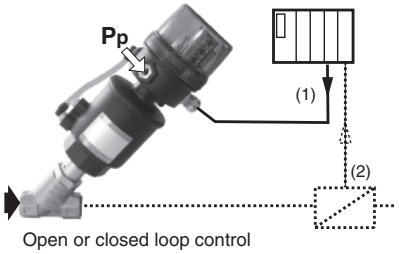
Valve Construction

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[D], 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) Value measured by process sensor

SPECIAL SERVICE VALVES

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
63mm Operator												
1/2	1/2	5.3	0	230	150	366	8290B002	8290B045	60	116	4.2	
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	**PDB67**
2	2	46	0	40	40	366	8290A024	8290A067	60	116	10.6	
90mm Operator												
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.

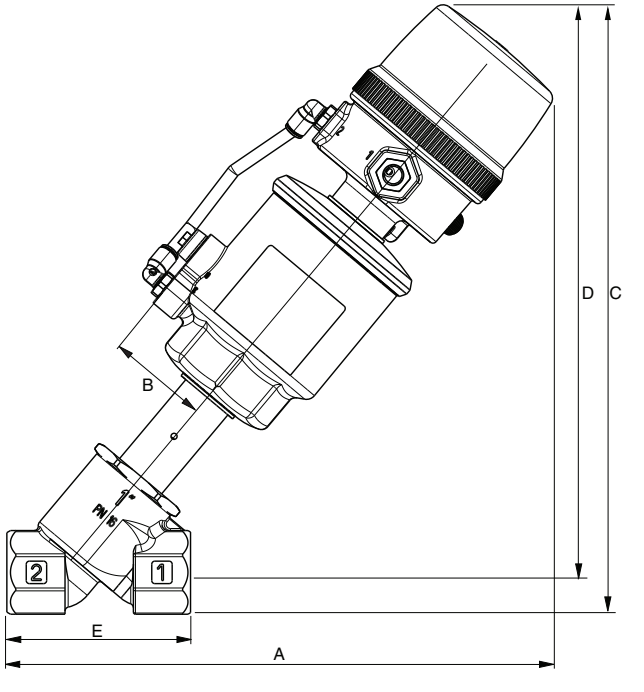
Response time (seconds)

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
63 mm Operator					
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
90 mm Operator					
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

Compressed Natural Gas Valves

303 Stainless Steel Bodies
3/8", 1/2", and 1" Connections

2/2 SERIES 291

Features

- Rugged stainless steel valve with piston design built to withstand pressure ratings over 5,000 psi
- High flow design for fast CNG dispensing, reduces vehicle fill time
- Ambient temperature range -40˚F to 158˚F (-40˚C to 70˚C)
- PEEK piston provides tight sealing and durable operation
- Suitable for use in Class I, Div. 1 hazardous locations
- Mountable in any position

Construction

Valve Parts in Contact with Fluids	
Body	303 Stainless Steel
Core Tube	Aluminum bronze
Piston	PEEK
Core and Plugnut	430F Stainless Steel
Springs	301 Stainless Steel
Sealing (U-cup)	PTFE/302 Stainless Steel
Seals	FKM

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
	DC Watts	AC			Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC
F	11.6	12	12	12	276000	238714

Standard Voltages: 24/50-60, 115/50-60, 120/50-60, 200/50-60, 230/50-60, and 240/50-60 volts AC, or 6, 12, 24, 48, 110, 120 and 240 volts DC.

Solenoid Enclosures

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

Nominal Ambient Temp. Range

-40°F to 158°F (-40°C to 70°C)

Approvals

UL listed solenoid
for hazardous locations - File E12264
CSA certified solenoid
for hazardous locations - File 13976
Meets applicable CE directives

Options

Three and six-station manifolds available, consult factory.
Rebuild kits available, consult factory.

SPECIAL SERVICE VALVES

How to Order

8 2 9 1 G 4 1 0 — Base Catalog Number
Refer to the Specifications Chart

H 0 — Electrical Interface

H0	Explosionproof & Watertight RHII, 1/2" Conduit with Leads (18")
H7	Explosionproof & Watertight, RHII, 1/2" Conduit with Leads (72")

1 0 0 — Valve Construction

100	PEEK piston, FKM seals

F A — Voltage

DC	AC
E7 6/DC	**FQ** 24/50-60
F3 12/DC	**FC** 115/50-60
F1 24/DC	**FA** 120/50-60
F9 48/DC	**EL** 200/50-60
FJ 110/DC	**FH** 230/50-60
FD 120/DC	**E6** 240/50-60
E2 240/DC	

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Compressed Natural Gas Min.	Operating Pressure Differential (psi) Compressed Natural Gas Max.	Max. Fluid Temp. °F	Base Catalog Number ISO thread ①	Base Catalog Number NPT thread	Base Catalog Number SAE thread	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
Normally Closed (Closed when de-energized)											
3/8	5/16	1.1	145	5,070	158	G291G410	8291G410	7291G410 ②	1	12.0/F	11.6/F
1/2	15/32	2.7	145	5,070	158	G291G420	8291G420	7291G420 ③	2	12.0/F	11.6/F
1	45/64	8.8	145	5,070	158	-	8291G431	7291G431 ④	3	12.0/F	11.6/F

① ISO 228 thread. ② (SAE 6), ③ (SAE 8), ④ (SAE 16)

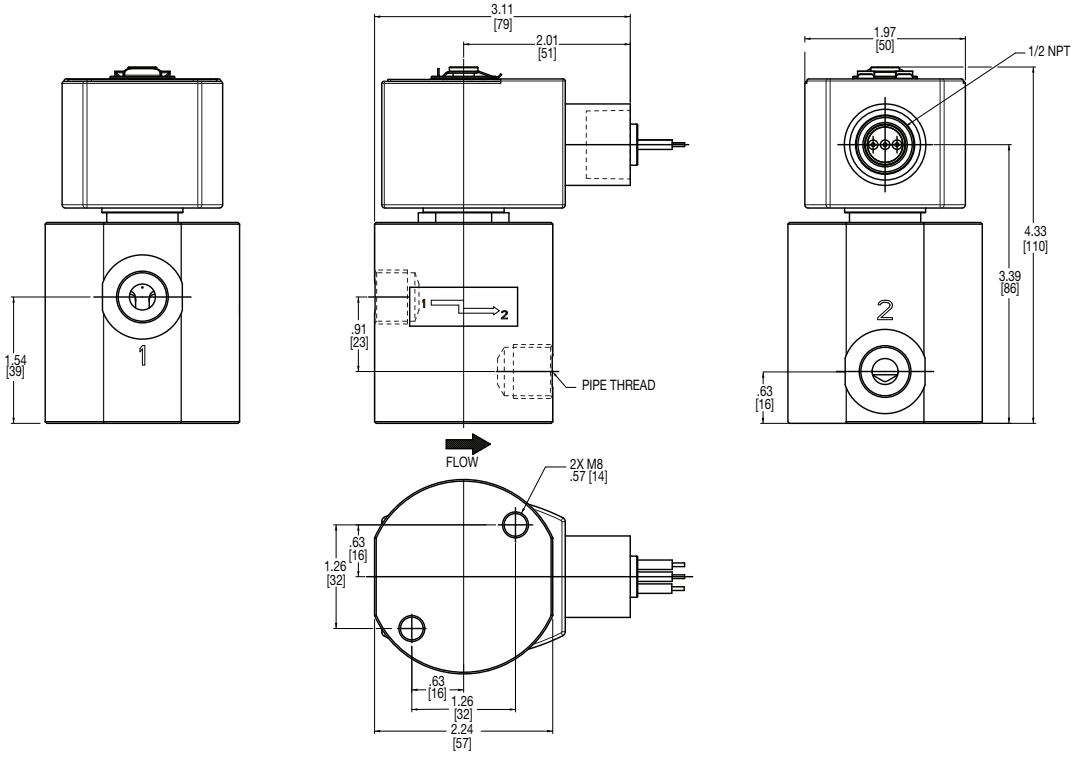
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Operating Pressure Differential (bar) Compressed Natural Gas Min.	Operating Pressure Differential (bar) Compressed Natural Gas Max.	Max. Fluid Temp. °C	Base Catalog Number ISO thread ①	Base Catalog Number NPT thread	Base Catalog Number SAE thread	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
Normally Closed (Closed when de-energized)											
3/8	8	0.96	10	350	70	G291G410	8291G410	7291G410 ②	1	12.0/F	11.6/F
1/2	12	2.3	10	350	70	G291G420	8291G420	7291G420 ③	2	12.0/F	11.6/F
1	18	7.6	10	350	70	-	8291G431	7291G431 ④	3	12.0/F	11.6/F

① ISO 228 thread. ② (SAE 6), ③ (SAE 8), ④ (SAE 16)

Dimensions inches (mm)

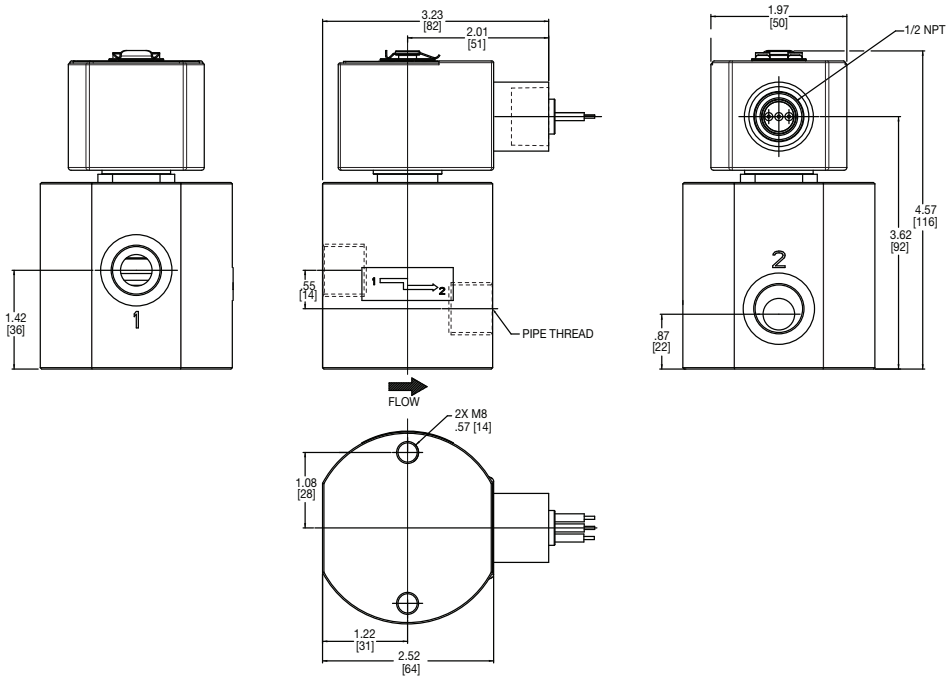
Const. Ref. 1



SPECIAL SERVICE VALVES

Dimensions inches (mm)

Const. Ref. 2



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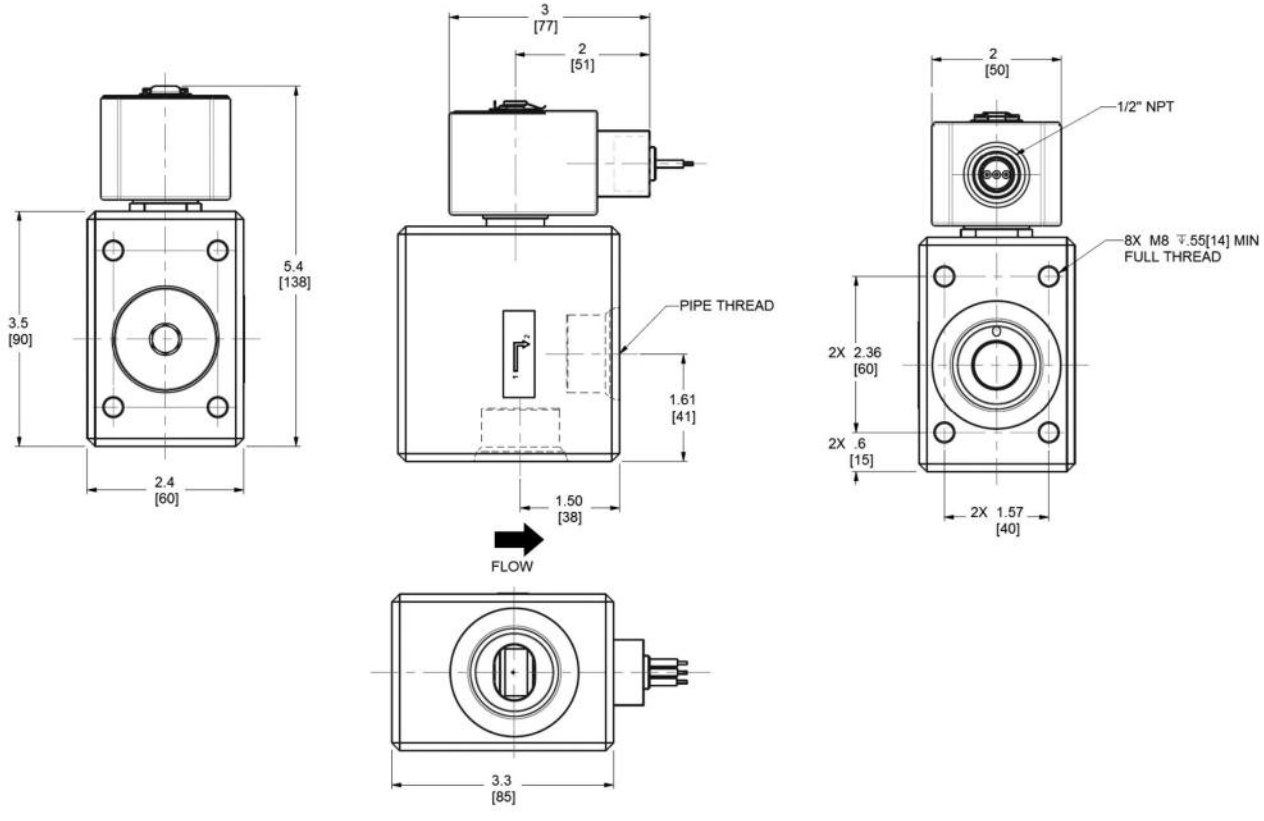


ASCO™ Steam and Agressive Fluid Piston Valves

Air Operated, 304 Stainless Steel Bodies | 1/2" to 2" NPT

2/2 SERIES 298B

Features

- Rugged design, built to withstand steam, superheated water, and corrosive fluids
- Available in normally closed and normally open constructions
- High-performance, maintenance-free stuffing box that is resistant to thermal shock
- Anti-water hammer design
- Pressure can be applied to any port as needed by the process
- Visual position indicator standard
- Ideal for use on tire presses and industrial autoclaves

Construction

Operator: Nickel plated aluminum

Valve Parts in Contact with Fluids	
Valve body and plug	304 Stainless Steel
Stuffing box housing	304 Stainless Steel
Stem, Disc	431L Stainless Steel
Stuffing box packing	PTFE Chevron
Disc seal	PTFE
Valve body seal	PTFE

Specifications

Fluid: Steam, superheated water, corrosive fluids
Fluid Temperature Range: 14˚F to 356˚F (-10˚C to 180˚C)
Ambient Temperature Range: -4˚F to 356˚F (-20˚C to 180˚C)
Maximum Viscosity: 23,500 SSU

Options

For other pipe connections, alternate pilot valves and construction options, please consult factory

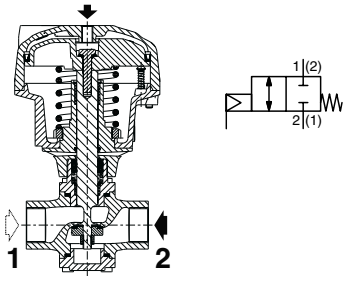
Pilot Valve

8356 Series

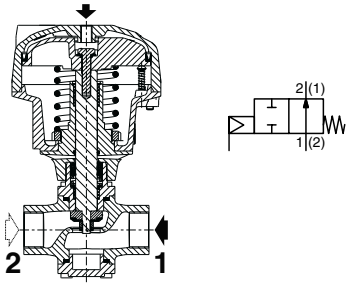
- In-line mount
- 1/8" or 1/4" NPT
- Brass or Stainless Steel

(*see 8356 catalog page for specifications*)

Normally Closed



Normally Open



Installation

Valve can be mounted in any position

SPECIAL SERVICE VALVES

Specifications English units (Metric)

Pipe Size (in)	Operator (mm)	Flow Cv (Kv)		Operating Pressure Differential (psi)		Catalog Number	Air Pilot Pressure (psi)		Const. Ref.	Approx. Shipping Weight (lbs.)
		Ports 1 - 2	Ports 2 - 1	Min.	Max. ①		Min.	Max.		
Normally Closed										
1/2" (15)	80	5.1 (4.4)	5.8 (5.0)	0	580 (40)	8298B0380TA0000	②	145 (10)	1	4.0 (1.8)
3/4" (20)	100	8.9 (7.7)	9.8 (8.5)	0	580 (40)	8298B04E0TA0000	②	145 (10)	2	7.5 (3.4)
1" (25)	100	13.5 (11.5)	13.0 (12.0)	0	580 (40)	8298B05E0TA0000	②	145 (10)	3	9.3 (4.2)
1-1/4" (32)	150	20.0 (18.0)	20.0 (18.0)	0	580 (40)	8298B06L0TA0000	②	145 (10)	4	21.0 (9.3)
1-1/2" (40)	150	33.5 (29.0)	33.5 (29.0)	0	580 (40)	8298B07L0TA0000	②	145 (10)	5	27.0 (11.4)
2" (50)	200	66.0 (57.0)	66.0 (57.0)	0	580 (40)	8298B08N0TA0000	②	145 (10)	6	53.0 (23.5)
Normally Open										
1/2" (15)	80	4.0 (3.5)	4.0 (3.5)	0	580 (40)	8298B1380TA0000	③	145 (10)	1	4.0 (1.8)
3/4" (20)	100	8.3 (7.2)	8.1 (7.0)	0	580 (40)	8298B14E0TA0000	③	145 (10)	2	7.7 (3.5)
1" (25)	100	12.0 (11.0)	12.0 (11.0)	0	580 (40)	8298B15E0TA0000	③	145 (10)	3	9.1 (4.1)
1-1/4" (32)	150	20.0 (18.0)	17.0 (15.0)	0	580 (40)	8298B16L0TA0000	③	145 (10)	4	21.0 (9.3)
1-1/2" (40)	150	32.6 (28.2)	32.6 (28.2)	0	580 (40)	8298B17L0TA0000	③	145 (10)	5	27.0 (11.4)
2" (50)	200	61.0 (53.0)	61.0 (53.0)	0	580 (40)	8298B18N0TA0000	③	145 (10)	6	49.0 (21.7)

① 580 psi within the specified fluid temperature limits, see Diagram 1; 40 bar within the specified fluid temperature limits, see Diagram 1A
② Minimum pilot pressure for Normally Closed varies with differential pressure. See Chart A (psi); See Chart A1 (bar)
③ Minimum pilot pressure for Normally Open varies with differential pressure. See Chart B (psi); See Chart B1 (bar)

Spare Part Kits

Type	Catalog Number	Spare Parts Kit
Normally Closed	8298B0380TA0000	M29852671700100
	8298B04E0TA0000	M29852671700400
	8298B05E0TA0000	M29852671700700
	8298B06L0TA0000	M29852671701000
	8298B07L0TA0000	M29852671701300
	8298B08N0TA0000	M29852671701600
Normally Open	8298B1380TA0000	M29852671700200
	8298B14E0TA0000	M29852671700500
	8298B15E0TA0000	M29852671700800
	8298B16L0TA0000	M29852671701100
	8298B17L0TA0000	M29852671701400
	8298B18N0TA0000	M29852671701700

English units

Diagram 1

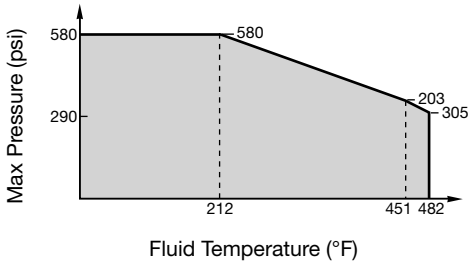


Chart A

Minimum Pilot Pressure
Normally Closed

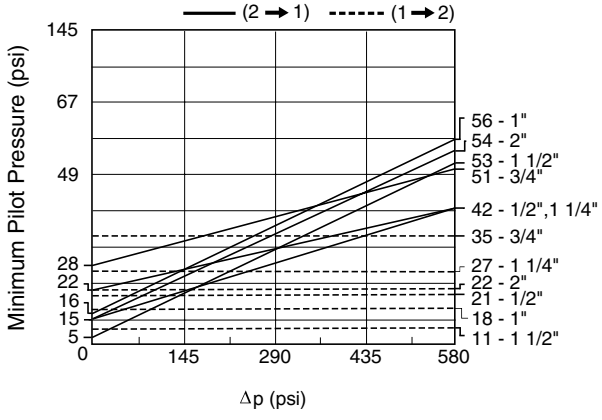
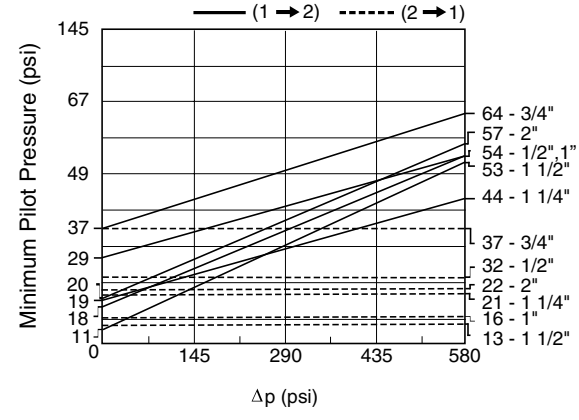


Chart B

Minimum Pilot Pressure
Normally Open



Metric units

Diagram 1A

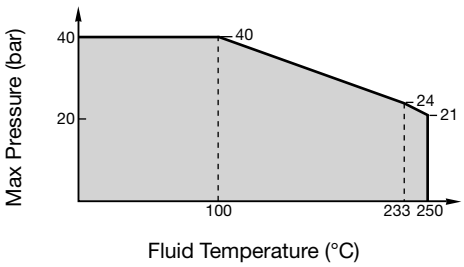


Chart A1

Minimum Pilot Pressure
Normally Closed

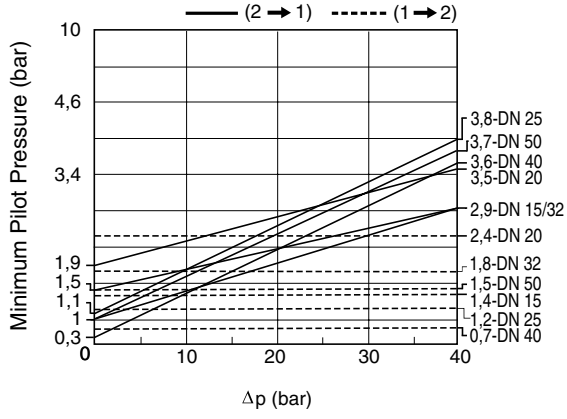
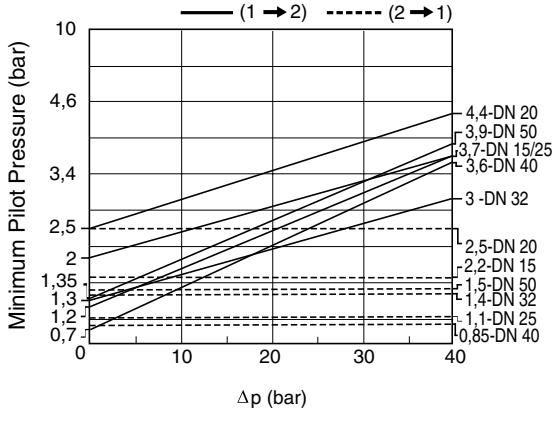


Chart B1

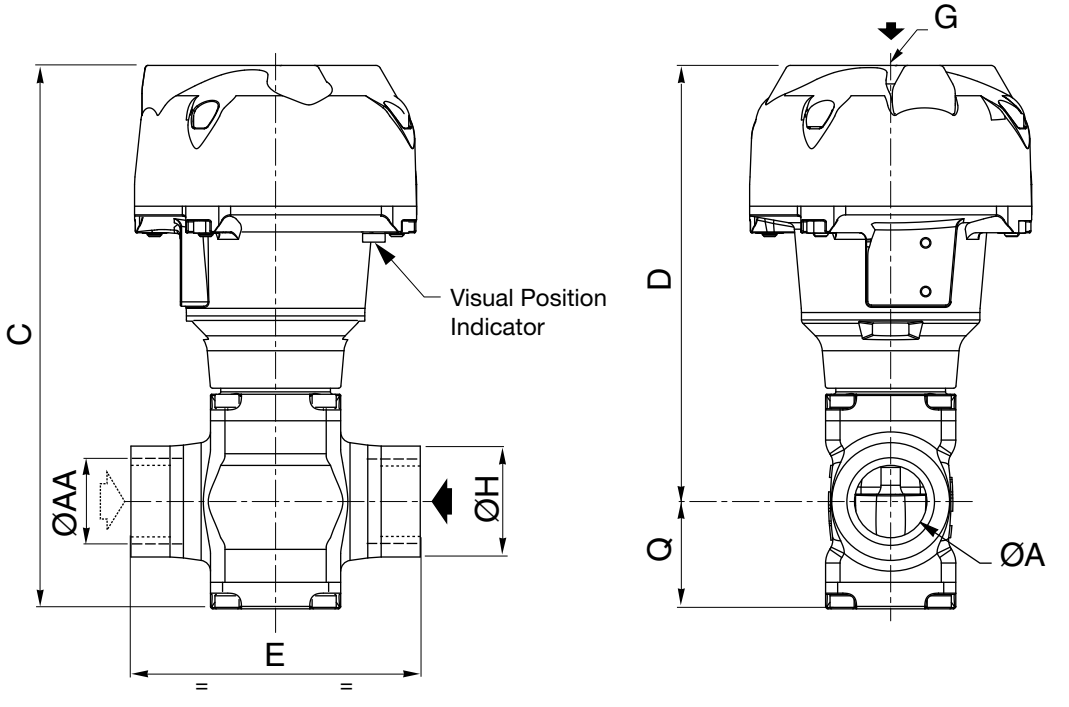
Minimum Pilot Pressure
Normally Open



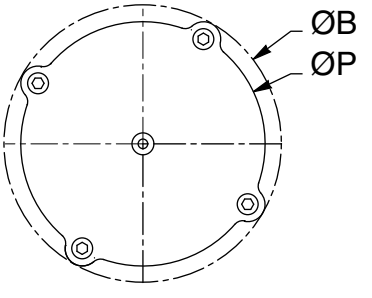
SPECIAL SERVICE VALVES

Dimensions inches (mm)

Const. Ref		ØAA	ØA	ØB	C	D	E	G	ØH	ØP	Q
1	in	1/2	0.59	4.3	7.2	6.0	3.3	NPT 1/8	1.3	3.7	1.3
	mm	15	15	110	184	152	85		33	95	33
2	in	3/4	0.79	5.2	8.3	6.7	4.3	NPT 1/8	1.6	4.6	1.5
	mm	20	20	133	210	171	110		40	117	39
3	in	1	0.98	5.2	8.9	7.1	4.7	NPT 1/8	1.8	4.6	1.8
	mm	25	25	133	225	181	120		46	117	45
4	in	1 1/4	1.3	7.5	11	9.3	5.7	NPT 1/4	2.2	6.8	2.2
	mm	32	32	191	291	237	145		57	173	54
5	in	1 1/2	1.6	7.5	13	10	5.9	NPT 1/4	2.6	1.8	2.6
	mm	40	40	191	326	259	150		65	173	67
6	in	2	2.0	9.7	16	13	7.5	NPT 1/4	3.0	9.1	3.2
	mm	50	50	247	409	329	190		75	230	81



Top down view

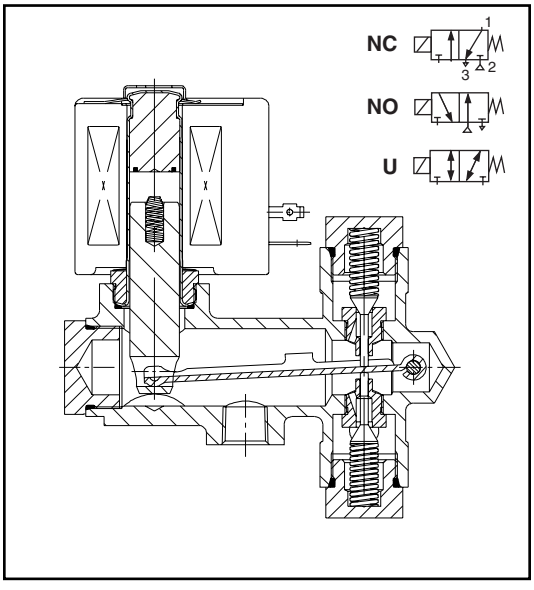


Features

- Designed for high flow and high pressure service
- Direct acting, requires no minimum operating pressure
- Ideal for power plants and similar applications

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Disc	303 Stainless Steel (Metal)
Seats	Phosphor Bronze
Core Tube	305 Stainless Steel
Core and Plugnut	430 F Stainless Steel
Springs	302 Stainless Steel, 17-7PH or Iconel
Shading Coil	Copper
Gaskets	NBR



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part Number	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
H	16.1	35	180	272810	272814
H	28.2	50	385	224195	224195

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). Must be specified when ordering.
(Note: 24 volt AC, 60 Hz not available with 28.2 watt coil)

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Watertight, Types 3, 4, 4X, 7, and 9; (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Class H Coils AC: 32˚F to 140˚F (0˚C to 60˚C)

Refer to Engineering Section for details.

Approvals

Meets applicable CE directives.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Max. AC NC/NO	Operating Pressure Differential (psi) Max. AC Univ.	Max. Fluid Temp.°F AC	Brass Body ① Add Suffix "F" for NC, "G" for NO, "U" for Univ. Catalog Number	Brass Body Const. Ref.	Watt Rating/ Class of Coil Insulation AC
PHOSPHOR BRONZE SEATS - STEAM SERVICE ONLY								
1/4	1/4	.45	100	55	344	8315G002	1	16.1/H
3/8	1/4	.45	100	50	344	8315G003	1	16.1/H
3/8	5/16	.75	105	50	344	8315 034 ②	4	28.2/H
1/2	5/16	.75	100	50	344	8315 035 ②	4	28.2/H

① NC = Normally Closed: Exhaust pressure when de-energized. NO = Normally Open: Applies pressure when de-energized. Univ. = Universal: Pressure at any port. ② Not available with 24 volt, 60 Hz coil. *Refer to Engineering Section for details.*

Specifications (Metric units)

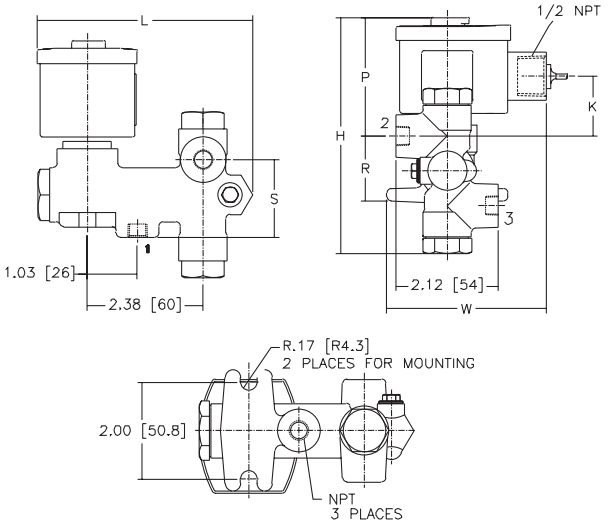
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Max. AC NC/NO	Operating Pressure Differential (bar) Max. AC Univ.	Max. Fluid Temp.°C AC	Brass Body ① Add Suffix "F" for NC, "G" for NO, "U" for Univ. Catalog Number	Brass Body Const. Ref.	Watt Rating/ Class of Coil Insulation AC
PHOSPHOR BRONZE SEATS - STEAM SERVICE ONLY								
1/4	.5	.39	7	3.8	173	8315G002	1	16.1/H
3/8	.5	.39	7	3.4	173	8315G003	1	16.1/H
3/8	.6	.64	7.2	3.4	173	8315 034 ②	4	28.2/H
1/2	.6	.64	7	3.4	173	8315 035 ②	4	28.2/H

Dimensions inches (mm)

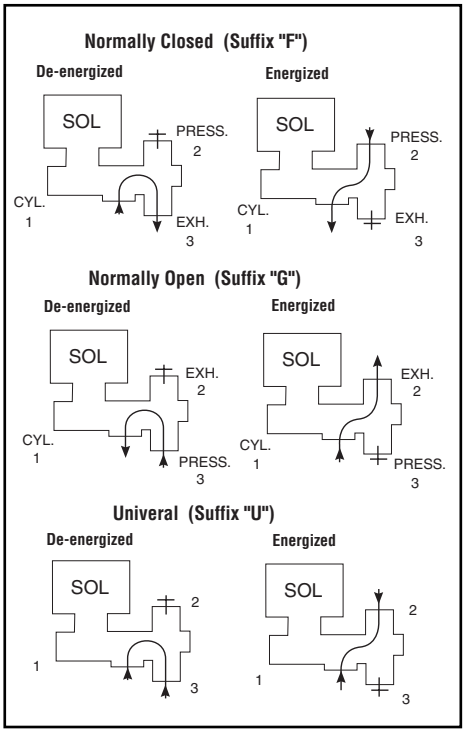
Const. Ref.		H	K	L	P	R	S	W
1	in	4.89	1.44	4.44	2.46	1.34	1.60	3.30
	mm	124	37	113	62	34	40	84
4	in	4.89	1.44	4.44	2.46	1.34	1.60	3.30
	mm	124	37	113	62	34	40	84

IMPORTANT: Valves must be mounted vertical and upright.

Const. Ref. 1, 4



Flow Diagrams



SPECIAL SERVICE VALVES

Solenoid Piloted-Spring Return

Extreme Low Temperature Valves

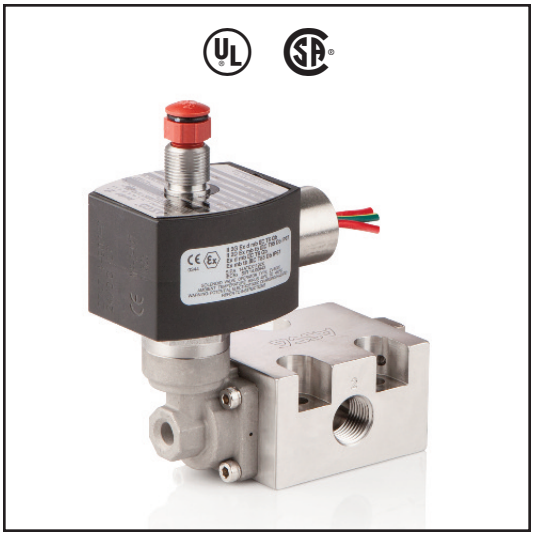
316L Stainless Steel Bodies • 1/4" and 3/8" NPT

Air, Inert Gas, and Sweet Dry Natual Gas

3/2 SERIES 381

Features

- Ideal for use in extremely harsh and corrosive environments, such as those found on offshore and near-shore oil platforms
- Broad operating temperature range of -60°C to 80°C allows for use in extreme environmental conditions
- High-flow design results in faster process response time
- Requires zero main pressure to operate when using the externally piloted version
- Compatible with speed control, allowing users to control flow to prevent abrupt opening/closing of actuator



Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
O-rings | Disc	Low Temperature NBR
Dynamic O-ring	Low Temperature FKM
U-Cup Seal	FVMQ
Core and Plugnut	430F Stainless Steel
Sleeve	304L Stainless Steel
Piston	316L Stainless Steel
Spring	17-7 Stainless Steel
Poppets | Stem | Disc Retainer	303 Stainless Steel
Screws	316 Stainless Steel
Core Guide (10.1 & 11.6W)	POM
Core Tube (10.1 & 11.6W)	305 Stainless Steel
Shading Coil (10.1 & 11.6W)	Silver

Electrical

Coil Options	Insulation Class	Wattage	T Code	Spare Coil Part Number
Intrinsically Safe	H	0.48 W	T6	298006
Ultra Low Power	F	0.55 W	T6	274714
High Ambient Low Power	H	0.70 W	T5	274914
Surge Suppression	F	0.75 W	T6	276007
Standard Low Power	F	1.4 W	T6	274714
Surge Suppression	F	1.7 W	T6	276007
High Ambient Low Power	F	1.8 W	T5	274714
Standard AC	F	10.1 W	T4	274614
Standard DC	F	11.6 W	T4	274714

IMPORTANT: Supervisory & leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.

Description	Wattage	Voltage (DC)	Pull In (mA)	Drop Out (mA)	Coil Resistance at 68F(20 C) (Ohms)
Standard Ultra Low Power	0.55 W	12	34.0	3.63	255
		24	17.0	1.80	1025
		48	8.5	0.91	4080
High Ambient Ultra Low Power	0.70 W	12	37.0	3.97	206
		24	19.0	1.98	830
		48	9.7	1.03	3185
Surge Suppression Ultra Low Power	0.75 W	12	41.0	4.41	165
		24	19.0	1.98	830
		48	9.7	1.03	3185
Standard Low Power	1.4 W	12	83.5	13.90	102
		24	42.0	7.00	410
		48	21.4	3.60	1640
High Ambient Low Power	1.8 W	12	94.3	15.70	80
		24	47.9	8.00	320
		48	24.0	4.00	1260
Surge Suppression Standard Power ①	1.7 W	12	94.3	15.70	80
		24	47.9	8.00	320
		48	22.7	3.80	1470

Note: ① Surge suppression contains diode bridge.

Nominal Ambient Temp. Ranges

Wattage	Min °F (°C)	Max °F (C°)
AC		
10.1	-76 (-60)	125 (52)
DC		
0.48	-40 (-40)	149 (65)
0.55	-76 (-60)	149 (65)
0.70		176 (80)
0.75		149 (65)
1.4		140 (60)
1.7		140 (60)
1.8		165 (74)
11.6		131 (55)

Entity Parameters

Intrinsically Safe - 0.48 W:

V_{max} = 32 VDC C_i = 0nF

I_{max} = 500 mA L_i = 0 H

P_i = 1.5 W

Solenoid Enclosures

Standard: Explosionproof and Watertight, Types 1, 2, 3, 3S, 4, 4X, 6, and 6P.

Refer to Engineering Section for fluid and temperature compatibility.

Approvals

Solenoid Only:

UL and CSA certified for class 1 Div. 1 locations

ATEX, IECEx: Ex d mb

Refer to Engineering Section for details.

SPECIAL SERVICE PILOT

How to order (Configurator available at www.asco.com)

8381K001 H1 400 F1

Base Catalog Number
See Specificatoins Table

Coil Connection Type

H1	1/2" conduit, 18" leads, Harsh Environment, Class 1, Div 1, (0.55, 0.70, 1.4, 1.8, 10.1, 11.4 Watt only)
H8	1/2" conduit, 72" leads, Harsh Environment, Class 1, Div 1, (0.55, 0.70, 1.4, 1.8, 10.1, 11.6 Watt only)
H6	1/2" conduit, 18" leads Harsh Environment, Class 1, Div 1 & Surge Suppression (0.75 & 1.7 Watt DC only)
H5	1/2" conduit, 72" leads Harsh Environment, Class 1, Div 1 & Surge Suppression (0.75 & 1.7 Watt DC only)
7S	1/2" conduit, 316SS Junction Box Intrinsically Safe (JSIS) 4, 4X, 6, 6P, IP66, IP67 (0.48 Watt only)
C1	1/2" conduit, 18" leads Instrinsically Safe (0.48 Watt only)
C8	1/2" conduit, 72" leads Instrinsically Safe (0.48 Watt only)

Voltage / **Watts**

F3	12 VDC	0.55, 0.75, 1.4, 1.7, 1.8, 11.6
H3	12 VDC	0.70
F1	24 VDC	0.55, 0.75, 1.4, 1.7, 1.8, 11.6
H1	24 VDC	0.48, 0.70
F9	48 VDC	0.55, 0.75, 1.4, 1.7, 1.8, 11.6
H9	48 VDC	0.70
FD	120 VDC	11.6
E2	240 VDC	11.6
D5	24/60, 22/50 AC	10.1
FL	24/50 AC	
E0	110/60, 100/50 AC	
D9	115/50, 120/50 AC	
F0	120/60, 110/50 AC	
D3	208/60 AC	
ES	220/60 AC	
DF	240/60, 208-220/50 AC	
DK	380/60 AC	
FK	480/60,440/50 AC	

Seal Options
400 Low Temp NBR disc, NBR seals without mounting bracket

SPECIAL SERVICE PILOT

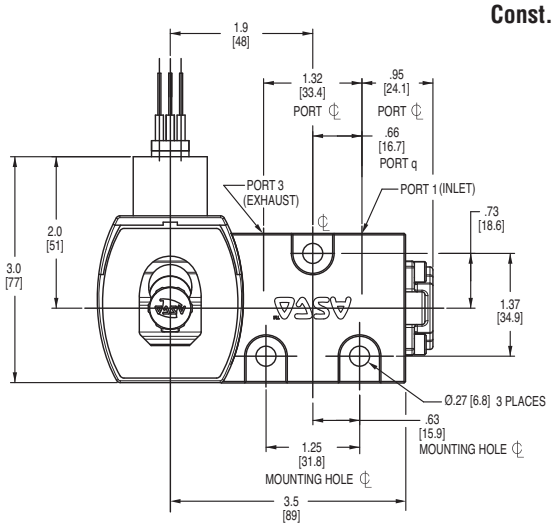
Specifications English units (Metric)

Pipe Size (in)	Flow Factor Cv (Kv m^3/h)		Pilot Pressure psi (bar)		Operating Pressure Differential psi (bar)		Base Catalog Number	Const. Ref.	Max. Fluid Temp °F (°C)	Watt Rating	
	Port 1-2	Port 2-3	Min.	Max.	Min.	Max.				AC	DC
Normally Closed, Single Solenoid/Spring Return - Internally Piloted											
1/4	2.3 (2.0)	2.1 (1.8)	-	-	25 (1.7)	150 (10)	8381K001	1	131 (55) ①	10.1	11.6
1/4	2.3 (2.0)	2.1 (1.8)	-	-	25 (1.7)	150 (10)	8381K311	1	140 (60)	-	1.4/1.7
1/4	2.3 (2.0)	2.1 (1.8)	-	-	25 (1.7)	150 (10)	8381K321	1	165 (74)	-	1.8
1/4	2.3 (2.0)	2.1 (1.8)	-	-	25 (1.7)	130 (9)	8381K331	1	149 (65)	-	0.55/0.75
1/4	2.3 (2.0)	2.1 (1.8)	-	-	25 (1.7)	130 (9)	8381K341	1	176 (80)	-	0.70
1/4	2.3 (2.0)	2.1 (1.8)	-	-	25 (1.7)	130 (9)	8381K361	1	149 (65)	-	0.48
3/8	2.7 (2.3)	2.4 (2.1)	-	-	25 (1.7)	150 (10)	8381K003	1	131 (55) ①	10.1	11.6
3/8	2.7 (2.3)	2.4 (2.1)	-	-	25 (1.7)	150 (10)	8381K313	1	140 (60)	-	1.4/1.7
3/8	2.7 (2.3)	2.4 (2.1)	-	-	25 (1.7)	150 (10)	8381K323	1	165 (74)	-	1.8
3/8	2.7 (2.3)	2.4 (2.1)	-	-	25 (1.7)	130 (9)	8381K333	1	149 (65)	-	0.55/0.75
3/8	2.7 (2.3)	2.4 (2.1)	-	-	25 (1.7)	130 (9)	8381K343	1	176 (80)	-	0.70
3/8	2.7 (2.3)	2.4 (2.1)	-	-	25 (1.7)	130 (9)	8381K363	1	149 (65)	-	0.48
Normally Closed, Single Solenoid/Spring Return - Externally Piloted											
1/4	2.3 (2.0)	2.1 (1.8)	25 (1.7)	150 (10)	0	200 (14)	8381K002	1	131 (55) ①	10.1	11.6
1/4	2.3 (2.0)	2.1 (1.8)	25 (1.7)	150 (10)	0	200 (14)	8381K312	1	140 (60)	-	1.4/1.7
1/4	2.3 (2.0)	2.1 (1.8)	25 (1.7)	150 (10)	0	200 (14)	8381K322	1	165 (74)	-	1.8
1/4	2.3 (2.0)	2.1 (1.8)	25 (1.7)	130 (9)	0	200 (14)	8381K332	1	149 (65)	-	0.55/0.75
1/4	2.3 (2.0)	2.1 (1.8)	25 (1.7)	130 (9)	0	200 (14)	8381K342	1	176 (80)	-	0.70
1/4	2.3 (2.0)	2.1 (1.8)	25 (1.7)	130 (10)	0	200 (14)	8381K362	1	149 (65)	-	0.48
3/8	2.7 (2.3)	2.4 (2.1)	25 (1.7)	150 (10)	0	200 (14)	8381K004	1	131 (55) ①	10.1	11.6
3/8	2.7 (2.3)	2.4 (2.1)	25 (1.7)	150 (10)	0	200 (14)	8381K314	1	140 (60)	-	1.4/1.7
3/8	2.7 (2.3)	2.4 (2.1)	25 (1.7)	150 (10)	0	200 (14)	8381K324	1	165 (74)	-	1.8
3/8	2.7 (2.3)	2.4 (2.1)	25 (1.7)	130 (9)	0	200 (14)	8381K334	1	149 (65)	-	0.55/0.75
3/8	2.7 (2.3)	2.4 (2.1)	25 (1.7)	130 (9)	0	200 (14)	8381K344	1	176 (80)	-	0.70
3/8	2.7 (2.3)	2.4 (2.1)	25 (1.7)	130 (9)	0	200 (14)	8381K364	1	149 (65)	-	0.48

Note: ① 125°F (52°C) for 10.1W AC

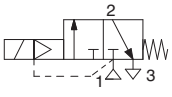
Dimensions English units (Metric)

Const. Ref. 1

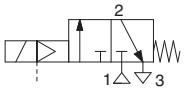


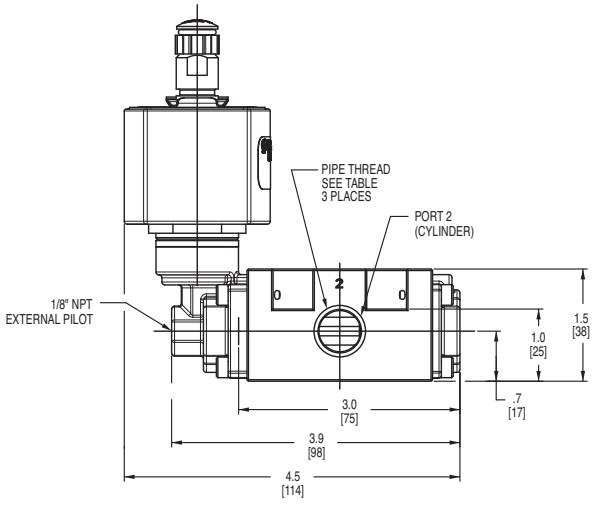
Dimension	Standard Power AC/DC		Low Power (1.4, 1.7, 1.8 W)		Low Power (0.48, 0.55, 0.70, 0.75 W)	
	inch	mm	inch	mm	inch	mm
A	4.3	110	4.8	123	4.8	123
B	2.17	55	2.32	59	2.20	56
C	2.8	72	3.0	76	2.9	73

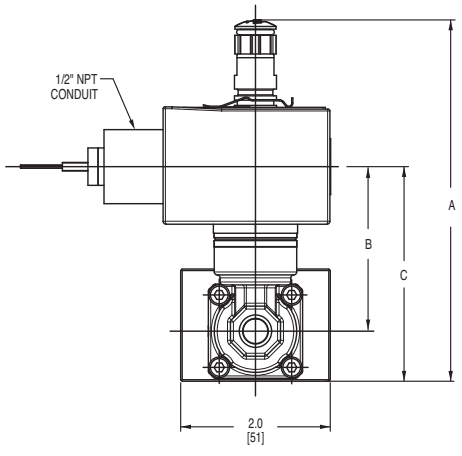
INTERNAL PILOT



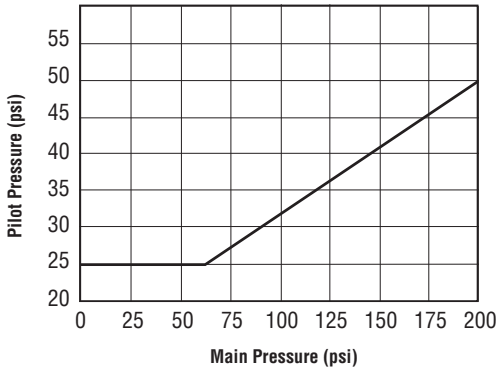
EXTERNAL PILOT







Min Pilot Presure (for Externally Piloted versions only)



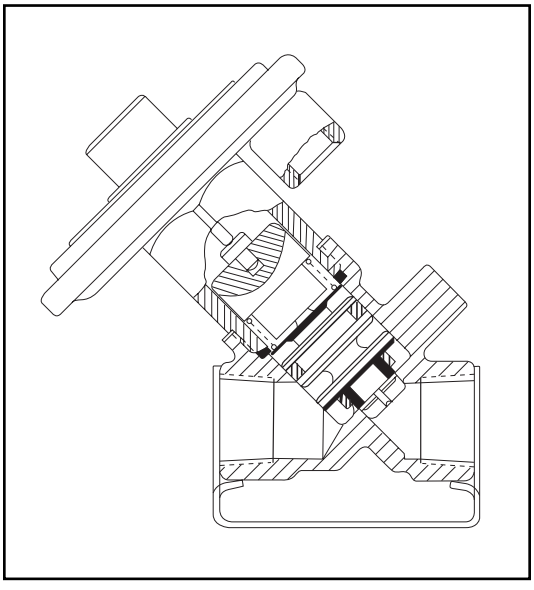
SPECIAL SERVICE PILOT

Features

- Unique sealing member isolates pilot air pressure from mainline fluid
- Variations in pilot air pressure do not affect valve operation
- Design provides long life handling of lubricated air
- Handle fluids up to 200˚F (92˚C)
- Some constructions handle steam up to 353˚F (177˚C)
- Mountable in any position

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seat	NBR or PTFE (for steam service)



Air Operators

Connection Size: 1/8" NPT.

Actuated Displacement Volume: 0.60 cu. in. for 3-30 psi operators; 0.25 cu. in. for 30-125 psi operator.

Media: Air

(For vacuum or other media, consult your local ASCO sales office for details. Refer to Optional Features Section for other available manual operators.)

Important

On 3-way and 4-way valves, except for those with zero minimum operating pressure, a Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and similar components must be installed in the cylinder lines only.

Options

Elastomers: For F262, P262, P210, P320

FKM (suffix V), Oxygen Service (suffix N)

Refer to Engineering Section for fluid and temperature compatibility.

Nominal Ambient Temp. Ranges

32˚F to 125˚F (0˚C to 52˚C)

Refer to Engineering Section for details.

Ordering Information

We must have catalog number, operating pressure, and fluid to be handled. Use strainers with air operated valves.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Main Line Operating Pressure (psi) Min.	Maximum Air-Inert Gas	Maximum Water	Maximum Lt. Oil @ 300 SSU	Maximum Steam	Max. Fluid Temp. °F	Instrument Air Operator 3-30 psi Range ① Catalog Number	Instrument Air Operator 3-30 psi Range ① Const. Ref.	Pneumatic Operator 30-125 psi Range ① Catalog Number	Pneumatic Operator 30-125 psi Range ① Const. Ref.
2/2 VALVES												
NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seating												
1/4	5/32	.52	0	125	125	125	-	200	F262C202K	1	P262C202	1
1/4	9/32	.88	0	40	40	40	-	200	F262D090K	1	P262D090 ②	1
3/8	5/8	2.8	0	125	125	125	-	180	F210C093K	6	P210C093	6
3/8	3/8	1.5	1 ⑥	125	125	125	-	200	F210C073K	3	P210C073	3
1/2	7/16	2.2	1 ⑥	125	125	125	-	200	F210A015K	4	P210A015	4
1/2	5/8	3.6	0	125	125	125	-	180	F210C094K	6	P210C094	6
3/4	3/4	5.5	0	125	125	125	-	180	F210D095K	7	P210D095	7
3/4	3/4	5.5	5	125	125	125	-	180	F210D009K	8	P210D009	8
1	1	13	5	125	125	125	-	180	F210D004K	10	P210D004	10
1 1/4	1 1/8	15	5	125	125	125	-	180	F210D008K	12	P210D008	12
2	1 3/4	43	5	125	125	125	-	180	F210 100K	15	P210 100	15
NORMALLY OPEN (Open when operator exhausted), Brass Body with NBR Seating												
1/4	5/32	.50	0	125	125	125	-	200	F262B106K	2	P262B106	2
3/8	5/8	2.8	0	125	125	125	-	180	F210C033K	16	P210C033	16
1/2	5/8	3.5	0	125	125	125	-	180	F210C034K	16	P210C034	16
3/4	3/4	5.5	0	125	125	125	-	180	F210C035K	17	P210C035	17
1	1	13	5	125	125	125	-	180	F210D014K	18	P210D014	18
NORMALLY CLOSED (Closed when operator exhausted), Brass Body with PTFE Seating												
1/4	3/8	1.2	1	-	-	-	125	353	F222A070K	4	P222A070	4
3/8	3/8	2.5	1	-	-	-	125	353	F222A074K	4	P222A074	4
1/2	3/8	2.5	1	-	-	-	125	353	F222A076K	4	P222A076	4
3/2 VALVES												
NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seats												
1/4	9/32	③	10	125	125	125	-	200	F321A001K	5	P321A001	5
3/8	9/32	③	10	125	125	125	-	200	F321A002K	5	P321A002	5
3/8	5/8	3	10	125	125	-	-	200	F316D014K	2	P316D014	2
1/2	5/8	4	10	125	125	-	-	200	F316D024K	2	P316D024	2
3/4	11/16	5.5	10	125	125	-	-	200	F316E044K	3	P316E044	3
1	1	13	10	125	125	-	-	200	F316E034K	4	P316E034	4
UNIVERSAL (Pressure at any port), Brass Body with NBR Seats												
1/4	1/8	.31	0	125	125	125	-	200	F320A009K	1	P320A009	1
4/2 VALVES												
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor Press. to Cyl.	Cv Flow Factor Exh. to Cyl.	Main Line Operating Pressure (psi) Min.	Maximum Air-Inert Gas	Maximum Water	Maximum Lt. Oil @ 300 SSU	Max. Fluid Temp. °F	Instrument Air Operator 3-30 psi Range Catalog Number	Instrument Air Operator 3-30 psi Range Const. Ref.	Pneumatic Operator 30-125 psi Range Catalog Number	Pneumatic Operator 30-125 psi Range Const. Ref.
2-Position Brass Body with Soft Seating ④												
1/4	1/4	.80	1	10 ⑤	125	125	125	200	F444B000K	1	P444B000	1
3/8	3/8	1.4	2.2	10 ⑤	125	125	125	200	F444C025K	2	P444C025	2

① 3-40 psi (.2 - 2.8 bar) and 50-125 psi (3.4 - 8.6 bar) range for steam valves only.
② Refers to operator minimum pressure: Catalog Number P262D090 requires 50 psi (3.4 bar) minimum pressure.
③ Cv pressure to cylinder = 0.8 (.7 Kv); Cv cylinder to exhaust = 1.2 (1.0 Kv).
④ Const. Ref. 1 has soft seating; Const. Ref. 2 and 3 have soft to metal seating.
⑤ 25 psi (1.7 bar) required on light oil service.
⑥ 5 psi (0.35 bar) required for air service.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Main Line Operating Pressure (bar) Min.	Maximum Air-Inert Gas	Maximum Water	Maximum Lt. Oil @ 300 SSU	Maximum Steam	Max. Fluid Temp.˚C	Instrument Air Operator 0.2-2 bar Range ① Catalog Number	Instrument Air Operator 0.2-2 bar Range ① Const. Ref.	Pneumatic Operator 2-8.6 bar Range ① Catalog Number	Pneumatic Operator 2-8.6 bar Range ① Const. Ref.
2/2 VALVES												
NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seating												
1/4	4	.45	0.0	9	9	9	-	93	F262C202K	1	P262C202	1
1/4	7	.76	0.0	3	3	3	-	93	F262D090K	1	P262D090 ②	1
3/8	16	2.4	0.0	9	9	9	-	82	F210C093K	6	P210C093	6
3/8	10	1.3	0.07 ⑥	9	9	9	-	93	F210C073K	3	P210C073	3
1/2	11	1.9	0.07 ⑥	9	9	9	-	93	F210A015K	4	P210A015	4
1/2	16	3.1	0.0	9	9	9	-	82	F210C094K	6	P210C094	6
3/4	19	4.7	0.0	9	9	9	-	82	F210D095K	7	P210D095	7
3/4	19	4.7	0.3	9	9	9	-	82	F210D009K	8	P210D009	8
1	25	11.1	0.3	9	9	9	-	82	F210D004K	10	P210D004	10
1 1/4	29	12.9	0.3	9	9	9	-	82	F210D008K	12	P210D008	12
2	45	36.9	0.3	9	9	9	-	82	F210 100K	15	P210 100	15
NORMALLY OPEN (Open when operator exhausted), Brass Body with NBR Seating												
1/4	4	.43	0.0	9	9	9	-	93	F262B106K	2	P262B106	2
3/8	16	2.4	0.0	9	9	9	-	82	F210C033K	16	P210C033	16
1/2	16	3.0	0.0	9	9	9	-	82	F210C034K	16	P210C034	16
3/4	19	4.7	0.0	9	9	9	-	82	F210C035K	17	P210C035	17
1	25	11.1	0.3	9	9	9	-	82	F210D014K	18	P210D014	18
NORMALLY CLOSED (Closed when operator exhausted), Brass Body with PTFE Seating												
1/4	10	1.0	0.1	-	-	-	24	178	F222A70K	4	P222A70	4
3/8	10	2.1	0.1	-	-	-	24	178	F222A74K	4	P222A74	4
1/2	10	2.1	0.1	-	-	-	24	178	F222A76K	4	P222A76	4
3/2 VALVES												
NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seats												
1/4	7	③	0.7	9	9	9	-	93	F321A001K	5	P321A001	5
3/8	7	③	0.7	9	9	9	-	93	F321A002K	5	P321A002	5
3/8	16	2.6	0.7	9	9	-	-	93	F316D014K	2	P316D014	2
1/2	16	3.4	0.7	9	9	-	-	93	F316D024K	2	P316D024	2
3/4	17	4.7	0.7	9	9	-	-	93	F316E044K	3	P316E044	3
1	25	11.1	0.7	9	9	-	-	93	F316E034K	4	P316E034	4
UNIVERSAL (Pressure at any port), Brass Body with NBR Seats												
1/4	3	.27	0	9	9	9	-	93	F320A009K	1	P320A009	1

4/2 VALVES

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h) Press. to Cyl.	Kv Flow Factor (m3/h) Exh. to Cyl.	Main Line Operating Pressure (bar) Min.	Maximum Air-Inert Gas	Maximum Water	Maximum Lt. Oil @ 300 SSU	Max. Fluid Temp.˚C	Instrument Air Operator 0.2-2 bar Range Catalog Number	Instrument Air Operator 0.2-2 bar Range Const. Ref.	Pneumatic Operator 2-8.6 bar Range Catalog Number	Pneumatic Operator 2-8.6 bar Range Const. Ref.
2-Position Brass Body with Soft Seating ④												
1/4	6	.69	.86	0.7 ⑤	9	9	9	93	F444B000K	1	P444B000	1
3/8	10	1.2	1.9	0.7 ⑤	9	9	9	93	F444C025K	2	P444C025	2

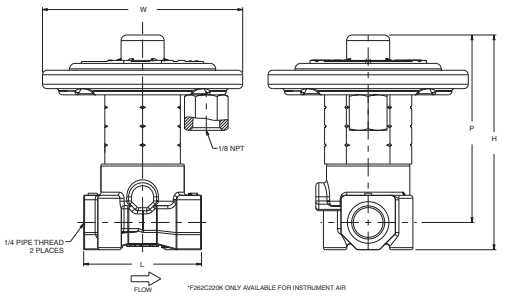
① 3-40 psi (.2 - 2.8 bar) and 50-125 psi (3.4 - 8.6 bar) range for steam valves only.
② Refers to operator minimum pressure: Catalog Number P262D090 requires 50 psi (3.4 bar) minimum pressure.
③ Cv pressure to cylinder = 0.8 (.7 Kv); Cv cylinder to exhaust = 1.2 (1.0 Kv).
④ Const. Ref. 1 has soft seating; Const. Ref. 2 and 3 have soft to metal seating.
⑤ 25 psi (1.7 bar) required on light oil service.
⑥ 5 psi (0.35 bar) required for air service.

Dimensions inches (mm)

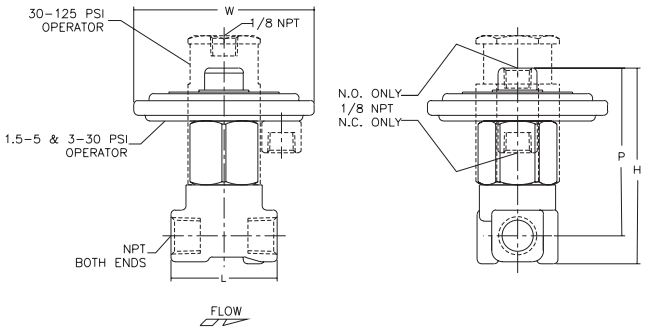
Const. Ref.		Instrument Air Operator 2/2 Valves with 3-30 PSI Operator ①				Pneumatic Operator 2/2 Valves with 30-125 PSI Operator ①			
		H	L	P	W	H	L	P	W ②
1	in	2.84	1.56	2.47	Ø 2.66	3.34	1.56	2.94	1.29
	mm	72	40	63	Ø 67	85	40	75	33
2	in	2.97	1.56	2.56	Ø 2.66	2.78	1.56	2.38	1.29
	mm	75	40	65	Ø 67	71	40	60	33
3	in	3.34	1.91	2.91	Ø 2.66	3.69	1.91	3.25	1.12
	mm	85	49	74	Ø 67	94	49	83	28
4	in	3.62	2.28	3.09	Ø 2.66	4.22	2.28	3.66	1.12
	mm	92	58	79	Ø 67	107	58	93	28
6	in	3.59	2.75	3.03	Ø 2.66	4.00	2.75	3.44	2.28
	mm	91	70	77	Ø 67	102	70	87	58
7	in	3.81	2.81	3.19	Ø 2.66	4.22	2.81	3.59	2.28
	mm	97	71	81	Ø 67	107	71	91	58
8	in	3.88	2.81	3.22	Ø 2.66	4.28	2.81	3.62	2.31
	mm	99	71	82	Ø 67	109	71	92	59
10	in	5.53	3.75	3.91	Ø 2.66	6.00	3.75	4.38	2.94
	mm	141	95	99	Ø 67	152	95	111	75
12	in	5.53	2.66	3.91	Ø 2.66	6.00	3.66	4.38	3.38
	mm	141	68	99	Ø 67	152	93	111	86
15	in	7.22	5.06	4.47	4.68	7.69	5.06	4.94	4.68
	mm	183	129	114	119	195	129	126	119
16	in	3.69	2.75	3.12	Ø 2.66	3.44	2.75	2.88	2.28
	mm	94	70	79	Ø 67	87	70	73	58
17	in	3.91	2.81	3.28	Ø 2.66	3.69	2.81	3.03	2.28
	mm	99	71	83	Ø 67	94	71	77	58
18	in	5.63	3.75	4.00	2.94	5.43	3.75	3.81	2.94
	mm	143	95	102	75	138	95	97	75

① When barbed tubing adapter is used, add 1.19 in (30 mm) to "H" and/or "P" (or overall) dimensions.
② Represents overall width of valve.

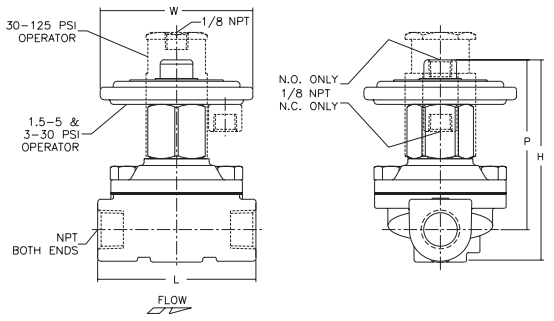
2/2 Valves - Const. Ref. 1



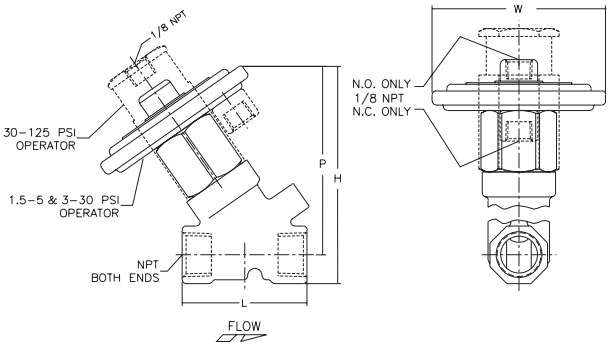
2/2 Valves - Const. Ref. 2



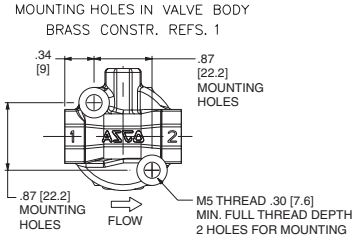
2/2 Valves - Const. Ref. 6 - 18



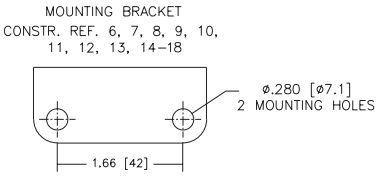
2/2 Valves - Const. Ref. 3, 4



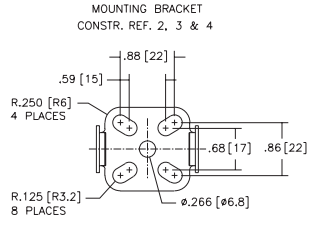
Mounting Bracket Const. Ref. 1



Mounting Bracket Const. Ref. 6 - 18



Mounting Bracket Const. Ref. 2, 3, 4



SPECIAL SERVICE VALVES

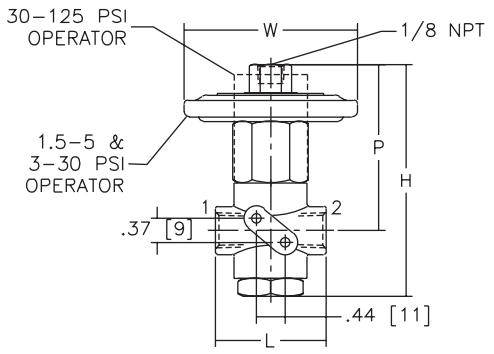
Dimensions inches (mm)

Const. Ref.		Instrument Air Operator 3/2 Valves with 3-30 psi Operator ①			Pneumatic Operator 3/2 Valves with 30-125 psi Operator ①						
		H	P	W ②	H	P	W ②	L	N	M	R
1	in	3.56	2.56	Ø 2.66	3.38	2.38	1.12	1.69	X	X	X
	mm	90	65	Ø 67	86	61	28	43	X	X	X
2	in	5.07	3.93	4.30	4.89	3.75	4.30	2.76	X	X	X
	mm	129	100	109	124	95	109	70	X	X	X
3	in	6.00	4.31	3.31	5.82	4.13	3.31	3.38	.53	2.16	.50
	mm	152	109	84	148	105	84	86	13	55	13
4	in	6.62	4.56	5.34	6.44	4.38	5.34	4.44	.88	2.68	.88
	mm	168	116	136	164	111	136	113	22	68	22
5	in	3.84	2.81	3.39	3.66	2.62	2.62	3.12	X	X	X
	mm	98	71	86	93	67	67	79	X	X	X

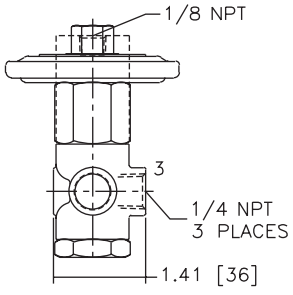
① When barbed tubing adapter is used, add 1.19 in (30 mm) to "H" and/or "P" (or overall) dimensions.

② Represents overall width of valve.

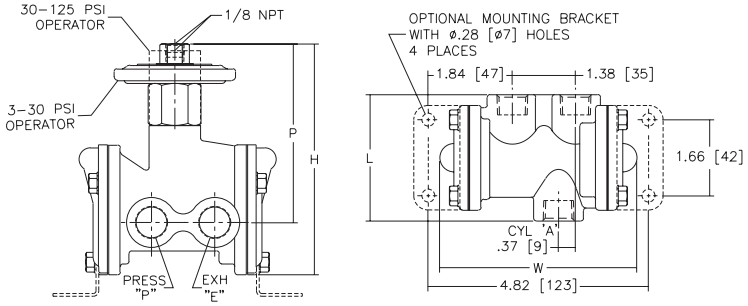
3/4 Valves Const. Ref. 1



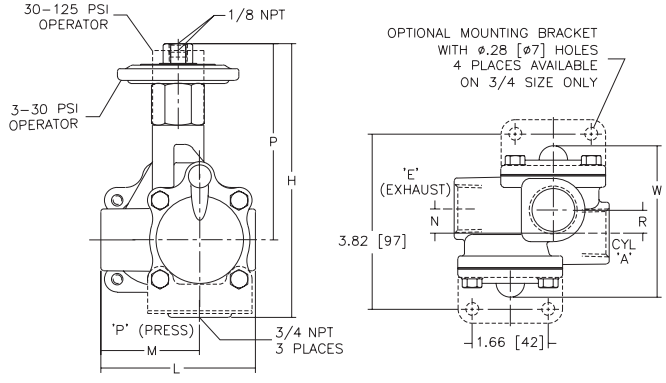
2 Mounting holes 0.28 (0.07 mm) deep for No. 8 thread cutting screw



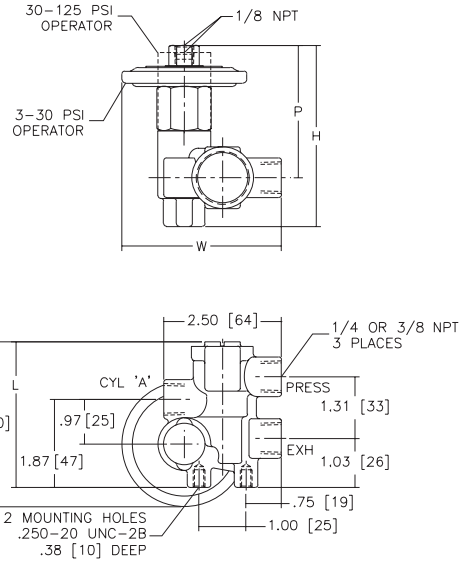
3/4 Valves Const. Ref. 2



3/4 Valves Const. Ref. 3, 4



3/4 Valves Const. Ref. 5



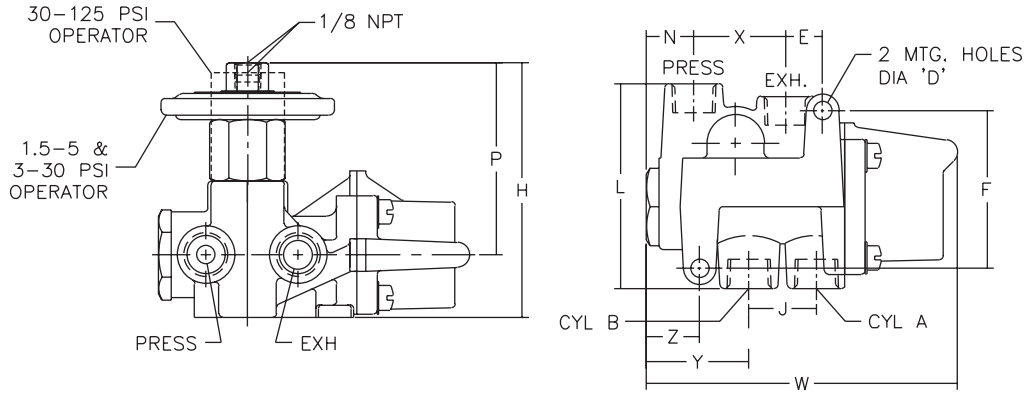
SPECIAL SERVICE VALVES

Dimensions inches (mm)

Const. Ref.		Instrument Air Operator 4/2 Valves with 3-30 psi (.2-2 bar) Operator ①			Pneumatic Operator 4/2 Valves with 30-125 psi (2-8.6 bar) Operator ①											
		H	P	W	H	P	W	E	F	J	L	N	X	Y	Z	DIA D
1	in	3.91	2.94	4.75	3.72	2.75	4.75	.56	2.41	1.03	3.12	.72	1.41	1.56	.81	Ø .28
	mm	99	75	121	94	70	121	14	61	26	79	18	36	40	21	Ø 7
2	in	3.88	2.75	6.06	3.69	2.56	6.06	.75	3.12	1.50	3.19	.84	1.88	1.90	.84	Ø .34
	mm	98	70	154	94	65	154	19	79	38	81	21	48	48	21	Ø 9

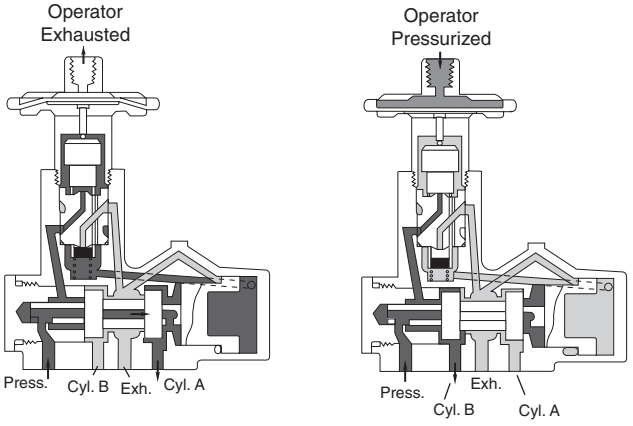
① When barbed tubing adapter is used, add 1.19 (30 mm) to "H" and/or "P" (or overall) dimensions.
IMPORTANT: Valves can be mounted in any position.

4/2 Valves - Const. Ref. 1, 2



Flow Diagrams

Const. Ref. 1, 2



SPECIAL SERVICE VALVES

Features

- 2-way normally closed and normally open operation
- For use with anhydrous and gaseous ammonia
- Pressures up to 410 psi
- UL and CSA agency approvals

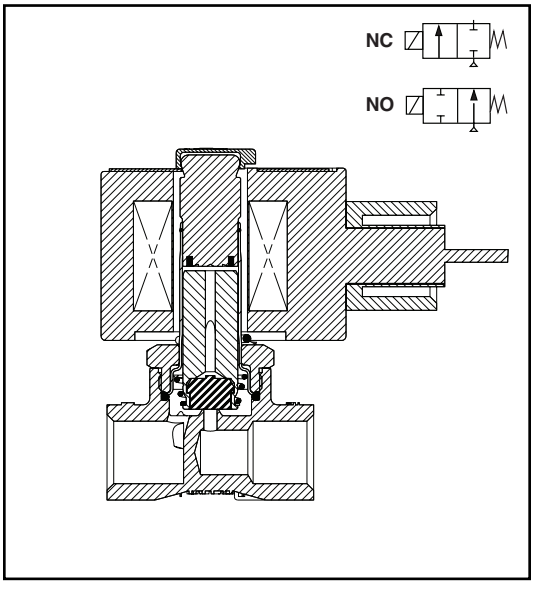
Construction

Valve Parts in Contact with Fluids	
Body	Cast 304 Stainless Steel
Seals and Discs	Neoprene
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Aluminum
Stem	PA (for normally open only)

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part No.	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	17.1	40	70	238610	238614

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



Solenoid Enclosures

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (For normally closed construction only)

See Optional Features Section for other available options.

Options

Panel mount (prefix GP)

Mounting bracket (suffix MB)

Quarter-turn manual operator with screw slot (suffix MS)* (for normally closed construction only)

Nominal Ambient Temp. Ranges

Standard: 32˚F to 131˚F (0˚C to 55˚C)

Optional (for normally closed construction only): For AC Class H coil option, the max. ambient temperature is 140˚F (60˚C) (prefix HB)

For explosionproof AC Class F coil option, the max ambient temperature is 125˚F (52˚C) (Prefix EF or EV)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed, General Purpose valves. Meets applicable CE directives.

Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. ˚F	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation
			Min.	Max. AC		Stainless Steel		
Normally Closed ①								
1/8	3/32	0.21	0	410	167	8262H178NH	1	17.1/F
1/8	1/8	0.35	0	300	167	8262H174NH	1	17.1/F
1/4	3/32	0.21	0	410	167	8262H183NH	2	17.1/F
1/4	1/8	0.35	0	300	167	8262H185NH	2	17.1/F
1/4	5/32	0.52	0	200	167	8262H187NH	2	17.1/F
1/4	7/32	0.73	0	100	167	8262H188NH	2	17.1/F
1/4	9/32	0.88	0	65	167	8262H230NH	2	17.1/F
3/8	1/8	0.35	0	300	167	8263H191NH	3	17.1/F
3/8	5/32	0.52	0	185	167	8263H193NH	3	17.1/F
3/8	7/32	0.73	0	86	167	8263H332NH	3	17.1/F
3/8	9/32	0.88	0	63	167	8263H333NH	3	17.1/F
Normally Open ②								
1/8	3/32	0.21	0	230	167	8262H172NH	4	17.1/H
1/8	1/8	0.35	0	145	167	8262H173NH	4	17.1/H
1/4	3/32	0.21	0	230	167	8262H205NH	5	17.1/H
1/4	1/8	0.35	0	145	167	8262H219NH	5	17.1/H
1/4	5/32	0.54	0	90	167	8262H223NH	5	17.1/H
1/4	7/32	0.83	0	45	167	8262H224NH	5	17.1/H
1/4	9/32	0.96	0	30	167	8262H225NH	5	17.1/H
3/8	1/8	0.35	0	145	167	8263H104NH	6	17.1/H
3/8	5/32	0.54	0	90	167	8263H105NH	6	17.1/H
3/8	7/32	0.83	0	45	167	8263H106NH	6	17.1/H
3/8	9/32	0.96	0	30	167	8263H107NH	6	17.1/H

① Explosionproof coil only with F Class coil. ② Explosionproof coil not offered.

Specifications (Metric units)

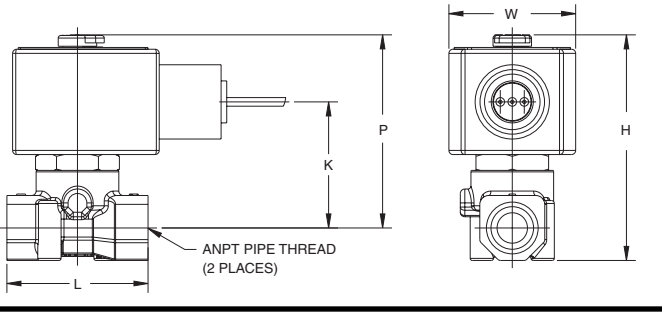
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/hr)	Operating Pressure Differential (bar)		Max. Fluid Temp. ˚C	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation
			Min.	Max. AC		Stainless Steel		
Normally Closed ①								
1/8	2.4	0.18	0	28	75	8262H178NH	1	17.1/F
1/8	3.2	0.30	0	21	75	8262H174NH	1	17.1/F
1/4	2.4	0.18	0	28	75	8262H183NH	2	17.1/F
1/4	3.2	0.30	0	21	75	8262H185NH	2	17.1/F
1/4	4.0	0.45	0	14	75	8262H187NH	2	17.1/F
1/4	5.6	0.63	0	7	75	8262H188NH	2	17.1/F
1/4	7.1	0.76	0	4	75	8262H230NH	2	17.1/F
3/8	3.2	0.30	0	21	75	8263H191NH	3	17.1/F
3/8	4.0	0.45	0	13	75	8263H193NH	3	17.1/F
3/8	5.6	0.63	0	6	75	8263H332NH	3	17.1/F
3/8	7.1	0.76	0	4	75	8263H333NH	3	17.1/F
Normally Open ②								
1/8	2.4	0.18	0	16	75	8262H172NH	4	17.1/H
1/8	3.2	0.30	0	10	75	8262H173NH	4	17.1/H
1/4	2.4	0.18	0	16	75	8262H205NH	5	17.1/H
1/4	3.2	0.30	0	10	75	8262H219NH	5	17.1/H
1/4	4.0	0.47	0	6	75	8262H223NH	5	17.1/H
1/4	5.6	0.72	0	3	75	8262H224NH	5	17.1/H
1/4	7.1	0.83	0	2	75	8262H225NH	5	17.1/H
3/8	3.2	0.30	0	10	75	8263H104NH	6	17.1/H
3/8	4.0	0.47	0	6	75	8263H105NH	6	17.1/H
3/8	5.6	0.72	0	3	75	8263H106NH	6	17.1/H
3/8	7.1	0.83	0	2	75	8263H107NH	6	17.1/H

① Explosionproof coil only with F Class coil. ② Explosionproof coil not offered.

Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.05	1.71	1.19	2.69	1.95
	mm	77	43	30	68	50
2	in	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50
3	in	3.20	1.79	1.88	2.77	1.95
	mm	81	45	48	70	50
4	in	3.00	1.54	1.19	2.69	2.06
	mm	76	39	30	68	52
5	in	3.12	1.62	1.56	2.76	2.06
	mm	79	41	40	70	52
6	in	3.2	1.62	1.88	2.77	2.06
	mm	81	41	48	70	52

Const. Ref. 1-6

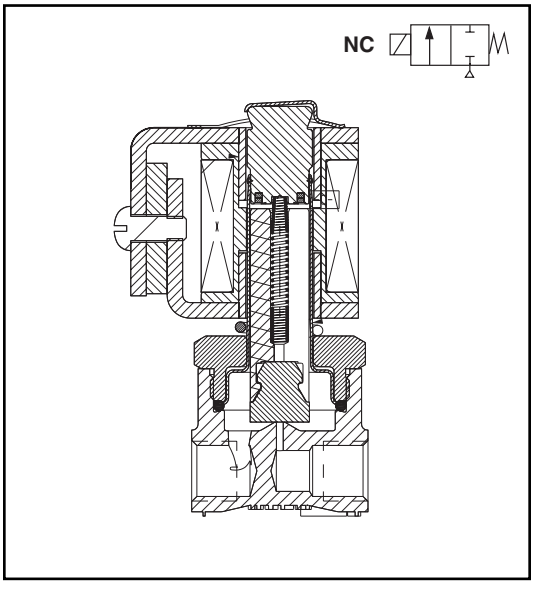


Features

- Ideal for remote applications where continuously powered devices can't be used, such as irrigation systems
- Pressures up to 2025 psi
- Brass and Stainless Steel constructions

Construction

Valve Parts in Contact with Fluids		
Body	Brass	Cast 304 Stainless Steel
Seals and Discs	NBR / UR	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	Stainless Steel	
Shading Coil	Copper	Silver



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption	Spare Coil Part No.
	DC	General Purpose
	Watts	DC
A	33.2	230725

Standard Voltages: 6, 12, 24 VDC. Must be specified when ordering.
Other voltages available when required.

Solenoid Enclosures

Standard: Open Frame

Options

Panel Mount (prefix GP)

Mounting bracket (suffix MB)

Silicone Free Service (suffix SF)

Elastomers: FKM (suffix V), EPDM (suffix E), Neoprene (suffix J), PTFE (suffix T)

Refer to Engineering Section for fluid and temperature compatibility.

Nominal Ambient Temp. Ranges

32˚F to 104˚F (-0˚C to 40˚C)

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)				Max. Fluid Temp. ˚F	Catalog Number		Const. Ref.	Watt Rating/ Class of Coil Insulation
			Min.	Max. DC				Brass	Stainless Steel		
				Air-Inert Gas	Water	Lt.Oil					
1/8	3/64	0.06	0	2025	1710	825	140	-	MU8262A619	1	33.2
1/8	3/64	0.06	0	1500	1350	825	140	MU8262A610	-	1	33.2
1/8	3/32	0.21	0	500	350	325	140	MU8262A611	MU8262A620	1	33.2
1/8	1/8	0.35	0	275	260	195	140	MU8262A612	MU8262A621	1	33.2
1/4	3/64	0.06	0	1500	1350	825	140	MU8262A613	MU8262A622	2	33.2
1/4	3/32	0.21	0	500	350	270	140	MU8262A614	MU8262A623	2	33.2
1/4	1/8	0.35	0	275	260	150	140	MU8262A615	MU8262A624	2	33.2
1/4	5/32	0.52	0	150	140	100	140	MU8262A616	MU8262A625	2	33.2
1/4	7/32	0.73	0	55	54	40	140	MU8262A617	MU8262A626	2	33.2
1/4	9/32	0.88	0	36	36	33	140	MU8262A618	MU8262A627	2	33.2
3/8	1/8	0.35	0	275	260	140	140	MU8263A615	MU8263A624	3	33.2
3/8	5/32	0.52	0	150	140	80	140	MU8263A616	MU8263A625	3	33.2
3/8	7/32	0.73	0	55	54	29	140	MU8263A617	MU8263A626	3	33.2
3/8	9/32	0.88	0	35	32	21	140	MU8263A618	MU8263A627	3	33.2

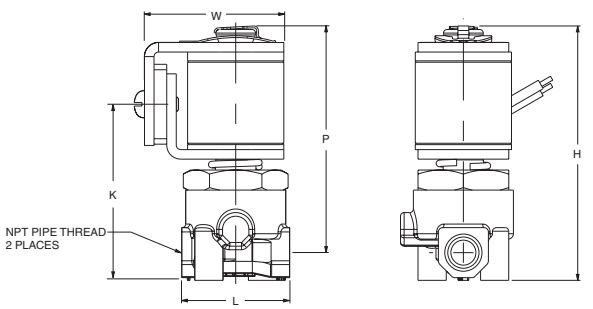
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)				Max. Fluid Temp. ˚C	Catalog Number		Const. Ref.	Watt Rating/ Class of Coil Insulation
			Min.	Max. DC				Brass	Stainless Steel		
				Air-Inert Gas	Water	Lt.Oil					
1/8	1.2	0.05	0	140	118	57	60	-	MU8262A619	1	33.2
1/8	1.2	0.05	0	103	93	57	60	MU8262A610	-	1	33.2
1/8	2.4	0.18	0	34	24	22	60	MU8262A611	MU8262A620	1	33.2
1/8	3.2	0.30	0	19	18	13	60	MU8262A612	MU8262A621	1	33.2
1/4	1.2	0.05	0	103	93	57	60	MU8262A613	MU8262A622	2	33.2
1/4	2.4	0.18	0	34	24	19	60	MU8262A614	MU8262A623	2	33.2
1/4	3.2	0.30	0	19	18	10	60	MU8262A615	MU8262A624	2	33.2
1/4	4.0	0.45	0	10	10	7	60	MU8262A616	MU8262A625	2	33.2
1/4	5.6	0.73	0	4	4	3	60	MU8262A617	MU8262A626	2	33.2
1/4	7.1	0.88	0	2	2	2	60	MU8262A618	MU8262A627	2	33.2
3/8	3.2	0.30	0	19	18	10	60	MU8263A615	MU8263A624	3	33.2
3/8	4.0	0.45	0	10	10	6	60	MU8263A616	MU8263A625	3	33.2
3/8	5.6	0.73	0	4	4	2	60	MU8263A617	MU8263A626	3	33.2
3/8	7.1	0.88	0	2	2	1	60	MU8263A618	MU8263A627	3	33.2

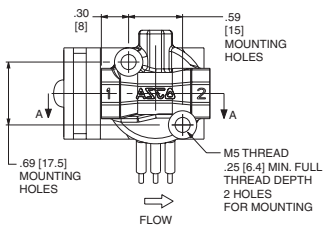
Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1	in	2.80	1.94	1.19	2.50	1.71
	mm	71	49	30	63	43
2	in	2.94	2.08	1.56	2.58	1.90
	mm	75	53	40	66	48
3	in	3.01	2.15	1.88	2.58	2.06
	mm	76	55	48	66	52

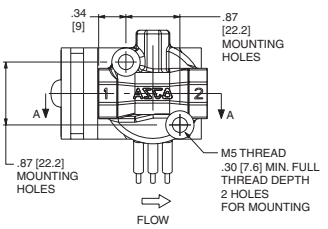
Const. Ref. 1, 2, 3



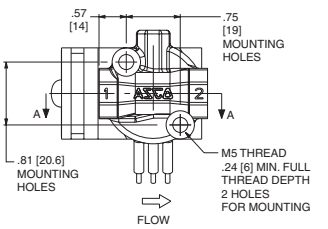
Const. Ref. 1 (1/8" Pipe)



Const. Ref. 2 (1/4" Pipe)



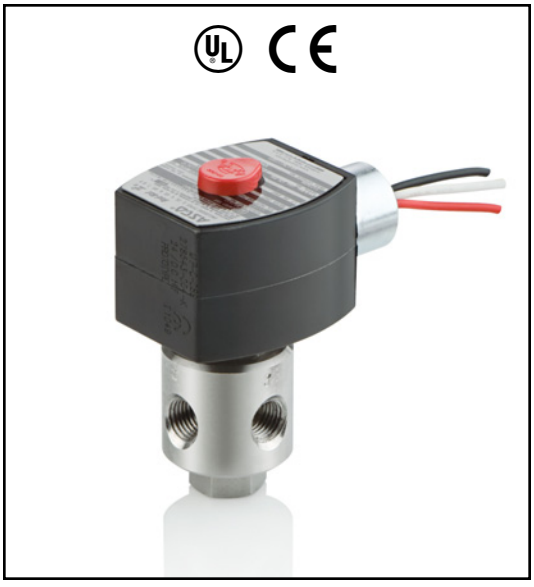
Const. Ref. 3 (3/8" Pipe)



Note: Mounting holes will accept a standard #10-32 machine screw.

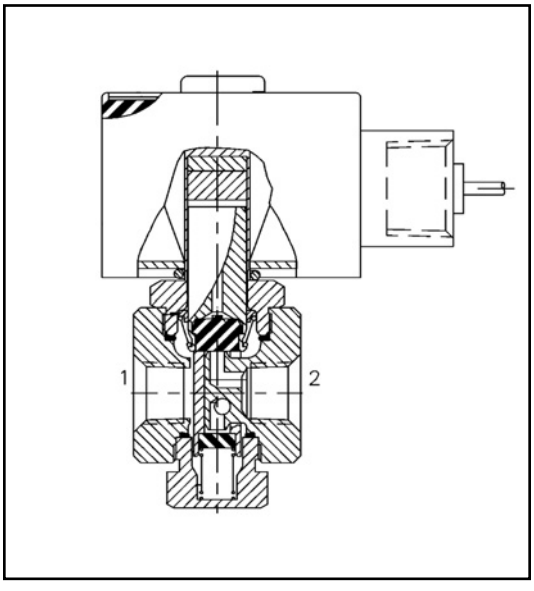
Features

- Ideal for remote applications where continuously powered devices are not preferred, such as gas well equipment.
- Pressures up to 125 psi
- Stainless steel constructions



Operation

- 3 wire magnetic latching configuration
- In the latched position, when supply voltage is momentarily applied to coil 1, pressure port is connected to the cylinder port and the exhaust port is closed.
- In the unlatched position, when supply voltage is momentarily applied to coil 2, cylinder port is connected to the exhaust port and the pressure port is closed.



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	303 Stainless Steel
Seals and Discs	Acetal, NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	Stainless Steel
Shading Coil	Silver

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption	Spare Coil Part Number	Spare Coil Part Number
	Watts	24/DC	12/DC
F	14.2	278543-004-K*	278543-002-K*
Standard Voltages: 12 & 24 VDC. Must be specified when ordering.			

Solenoid Enclosures

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

Nominal Ambient Temp. Ranges

-25°F to 110°F (-31°C to 43°C)

Approvals

Solenoid Only:

UL listed.

Meets applicable CE directives.

Specifications (English units)

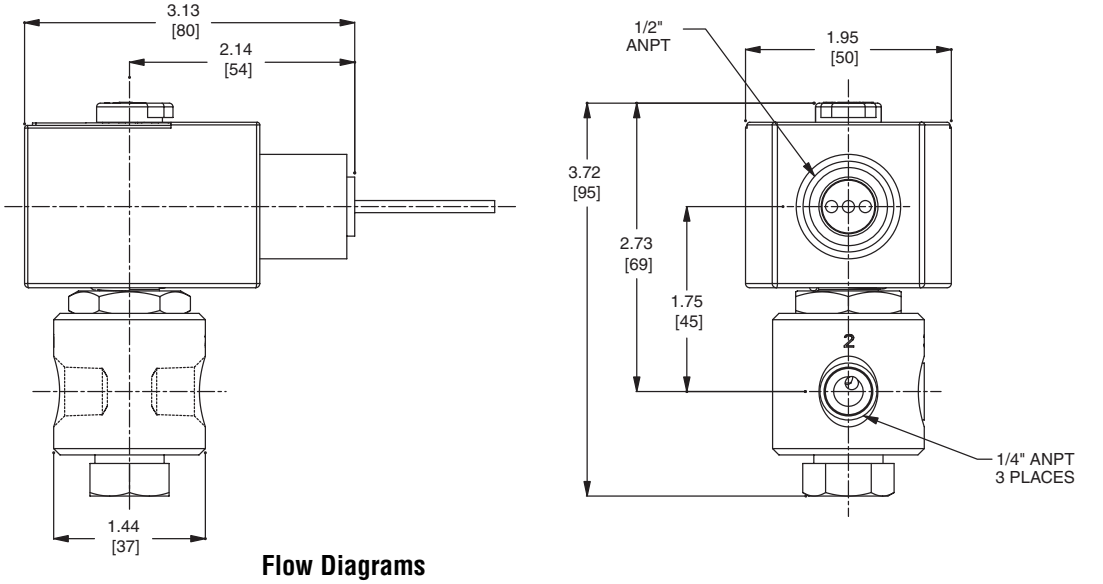
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max.Fluid Temp. °F	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation
			Min.	Max				
1/4	0.08	0.20	0	125	120	HV428342001 12/DC	1	14.2/F
1/4	0.08	0.20	0	125	120	HV428342002 24/DC	1	14.2/F

Specifications (Metric units)

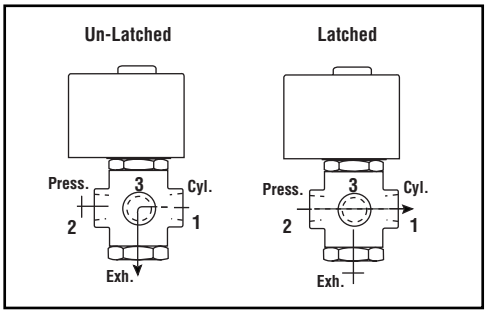
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Max.Fluid Temp. °C	Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation
			Min.	Max				
1/4	2.0	0.17	0	8.6	48	HV428342001 12/DC	1	14.2/F
1/4	2.0	0.17	0	8.6	48	HV428342002 24/DC	1	14.2/F

Dimensions: inches (mm)

Const. Ref. 1



Flow Diagrams

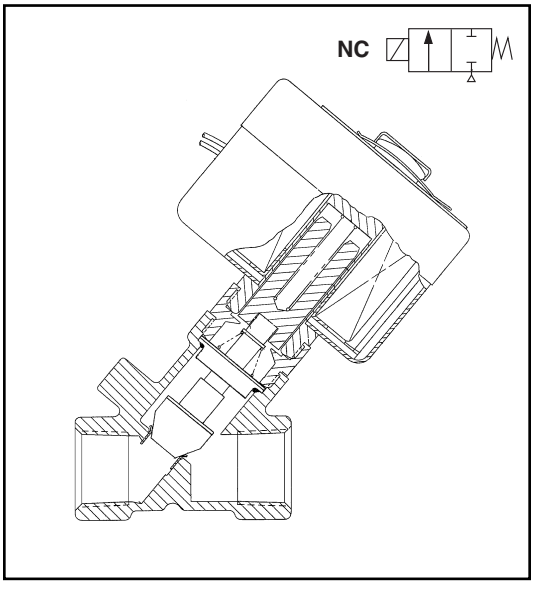


Features

- Designed to isolate corrosive fluids from solenoid parts
- Only the isolating part, seals, and body are in contact with fluids
- No minimum operating pressure required
- Variety of body materials and process connections
- Many other constructions (not shown here) are available in a wide range of sizes

Construction

Valve Parts in Contact with Fluids		
	8260	**8030**
Body	CA, PP	Brass/Stainless Steel
Diaphragm/Disc	EPDM, FKM	PTFE
Seals	-	FKM



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption AC				Spare Coil Part No	
		AC			General Purpose	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC
F	10.6	6.1	16	30	238210	238310
H	-	20	43	135	222345	-

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 available when required.

Solenoid Enclosures

Standard: RedHat II Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat Type 1.

Optional: Open Frame Solenoid, Junction Box enclosure, and Panel Mount Constructions.

See Optional Features Section for descriptions on these and other available options.

Nominal Ambient Temp. Ranges

RedHat II: AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

RedHat: AC: 32˚F to 77˚F (0˚C to 25˚C)
(104˚F/40˚C occasionally)

Refer to Engineering Section for details.

Approvals

CSA certified. UL listed as indicated.

Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

Body Material	Diaphragm/ Disc	Seals	Typical Applications	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Max. Operating Pressure (psi) AC	Max. Operating Pressure (psi) DC	Max. Fluid Temp. °F AC	Max. Fluid Temp. °F DC	Catalog Number	Const. Ref.	UL Listing	Watt Rating/ Class of Coil Insulation ④ AC	Watt Rating/ Class of Coil Insulation ④ DC
CA	EPDM	-	Demineralized and Distilled Water, Sea Water	Bib for 1/4" I.D. Flexible Tubing or Hose	9/64	.35	6	6	130	120	D8260G054E	4	-	6.1/F	10.6/F
				1/4" O.D. Compression ①	9/64	.35	6	6	130	120	D8260G071E	3	-	6.1/F	10.6/F
PP	EPDM	-	Photo Solution, 20% Max. Concentration Hydrochloric Acid	Bib for 1/4" I.D. Flexible Tubing or Hose	9/64	.35	6	6	130	120	D8260G053E	4	-	6.1/F	10.6/F
					3/16	.53	6	6	130	120	D8260G056E	4	②	6.1/F	10.6/F
PP	FKM	-	95% Max. Concentration Phosphoric Acid	Bib for 1/4" I.D. Flexible Tubing or Hose	9/64	.35	6	6	130	120	D8260G053V	4	-	6.1/F	10.6/F
			60% Max. Concentration Sulphuric Acid		3/16	.53	6	6	130	120	D8260G056V	4	-	6.1/F	10.6/F
Brass (w/S.S. Seat)	PTFE	FKM	Hot Water, Steam Boiler Blowdown, Steam Cookers, Hot Cooking Oil, Deep Fat Cookers	3/8	3/8	1.8	15 ③	-	250	-	D8030 084	1	⑤	20/H	-
				1/2	3/8	2.2	15 ③	-	250	-	D8030 085	1	⑤	20/H	-
				3/4	3/8	2.2	15 ③	-	250	-	D8030 086	2	⑤	20/H	-
18-8 S.S.	PTFE	FKM	Hot Water, Steam Boiler Blowdown, Steam Cookers, Hot Cooking Oil, Deep Fat Cookers	1/2	3/8	2.2	15 ③	-	250	-	D8030 095	1	⑤	20/H	-

① Fittings not supplied with valve; refer to List Price Schedule.
② UL recognized component – AC only.
③ Valves are suitable for closing at zero pressure differential.
④ On 50 hz service, the rating for the 6.1/F solenoid is 8.1 watts.
⑤ General Purpose Valves.

Specifications (Metric units)

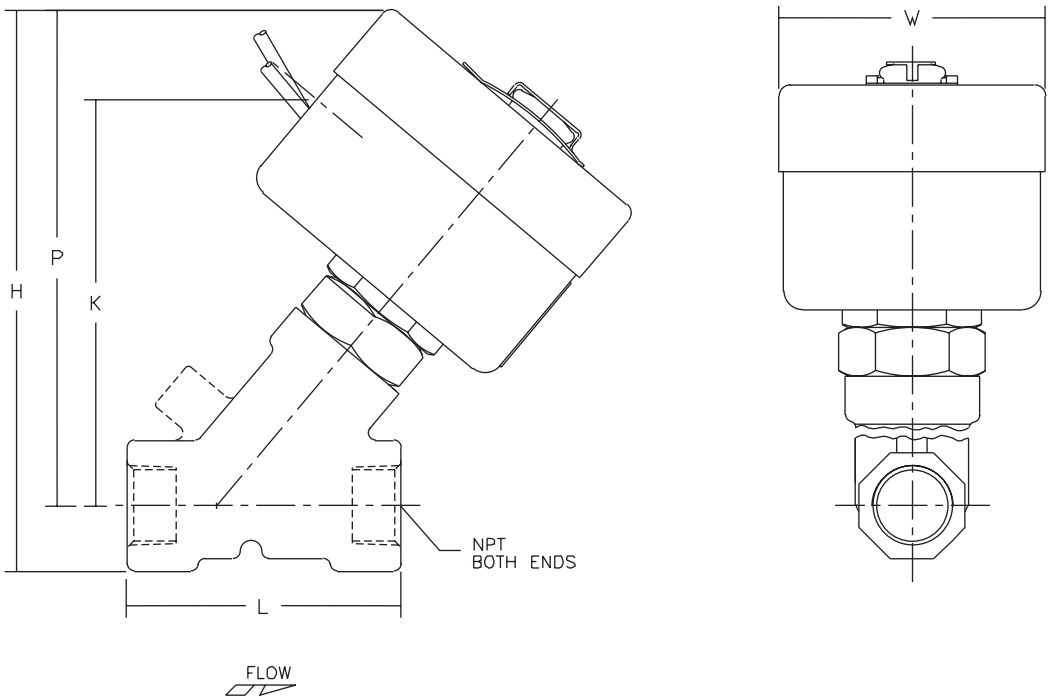
Body Material	Diaphragm/ Disc	Seals	Typical Applications	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Max. Operating Pressure (bar) AC	Max. Operating Pressure (bar) DC	Max. Fluid Temp. °C AC	Max. Fluid Temp. °C DC	Catalog Number	Const. Ref.	UL Listing	Watt Rating/ Class of Coil Insulation ④ AC	Watt Rating/ Class of Coil Insulation ④ DC
CA	EPDM	-	Demineralized and Distilled Water, Sea Water	Bib for 1/4" I.D. Flexible Tubing or Hose	4	.30	0.4	0.4	54	48.8	D8260G054E	4	-	6.1/F	10.6/F
				1/4" O.D. Compression ①	4	.30	0.4	0.4	54	48.8	D8260G071E	3	-	6.1/F	10.6/F
PP	EPDM	-	Photo Solution, 20% Max. Concentration Hydrochloric Acid	Bib for 1/4" I.D. Flexible Tubing or Hose	4	.30	0.4	0.4	54	48.8	D8260G053E	4	-	6.1/F	10.6/F
					5	.45	0.4	0.4	54	48.8	D8260G056E	4	②	6.1/F	10.6/F
PP	FKM	-	95% Max. Concentration Phosphoric Acid	Bib for 1/4" I.D. Flexible Tubing or Hose	4	.30	0.4	0.4	54	48.8	D8260G053V	4	-	6.1/F	10.6/F
			60% Max. Concentration Sulphuric Acid		5	.45	0.4	0.4	54	48.8	D8260G056V	4	-	6.1/F	10.6/F
Brass (w/S.S. Seat)	PTFE	FKM	Hot Water, Steam Boiler Blowdown, Steam Cookers, Hot Cooking Oil, Deep Fat Cookers	3/8	10	1.54	1 ③	-	120	-	D8030 084	1	⑤	20/H	-
				1/2	10	1.89	1 ③	-	120	-	D8030 085	1	⑤	20/H	-
				3/4	10	1.89	1 ③	-	120	-	D8030 086	2	⑤	20/H	-
18-8 S.S.	PTFE	FKM	Hot Water, Steam Boiler Blowdown, Steam Cookers, Hot Cooking Oil, Deep Fat Cookers	1/2	10	1.89	1 ③	-	120	-	D8030 095	1	⑤	20/H	-

① Fittings not supplied with valve; refer to List Price Schedule.
② UL recognized component – AC only.
③ Valves are suitable for closing at zero pressure differential.
④ On 50 hz service, the rating for the 6.1/F solenoid is 8.1 watts.
⑤ General Purpose Valves.

Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	4.68	3.25	2.28	4.13	2.22
	mm	119	83	58	105	56
2	in	4.81	3.25	2.75	4.13	2.22
	mm	122	83	70	105	56
3	in	3.05	1.63	2.44	2.49	1.94
	mm	77	41	62	63	49
4	in	3.05	1.63	2.19	2.49	1.94
	mm	77	41	56	63	49

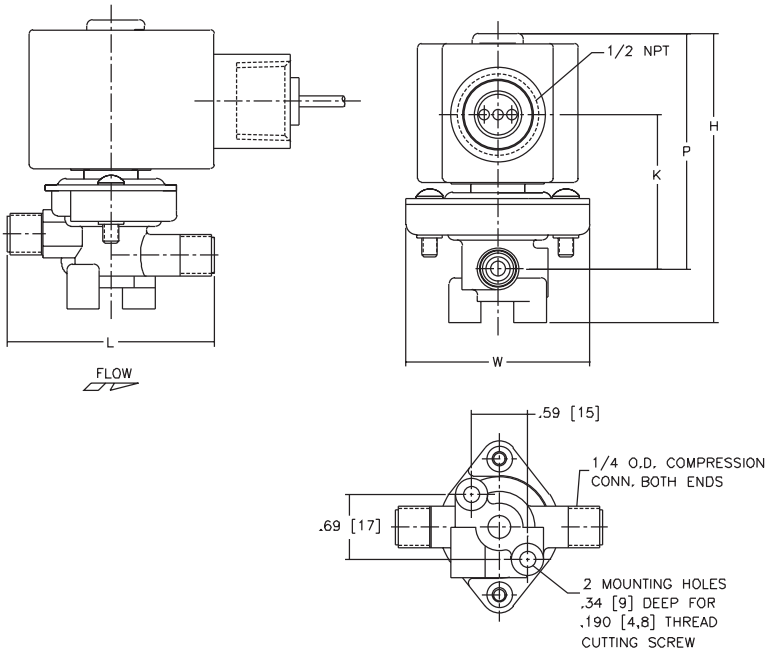
Const. Ref. 1, 2



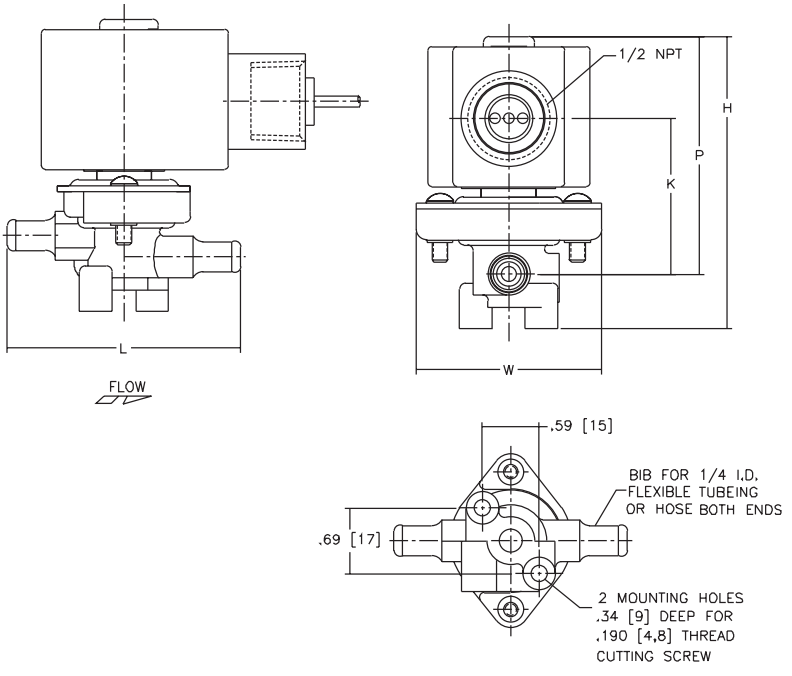
Const. Ref. 1 & 2 must be mounted with solenoid vertical and upright.

Dimensions inches (mm)

Const. Ref. 3



Const. Ref. 4



Special Service Valves

One of ASCO's many strengths is the breadth of our product line and our ability to provide customers with the best valve for the application. Our Special Service valves are key to meeting these varied requirements. As listed in the index below ASCO has focused product lines which meet special application parameters from steam to vacuum. These Special Service valves are capable of meeting typically harsh applications where more standard solenoid valves are not able to meet the specifications or lifetime requirements.

They also can relate to the media which is being handled, the operating conditions, the application specifications or environment. The valves in this section consist of 2-way valves, 3-way valves, 4-way valves, and air-operated valves.

If you cannot find the valves you need in this section, ASCO has the industry's largest staff of design engineers to possibly create the special valve you might need for your unique application.

Contact the ASCO office nearest you for details.

Index

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ASCO TODAY™

Because Time Matters

ASCO Today delivers the great products you need, when you need them.
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Guaranteed same day shipment or ASCO pays the freight. Over 2000 of ASCO's most popular products qualify for ASCO Today's guarantee. ASCO Today includes our most popular valves, valve rebuild kits, and accessories. As part of our continued drive for customer service, we expanded the ASCO Today program with over 50,000 products that can be shipped within five business days. 5DAY

2, 3, & 4-Way Solenoid Valves | Air Operated Valves | Combustion Products | Miniature Valves

Products may vary in Canada, please call 1-519-758-2700 to check availability of specific catalog numbers.

For more information on how you can have the ASCO products you want when you want them, visit us online to see our complete listing of ASCO Today products or call 1-800-972-2726.

 ASCO Today is registered in the United States.

Top Loading Bulkhead Fittings

Aluminum Bodies
Fits 3/4" to 1 1/2" Pipe Sizes

2/2 SERIES Dust Collector

Features

- Eliminates welding in through-the-wall installations
- Normally used with ASCO pulse valves having integral compression fittings
- Top loading-type dust collectors require installation and removal of collector bags or cartridges from the top of the housing, above the blow tubes

Installation

Fittings are installed through the dust collector wall, gasketed in place, and secured with a retaining ring. Compression nut, retainer, and pipe seal are then installed on the pipe, making certain the beveled edge of the seal faces the connector body. The pipe assembly then slides into the connector body and the nut is firmly hand tightened.

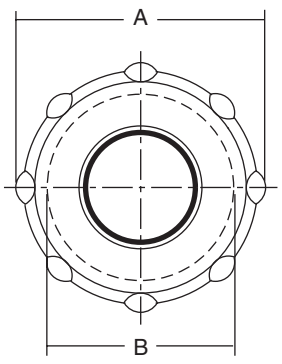
Nominal Ambient Temp. Ranges

-4˚F to 266˚F (-20˚C to 130˚C)
Note: The rubber seal, retainer, and nut provide pressure sealing around the pipes. Inlet and blow pipes must be secured to prevent movement.

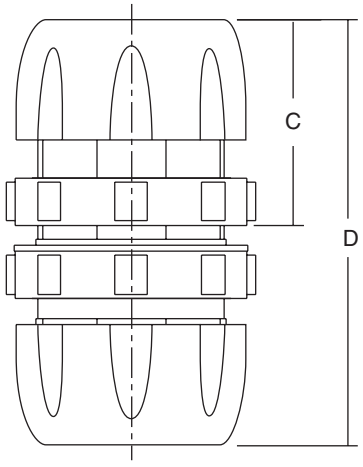
Dimensions inches (mm)

Connector Size		3/4"	1"	1-1/2"
A	in	2.56	3.03	3.50
	mm	65	77	89
B	in	1.85	2.28	2.72
	mm	47	58	69
C	in	2.44	2.52	2.56
	mm	62	64	65
D	in	4.57	4.80	4.72
	mm	116	122	120

Pipe Size (in)	Top Loading Kit Number
3/4"	266015
1"	266017
1-1/2"	266019



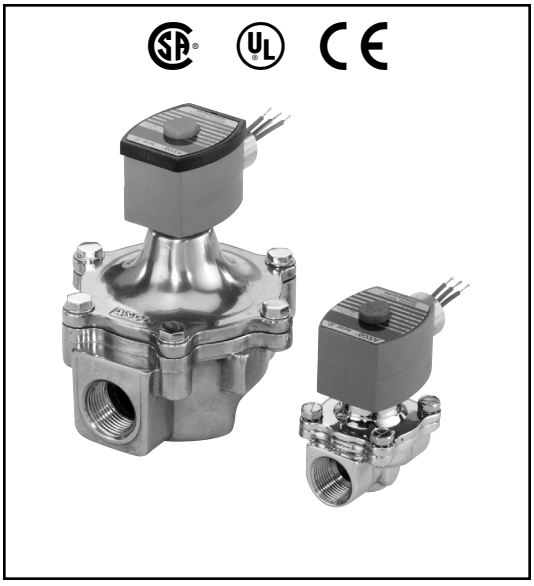
MOUNTING HOLE



SPECIAL SERVICE VALVES

Features

- Range of products for vacuum service applications on vacuum breaking and roughing pumps
- Zero Minimum Operating Pressure Differential
- Elastomers de-gassed and cleaned ("VH" suffix)
- Mountable in any position, except as noted



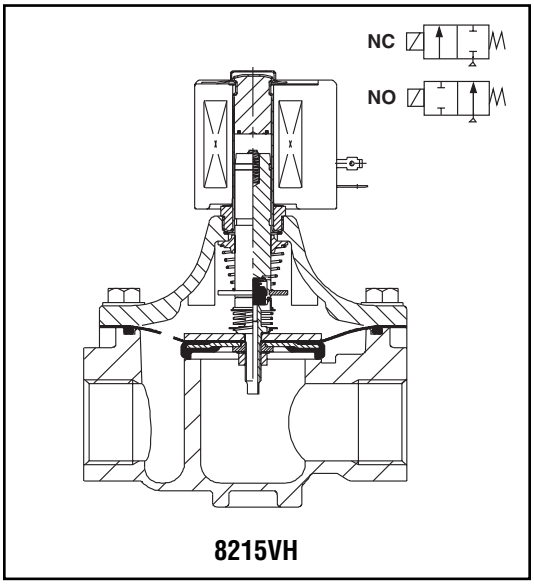
Application

Conditions	Pressure
Low (and Rough)	760 to 25 Torr (or 29" Hg)
Medium (and Fine)	25 to 10^{-3} Torr
High	10^{-3} to 10^{-6} Torr
Very High	10^{-6} to 10^{-9} Torr
Ultra High	10^{-9} Torr and Below

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part No.	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	6.1	16	30	238210	238214
F	10.1	25	70	238610	238614
F	16.1	35	180	272610	272614
F	17.1	40	93	238610	238614

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



8215VH

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Series 8262: 5˚F to 131˚F (-15˚C to 55˚C)
All Others: 32˚F to 125˚F (0˚C to 52˚C)
Note: Max. ambient for explosionproof (EF) is 125˚F (52˚C)
Refer to Engineering Section for details.

Approvals

8262 Series UL listed, CSA certified.
8210, 8030 Series CSA certified.
All Series meet applicable CE directives.
Refer to Engineering Section for details.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Body Material	Application Guide: Electrical Check	Breaker	Roughing	Foreline or High Vacuum	Suction or Release	Max. Fluid Temp. °F AC	Medium Vacuum to 10^{-3} Torr ③ Catalog Number	High Vacuum to 10^{-6} Torr ③ Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation ② AC
NORMALLY CLOSED (Closed when de-energized)															
1/8	1/8	0.35	0	15	Brass	●	●	●	●	●	180	-	8262H002VH ④	1	6.1/F
1/8	1/8	0.35	0	15	SS	●	●	●	●	●	180	-	8262H006VH ④	1	6.1/F
1/4	9/32	0.88	0	15	Brass	●	●	●	●	●	180	-	8262H090VH ④	2	6.1/F
1/4	9/32	0.88	0	15	SS	●	●	●	●	●	180	-	8262H038VH ④	2	6.1/F
3/8	3/8	1.8	0	15	Brass	●	●	●	●	●	180	8030G013VM	8030G013VH	3	10.1/F
1/2	7/16	2.8	0	15	Brass	●	●	●	●	●	180	8030G017VM	8030G017VH	4	16.1/F
3/4	3/4	5	0	4	Brass	●	-	-	-	-	180	8030G043VM	8030G043VH	5	17.1/F
3/4	3/4	5	0	15	Brass	-	●	-	-	●	180	8210G095VM	8210G095VH	6	10.1/F
1	1 5/8	20.5	0	15	Alum.	-	●	-	-	●	125	8215G050VM ①	8215G050VH ①	7	16.1/F
1 1/4	1 5/8	31.7	0	15	Alum.	-	●	-	-	●	125	8215G060VM ①	8215G060VH ①	7	16.1/F
1 1/2	1 5/8	32.7	0	15	Alum.	-	●	-	-	●	125	8215G070VM ①	8215G070VH ①	8	16.1/F
2	2 3/32	55	0	15	Alum.	-	●	-	-	●	125	8215G080VM ①	8215G080VH ①	9	16.1/F
NORMALLY OPEN (Open when de-energized)															
1/8	1/8	0.35	0	15	Brass	●	●	●	●	●	180	-	8262H129VH ④	10	10.1/F
1/8	1/8	0.35	0	15	SS	●	●	●	●	●	180	-	8262H237VH ④	10	10.1/F
1/4	9/32	0.96	0	15	Brass	●	●	●	●	●	180	-	8262H265VH ④	11	10.1/F
1/4	9/32	0.96	0	15	SS	●	●	●	●	●	180	-	8262H152VH ④	11	10.1/F
3/8	5/8	3	0	15	Brass	-	●	-	-	●	180	8210G033VM	8210G033VH	12	10.1/F
1/2	5/8	4	0	15	Brass	-	●	-	-	●	180	8210G034VM	8210G034VH	12	10.1/F
3/4	3/4	5.5	0	15	Brass	-	●	-	-	●	180	8210G035VM	8210G035VH	13	10.1/F
1	1 5/8	20.5	0	15	Alum.	-	●	-	-	●	125	8215G053VM ①	8215G053VH ①	14	16.1/F
1 1/4	1 5/8	31.7	0	15	Alum.	-	●	-	-	●	125	8215G063VM ①	8215G063VH ①	14	16.1/F
1 1/2	1 5/8	32.7	0	15	Alum.	-	●	-	-	●	125	8215G073VM ①	8215G073VH ①	15	16.1/F
2	2 3/32	55	0	15	Alum.	-	●	-	-	●	125	8215G083VM ①	8215G083VH ①	16	16.1/F

① Valves must be mounted with solenoid vertical and upright. ② On 50 hertz service, the rating for the 6.1/F solenoid is 8.1 watts.
③ For low vacuum applications to 29" Hg, use standard catalog valves with 0 psi minimum, 15+ psi maxium OPD (except 2" NPT). ④ FKM seals and disc

Specifications (Metric units)

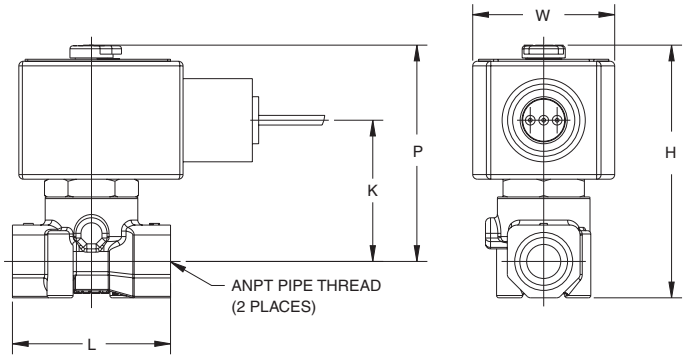
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Body Material	Application Guide: Electrical Check	Breaker	Roughing	Foreline or High Vacuum	Suction or Release	Max. Fluid Temp. °C AC	Medium Vacuum to 10^{-3} Torr ③ Catalog Number	High Vacuum to 10^{-6} Torr ③ Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation ② AC
NORMALLY CLOSED (Closed when de-energized)															
1/8	3.2	0.30	0	1	Brass	●	●	●	●	●	82	-	8262H002VH ④	1	6.1/F
1/8	3.2	0.30	0	1	SS	●	●	●	●	●	82	-	8262H006VH ④	1	6.1/F
1/4	7.1	0.76	0	1	Brass	●	●	●	●	●	82	-	8262H090VH ④	2	6.1/F
1/4	7.1	0.76	0	1	SS	●	●	●	●	●	82	-	8262H038VH ④	2	6.1/F
3/8	10	1.54	0	1	Brass	●	●	●	●	●	82	8030G013VM	8030G013VH	3	10.1/F
1/2	11	2.40	0	1	Brass	●	●	●	●	●	82	8030G017VM	8030G017VH	4	16.1/F
3/4	19	4.29	0	0.3	Brass	●	-	-	-	-	82	8030G043VM	8030G043VH	5	17.1/F
3/4	19	4.29	0	1	Brass	-	●	-	-	●	82	8210G095VM	8210G095VH	6	10.1/F
1	41	17.57	0	1	Alum.	-	●	-	-	●	52	8215G050VM ①	8215G050VH ①	7	16.1/F
1 1/4	41	27.17	0	1	Alum.	-	●	-	-	●	52	8215G060VM ①	8215G060VH ①	7	16.1/F
1 1/2	41	28.03	0	1	Alum.	-	●	-	-	●	52	8215G070VM ①	8215G070VH ①	8	16.1/F
2	53	47.14	0	1	Alum.	-	●	-	-	●	52	8215G080VM ①	8215G080VH ①	9	16.1/F
NORMALLY OPEN (Open when de-energized)															
1/8	3.2	0.30	0	1	Brass	●	●	●	●	●	82	-	8262H129VH ④	10	10.1/F
1/8	3.2	0.30	0	1	SS	●	●	●	●	●	82	-	8262H237VH ④	10	10.1/F
1/4	7.1	0.83	0	1	Brass	●	●	●	●	●	82	-	8262H265VH ④	11	10.1/F
1/4	7.1	0.83	0	1	SS	●	●	●	●	●	82	-	8262H152VH ④	11	10.1/F
3/8	16	2.57	0	1	Brass	-	●	-	-	●	82	8210G033VM	8210G033VH	12	10.1/F
1/2	16	3.43	0	1	Brass	-	●	-	-	●	82	8210G034VM	8210G034VH	12	10.1/F
3/4	19	4.71	0	1	Brass	-	●	-	-	●	82	8210G035VM	8210G035VH	13	10.1/F
1	41	17.57	0	1	Alum.	-	●	-	-	●	82	8215G053VM ①	8215G053VH ①	14	16.1/F
1 1/4	41	27.17	0	1	Alum.	-	●	-	-	●	52	8215G063VM ①	8215G063VH ①	14	16.1/F
1 1/2	41	28.03	0	1	Alum.	-	●	-	-	●	52	8215G073VM ①	8215G073VH ①	15	16.1/F
2	53	47.14	0	1	Alum.	-	●	-	-	●	52	8215G083VM ①	8215G083VH ①	16	16.1/F

① Valves must be mounted with solenoid vertical and upright. ② On 50 hertz service, the rating for the 6.1/F solenoid is 8.1 watts.
③ For low vacuum applications to 29" Hg, use standard catalog valves with 0 bar minimum, 1+ bar maxium OPD (except 2" NPT). ④ FKM seals and disc.

Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	3.00	1.60	1.19	2.69	1.69
	mm	76	41	30	68	43
2	in	3.12	1.72	1.56	2.76	1.69
	mm	79	44	40	70	43
3	in	4.00	3.14	1.91	3.55	1.95
	mm	102	80	49	90	50
4	in	4.13	2.84	2.28	3.56	2.22
	mm	105	72	58	90	56
5	in	4.10	2.44	2.81	3.41	2.28
	mm	104	62	71	87	58
6	in	4.13	2.47	2.81	3.44	2.28
	mm	105	63	71	87	58
7	in	6.79	4.26	5.00	5.48	5.38
	mm	174	108	127	139	137
8	in	6.79	4.32	5.00	5.54	5.38
	mm	174	110	127	141	137
9	in	7.42	4.66	6.09	5.89	6.31
	mm	188	118	155	150	160
10	in	3.00	1.54	1.19	2.69	2.06
	mm	76	39	30	68	52
11	in	3.12	1.62	1.56	2.76	2.06
	mm	79	41	40	70	52
12	in	4.35	2.65	2.75	3.79	2.28
	mm	110	67	70	96	58
13	in	4.64	2.81	2.81	3.94	2.28
	mm	118	71	71	100	58
14	in	6.79	2.35	5.00	3.13	5.38
	mm	172	60	127	79	137
15	in	6.79	2.29	5.00	3.06	5.38
	mm	172	58	127	78	137
16	in	6.94	2.54	6.09	3.31	6.31
	mm	176	65	155	84	160

Const. Ref. 1, 2



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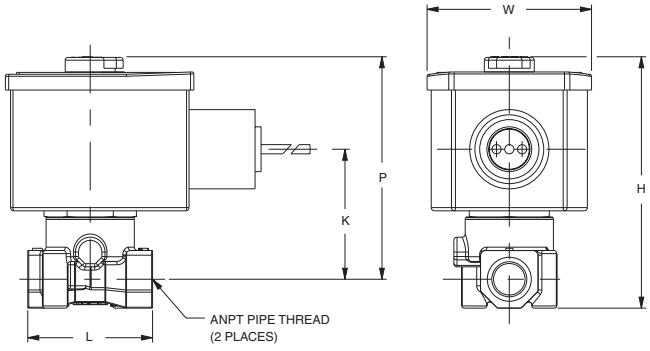

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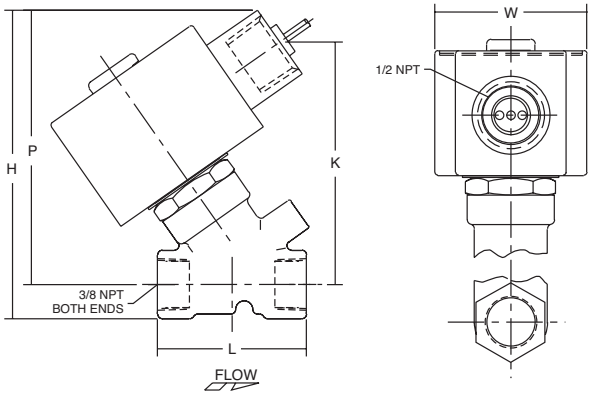

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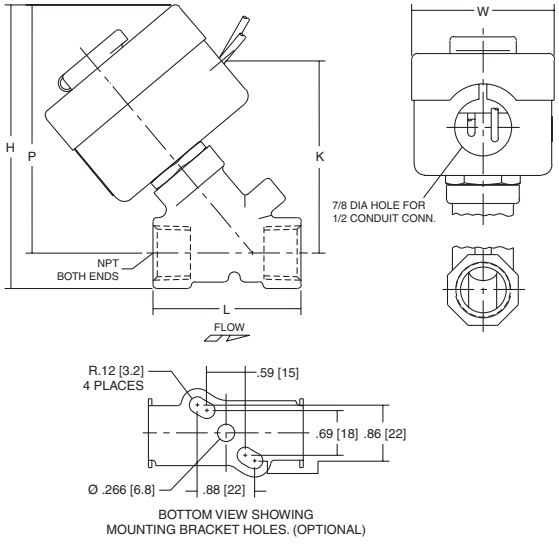
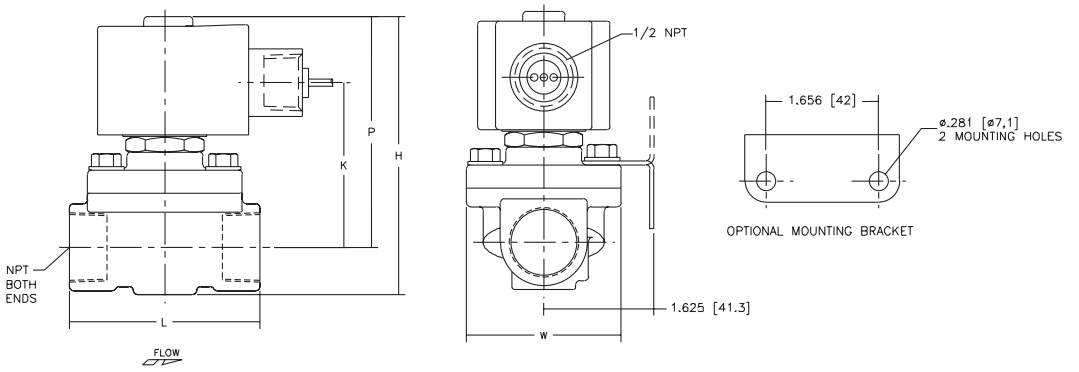
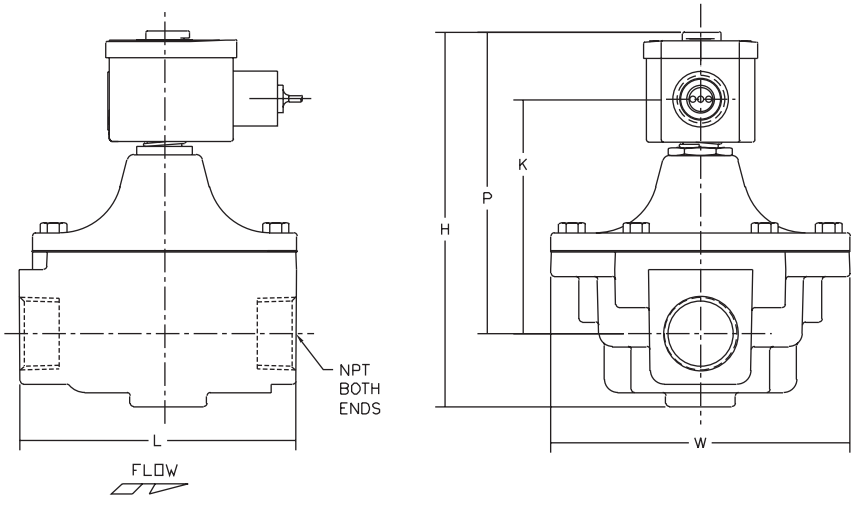


Dimensions inches (mm)

Const. Ref. 5, 6, 12, 13



Const. Ref. 7,8, 9



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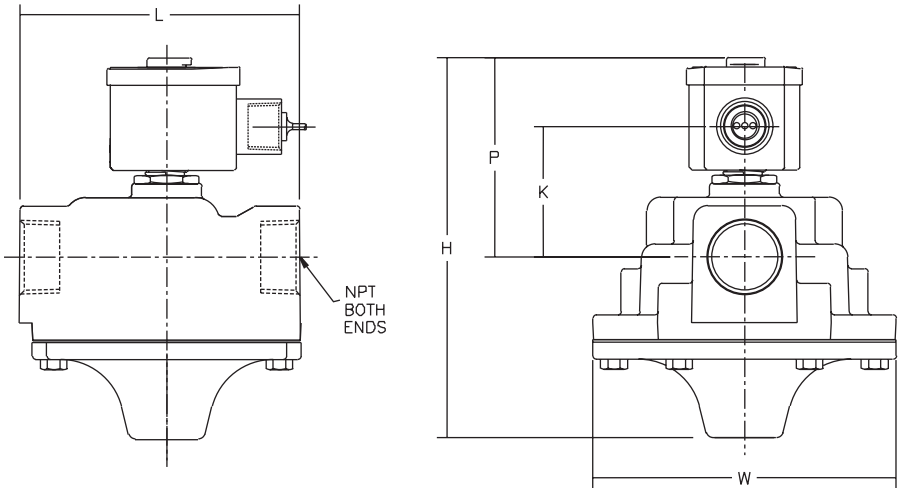
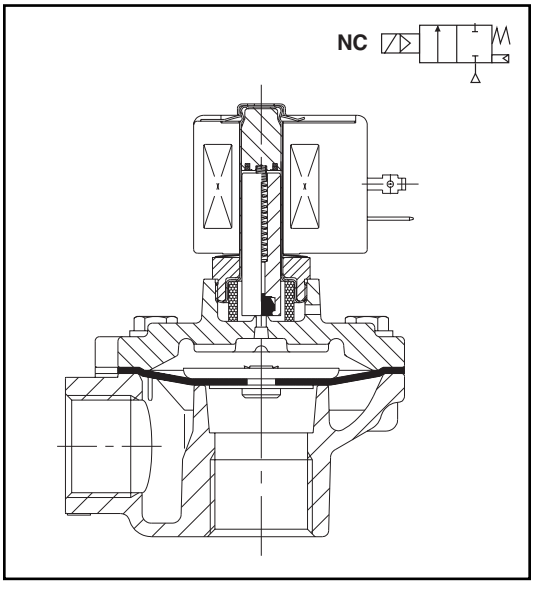


Features

- Specially designed for reverse jet-type dust collector systems
- High flow Cv(s) to 140 for effective bag cleaning
- High cycle life
- Fast opening/closing

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals	NBR
Diaphragm	NBR, HYT or CR as noted
Discs	NBR or PA, as noted



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part Number	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	6.1	16	30	238210	238214
F	10.1	25	50	238610	238614
F	17.1	40	70	238610	238614

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz), *Consult factory for DC voltage. Other voltages available when required.*

Solenoid Enclosures

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

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

See Optional Features Section for other available options.
Consult your local ASCO office for details on accessories.

Nominal Temp. Ranges

Ambient: AC constructions: 0˚F to 185˚F (-18˚C to 85˚C); 150˚F (66˚C) for valves with HYT diaphragms

Consult local sales office for DC constructions.

Fluids: 0˚F to 185˚F (-18˚C to 85˚C), except as noted. For temperatures to 300˚F (149˚C), specify FPM, suffix "V" (except where noted).

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Min. Operating Pressure Differential (psi) ⑩	Max. Operating Pressure Differential (psi) ⑩	Integral Pilot Catalog Number	Remote Pilot Construction (Minimum Pilot Valve Orifice Size = 1/8") Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Rebuild Kit AC Valves Kit No.	Diaphragm Only 10 Pack "Zip" Kit Kit No.
3/4	3/4	10.5	5	125	-	8353C033 ③	1	-	96875	238864
3/4 ①	3/4	10.5	5	125	-	8353C030 ③	1	-	96875	238864
3/4 ②	3/4	10.5	5	125	-	8353C004 ③	1	-	96875	238864
1	1 1/8	20	5	125	-	8353C035 ④	1	-	200262	238866
1	1 1/8	20	5	125	8353G041 ④	-	4	6.1/F	316563	238866
1	1 5/8	18	15	125	8353G006 ⑤⑧	-	3	17.1/F	300144	-
1 1/4	1 5/8	20	15	125	8353G005 ⑤⑧	-	3	17.1/F	300144	-
1 1/2	1 1/2	35	15	125	8353G001 ⑤⑧	-	3	17.1/F	300144	-
1 1/2	2	53	10	125	-	8353H038 ④	2	-	276886	238870
1 1/2	2	53	5	125	8353J039 ④	-	5	10.1/F	322108	238870
1 1/2	2	48	5	125	8353G061 ⑨	-	5	10.1/F	316297	-
1 1/2	2	48	10	125	-	8353A062 ⑨	2	-	276884	-
2	2	60	15	125	8353G002 ⑤⑧	-	3	17.1/F	300145	-
2	2	76	5	125	-	8353 048 ⑥⑦	2	-	256802	256797
2	2	76	5	125	8353G050 ⑥	-	5	10.1/F	316029	256797
2 1/2	3	82	15	125	8353G007 ⑤	-	6	10.1/F	176878	-
3	3	140	15	125	8353G008 ⑤	-	6	10.1/F	176878	-

① Supplied with internal slip fit connection on outlet.
② Extended ends for Dresser connections.
③ NBR diaphragm.
④ HYT diaphragm max. fluid temp. 150˚F.
For higher temperature, consult factory.
⑤ CR diaphragm/PA disc.
⑥ CR diaphragm.
⑦ Minimum pilot orifice size 7/32".
⑧ Consult factory for remote piloted construction.
⑨ NBR diaphragm, PA disc, long-life construction. Maximum fluid temp. 185˚F.
⑩ Contact local sales office for DC pressure requirements.

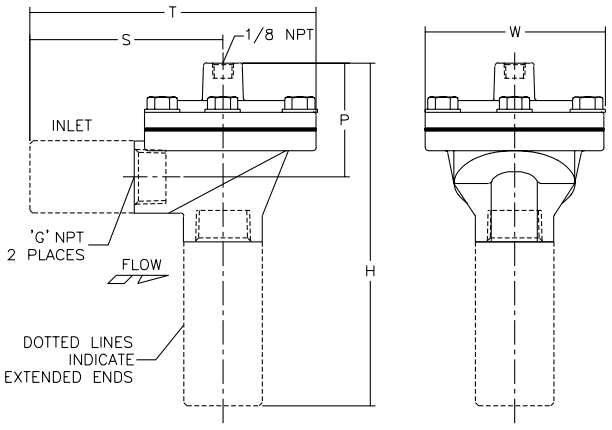
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Min. Operating Pressure Differential (bar) ⑩	Max. Operating Pressure Differential (bar) ⑩	Integral Pilot Catalog Number	Remote Pilot Construction (Minimum Pilot Valve Orifice Size = 1/8") Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Rebuild Kit AC Valves Kit No.	Diaphragm Only 10 Pack "Zip" Kit Kit No.
3/4	19	9.0	0.3	8.6	-	8353C033 ③	1	-	96875	238864
3/4 ①	19	9.0	0.3	8.6	-	8353C030 ③	1	-	96875	238864
3/4 ②	19	9.0	0.3	8.6	-	8353C004 ③	1	-	96875	238864
1	29	17.1	0.3	8.6	-	8353C035 ④	1	-	200262	238866
1	29	17.1	0.3	8.6	8353G041 ④	-	4	6.1/F	316563	238866
1	41	15.4	1.0	8.6	8353G006 ⑤⑧	-	3	17.1/F	300144	-
1 1/4	41	17.1	1.0	8.6	8353G005 ⑤⑧	-	3	17.1/F	300144	-
1 1/2	38	30.0	1.0	8.6	8353G001 ⑤⑧	-	3	17.1/F	300144	-
1 1/2	51	45.4	0.7	8.6	-	8353H038 ④	2	-	276886	238870
1 1/2	51	45.4	0.3	8.6	8353J039 ④	-	5	10.1/F	322108	238870
1 1/2	51	41.1	0.3	8.6	8353G061 ⑨	-	5	10.1/F	316297	-
1 1/2	51	41.1	0.7	8.6	-	8353A062 ⑨	2	-	276884	-
2	51	51.4	1.0	8.6	8353G002 ⑤⑧	-	3	17.1/F	300145	-
2	51	65.1	0.3	8.6	-	8353 048 ⑥⑦	2	-	256802	256797
2	51	65.1	0.3	8.6	8353G050 ⑥	-	5	10.1/F	316029	256797
2 1/2	76	70.3	1.0	8.6	8353G007 ⑤	-	6	10.1/F	176878	-
3	76	120.0	1.0	8.6	8353G008 ⑤	-	6	10.1/F	176878	-

Dimensions inches (mm)

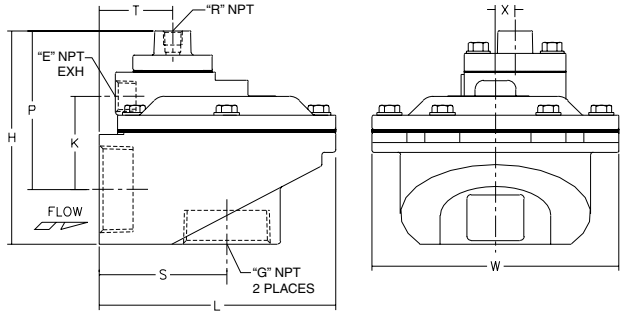
Cat. No.	"G"		H	L	P	Bonnet Bolts	T	W
8353C004	Extended End	in	7.94	3.69	2.16	5.00	5.16	3.44
		mm	201.6	93.7	54.8	127.0	131.0	87.3
8353C030	3/4 NPT (Inlet)	in	3.44	1.69	2.19	5.00	3.47	3.44
		mm	87.3	42.9	55.6	127.0	88.1	87.3
	3/4 Socket (Outlet)	in	3.44	1.69	2.19	5.00	3.47	3.44
		mm	87.3	42.9	55.6	127.0	88.1	87.3
8353C033	3/4 NPT	in	3.44	1.69	2.19	5.00	3.47	3.44
		mm	87.3	42.9	55.6	127.0	88.1	87.3
8353C035	1 NPT	in	2.53	2.03	1.69	4.00	3.50	2.94
		mm	64.3	51.6	42.9	101.6	88.9	74.6

Const. Ref. 1



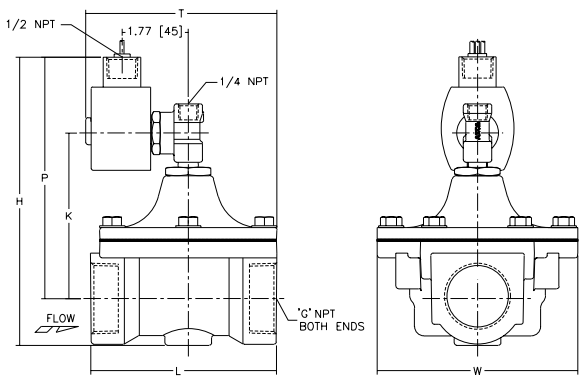
Cat. No.	"E" NPT	"G" NPT		H	L	P	"R" NPT	S	T	W	X
8353H038	3/8	1 1/2	in	4.63	5.16	3.44	1/8	2.78	1.61	5.38	0.44
			mm	117.5	131.0	87.3		70.6	40.9	136.5	11.1
8353A062	3/8	1 1/2	in	5.16	5.16	3.44	1/8	2.78	1.61	5.38	0.44
			mm	131.0	131.0	87.3		70.6	40.9	136.5	11.1
8353 048	3/4	2	in	6.47	6.63	4.69	1/4	3.75	2.56	6.50	-
			mm	164.3	168.3	119.1		95.3	65.1	165.1	-

Const. Ref. 2



Cat. No.	"G" NPT		H	L	P	S	T	W
8353G001	1 1/2	in	7.72	5.00	6.47	1.78	5.13	5.38
		mm	196.1	127.0	164.3	45.2	130.2	136.5
8353G002	2	in	8.34	6.09	6.84	1.78	5.56	6.34
		mm	211.9	154.8	173.8	45.2	141.3	161.1
8353G005	1 1/4	in	7.72	5.00	6.47	1.78	5.13	5.38
		mm	196.1	127.0	164.3	45.2	130.2	136.5
8353G006	1	in	7.72	5.00	6.41	1.78	5.13	5.38
		mm	196.1	127.0	162.7	45.2	130.2	136.5

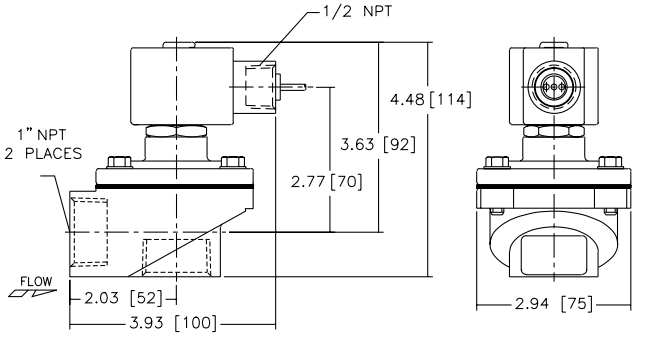
Const. Ref. 3



SPECIAL SERVICE VALVES

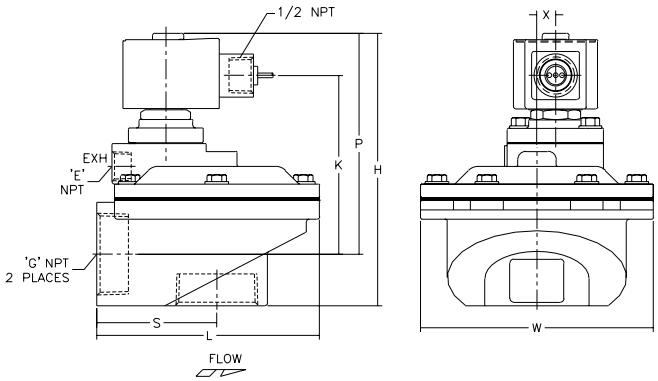
Dimensions inches (mm)

Const. Ref. 4



Const. Ref. 5

Cat. No.	"E" NPT	"G" NPT		H	L	P	S	T	W	X
8353J039	3/8	1 1/2	in	6.28	5.16	5.08	2.78	1.61	5.38	0.44
			mm	159.5	131.0	129.0	70.6	40.9	136.5	11.1
8353G061	3/8	1 1/2	in	6.28	5.16	5.08	2.78	1.61	5.38	0.44
			mm	159.5	131.0	129.0	70.6	40.9	136.5	11.1
8353G050	3/4	2	in	8.25	6.63	6.47	3.75	2.56	6.50	-
			mm	209.6	168.3	164.3	95.3	65.1	165.1	-



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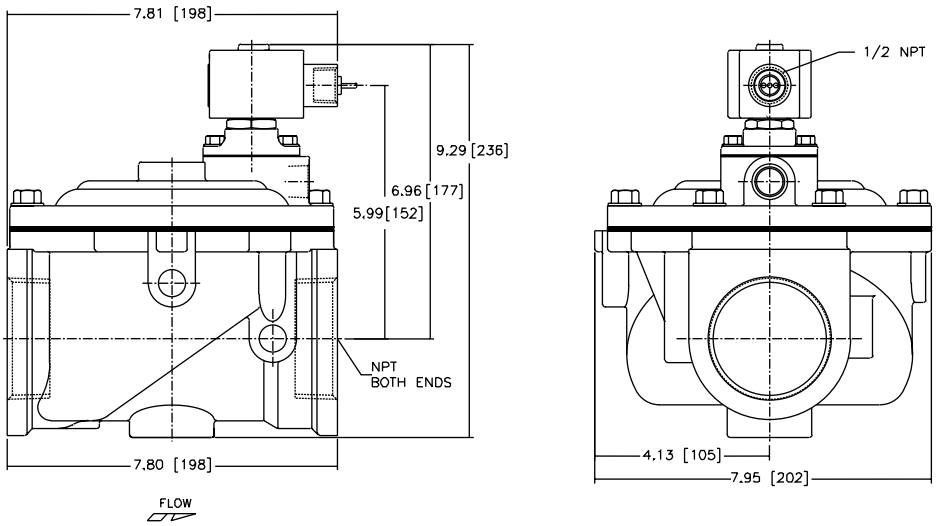


General Purpose/Panel Mount Pilot Valves

Brass or Plastic Bodies
1/8" to 1/4" NPT

Features

- Designed to pilot large dust collector pulse valves
- For individual installation or mounting in panel enclosure
- Brass bodied valve has threaded exhaust port for optional muffler installation, and screw or leaded terminals
- Plastic body valve designed for plastic or metallic tubing, has spade terminals
- All with bubble-tight seals
- Zero minimum pressure

Construction

Valve Parts in Contact with Fluids	
Body	Brass or PA, as listed
Seals and Discs	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Shading Coil	Copper
Springs	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number		
	DC Watts	AC			General Purpose		Explosionproof
		Watts	VA Holding	VA Inrush	AC	DC	AC
F	-	6	15.6	27.5	99216 (spade)	-	-
F	-	6	15.6	27.5	125472 (screw)	-	-
F	-	6.1	16	30	238210	-	238214
B	-	24.9	34.8	43.2	174879 ①	-	-
F	22	10	17.6	23.2	400135	400135	-

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz), 24 volts DC. Other voltages are available when required.

Note: ① Maximum voltage 120/60. Higher voltages use Class F Coil, 186548.

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Open Frame.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

8262 Series

AC: -13˚F to 131˚F (-25˚C to 55˚C)

DC: -13˚F to 104˚F (-25˚C to 40˚C)
-13˚F to 131˚F (-25˚C to 55˚C)

Note: Max ambient for explosionproof (EF) is 125˚F (52˚C) for AC, 131˚F (55˚C) for DC.

8257 Series

Ambient: AC 0˚F to 140˚F (-17˚C to 60˚C)
DC 0˚F to 140˚F (-17˚C to 60˚C)

Fluids: AC 0˚F to 180˚F (-17˚C to 82˚C)

8260 Series

Ambient: AC constructions: 32˚F to 125˚F (0˚C to 52˚C)

Fluids: 32˚F to 180˚F (0˚C to 82˚C)

Approvals

8262 Series

CSA certified. UL listed, as indicated.
Meets applicable CE directives.

8257 Series

CSA certified, file 10381
UL Recognized, file NP618.

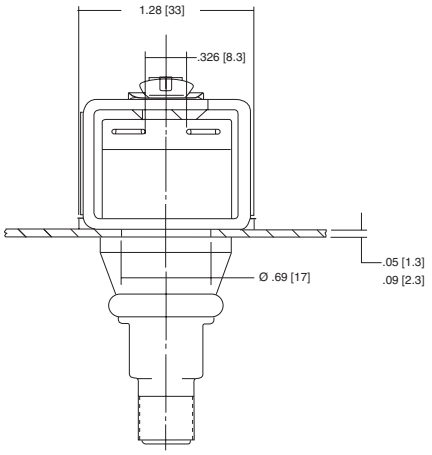
Specifications (English, Metric units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Kv Flow Factor (m^3/h)	Max. Operating Pressure Differential psi (bar)	Catalog Number			Watt Rating/ Class of Coil Insulation	
					RedHat II	RedHat Panel Mount Solenoids with Spade Terminal Coils Standard	RedHat Panel Mount Solenoids with Screw Terminal Coils Standard	AC	DC
NORMALLY CLOSED (Closed when de-energized), Brass Body - AC Only									
1/8	1/8	.34	.29	155 (10.7)	8262H002	-	-	6.1/F	-
1/8	1/8	.34	.29	155 (10.7)	-	PSF8262C002 ④	-	6/F	-
1/8	1/8	.34	.29	150 (10.3)	-	-	PSFX8262C002-17523 ③④	6/F	-
1/8	1/8	.35	.29	125 (8.6)	-	USF8257A001	-	10/F	22/F
NORMALLY CLOSED (Closed when de-energized), PA Body - AC Only									
1/4 O.D. Comp. ②	1/8	.30	.26	125 (8.6)	-	USM8260100 ①	-	24.9/B	-
1/8 External NPT	1/8	.30	.26	125 (8.6)	-	USM8260101 ①	-	24.9/B	-

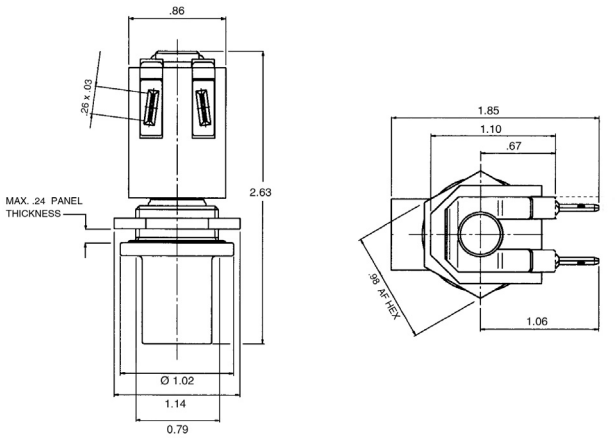
① Spade terminal coils are standard. Solenoid will withstand a total energized time of 12 seconds within any 60 second period.
② Fittings not supplied with valve. To order, refer to List Price Schedule.
③ Gasketed panel mount pilot valve used in pilot valve enclosure HV125468, -69, and -70.
④ For dimensional drawing contact local sales office.

Dimensions inches (mm)

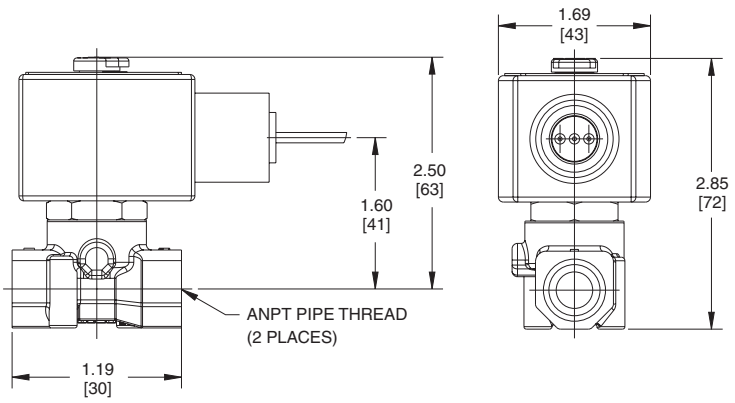
USM8260100, USM8260101



USF8257A001



8262H002



SPECIAL SERVICE VALVES

Features

- The high quality polyacetal (POM) piston cartridge provides a long operating life and a large temperature range
- Quick mount connection eliminates thread cutting and sealing
- Integral operators have molded epoxy coils, with available options
- Valves may be mounted in any position

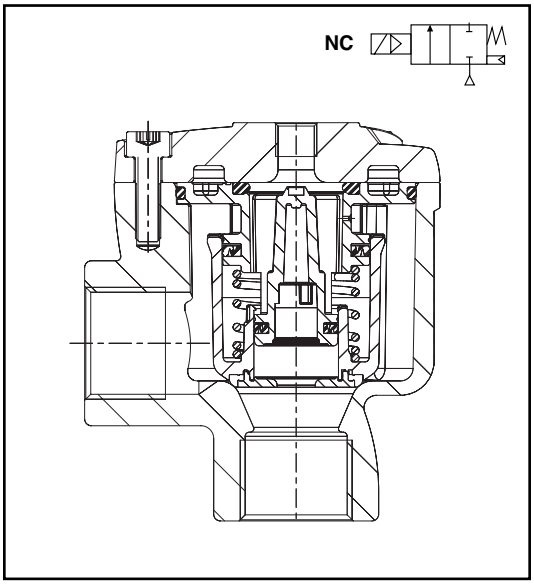
Construction

Body	Aluminum
Piston/Cartridge	POM (Polyacetal)
Clamps/Bolts	Plated Steel
Integral Solenoid	
Core Tube/Core & Plugnut/Core Spring	Stainless Steel
Seals and Disc	NBR
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part No.			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314

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 available when required.



Solenoid Enclosures

Standard: RedHat II Types 1, 2, 3, 4, and 4X combinatin. General Purpose and Watertight.

Optional: RedHat II Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. Explosionproof and Watertight. (To order, add prefix "EF" to catalog number.) Other electrical and construction options are also available.

Consult your local ASCO office for details on accessories.

Rebuild Kits

Remote Pilot		Integral Pilot		
Catalog Number	Rebuild Kit	Catalog Number	Rebuild Kit	
			AC	DC
S353A713	C117-279	S353G711	C133-453	C133-454
S353A723	C117-280	S353G721	C133-455	C133-456
8353A813	C117-271	8353G811	C133-451	C133-452
8353A823	C117-271	8353G821	C133-451	C133-452
S353A733	C117-289	S353G731	C133-465	C133-466
8353A833	C117-283	8353G831	C133-463	C133-464

Nominal Ambient Temp. Ranges

Remote: -4˚F to 185˚F (-20˚C to 85˚C)

Integral: AC -4˚F to 125˚F (-20˚C to 50˚C)
DC -4˚F to 104˚F (-20˚C to 40˚C)

Refer to Engineering Section for details.

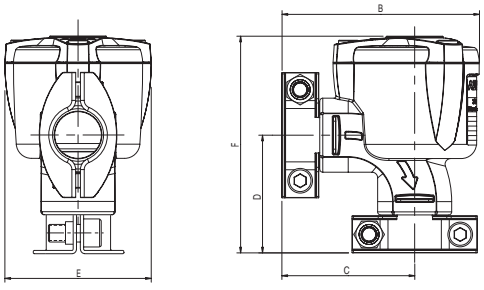
Specifications (English, Metric units)

Pipe Size (in)	Orifice Size in (mm)	Remote Pilot Connection in	Cv Flow Factor	Kv Flow Factor (m3/h)	Operating Pressure Differential psi (bar) Air Min.	Operating Pressure Differential psi (bar) Air Max.	Quick Mount Catalog Number	Const. Ref.	NPT Connections Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
REMOTE PILOT CONSTRUCTIONS												
3/4	1.1 (28)	1/8	16	14	5 (0.3)	125 (8.6)	S353A713	1	8353A813	2	-	-
1	1.1 (28)	1/8	27	23	5 (0.3)	125 (8.6)	S353A723	1	8353A823	2	-	-
1 1/2	1.7 (43)	1/8	53	46	5 (0.3)	125 (8.6)	S353A733	1	8353A833	2	-	-
INTEGRAL PILOT CONSTRUCTIONS												
3/4	1.1 (28)	-	16	14	5 (0.3)	125 (8.6)	S353G711	3	8353G811	4	6.1/F	18.6/F
1	1.1 (28)	-	27	23	5 (0.3)	125 (8.6)	S353G721	3	8353G821	4	6.1/F	18.6/F
1 1/2	1.7 (43)	-	53	46	5 (0.3)	125 (8.6)	S353G731	3	8353G831	4	6.1/F	18.6/F

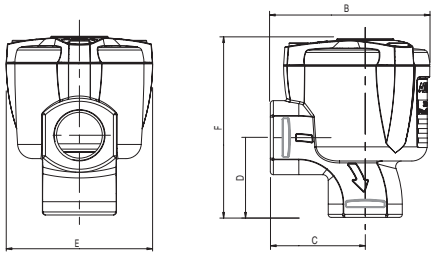
Dimensions inches (mm)

Remote Pilot Constructions

Const. Ref. 1 (Quick Mount)



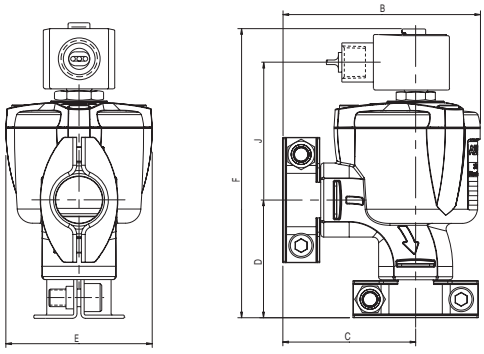
Const. Ref. 2 (NPT)



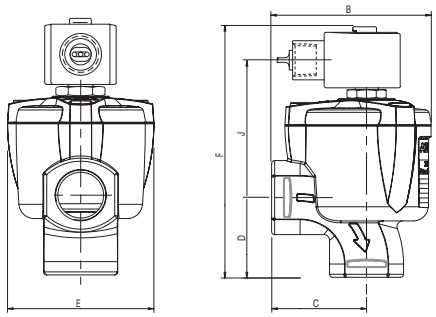
Pipe Connections	B	C	D	E	F
3/4" Quick Mount	4.1 (105)	2.8 (71)	2.4 (62)	3.0 (77)	4.5 (114)
1" Quick Mount	4.5 (117)	3.3 (85)	2.8 (71)	3.0 (77)	4.8 (121)
1 1/2" Quick Mount	5.7 (146)	3.8 (97)	3.4 (86)	4.4 (112)	6.0 (153)
3/4" NPT	3.3 (85)	2.0 (51)	1.7 (42)	3.0 (77)	3.7 (94)
1" NPT	3.8 (96)	2.4 (62)	2.0 (51)	3.0 (77)	4.0 (100)
1 1/2" NPT	4.8 (121)	2.8 (71)	2.4 (60)	4.4 (112)	5.0 (127)

Integral Pilot Constructions

Const. Ref. 3 (Quick Mount)



Const. Ref. 4 (NPT)



Pipe Connections	B	C	D	E	F	J
3/4" Quick Mount	4.1 (105)	2.8 (71)	2.4 (62)	3.0 (77)	6.5 (166)	3.2 (81)
1" Quick Mount	4.5 (114)	3.3 (85)	2.8 (71)	3.0 (77)	6.8 (173)	3.1 (79)
1 1/2" Quick Mount	5.7 (146)	3.8 (97)	3.4 (86)	4.4 (112)	8.1 (206)	3.8 (97)
3/4" NPT	3.3 (85)	2.0 (51)	1.7 (42)	3.0 (77)	5.7 (146)	3.1 (79)
1" NPT	3.8 (96)	2.4 (62)	2.0 (51)	3.0 (77)	6.0 (152)	3.1 (79)
1 1/2" NPT	4.8 (121)	2.8 (71)	2.4 (60)	4.4 (112)	7.1 (181)	3.8 (97)

Features

- Protection for pre-wired ASCO remote pilot valves
- Corrosion resistant, cast aluminum enclosures available with Type 4X Watertight or Types 7 and 9 Explosionproof protection
- Installer-friendly valve layout
- For Explosionproof enclosure, manual operation possible through exhaust port in base
- Enclosures may be mounted in any position

Pilot Valve Enclosures

Standard: Watertight enclosure: Types 1, 2, 3, 3S, and 4X. Explosionproof enclosure: Types 4X, 6, 7, and 9. Class I, Div 1, Groups C and D. Class II, Div 1, Groups E, F, and G.
Type 4X is standard on Explosionpoof enclosure.
See Optional Features Section for other available options.

Approvals

CSA certified.

Ordering instructions for Pilot Valve Enclosure - 3 to 12 Pilot Valves

Number of Valves	Watertight/Dusttight				Explosionproof		
		Suffix				Suffix	
	Catalog Number	120/60 V	240/60 V	24VDC	Catalog Number	120/60 V	240/60 V
3	125469-003-	-01-A	-02-A	-77-A	125847-003-	-01	-02
4	125469-004-	-01-A	-02-A	-77-A	125847-004-	-01	-02
5	125469-005-	-01-A	-02-A	-77-A	125847-005-	-01	-02
6	125469-006-	-01-A	-02-A	-77-A	125847-006-	-01	-02
7	125469-007-	-01-A	-02-A	-77-A			
8	125469-008-	-01-A	-02-A	-77-A			
9	125470-009-	-01-A	-02-A	-77-A			
10	125470-010-	-01-A	-02-A	-77-A			
11	125470-011-	-01-A	-02-A	-77-A			
12	125470-012-	-01-A	-02-A	-77-A			

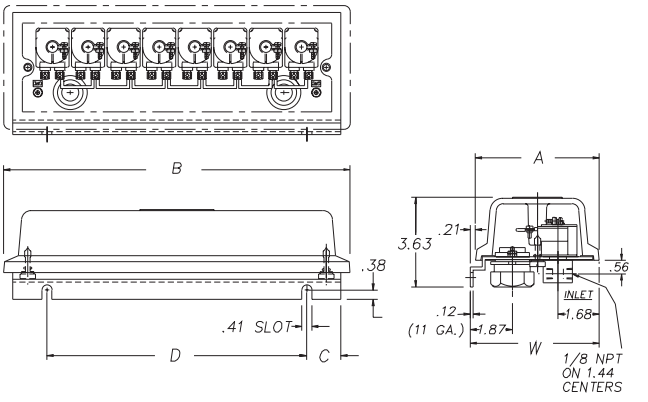
To order for different voltages, add suffix to catalog numbers, as shown above: -01-A" for 120 volt, 60 Hz valves; -02-A" for 240 volt, 60 Hz valves; -77-A for 24 VDC valves.
Example: Specify Catalog Number 125470-009-02-A for a Type 4X box, which includes nine 240 volt, 60 Hz PSFX8262C002-17523 pilot valve with screw terminal coils.

Pilot Valve Specifications (English, Metric units)

Pipe Size (in)	Orifice Size in (mm)	Cv Flow Factor (Kv Flow Factor m3/h)	Max. Pressure psi (bar)	Catalog Number	Watt Rating/ Class of Coil Insulation	Spare Coil
Watertight Enclosure includes these built-in pilot valves:						
1/8	1/8 (3.2)	0.34 (0.29)	150 (10)	PSFX8262C002-17523	6/F	125472

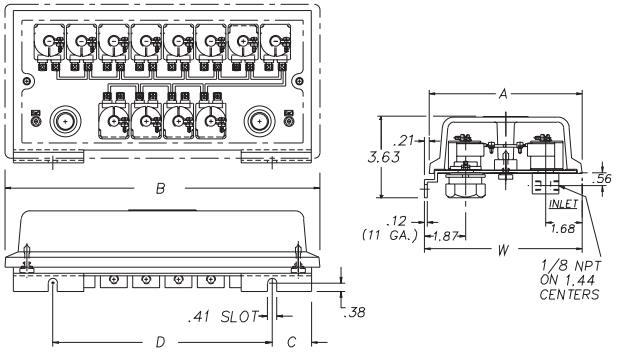
Dimensions inches (mm)

Type 4X Watertight Enclosures
8 Valve Maximum



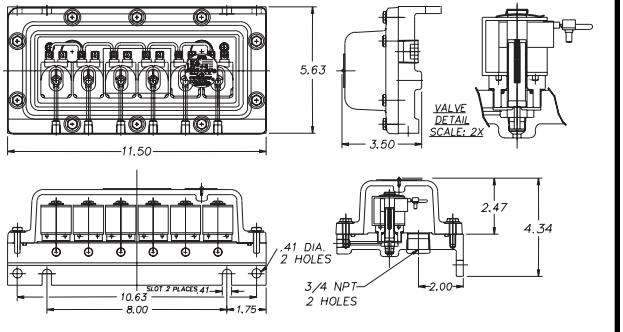
Catalog No.		A	B	C	D	W
125-469	in	5.00	14.00	1.38	10.50	5.21
	mm	127	356	35	267	132

Type 4X Watertight Enclosure
12 Valve Maximum



Catalog No.		A	B	C	D	W
125-470	in	6.81	14.00	1.75	9.75	7.02
	mm	173	356	44	248	178

Type 7 and 9 Explosionproof Enclosure
Explosionproof Assembly - 6 Valve Maximum



Main Pulse Valves with Integral Fittings

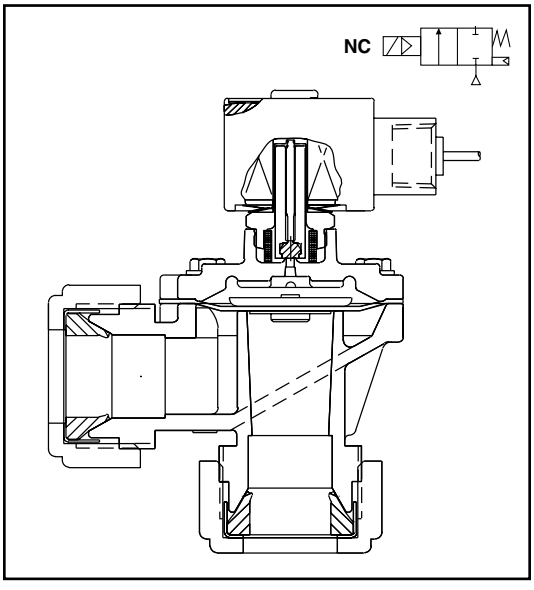
3/4" to 1 1/2" • Air and Inert Gas Only

Features

- Die-cast aluminum bodies and diaphragm operation
- Integral compression fittings for fast, easy, secure installation

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals & Gasket	NBR
Diaphragms	NBR or HYT, as noted
Discs	PA
Retainer	Carbon Steel



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part Number	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	6.1	16	30	238210	238214
F	10.1	25	50	238610	238614

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). *Consult factory for DC voltage. Other voltages are available when required.*

Solenoid Enclosures

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" to catalog number.)
Also available Open Frame Solenoids, Junction Box, DIN connections.

See Optional Features Section for other available options.

Nominal Temp. Ranges

Ambient: AC constructions: 0˚F to 185˚F (-18˚C to 85˚C); 150˚F (66˚C) for valves with HYT diaphragms

Fluids: 0˚F to 185˚F (-18˚C to 85˚C), except as noted. For temperatures to 300˚F (149˚C), specify FPM, suffix "V" (except where noted).

Pressure Ranges

AC minimum 5 psi (0.3 bar).
AC maximum 125 psi (8.6 bar).

Consult ASCO for DC pressure ratings.

ASCO®

Specifications (English, Metric units)

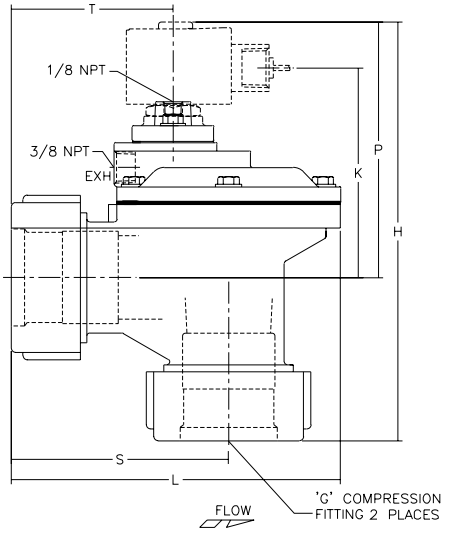
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Kv Flow Factor (m3/h)	Min. & Max. Operating Pressure Differential (psi)	Min. & Max. Operating Pressure Differential (bar)	Integral Pilot Catalog Number	Remote Pilot Construction (Minimum Pilot Valve Orifice Size = 1/8") Catalog Number	Watt Rating/ Class of Coil Insulation AC	Rebuild Kit AC Valves Kit No.	Diaphragm Only 10 Pack "Zip" Kit Kit No.
3/4	1 1/8	15	12.9	5 & 125	0.3 & 8.6	8353G052 ①	-	6.1/F	K316563	K238866
3/4	1 1/8	15	12.9	5 & 125	0.3 & 8.6	-	8353 055 ①	-	K200262	K238866
1	1 1/8	20	17.1	5 & 125	0.3 & 8.6	8353G053 ①	-	6.1/F	K316563	K238866
1	1 1/8	20	17.1	5 & 125	0.3 & 8.6	-	8353 056 ①	-	K200262	K238866
1 1/2	2	48	41.1	5 & 125	0.3 & 8.6	8353G059 ②	-	10.1/F	K316297	-
1 1/2	2	48	41.1	10 & 125	0.7 & 8.6	-	8353A064 ②	-	K276884	-
1 1/2	2	50	42.9	5 & 125	0.3 & 8.6	8353H054 ①	-	10.1/F	K322108	K238870
1 1/2	2	50	42.9	10 & 125	0.7 & 8.6	-	8353A057 ①	-	K276886	K238870

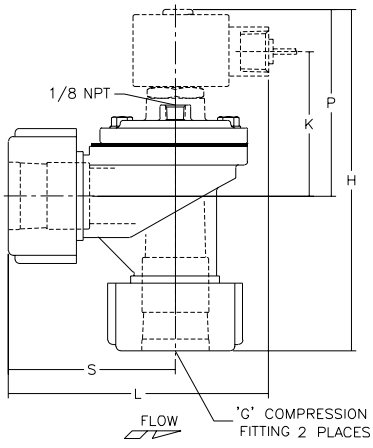
① HYT diaphragm. Maximum fluid temperature 150°F (66°C). For higher temperature, consult factory.
② NBR diaphragm, PA disc, Long-life construction. Maximum fluid temperature 185°F (85°C).
The rubber seal, retainer, and nut provide pressure sealing around the pipes. Inlet and blow pipes must be secured to prevent movement.

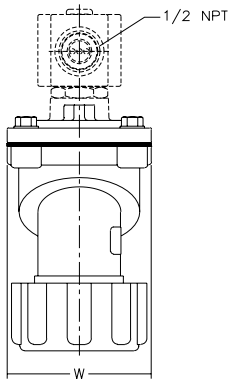
Dimensions inches (mm)

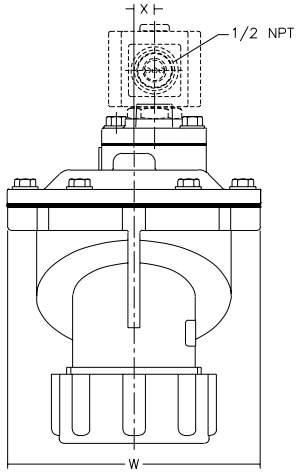
Cat. No.	"G" Compression Fitting		H	I	P	S	T	W	X
8353G052	3/4	in	6.03	5.06	3.75	3.16	-	2.94	-
		mm	153.19	128.59	95.25	80.17	-	74.61	-
8353 055	3/4	in	4.09	4.63	1.78	3.16	-	2.94	-
		mm	103.98	117.48	45.24	80.17	-	74.61	-
8353G053	1	in	7.03	5.34	3.81	3.47	-	2.94	-
		mm	178.59	135.73	96.84	88.11	-	74.61	-
8353 056	1	in	5.06	4.94	1.88	3.47	-	2.94	-
		mm	128.59	125.41	47.63	88.11	-	74.61	-
8353H054	1 1/2	in	8.84	6.97	5.38	4.63	3.44	5.38	0.44
		mm	224.63	177.01	136.53	117.48	87.31	136.53	11.11
8353A057	1 1/2	in	7.19	6.97	3.75	4.63	3.44	5.38	0.44
		mm	182.56	177.01	95.25	117.48	87.31	136.53	11.11
8353G059	1 1/2	in	8.84	6.97	5.38	4.63	3.44	5.38	0.44
		mm	224.63	177.01	136.53	117.48	87.31	136.53	11.11
8353A064	1 1/2	in	7.19	6.97	3.75	4.63	3.44	5.38	0.44
		mm	182.56	177.01	95.25	117.48	87.31	136.53	11.11

Note: Integral Pilot shown dotted in.









1 1/2" pipe gasket kit for compression, 10 pack - K278426.

SPECIAL SERVICE VALVES

Valve Automation Products

The valve automation market has demanding product requirements and specifications. ASCO is uniquely qualified to meet these needs. With our offering of direct mount NAMUR valves and valve position indicators ASCO can offer one source of supply for your valve automation solutions.

ASCO offers a complete range of 3 and 4-way valves which mount directly onto single acting and double acting actuators, including 3/2 - 5/2 combination valves that can be converted from 3-way operation to 4-way operation by simply flipping a gasket or changing a plate. These direct mount pilot valves eliminate the need for piping the valve to the actuator, and allow for fast, easy installation on the actuator. These valves are offered with RedHat II molded epoxy solenoids, along with optional features such as high temperature Class H molded coils and manual operators. Additional coil types are available.

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8320 Dribble Control	211

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ASCO Today delivers the great products you need, when you need them.
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Guaranteed same day shipment or ASCO pays the freight. Over 2000 of ASCO's most popular products qualify for ASCO Today's guarantee. ASCO Today includes our most popular valves, valve rebuild kits, and accessories. As part of our continued drive for customer service, we expanded the ASCO Today program with over 50,000 products that can be shipped within five business days. 5DAY

2, 3, & 4-Way Solenoid Valves | Air Operated Valves | Combustion Products | Miniature Valves

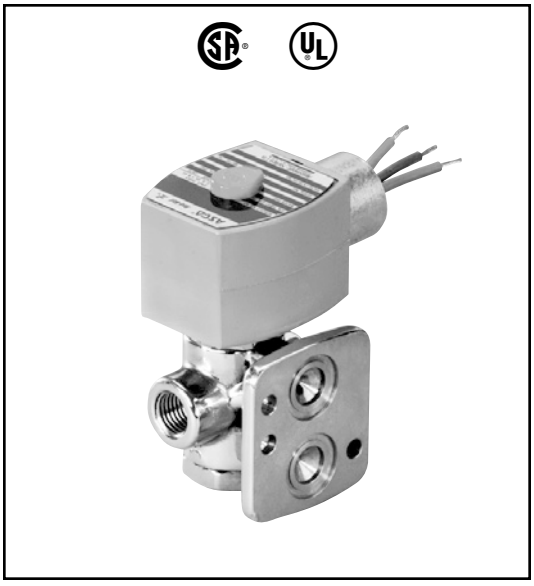
Products may vary in Canada, please call 1-519-758-2700 to check availability of specific catalog numbers.

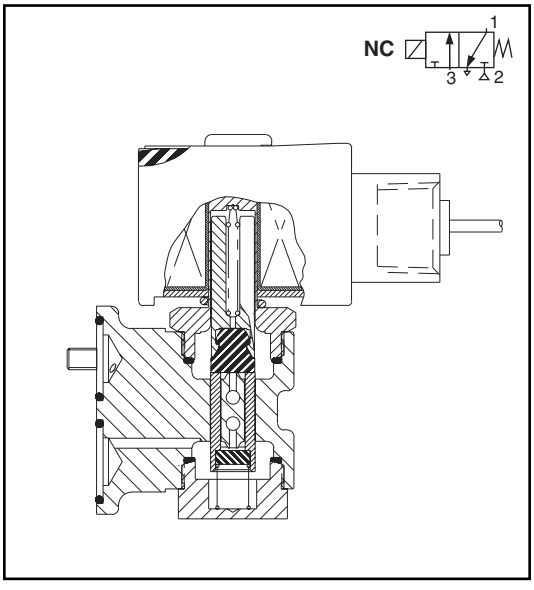
For more information on how you can have the ASCO products you want when you want them, visit us online to see our complete listing of ASCO Today products or call 1-800-972-2726.

 ASCO Today is registered in the United States.

Features

- Mount directly to spring return actuators with NAMUR interface
- Same poppet valve performance as in standard 8320 valves
- Integral breather block prevents ingestion of contaminates or corrosives
- Variety of flow and pressure ratings
- Mountable in any position





Construction

Valve Parts in Contact with Fluids		
Body	Brass	303 Stainless Steel
Seals and Discs	NBR	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Disc-Holder	CA	
Core Guide	CA (10.1 and 17.1 watts only)	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	11.6	10.1	25	50	238610	238710	238614	238714
F	22.6	17.1	40	70	238610	238710	238614	238714

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.

Special Construction: Dual solenoid construction for redundant controls and dribble control available. *Consult your local ASCO sales office for details.*

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 0˚F to 125˚F (-18˚C to 52˚C)
DC: 0˚F to 104˚F (-18˚C to 40˚C)

When used at temperatures below 32˚F (0˚C), media must be moisture free. Also available: -40˚ construction.

Please contact ASCO sales office for details.

Approvals

UL component and CSA certified.

SIL 3 capable per IEC 61508.
Third party certification provided by EXIDA.

Refer to Engineering Section for details.

Specifications (English units)

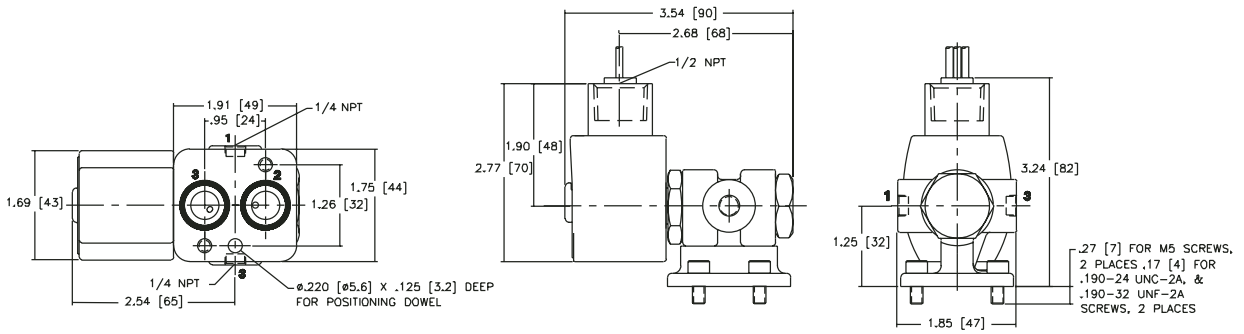
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Air-Inert Gas Max. AC	Operating Pressure Differential (psi) Air-Inert Gas Max. DC	Max. Fluid Temp.°F AC	Max. Fluid Temp.°F DC	Brass Body Catalog Number	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
NORMALLY CLOSED (Closed when de-energized) – PFD_{AVG} = 6.81 x 10^{-4}											
1/4	1/16	.09	150	125	180	120	8320G701	8320G711	1	6.1/F	10.6/F
1/4	3/32	.12	100	100	180	120	8320G702	8320G712	1	6.1/F	10.6/F
1/4	1/16	.09	210	160	180	120	8320G703	8320G713 ①	2	17.1/F	11.6/F
1/4	3/32	.12	150	150	180	120	8320G704	8320G714 ①	2	10.1/F	22.6/F
1/4	1/8	.21	100	-	180	-	8320G705	8320G715 ①	2	17.1/F	-
① Standard ambient temperature rating of -40˚F.											

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar) Air-Inert Gas Max. AC	Operating Pressure Differential (bar) Air-Inert Gas Max. DC	Max. Fluid Temp. °C AC	Max. Fluid Temp. °C DC	Brass Body Catalog Number	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
NORMALLY CLOSED (Closed when de-energized) – PFD_{AVG} = 6.81 x 10^{-4}											
1/4	2	.08	10	9	81	48	8320G701	8320G711	1	6.1/F	10.6/F
1/4	2	.10	7	7	81	48	8320G702	8320G712	1	6.1/F	10.6/F
1/4	2	.08	14	11	81	48	8320G703	8320G713 ①	2	17.1/F	11.6/F
1/4	2	.10	10	10	81	48	8320G704	8320G714 ①	2	10.1/F	22.6/F
1/4	3	.18	7	-	81	-	8320G705	8320G715 ①	2	17.1/F	-
① Standard ambient temperature rating of -40˚C.											

Dimensions inches (mm)

Const. Ref. 1



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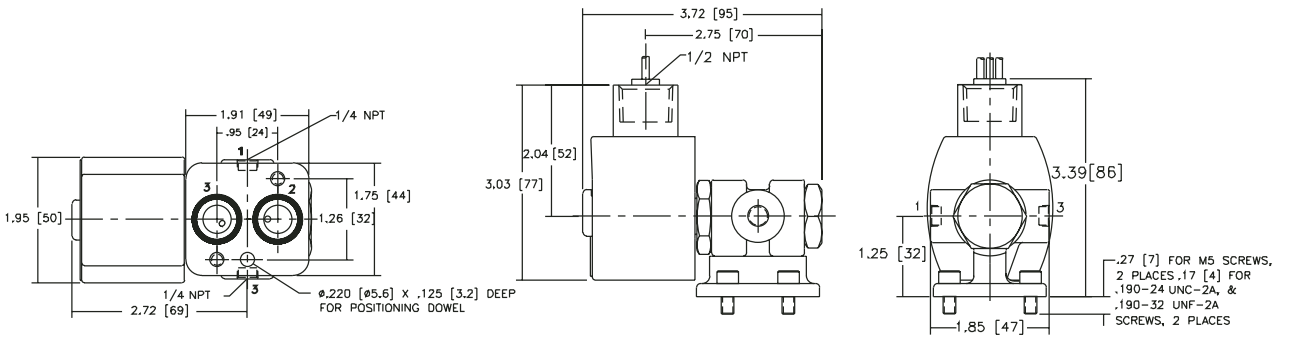
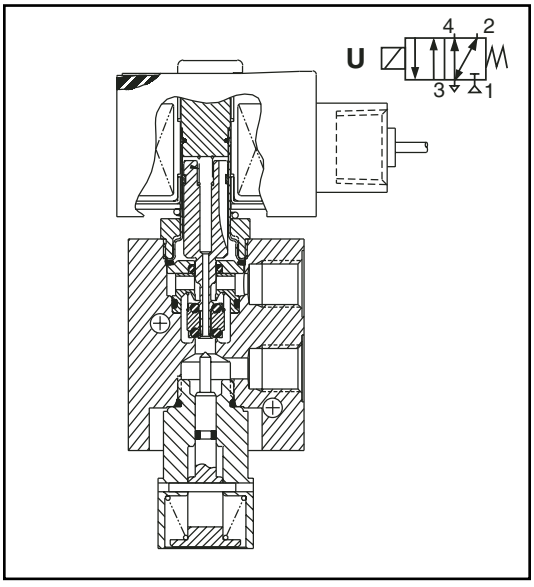


Features

- NAMUR direct mount construction
- Balanced Poppet construction provides high flow with low power consumption
- PTFE rider rings and graphite-filled PTFE seals reduce friction and eliminate sticking for long life
- No minimum pressure required
- Tamperproof no-voltage release manual reset provides added safety



Construction

Valve Parts in Contact with Fluids		
Body	Aluminum	316 Stainless Steel
Seals and Discs	VMQ	
	NBR	FKM
Core Tube	305 Stainless Steel	
Stem and Insert	303 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Rider Rings	PTFE	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	12	24	24	276000	238710	276002	238714

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Solenoid Enclosures

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" or, for Explosionproof Stainless Steel trim and hub on Aluminum-Bodied valves, add "EV" to catalog number.)

See Optional Features Section for other available options.

SIL (Safety Integrity Level) Information:

- PFD (Probability of Falure on Demand) < 4 x 10^{-7} at a confidence factor of 95%.
- SFF (Safe Failure Fraction) according to IEC 61508-2 Table A1 is ≥ 0.99.
- Only constructions without manual operators apply to the above criteria.

Nominal Ambient Temp. Ranges

8327G033 and 35: -4˚F to 131˚F (-20˚C to 55˚C)
8327G053 and 55: -40˚F to 131˚F (-40˚C to 55˚C)

Refer to Engineering Section for details.

Approvals

General Purpose Solenoid:

UL recognized component, CSA certified.

Explosionproof Solenoid: (Prefix EF and EV)

UL listed solenoid.

CSA certified for use in hazardous Locations.

Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

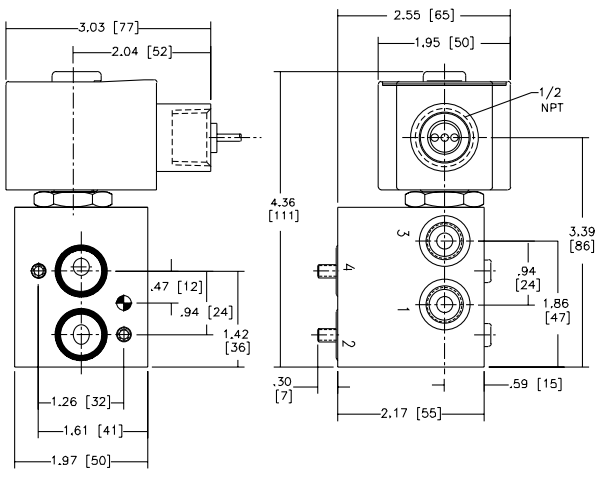
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor Ports 1-2	Cv Flow Factor Ports 2-3	Maximum Operating Pressure Diff. (psi) Air-Inert Gas	Fluid Temp. Range °F	Aluminum Body Catalog Number	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
UNIVERSAL - Low-Temperature Operation										
1/4	1/4	.52	.53	150	-40 to 131	8327G053	EV8327G055	1	12.0/F	11.6/F
UNIVERSAL MANUAL RESET - Tamperproof No-Voltage Release										
1/4	1/4	.62	.43	150	-4 to 176	8327G033	-	2	12.0/F	11.6/F
1/4	1/4	.62	.43	150	-4 to 248	-	EV8327G035	2	12.0/F	11.6/F

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h) Ports 1-2	Kv Flow Factor (m^3/h) Ports 2-3	Maximum Operating Pressure Diff. (bar) Air-Inert Gas	Fluid Temp. Range °C	Aluminum Body Catalog Number	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC	Watt Rating/ Class of Coil Insulation DC
UNIVERSAL - Low-Temperature Operation										
1/4	6.4	.45	.45	10	-40 to 55	8327G053	EV8327G055	1	12.0/F	11.6/F
UNIVERSAL MANUAL RESET - Tamperproof No-Voltage Release										
1/4	6.4	.53	.37	10	-20 to 80	8327G033	-	2	12.0/F	11.6/F
1/4	6.4	.53	.37	10	-20 to 120	-	EV8327G035	2	12.0/F	11.6/F

Dimensions inches (mm)

Const. Ref. 1



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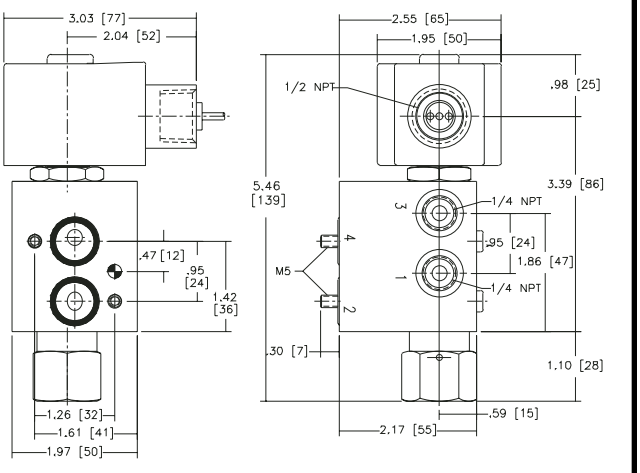
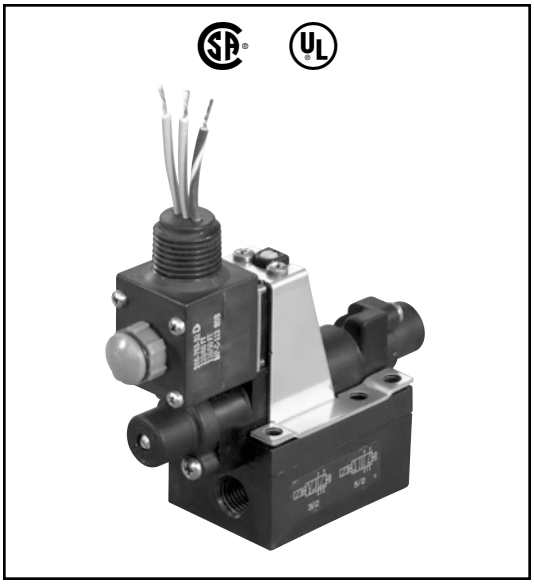
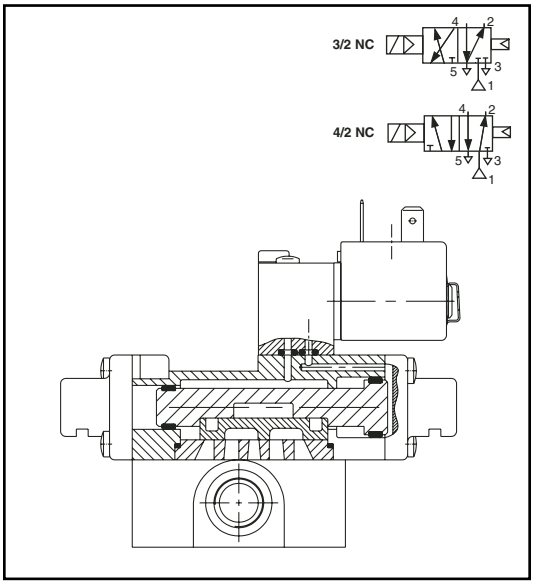


Features

- Mount directly to actuators with NAMUR, Keystone, or Worcester interfaces
- Easy conversion from AC to DC by simply changing coil
- Standard momentary/maintained manual operator
- 3/2 is normally closed poppet design for spring return actuators
- 3/2 normally closed or 4/2 operation can be selected by rotating sub-base gasket
- 3/2 normally closed or 4/2 valves have built-in linear flow device capable of controlling Cv from 0.10 to 0.50
- Breather block exhausts to spring side of actuator to prevent corrosion of the actuator
- Unique CA slide and ceramic flow plate for extra-long life





Construction

Valve Parts in Contact with Fluids	
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Seals	Low-Friction, Low-Wear NBR
Interface Plate	Molded PA
8401 Series Only	
Pressure Port	303 Stainless Steel
Main and Pilot Body	Molded PA
Spool	CA
Slide	Graphite-filled PTFE
Flow Plate	Ceramic (Alumina)
Worcester Version	
Main Body and Sub-Base	Anodized Aluminum

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
	DC Watts	AC				
		Watts	VA Holding	VA Inrush	AC	AC
F	6.9	6.3	8.8	12.1	266763	270008

Standard Voltages: 24, 120, 240 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 available upon request.

Solenoid Enclosures

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

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

Molded epoxy coil per 3 x DIN 46244. (To order, change "WT" catalog number prefix to "SC".)

Molded epoxy open frame Class F coil with 18" leads. (To order, change "WT" catalog number prefix to "U".)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

AC: 0˚F to 104˚F (-18˚C to 40˚C),
except prefixes "U" and "SC" to 135˚F (57˚C)

DC: 0˚F to 77˚F (-18˚C to 25˚C)

Approvals

"WT" - UL recognized component General Purpose Valve, CSA certified.

"EF" - UL listed solenoid, CSA sertified.

"U" and "SC" - UL recognized component, CSA certified.

Refer to Engineering Section for details.

Specifications (English units)

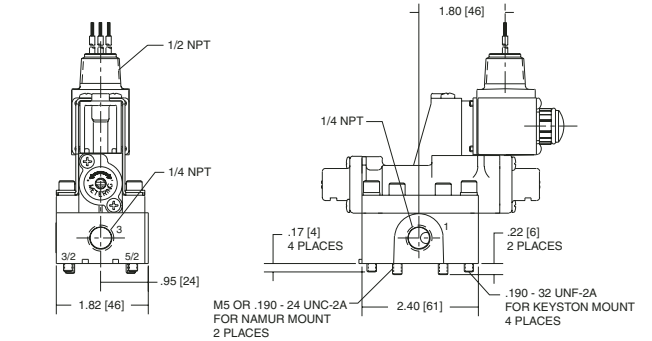
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Main Line Supply Pressure (psi) AC and DC				Catalog Number	Const. Ref.	Interface Type	Watt Rating/ Class of Coil Insulation	
			Air-Inert Gas		Max. Fluid Temp. °F						
			Min.	Max.	AC	DC				AC	DC
3-WAY NORMALLY CLOSED OR 4-WAY											
1/4	1/4	.50	20	150	104	77	WT8401B202M	1	NAMUR	6.3/F	6.9/F
1/4	1/4	.50	20	150	104	77	WT8401B204M	1	Keystone	6.3/F	6.9/F
1/4	1/4	.40	20	150	104	77	WT8401B200M	2	Worcester	6.3/F	6.9/F

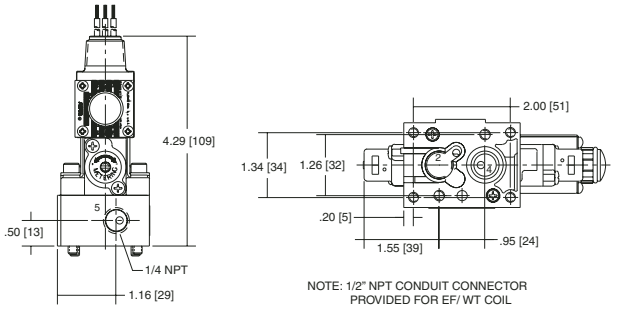
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Main Line Supply Pressure (bar) AC and DC				Catalog Number	Const. Ref.	Interface Type	Watt Rating/ Class of Coil Insulation	
			Air-Inert Gas		Max. Fluid Temp. °C						
			Min.	Max.	AC	DC				AC	DC
3-WAY NORMALLY CLOSED OR 4-WAY											
1/4	6	.43	1	10	40	25	WT8401B202M	1	NAMUR	6.3/F	6.9/F
1/4	6	.43	1	10	40	25	WT8401B204M	1	Keystone	6.3/F	6.9/F
1/4	6	.34	1	10	40	25	WT8401B200M	2	Worcester	6.3/F	6.9/F

Dimensions inches (mm)

Const. Ref. 1





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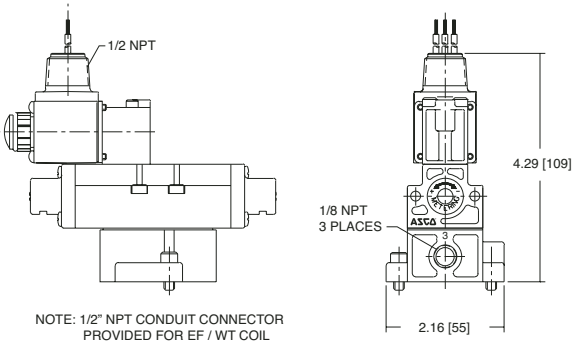
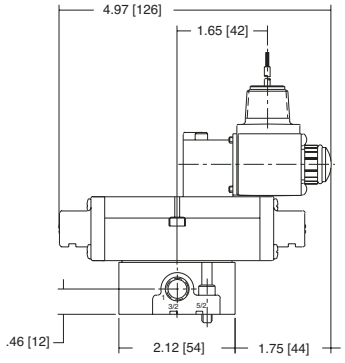
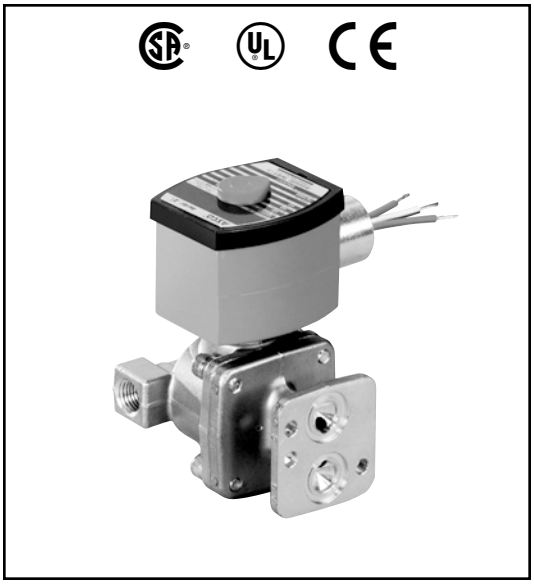
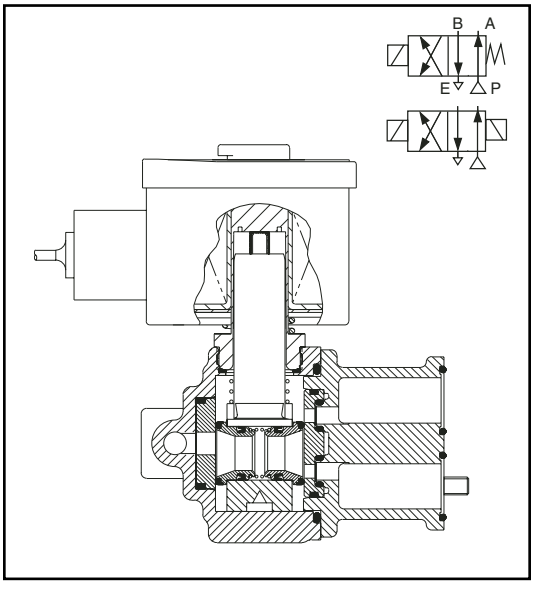




Features

- NAMUR direct mount version of the rugged, dependable 8342 Series valves
- Direct acting, high flow slide-style valve
- No Minimum Operating Pressure Differential required to shift valve
- Available with single or dual solenoid operation
- Mechanical detent on dual solenoids holds last position, even after loss of electric power, pneumatics, or pressure





Construction

Valve Parts in Contact with Fluids		
Body	Brass	303 Stainless Steel
Seals and Discs	NBR and FKM	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	
Sleeve	PA	
Seats	PTFE	

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part Number	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	20.1	35	115	272610	272614
F	16.1	45	140	272610	272614

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). Must be specified when ordering. Other voltages, except combinations 120/60 and 110/50, are available when required.

Solenoid Enclosures

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

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

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

32˚F to 125˚F (0˚C to 52˚C)

Refer to Engineering Section for details.

Approvals

General Purpose Solenoid:

UL recognized component, CSA certified.

Explosionproof Solenoid: (EF Brass, EV S.S)

UL listed solenoid.

CSA certified for use in hazardous Locations.

Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

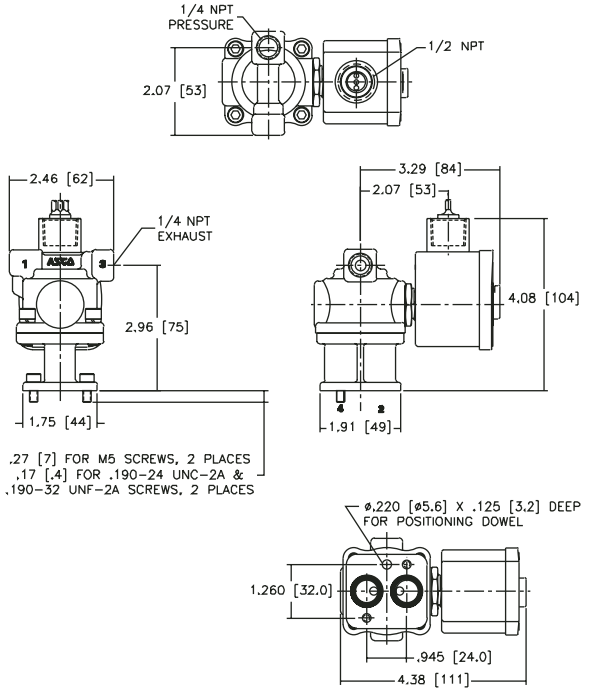
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor Ports 1-2	Cv Flow Factor Ports 2-3	Maximum Operating Pressure Differential (psi)	Maximum Fluid Temperature Range °F	Brass Body Catalog Number	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC
SINGLE SOLENOID									
1/4	3/16	.7	.5	125	160	8342G501	8342G511	1	20.1/F
DUAL SOLENOID									
1/4	3/16	.7	.5	125	160	8342G502	8342G512	2	16.1/F

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor Ports 1-2 (m^3/h)	Kv Flow Factor Ports 2-3 (m^3/h)	Maximum Operating Pressure Differential (bar)	Maximum Fluid Temperature Range °C	Brass Body Catalog Number	Stainless Steel Body Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation AC
SINGLE SOLENOID									
1/4	5	.60	.43	9	71	8342G501	8342G511	1	20.1/F
DUAL SOLENOID									
1/4	5	.60	.43	9	71	8342G502	8342G512	2	16.1/F

Dimensions inches (mm)

Const. Ref. 1



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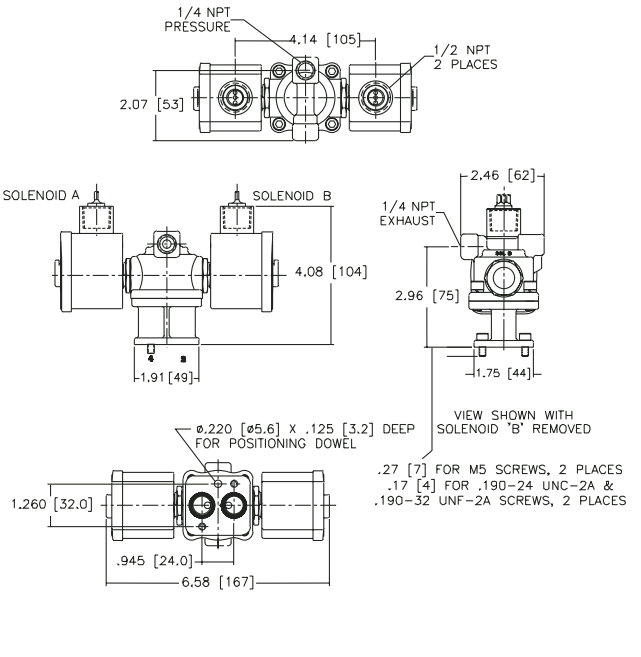
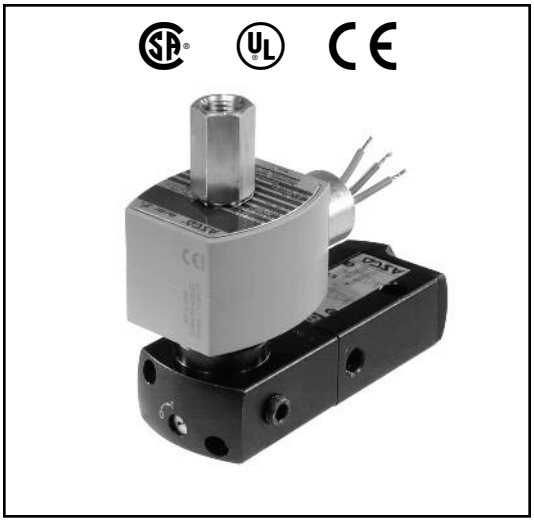


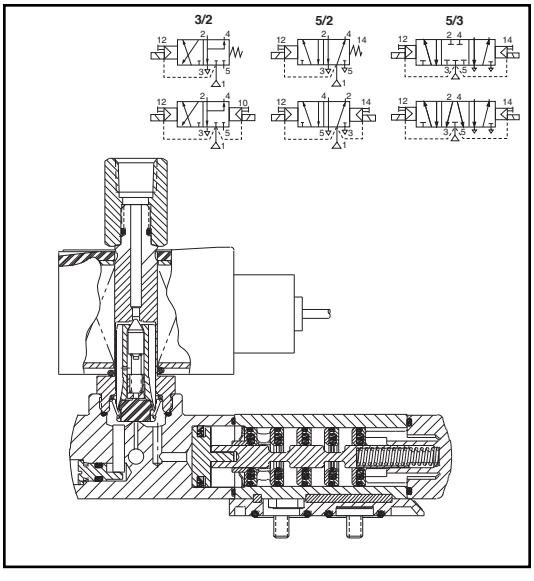
Direct Mount RedHat II Spool Valves

Anodized Aluminum, Brass and Stainless Steel Bodies
1/4" and 1/2" NPT

Features

- Compact Spool Valve convertible from 3/2 to 5/2 with flow plates
- Mount directly to actuators with NAMUR interface per VDI/VDE 3845
- Single and dual solenoid constructions available
- Integral Breather Block vents to spring side of actuator to exhaust, preventing corrosion of the actuator
- Unique design combines hard T-seals and flexible o-rings, provides bubble-tight shutoff, resistance to dirt and multimillion cycle life controlling air or inert gas
- Low Power and Intrinsically Safe construction available *See Special Service Pilot Valve Section for details*





Construction

Valve Parts in Contact with Fluids			
Body	Aluminum, Black Anodized	Brass	316L Stainless Steel
End Cover (Spring end)	Glass-filled Polyamide	Brass	316L Stainless Steel
Spool Valve Internals	Zamak, Stainless Steel, Acetal (POM), Aluminum	Brass, Acetal (POM), Delrin	
Pilot End Covers	Aluminum, Black Anodized	Brass	316L Stainless Steel
Core Tube	Stainless Steel		
Core and Plugnut	Stainless Steel		
Springs	Stainless Steel		
Seals and Discs	NBR		
Top Disc	Nylon (PA)		
Core Guide	Acetal		
Seat and Seat Insert	Brass, Acetal		
Shading Coil	Copper		
Rider Ring (low power)	PTFE		

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	10.1	25	50	238610	238710	238614	238714

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (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

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

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" or ("EV" for stainless steel) to catalog number.)

See Optional Features Section for other available options.

Nominal Ambient Temp. Ranges

Body Material	Description
Aluminum	AC: 5˚F to 125˚F (-15˚C to 52˚C) DC: 5˚F to 104˚F (-15˚C to 40˚C)
Brass **Stainless Steel**	AC: -40˚F to 125˚F (-40˚C to 52˚C) DC: -40˚F to 104˚F (-40˚C to 40˚C)

Approvals

UL/CSA approvals for aluminum constructions pending. EF and EV are UL listed solenoids. CSA certified. Meet applicable CE directives.
SIL 3 capable per IEC 61508 on normally closed single solenoid. Third party certification provided by EXIDA. *Refer to Engineering Section for details.*

ATEX/IECEx certified with prefix "EV" as listed. *Refer to Optional Features Electrical Section for details.*

Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – PFD_{AVG} = 3.3 x 10^{-3}							Dual Solenoid							
				Operating Pressure Differential (psi) Air-Inert Gas			Max. Fluid Temp.˚F		Catalog Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas			Max. Fluid Temp.˚F		Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
				Min.	Max. AC	Max. DC	AC	DC			Min.	Max. AC	Max. DC	AC	DC			AC	DC
Aluminum 3/2, 5/2	1/4 ①	1/4	.86	30	150	120	140	120	8551G401	1	30	150	120	140	120	8551G402	1	10.1/F	11.6/F
Aluminum 5/3 Center Closed									-	2						8551G465	2		
Aluminum 5/3 Center Open									-	2						8551G466	2		
Brass 3/2, 5/2									EF8551G403 ②	1						EF8551G404 ②	1		
316L Stainless Steel 3/2, 5/2									EV8551G409 ③④	2						EV8551G410 ③④	2		
Aluminum 3/2, 5/2	1/2	1/2	3.7						8553G401	2						8553G402	2		

① 1/8 inch NPT exhaust for aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid. ④ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

Body Material	Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Single Solenoid – PFD_{AVG} = 3.3 x 10^{-3}							Dual Solenoid							
				Operating Pressure Differential (bar) Air-Inert Gas			Max. Fluid Temp.˚C		Catalog Number	Const. Ref.	Operating Pressure Differential (bar) Air-Inert Gas			Max. Fluid Temp.˚C		Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
				Min.	Max. AC	Max. DC	AC	DC			Min.	Max. AC	Max. DC	AC	DC			AC	DC
Aluminum 3/2, 5/2	1/4 ①	6.4	.7	2	10	8.2	60	48	8551G401	1	2	10	8.2	60	48	8551G402	1	10.1/F	11.6/F
Aluminum 5/3 Center Closed									-	2						8551G465	2		
Aluminum 5/3 Center Open									-	2						8551G466	2		
Brass 3/2, 5/2									EF8551G403 ②	1						EF8551G404 ②	1		
316L Stainless Steel 3/2, 5/2									EV8551G409 ③④	2						EV8551G410 ③④	2		
Aluminum 3/2, 5/2	1/2	13	3.2						8553G401	2						8553G402	2		

① 1/8 inch NPT exhaust for aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid. ④ ATEX/IECEx certified with prefix "EV".

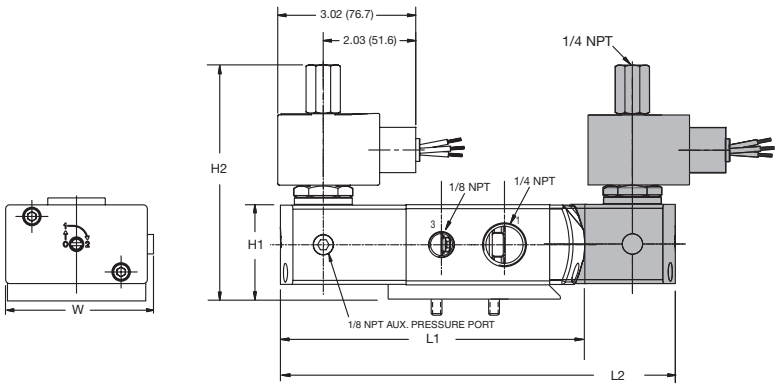
Dimensions inches (mm)

Series	8551
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.50 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

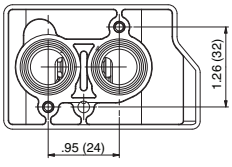
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO	1 0 2	Push and turn to lock with flat head screwdriver slot
MI	1 0 2	Momentary push in with flat head screwdriver slot
MH	1 0 2	Momentary push in by hand
MS	1 0 2	Push and turn to lock by hand

Const. Ref. 1



8551 NAMUR Footprint

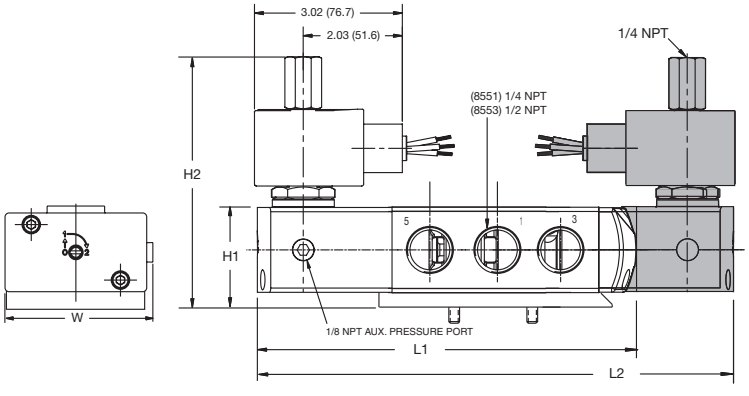


Series	8551 (5/3)	8553
NPT	1/4	1/2
L1 ①	-	7.09 (180)
L2 ①	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.77 (121)
H1	1.57 (40)	2.08 (53)
W	1.77 (45)	2.87 (73)

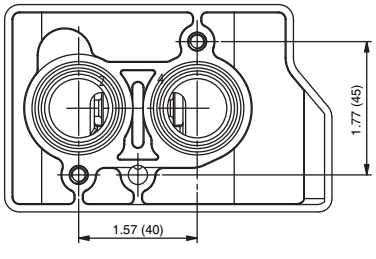
① Manual override option MH adds .250" (6.4), MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO	1 0 2	Push and turn to lock with flat head screwdriver slot
MI	1 0 2	Momentary push in with flat head screwdriver slot
MH	1 0 2	Momentary push in by hand
MS	1 0 2	Push and turn to lock by hand

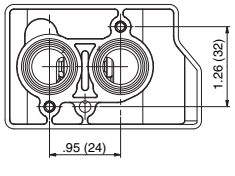
Const. Ref. 2



8553 NAMUR Footprint



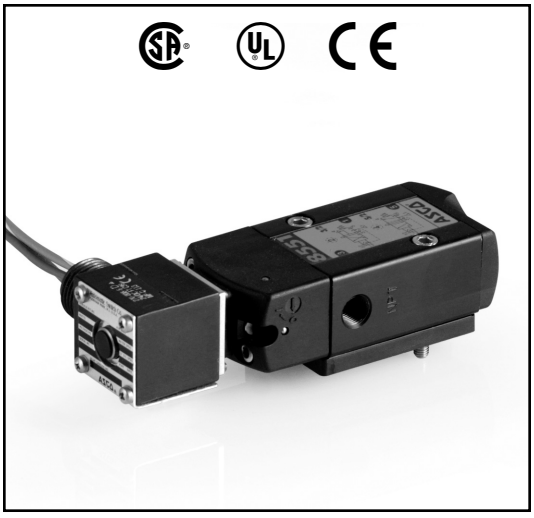
8551 NAMUR Footprint

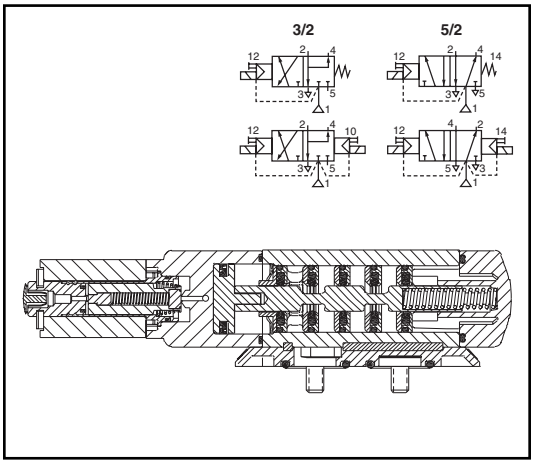


VALVE AUTOMATION

Features

- Compact spool valve convertible from 3/2 to 5/2
- NAMUR mount construction
- Standard manual operator
- DIN, Watertight and Explosionproof solenoids available
- Single and dual solenoid constructions
- Mountable in any position
- Vents air from spring side of actuator to prevent corrosion of actuator





Construction

Valve Parts in Contact with Fluids	
Body	Black Anodized Aluminum
Spring	Phosphate treated black steel
Shading Coil	Copper
Seals	NBR + PUR
Core and Core Tube	Stainless Steel / Brass
End Covers and Plate	6/6 glass filled PA/FV
Spool	Aluminum
Internal Parts	Zamak, Steel, CA

Electrical

Standard Coil and Class of Insulation	Enclosure Type	Watt Rating and Power Consumption				Spare Coil Part Number	
		DC Watts	AC Watts	VA Holding	VA Inrush	AC	DC
F	SC	3	2.5	3.5	6	400127	400127
F	SC	6.9	5	7	15	400727	400727
F	EF	6.9	6.3	7	10.1	266762	270007
F	WT	6.9	6.3	7	10.1	266763	270008

Standard Voltages: SC: 24, 120, 240 Volts AC, 50-60 Hz; 12, 24, 120 Volts DC.
WT and EF: 24/50-60HZ, (120/60, 110-120/50)①, (240/60, 220-240/50)② Volts AC; 6, 12, 24, 120 Volts DC.
① Order as 120/60, 110/50
② Order as 240/60, 220/50

Solenoid Enclosures

Standard: - Prefix

SC = IP65 type DIN (open frame) per 46244

WT = Combination General Purpose and Watertight Types 1, 2, 3, 3S, 4, and 4X

EF = Combination Explosionproof and Watertight Types 3, 3S, 4, 4X, 6, 5P, 7, 9 Class I, Div. 1 (Groups A - D) and Class II, Div. 1 Type 9 (Groups E-G)

Nominal Ambient Temp. Ranges

SC: AC/DC: 5˚F to +140˚F (-15˚C to 60˚C)

EF: AC: 5˚F to +104˚F (-15˚C to 40˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

WT: AC: 5˚F to +140˚F (-15˚C to 60˚C)
DC: 5˚F to +77˚F (-15˚C to 25˚C)

Note: For temperatures below 32˚F (0˚C) moisture-free air must be used.

Refer to Engineering Section for details.

Approvals

SC (2.5W and 3W only) UL recognized component, CSA certified. (Series 8551 only)

WT: UL listed, CSA certified. (Series 8551 only)

EF: UL and CSA listed solenoid.
Meets applicable CE directives.

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

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Fluid Temperature °F (for single and dual solenoid)			Single Solenoid $PFD_{AVG} = 3.3 \times 10^{-3}$	Dual Solenoid	Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Catalog Number		AC	DC
OPEN FRAME DIN COIL												
1/4 ①	1/4	.86	30	150	5	140	140	SC8551A001MS	SC8551A002MS	1	2.5	3
1/2	1/2	3.7	30	150	-15	140	140	SC8553A001MS	SC8553A002MS	2	5	6.9
WATERTIGHT ENCLOSURE												
1/4 ①	1/4	.86	30	150	5	140	77	WT8551A001MS	WT8551A002MS	1	6.3	6.9
1/2	1/2	3.7	30	150	-15	140	77	WT8553A001MS	WT8553A002MS	2	6.3	6.9
EXPLOSIONPROOF ENCLOSURE												
1/4 ①	1/4	.86	30	150	5	104	77	EF8551A001MS	EF8551A002MS	1	6.3	6.9
1/2	1/2	3.7	30	150	-15	104	77	EF8553A001MS	EF8553A002MS	2	6.3	6.9

① 1/8 inch NPT exhausts.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/h)	Operating Pressure Differential (bar)		Fluid Temperature °C (for single and dual solenoid)			Single Solenoid $PFD_{AVG} = 3.3 \times 10^{-3}$	Dual Solenoid	Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Min.	Max.	Min.	Max. AC	Max. DC	Catalog Number	Catalog Number		AC	DC
OPEN FRAME DIN COIL												
1/4 ①	6.4	.7	2	10	-15	60	60	SC8551A001MS	SC8551A002MS	1	2.5	3
1/2	13	3.15	2	10	-25	60	60	SC8553A001MS	SC8553A002MS	2	5	6.9
WATERTIGHT ENCLOSURE												
1/4 ①	6.4	.7	2	10	-15	60	25	WT8551A001MS	WT8551A002MS	1	6.3	6.9
1/2	13	3.15	2	10	-25	60	25	WT8553A001MS	WT8553A002MS	2	6.3	6.9
EXPLOSIONPROOF ENCLOSURE												
1/4 ①	6.4	.7	2	10	-15	40	25	EF8551A001MS	EF8551A002MS	1	6.3	6.9
1/2	13	3.15	2	10	-25	40	25	EF8553A001MS	EF8553A002MS	2	6.3	6.9

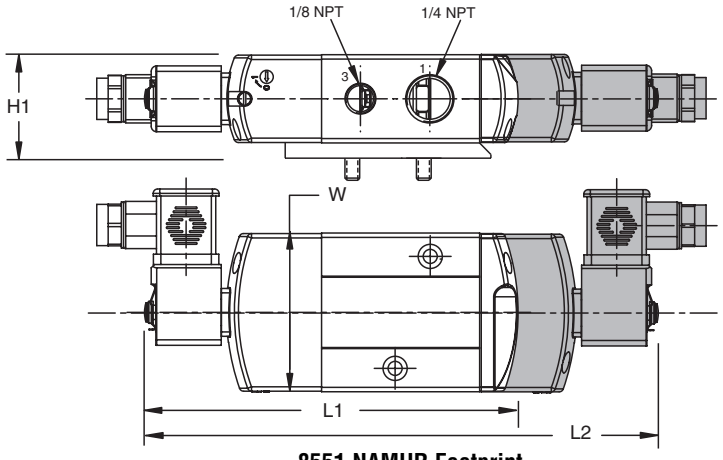
① 1/8 inch NPT exhausts.

Dimensions inches (mm)

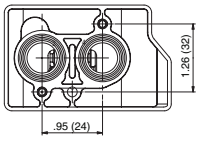
Series	8551
NPT	1/4
L1	5.47 (139)
L2	7.56 (192)
H1	1.30 (33)
W	1.77 (45)

NOTE: Valve shown with CM22 DIN terminal coil and connector. Connector sold separately.

Const. Ref. 1



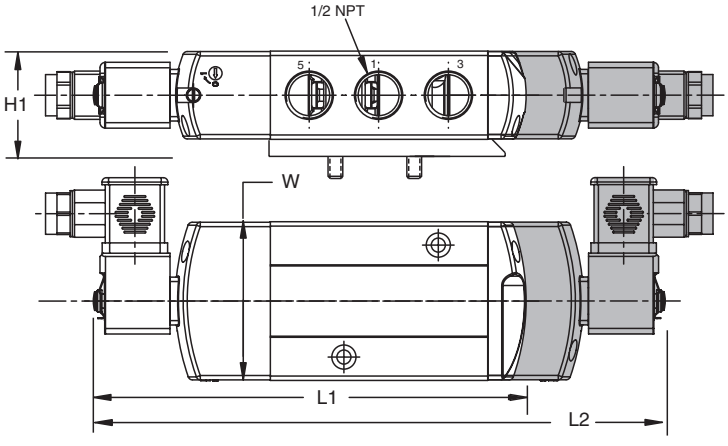
8551 NAMUR Footprint



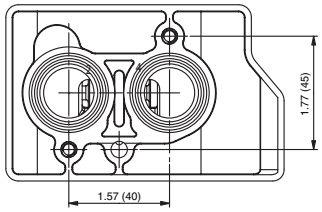
Series	8553
NPT	1/2
L1	7.76 (197)
L2	10.25 (260)
H1	1.94 (49)
W	2.85 (72)

NOTE: Valve shown with CM22 DIN terminal coil and connector. Connector sold separately.

Const. Ref. 2



8553 NAMUR Footprint



VALVE AUTOMATION

Combustion Valves

The application of valves and accessories for use on combustible media requires careful consideration of the application and use to assure proper and optimal operation. Consideration in valve selection must be given to the function of the valve. This section includes 2-way and 3-way valves for the control of combustible media. Generally a combustion train includes 2 shutoff valves on both the pilot and main media feed lines. The Agency approvals for each product range in this section are included on the individual catalog pages.

Combustible media includes natural gas and oil, and this section is organized into sections for each media.

Additionally special constructions developed for use on combustible media are shown.

Terminology:

Normally Closed or Shutoff Valves

2-way valves to shut off the flow of combustion media when de-energized. These valves permit flow from port 1 to port 2 when energized.

Normally Open or Vent Valves

2-way valves that allow flow when de-energized and are primarily used in block and bleed systems, where the normally open or Vent Valve is positioned in the pipe train between two blocking or shutoff valves.

Visual and/or electrical position indicators are optional on several series of valves and should be considered when designing products to comply with NFPA standards.

Index

Series	General Description	Size (NPT)	Solenoid	Additional	Page
Natural Gas					
Normally Open /Vent Valves					
8030	Normally Open/Vent Valves	3/8" - 3/4"	Watertight	Direct Acting	291
8210	Normally Open/Vent Valves	3/8" - 3/4"	Watertight	-	293
8214	Normally Open/Vent Valves	3/8" - 2 1/2"	GP and Watertight	Visual Indication and Proof of Closure	295
S262	Normally Open/Vent Valves	3/8" - 3"	General Purpose	-	303
Normally Closed /Blocking Valves					
8256	Normally Closed/Blocking Valves	1/8"	Open Frame & Watertight	Direct Acting	307
8262	Normally Closed/Blocking Valves	1/8"- 1/4"	Watertight	Direct Acting	309
8030	Normally Closed/Blocking Valves	3/8" - 3/4"	Watertight	Direct Acting	311
8040	Normally Closed/Blocking Valves	1/8" - 3/8"	Watertight	Direct Acting	313
8040	Normally Closed/Blocking Valves	3/8" - 1 1/4"	GP and Watertight	Direct Acting	315
8042	Normally Closed/Blocking Valves	3/4" - 3"	General Purpose	5 lb closing spring	319
8043	Normally Closed/Blocking Valves	3/4" - 3"	GP and Watertight	5 lb closing spring, Visual Indication and Proof of Closure	323
8210	Normally Closed/Blocking Valves	3/8" - 3/4"	Watertight	-	327
8214	Normally Closed/Blocking Valves	3/8" - 3/4"	Watertight	-	329
Double Gas Valves	Normally Closed/Blocking Valves	3/4" - 3"	GP and Watertight	Visual Indication and Proof of Closure	331
8214 200	Normally Closed/Blocking Valves	3/4" - 3"	GP and Watertight	Visual Indication and Proof of Closure	337
AH2E	On/Off Actuator	-	Hydramotor	Use with V710(B) - Visual Indication and Proof of Closure	345
AH4E	Low/High/Off Actuator	-	Hydramotor	Use with V710(B) - Visual Indication and Proof of Closure	347
V710(B)	Normally Closed/Blocking Valves	3/4" - 4"	-	Use with AH2E, AH4E	349
H117	Normally Closed/Blocking Valves	2" - 4"	Hydramotor	Cast Iron Body - Visual Indication and Proof of Closure	353
H118	Normally Closed/Blocking Valves	1" - 4"	Hydramotor	Cast Iron Body - Visual Indication and Proof of Closure	357
H137	Normally Closed/Blocking Valves	2" - 6"	Hydramotor	Cast Iron Body - Proof of Closure	361
K3A4	Normally Closed/Blocking Valves	3/8" - 1"	General Purpose	Direct Acting	365
K3A5	Normally Closed/Blocking Valves	3/8" - 1"	General Purpose	Direct Acting	367
K3A6	Normally Closed/Blocking Valves	3/4" - 1 1/2"	General Purpose	-	369
K3A7	Normally Closed/Blocking Valves	1 1/4" - 1 1/2"	General Purpose	Direct Acting	371
S261	Normally Closed/Blocking Valves	3/8" - 3"	General Purpose	-	373
SV311	Normally Closed/Blocking Valves	1/8" - 3/8"	General Purpose	Direct Acting	377
Fuel Oil (No. 2, 4, 5, & Heated No. 6)					
8256	Normally Closed/Blocking Valves	1/8"	Open Frame & Watertight	Direct Acting	379
8262/8263	Normally Closed/Blocking Valves	1/8" - 3/8"	Watertight	Direct Acting	381
8266	Normally Closed/Blocking Valves/NO	3/8" - 3/4"	General Purpose	-	385
HOV1B	Normally Closed/Blocking Valves	1/2" - 1"	Hydramotor	Pressures to 300 psi	389
SV401	Normally Closed/Blocking Valves	1/4" - 3/8"	Watertight	Pressures to 300 psi - Proof of Closure	393
8377	3-Way	3/8" - 1/2"	General Purpose	Pressures to 100 psi	395
HOV13B	3-Way	1/2" - 3/4"	Hydramotor	Pressures to 300 psi - Proof of Closure	397
Specialty Valves - Accessories					
8040	Normally Closed/Blocking Valves	3/8" - 3/4"	Open Frame & Watertight	Direct Acting	401
Low Temp SS	Normally Closed/Blocking Valves	3/8" - 1"	Explosion Proof	Stainless Steel Body	405
HV266	Normally Closed/Blocking Valves	1/2" - 1"	GP and Watertight	Stainless Steel Body	411
8044	Normally Closed/Blocking Valves	3/4" - 3"	General Purpose	Manual Reset	413
HV216, JV216	Normally Closed/Blocking Valves	1/2" - 3"	None	Cable Release or Fusible Link	417
LP Gas Systems	Normally Closed/Blocking Valves	1/4" - 3/4"	Watertight	Liquid Petroleum Gases	421
Control Panels	Control Panel for Gas Service	-	-	Key Switch Control Panel	425

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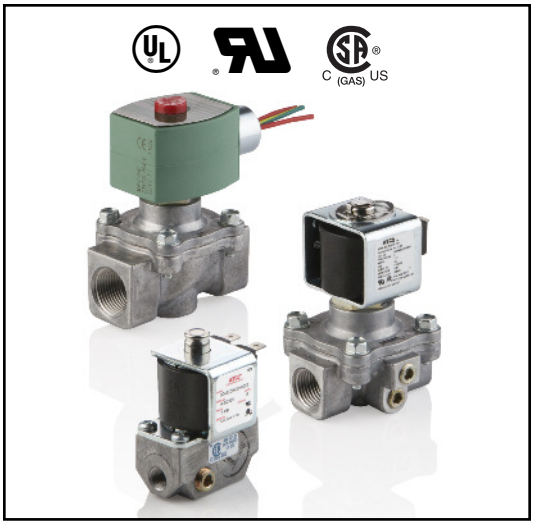
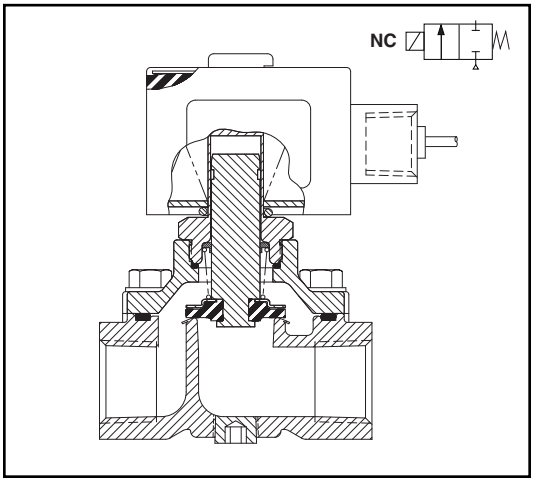
Products may vary in Canada, please call 1-519-758-2700 to check availability of specific catalog numbers.

Features

- Compact gas valves for OEM applications
- 2-way normally closed operation
- For control of commercial ovens and gas generators
- Valves available with optional 1/8" NPT pipe tap(s) with plug(s) for routine testing





Fluid: Fuel Gas

Construction

Valve Parts in Contact with Fluids		
Sizes	1/8", 1/4"	3/8", 1/2", 3/4"
Body	Aluminum	
Seals and Disc	LT NBR	
Core Tube	305 Stainless Steel	
Core Guide	-	POM
Rider Ring	-	PTFE
Core and Plugnut*	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	
Pipe Plug(s)	Zinc Plated Steel	
* Zinc Plated Steel for 1/8" & 1/4" DC versions		

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.°F	Spare Coil Family					
		AC				Open Frame				Watertight	
						Spade		Leads			
	DC Watts	Watts	VA Holding	VA Inrush		AC	DC	AC	DC	AC	AC
F	-	6.0*	16	53	-40 to 175	204558	-	99216	-	-	-
F	15.3	-	-	-	-40 to 175	-	204838	-	103833	-	-
F	-	7.1*	16	42	-40 to 175	-	-	-	-	238210	-
F	10.6	-	-	-	-40 to 175	-	-	-	-	-	238310
F	9.7	-	-	-	-40 to 175	-	204838	-	-	-	-

* On 50Hz service the watt rating for 6.0 solenoid is 7.3 watts; 7.1 solenoid is 8.1 watts.
Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz); 12, 24 volts DC.

Solenoid Enclosures

Open Frame (1/8", 1/4" sizes): Spade terminals only.

Open Frame (3/8", 1/2", 3/4" sizes): Either spade terminals or 18" leads.

Watertight (3/8", 1/2", 3/4" sizes): Molded epoxy Type 4 and 4X with 1/2" metal conduit hub and 18" leads.

Valve Opening/ Closing Time: Less than 1 second

Options: Mounting bracket, coil with 72" leads.

Approvals

Open Frame: UL recognized component to standard 429 "Electrically Operated Valves", Guide YIOZ2, File MP618 Safety Valves.

Watertight: UL listed to standard 429 "Electrically Operated Valve", Guide YIOZ File MP618 Safety Valves.

Open Frame/Watertight: CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves"

2) Automatic Gas Valves ANSI Z21.21 CSA 6.5 C/I, File 112872

How to Order (Example - 8040A131L0400F3)

8 0 4 0 A 1 3 1 — Base Catalog Number
Refer to the Specifications Section

L 0 — Electrical Interface

L0	Open Frame Lead (18")
L7	Open Frame Lead (72")
0D	Open Frame Spade
C0	Watertight RHII 1/2" Conduit Lead (18")
C7	Watertight RHII 1/2" Conduit Lead (72")

4 0 0 — Valve Construction

400	LT NBR disc, NBR seals w/o mounting bracket
C00	LT NBR disc, NBR seals with mounting bracket

F 3 — Voltage

AC	
F4	24/60
F0	120/60, 110/50
F6	240/60, 220/50
DC	
F3	12V
F1	24V

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity		Max. Operating Pressure Differential (psi)		Max. Fluid Temp. ˚F	Base Catalog Number ③	Const. Ref.	Agency		Wattage		Approx. Shipping Weight (lbs)
			Btu/hr ①	Btu/hr ②	Min.	Max.				UL	CSA	AC	DC	
Open Frame														
1/8	5/16	1	53,700	206,000	0	5	125	8040C106 ⑥	5	❍	❍	6.0 ④	-	1.3
1/4	5/16	1.1	59,000	226,000	0	5	125	8040C107 ⑥	5	❍	❍	6.0 ④	-	1.3
3/8	3/4	4.3	229,000	384,000	0	1	175	8040A131	1	❍	❍	6.0 ④	-	2
1/2	3/4	5	267,000	446,000	0	1	175	8040A132	1	❍	❍	6.0 ④	-	2
3/4	3/4	8.8	470,000	786,000	0	1	175	8040A133	2	❍	❍	6.0 ④	-	2
1/8	5/16	1	53,700	127,000	0	2	125	8040C106 ⑥	5	❍	❍	-	9.7	1.3
1/4	5/16	1.1	59,000	140,000	0	2	125	8040C107 ⑥	5	❍	❍	-	9.7	1.3
3/8	3/4	4.3	229,000	332,000	0	1.75	125	8040A131	1	❍	❍	-	15.3	2
1/2	3/4	4.9	261,000	378,000	0	1.75	125	8040A132	1	❍	❍	-	15.3	2
3/4	3/4	8.1	433,000	626,000	0	1.75	125	8040A133	2	❍	❍	-	15.3	2
Watertight														
3/8	3/4	4.3	229,000	384,000	0	1	175	8040G131	3	❍	❍	7.1 ⑤	-	2.5
1/2	3/4	5	267,000	446,000	0	1	175	8040G132	3	❍	❍	7.1 ⑤	-	2.5
3/4	3/4	8.8	470,000	786,000	0	1	175	8040G133	4	❍	❍	7.1 ⑤	-	2.5
3/8	3/4	4.3	229,000	332,000	0	0.5	125	8040G131	3	❍	❍	-	10.6	2.5
1/2	3/4	4.9	261,000	378,000	0	0.5	125	8040G132	3	❍	❍	-	10.6	2.5
3/4	3/4	8.1	433,000	626,000	0	0.5	125	8040G133	4	❍	❍	-	10.6	2.5

❍= Safety Shutoff valve
① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas
② Per CSA 6.5 @ 25% inlet pressure/ 10% pressure drop
③ For optional upstream & downstream pipe taps in body, change 6th digit in Base Catalog to "0" (ex: 8040A031)
④ On 50Hz service the watt rating for 6.0 solenoid is 7.3 watts
⑤ On 50Hz service the watt rating for 7.1 solenoid is 8.1 watts
⑥ Available with Open Frame Spade enclosure only (See How to Order, Electrical Interface code "0D")

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity		Max. Operating Pressure Differential (bar)		Max. Fluid Temp. ˚C	Base Catalog Number ③	Const. Ref.	Agency		Wattage		Approx. Shipping Weight (kgs)
			Btu/hr ①	Btu/hr ②	Min.	Max.				UL	CSA	AC	DC	
Open Frame														
1/8	8	0.90	53,700	206,000	0	0.34	52	8040C106 ⑥	5	❍	❍	6.0 ④	-	0.6
1/4	8	0.95	59,000	226,000	0	0.34	52	8040C107 ⑥	5	❍	❍	6.0 ④	-	0.6
3/8	19	3.6	229,000	384,000	0	0.07	79	8040A131	1	❍	❍	6.0 ④	-	0.9
1/2	19	4.3	267,000	446,000	0	0.07	79	8040A132	1	❍	❍	6.0 ④	-	0.9
3/4	19	7.5	470,000	786,000	0	0.07	79	8040A133	2	❍	❍	6.0 ④	-	0.9
1/8	8	0.90	53,700	127,000	0	0.14	52	8040C106 ⑥	5	❍	❍	-	9.7	0.6
1/4	8	0.95	59,000	140,000	0	0.14	52	8040C107 ⑥	5	❍	❍	-	9.7	0.6
3/8	19	3.6	229,000	332,000	0	0.05	52	8040A131	1	❍	❍	-	15.3	0.9
1/2	19	4.2	261,000	378,000	0	0.05	52	8040A132	1	❍	❍	-	15.3	0.9
3/4	19	6.9	433,000	626,000	0	0.05	52	8040A133	2	❍	❍	-	15.3	0.9
Watertight														
3/8	19	3.6	229,000	511,000	0	0.12	79	8040G131	3	❍	❍	7.1 ⑤	-	1.1
1/2	19	4.3	267,000	594,000	0	0.12	79	8040G132	3	❍	❍	7.1 ⑤	-	1.1
3/4	19	7.5	470,000	1,045,000	0	0.12	79	8040G133	4	❍	❍	7.1 ⑤	-	1.1
3/8	19	3.6	229,000	-	0	0.03	52	8040G131	3	❍	❍	-	10.6	1.1
1/2	19	4.2	261,000	-	0	0.03	52	8040G132	3	❍	❍	-	10.6	1.1
3/4	19	6.9	433,000	-	0	0.03	52	8040G133	4	❍	❍	-	10.6	1.1

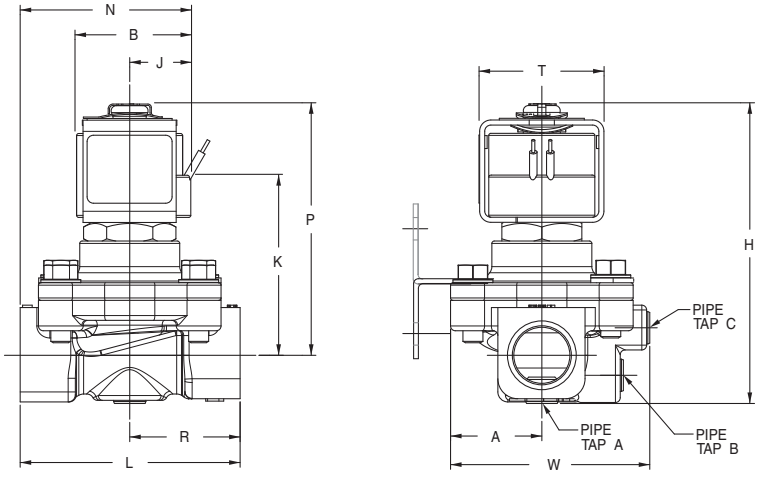
❍= Safety Shutoff valve
① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas
② Per CSA 6.5 @ 25% inlet pressure/ 10% pressure drop
③ For optional upstream & downstream pipe taps in body, change 6th digit in Base Catalog to "0" (ex: 8040A031)
④ On 50Hz service the watt rating for 6.0 solenoid is 7.3 watts
⑤ On 50Hz service the watt rating for 7.1 solenoid is 8.1 watts
⑥ Available with Open Frame Spade enclosure only (See How to Order, Electrical Interface code "0D")

Dimensions inches (mm)

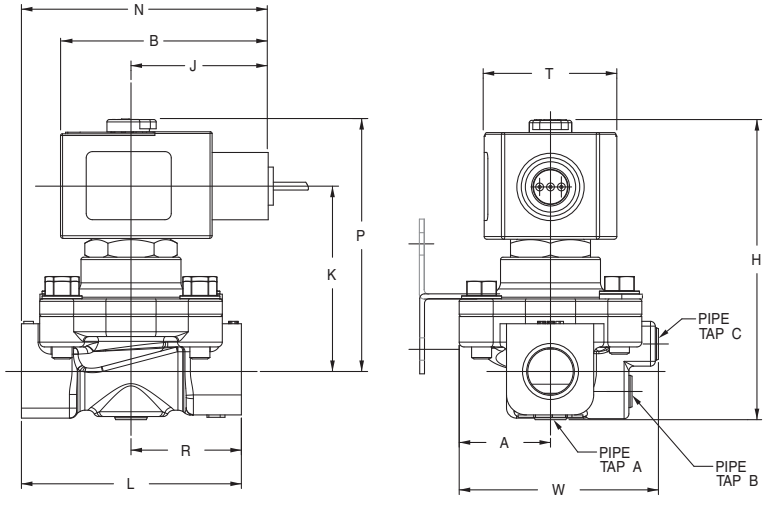
Const. Ref.		1	2	3	4
A	in	29	29	29	29
	mm	1.1	1.1	1.1	1.1
B	in	51	51	70	70
	mm	2.0	2	2.8	2.8
H	in	96	107	96	107
	mm	3.8	4.2	3.8	4.2
J	in	33	33	48	48
	mm	1.3	1.3	1.9	1.9
K	in	73	77	60	65
	mm	2.9	3.1	2.4	2.6
L	in	70	84	70	84
	mm	2.8	3.3	2.8	3.3
N	in	68	75	83	90
	mm	2.7	3	3.3	3.5
R	in	35	42	35	42
	mm	1.4	1.7	1.4	1.7
P	in	82.0	87	82	87
	mm	3.2	3.4	3.2	3.4
T	in	40.0	40	43	43
	mm	1.6	1.6	1.7	1.7
W	in	62	59	62	59
	mm	2.4	2.3	2.4	2.3
Pipe Taps (Optional)		B & C	A & C	B & C	A & C

Mountable in any position (AC)
Must be mounted with solenoid vertical and upright (DC)

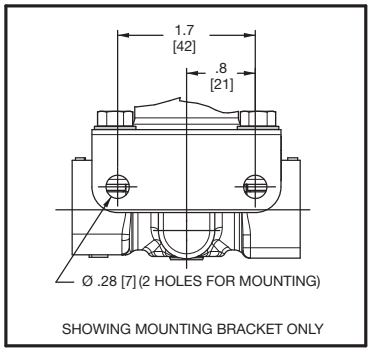
Const. Ref. 1, 2



Const. Ref. 3, 4



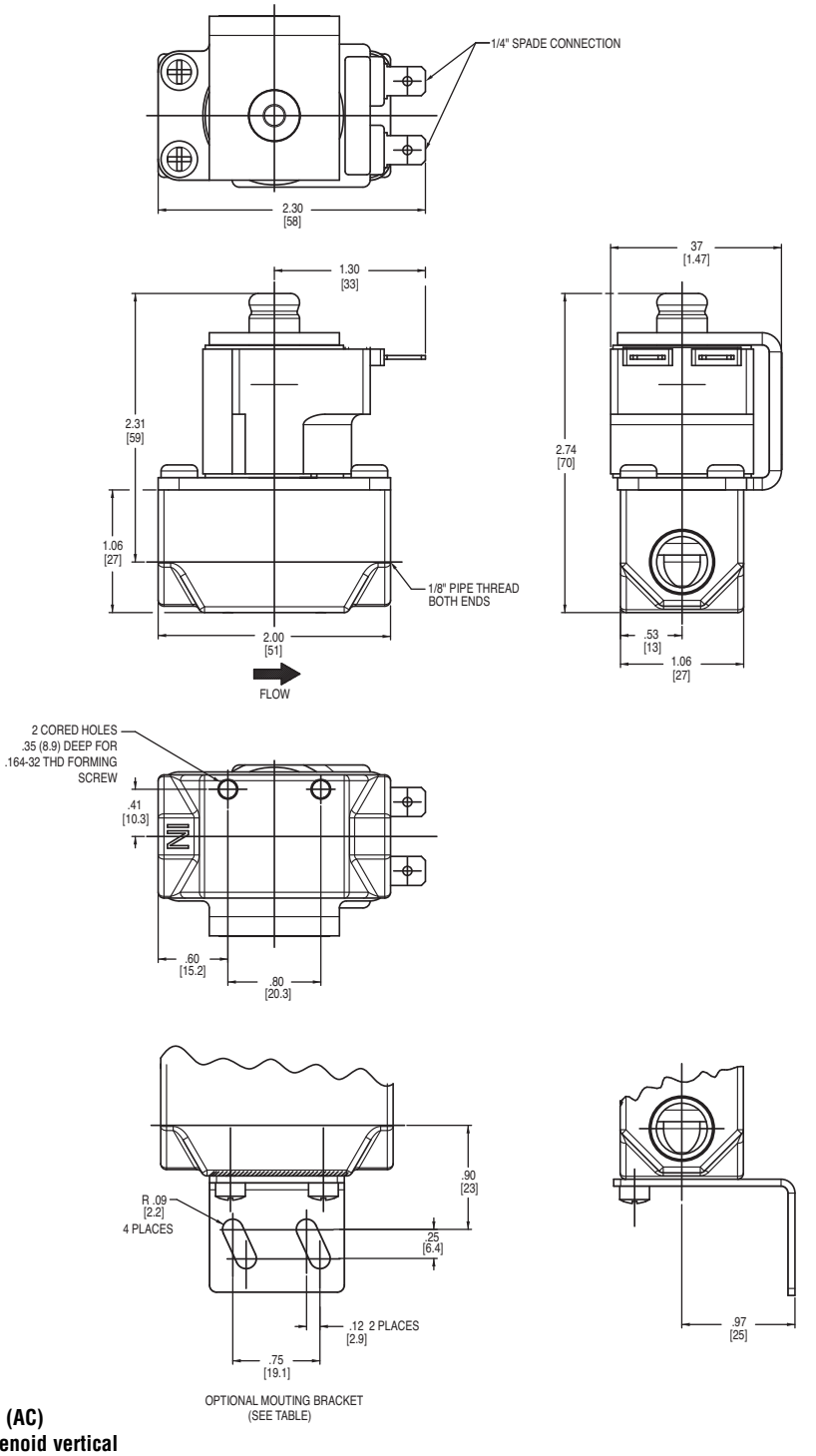
Mounting Bracket (Const. Ref. 1-4)



COMBUSTION

Dimensions inches (mm)

Const. Ref. 5



Mountable in any position (AC)
Must be mounted with solenoid vertical and upright (DC)

COMBUSTION

ASCO® RedHat

Open Frame & General Purpose Enclosure

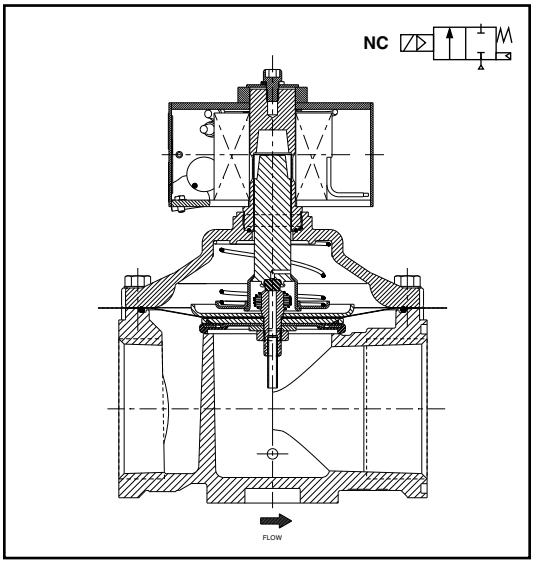
Gas Shutoff Valves

3/4" to 3" NPT

2/2 SERIES X214

Features

- DC construction (12 & 24 VDC)
- High-force closing spring provides positive shutoff for reverse pressure up to 15" W.C.
- Low Power 24 VDC Peak & Hold: Reduces energy consumption to 3.2 W (Hold). Ideal for remote power-critical installations (2" High Flow to 3")
- Broad ambient temperature range: -40˚F to 140˚F (-40˚C to 60˚C)
- 2-way normally closed operation
- Zero differential piloted diaphragm
- High-flow die-cast aluminum bodies
- 1/8" NPT pipe taps with plugs for routine testing
- Optional flange adapters for ease of installation and service
- For on/off control of fuel gas in emergency and standby power systems requiring a primary and alternate fuel source



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Bushing	PTFE Coated Fiberglass
Core, Bonnet and Plugnut	Zinc-Plated CRS
Springs	302 Stainless Steel
Pipe Plug	Zinc-Plated Steel
Pilot Seat	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Pipe Sizes (in)	Watt Rating (DC)			Ambient Temp. ˚F (˚C)
		Standard	Peak Watts	Hold Watts	
H	3/4" to 2"	45	-	-	-40 to 140 (-40 to 60)
F	2" High Flow to 3"	-	61	3.2	
Standard DC Voltages: 12, 24 (3/4" to 2"); 24 only (2" High Flow to 3")					

Solenoid Enclosures

Open Frame: 18" leads std; 72" leads optional

Type 1 General Purpose: Metal housing with 7/8" hole for 1/2" conduit connection

Valve Response Time

Valve Opening/Closing Time: Less than 1 second

Closeoff Pressure

50 psi (3.5 bar) maximum (3/4" to 2")
5 psi (0.35 bar) maximum (2" High Flow to 3")

Approvals

Open Frame: UL recognized component to standard 429 "Electrically Operated Valve", Guide YIOZ2, File MP618 Safety Valves

General Purpose: UL Listed to standard 429 "Electrically Operated Valve", Guide YIOZ, File MP618 Safety Valves

Open Frame/General Purpose: CSA Certified to:

1) Standard C22.2 No.139 "Electrically Operated Valves", File 010381
2) Automatic Gas Valves Z21.21, CSA 6.5 C/I, File 112872

COMBUSTION

ASCO®

How to Order (Example: X2144399980001H3)

X 2 1 4 4 3 9 9 9 8 | **0 0 1** | **H 3**

Base Catalog Number		Item	Voltage / Class
X214439998	Small body, Open frame	001* 3/4"	H3 12VDC / H H1 24VDC / H
		002* 1"	
		003* 1-1/4"	
		004* 1-1/2"	
X214439999	Medium body Open frame	005* 1-1/4", High flow	H3 12VDC / H H1 24VDC / H
		006* 1-1/2", High flow	
		007* 2"	
X214440000	Large body, Type 1 General Purpose Enclosure	018 2", High flow	F1 24VDC / F
		019 2-1/2"	
		010 3"	

* 18" leads std. For 72" Leads change 1st digit to 1 (example, 101)

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Fuel Gas Capacity		Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Base Catalog Number	Item	Const. Ref.	Agency		Wattage	Approx. Shipping Weight (lbs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.	DC				UL	CSA	DC	
Open Frame														
3/4"	1 5/8	11	593,200	1,411,500	0	5	140	X214439998	001 ③	1	❍	❍	45	9.2
1"	1 5/8	21	1,132,300	2,695,000	0	5	140		002 ③	1	❍	❍	45	9
1-1/4"	1 5/8	32	1,725,500	4,107,000	0	5	140		003 ③	1	❍	❍	45	8.9
1-1/2"	1 5/8	35	1,887,200	4,492,000	0	5	140		004 ③	1	❍	❍	45	8.7
1-1/4" (High Flow)	2 3/32	36	1,925,000	4,620,000	0	5	140	X214439999	005 ③	2	❍	❍	45	10.2
1-1/2" (High Flow)	2 3/32	45	2,406,000	5,775,500	0	5	140		006 ③	2	❍	❍	45	10
2"	2 3/32	55	2,940,500	7,059,000	0	5	140		007 ③	2	❍	❍	45	9.7
General Purpose														
2 (High Flow)	3	75	4,044,100	15,388,000	0	5	140	X214440000	018	3	❍	❍	61/3.2 ④	19.2
2-1/2	3	104	5,607,800	21,339,000	0	5	140		019	3	❍	❍	61/3.2 ④	18.5
3	3	105	5,661,700	21,544,000	0	5	140		010	3	❍	❍	61/3.2 ④	17.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Per CSA 6.5 @ 25% Inlet Pressure / 10% pressure drop. ③ 18" leads standard. For 72" leads change 1st digit to 1 (example, 101). ④ Peak & Hold Construction, 61 watts for up to 2 seconds to pull in and 3.2 watts to hold.

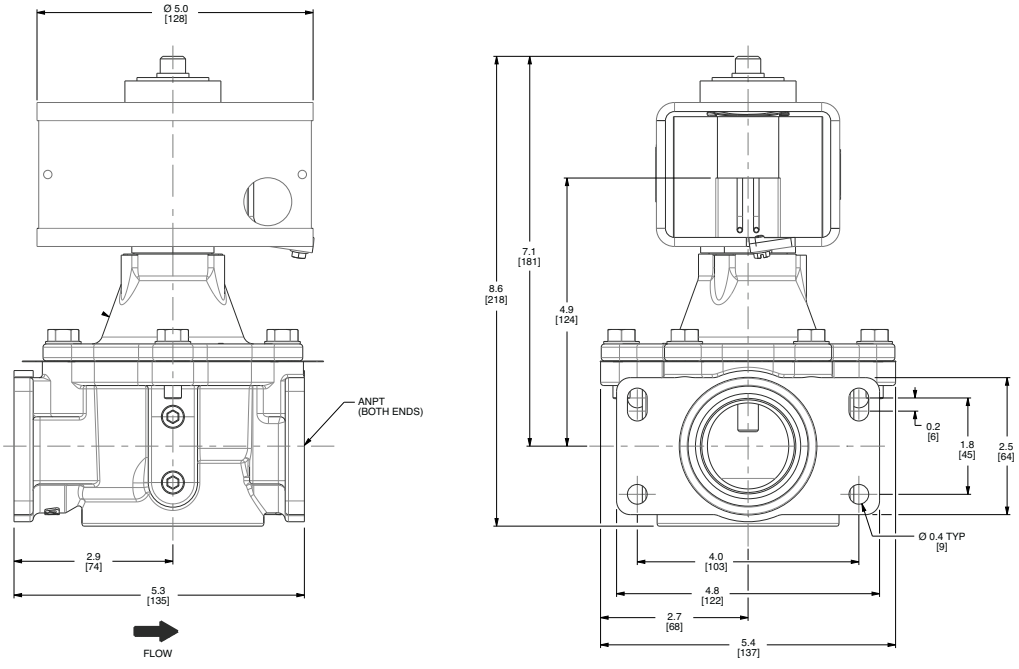
Specifications (Metric units)

Pipe Size (in)	Orifice Size (in)	Kv Flow (m^3/hr)	Fuel Gas Capacity		Operating Pressure Differential (bar)		Max. Fluid Temp. °C	Base Catalog Number	Item	Const. Ref.	Agency		Wattage	Approx. Shipping Weight (kgs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.	DC				UL	CSA	DC	
Open Frame														
3/4"	41	9.4	593,200	1,411,500	0	0.3	60	X214439998	001 ③	1	❍	❍	45	4.2
1"	41	17.9	1,132,300	2,695,000	0	0.3	60		002 ③	1	❍	❍	45	4.1
1-1/4"	41	27.3	1,725,500	4,107,000	0	0.3	60		003 ③	1	❍	❍	45	4
1-1/2"	41	29.9	1,887,200	4,492,000	0	0.3	60		004 ③	1	❍	❍	45	3.9
1-1/4" (High Flow)	53	30.7	1,925,000	4,620,000	0	0.3	60	X214439999	005 ③	2	❍	❍	45	4.6
1-1/2" (High Flow)	53	38.4	2,406,000	5,775,500	0	0.3	60		006 ③	2	❍	❍	45	4.5
2"	53	46.9	2,940,500	7,059,000	0	0.3	60		007 ③	2	❍	❍	45	4.4
General Purpose														
2 (High Flow)	76	64	4,044,100	15,388,000	0	0.3	60	X214440000	018	3	❍	❍	61/3.2 ④	8.7
2-1/2	76	88.7	5,607,800	21,339,000	0	0.3	60		019	3	❍	❍	61/3.2 ④	8.4
3	76	89.6	5,661,700	21,544,000	0	0.3	60		010	3	❍	❍	61/3.2 ④	7.9

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Per CSA 6.5 @ 25% Inlet Pressure / 10% pressure drop. ③ 18" leads standard. For 72" leads change 1st digit to 1 (example, 101). ④ Peak & Hold Construction, 61 watts for up to 2 seconds to pull in and 3.2 watts to hold.

Dimensions inches (mm)

Const. Ref. 1



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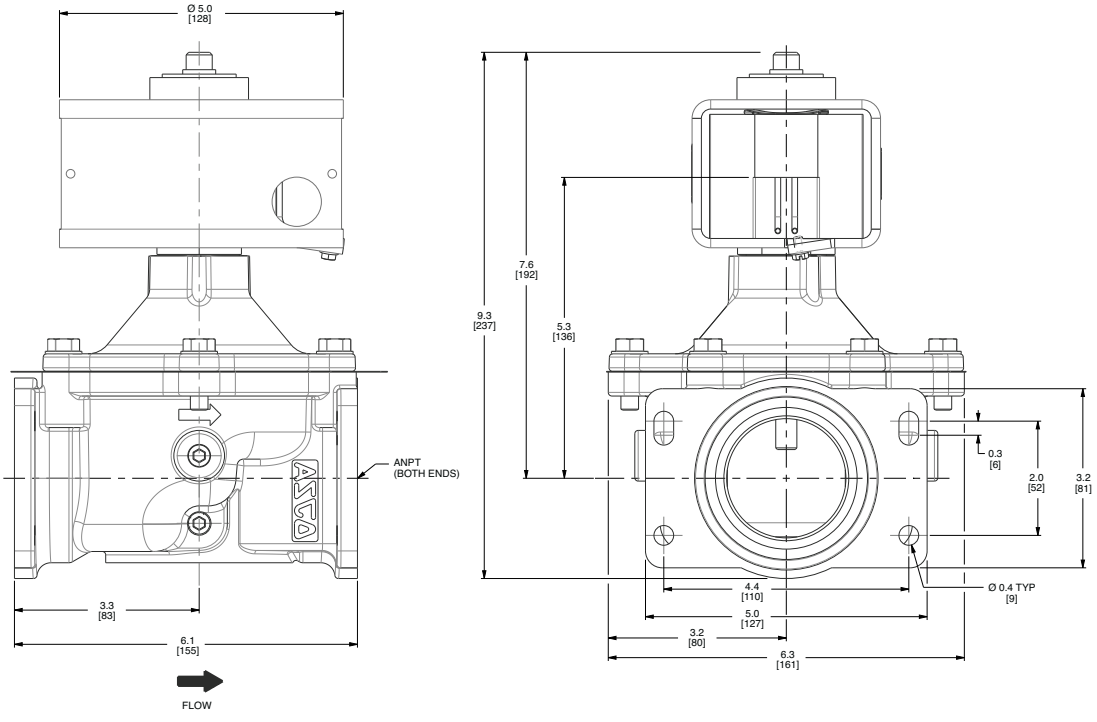
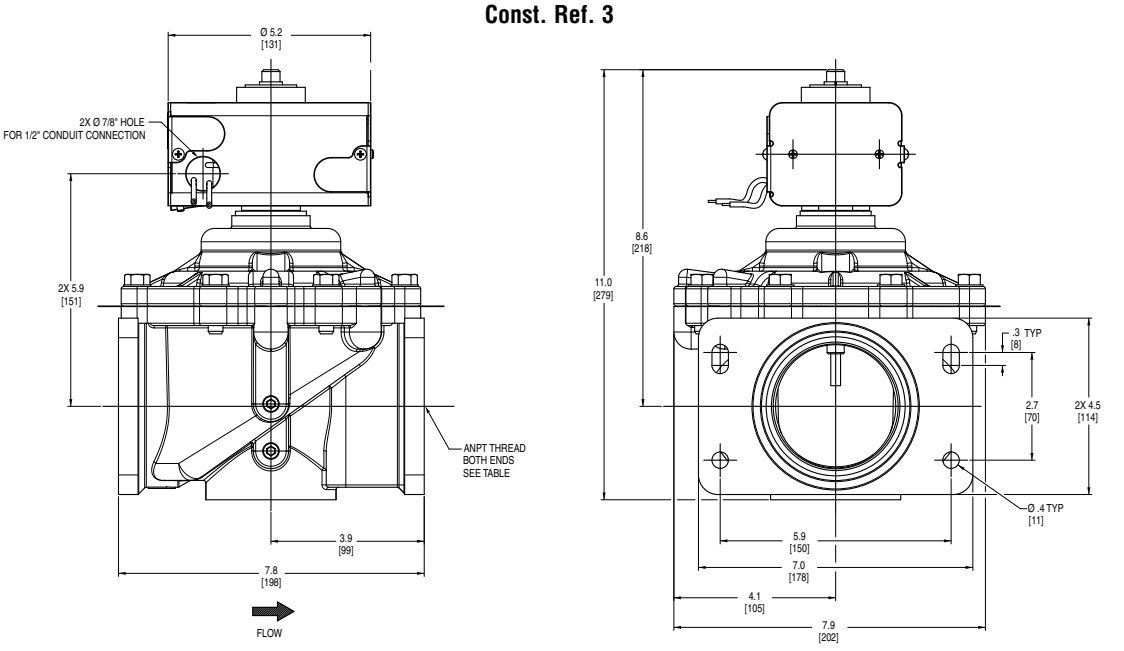


Must be mounted with solenoid vertical and upright.

Dimensions inches (mm)

Const. Ref. 3



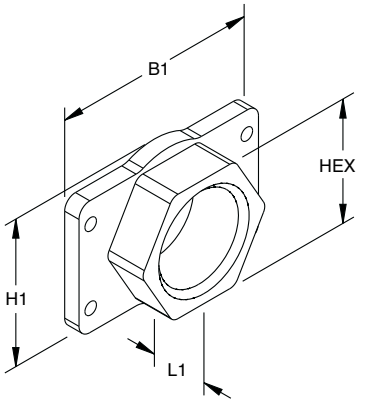
Must be mounted with solenoid vertical and upright.

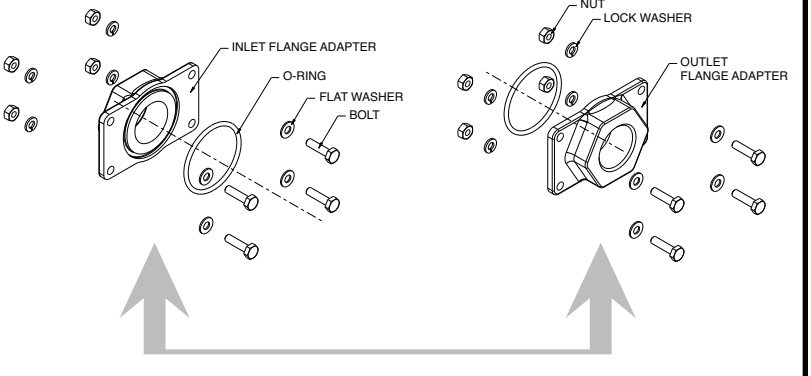
Flange Adapters

Pipe Size (in)		B1	H1	L1	HEX
3/4", 1"	in	4.8	2.5	1.27	2.5
	mm	122	76	32	64
1-1/4" 2"	in	5	3.56	1.38	3
	mm	127	90	35	76
2" (High Flow) - 3"	in	7	4.5	2.01	4.5
	mm	178	114	51	114

Flange Adapter Kits (Optional)

Pipe Size (in)	Inlet & Outlet Adapter/Hardware Kit	Approx. Shipping Weight (lbs)
3/4	296659-001	1.6
1	296659-002	1.5
1-1/4	296659-003	1.3
1-1/2	296659-004	1.2
1-1/4 (High Flow)	296659-005	2.4
1-1/2 (High Flow)	296659-006	2.1
2	296659-007	1.7
2 (High Flow)	296659-008	6.6
2-1/2	296659-009	6.0
3	296659-010	4.9





INLET & OUTLET
FLANGE ADAPTERS AND HARDWARE KIT

COMBUSTION

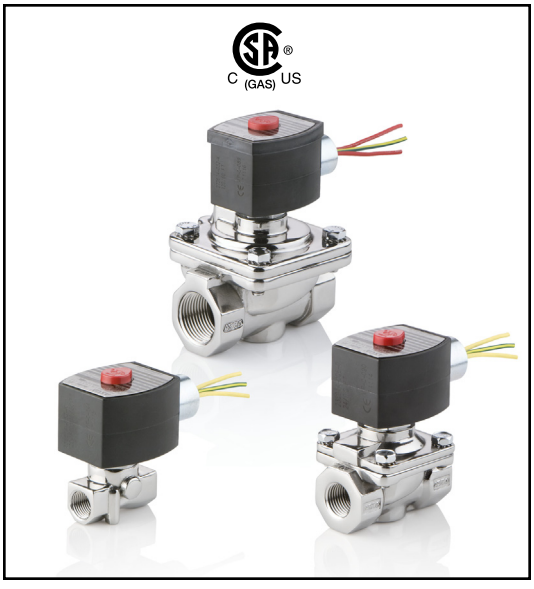
Low Temperature Gas Shutoff Valve (AC)

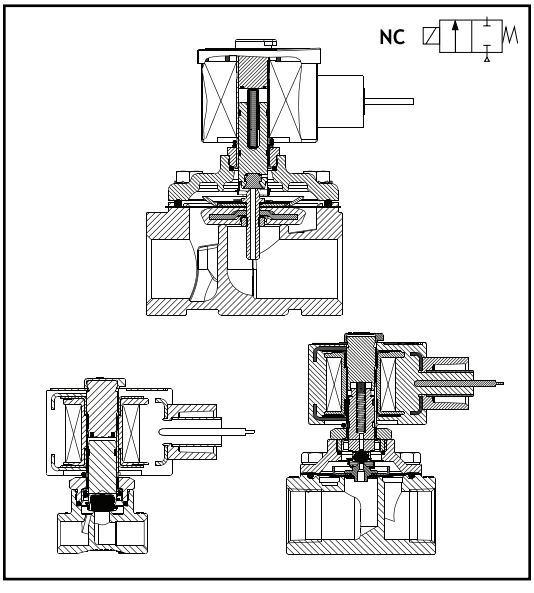
Stainless Steel Body • 1/4" to 1" NPT

2/2
SERIES
HV427480
HV427481
HV427482

Features

- Ambient temperature range; -40˚F to 125˚F (-40˚C to 52˚C)
- Zero minimum differential pressure
- Maximum operating pressure differential up to 50 psi
- Robust design provides consistent and reliable operation
- Complies with ANSI/ISA-12.27.01.2003 single seal requirements
- Meets Automatic Gas Valves Z21.21, CSA 6.5 C/I Safety Shutoff standard
- Resilient soft seating for tight shutoff
- For on-off control of fuel gas in commercial and industrial gas burners





Fluid: Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	304 Stainless Steel
Seals and Disc	Low Temp NBR (1/4", 3/8", 1/2", 3/4") Low Temp FKM (1")
Diaphragm	Low Temp. NBR (1/2", 3/4") Low Temp. HNBR (1")
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	Stainless Steel (1/2" to 1"), Inconel (1/4", 3/8")
Shading Coil	Silver
Rider Ring	PTFE

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption AC Watts	VA Holding	VA Inrush	Ambient Temp.°F (˚C)	Spare Coil Family Explosionproof AC
F	10.1	25	70	-40 to 125˚F (-40 to 52˚C)	238614
F	16.1	35	180		272614

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz)
Consult factory for special voltages.

Solenoid Enclosures

1/4" through 1" - Explosionproof & Watertight, Types 1, 3, 3S, 4, 4X, 6, 6P, 7, and 9.

Leads

Standard: 72" leads

Approvals

CSA Certified:

1) Solenoid for Hazardous Locations, File 013976.
2) Automatic Gas Valves Z21.21, CSA 6.5 C/I Safety Shutoff, File 112872.
3) Standard C22.2 No. 139 “Electrically Operated Valves”, File 112872.
4) ANSI/ISA-12.27.01.2003 Single Seal.

Consult factory for Canadian Registration Numbers (CRN).

UL Listed Explosionproof Solenoid.

2/2
SERIES
HV427480
HV427481
HV427482

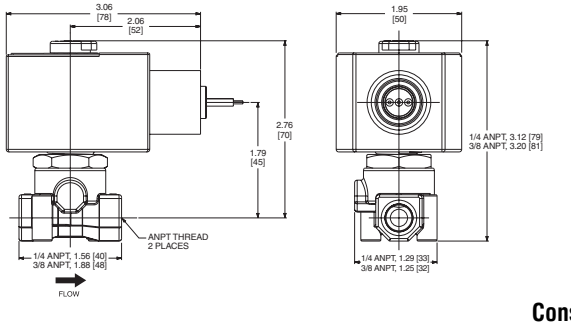
Specifications

Pipe Size (in)	Orifice Size (in)	Cv Flow	Gas Capacity Btu/hr. ①	Gas Capacity Btu/hr. ②	Operating Pressure Differential (psi) ④ Min.	Operating Pressure Differential (psi) ④ Max.	Fluid Temp. Range ˚F (˚C) ③	Catalog Number	Voltage	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage
COMBUSTION (Fuel Gas) - Normally Closed (Closed when de-energized)														
1/4	9/32	1	55,000	837,000	0	50	-40 to 125ºF (-40 to 52ºC)	HV427480001	24/60	1	❒	-	❍	10.1
								HV427480002	120/60, 110/50		❒	-	❍	
								HV427480003	240/60, 220/50		❒	-	❍	
3/8	9/32	1	55,000	837,000	0	50	-40 to 125ºF (-40 to 52ºC)	HV427480101	24/60		❒	-	❍	
								HV427480102	120/60, 110/50		❒	-	❍	
								HV427480103	240/60, 220/50		❒	-	❍	
1/2	5/8	4.3	231,900	3,529,000	0	50	14 to 125ºF (-10 to 52ºC)	HV427481001	24/60	2	❒	-	❍	10.1
								HV427481002	120/60, 110/50		❒	-	❍	
								HV427481003	240/60, 220/50		❒	-	❍	
3/4	5/8	4.5	242,600	3,693,000	0	50	14 to 125ºF (-10 to 52ºC)	HV427481101	24/60		❒	-	❍	
								HV427481102	120/60, 110/50		❒	-	❍	
								HV427481103	240/60, 220/50		❒	-	❍	
1	1	13	701,000	8,483,000	0	35	14 to 125ºF (-10 to 52ºC)	HV427482001	24/60	3	❒	-	❍	16.1
								HV427482002	120/60		❒	-	❍	
								HV427482003	110/50		❒	-	❍	
								HV427482004	240/60		❒	-	❍	
								HV427482005	220/50		❒	-	❍	

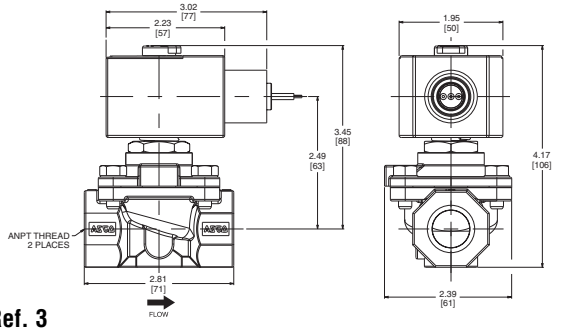
❍ = Safety Shutoff Valve. ❒ UL Listed Hazardous Location, solenoid only. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
② 10% of MOPD pressure drop @ 25% of MOPD inlet pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas (based on CSA 6.5).
③ Dewpoint - To prevent freezing of condensed water vapor in the valve, the fuel gas must have a dewpoint at least 10˚C (18˚F) below the minimum temperature to which any point of the system will be exposed.
④ Safe Working Pressure (SWP); 100 psi, is the line or system pressure to which the valve may be subjected without being damaged. To ensure proper operation, the Maximum Operating Pressure Differential (MOPD) stamped on nameplate must be adhered to.

Dimensions: inches [mm]

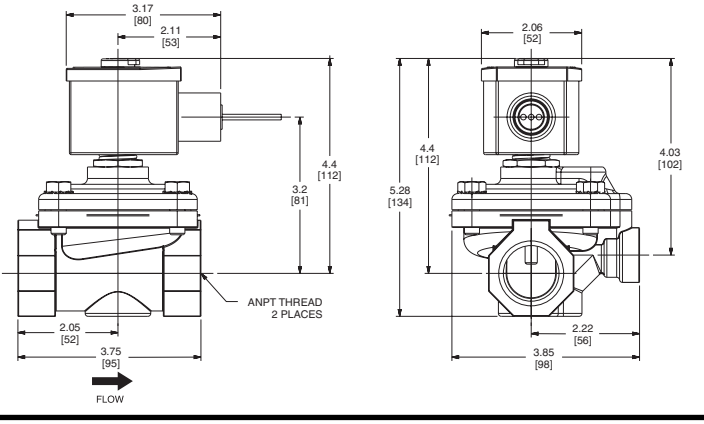
Const. Ref. 1
Can be mounted in any position.



Const. Ref. 2
Can be mounted in any position.



Const. Ref. 3
Must be mounted with solenoid vertical and upright



COMBUSTION

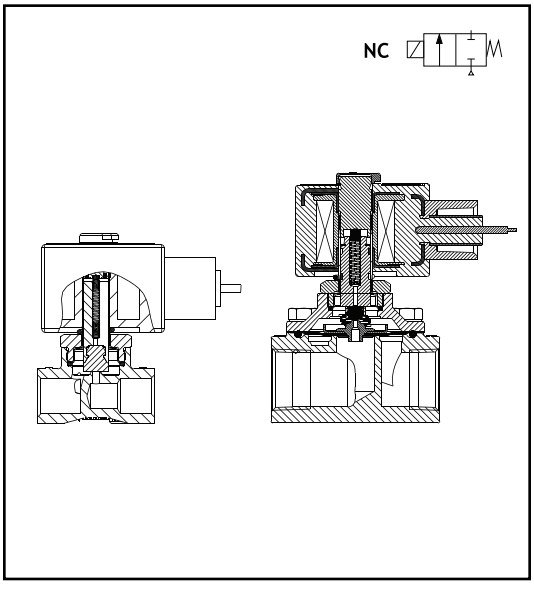
Low Temperature Gas Shutoff Valve (DC)

Stainless Steel Body • 1/4" to 1" NPT

2/2
SERIES
HV426716
HV426780
HV285926

Features

- Ambient temperature range; -40˚F to 125˚F (-40˚C to 52˚C)
- Zero minimum differential pressure
- Maximum operating pressure differential up to 50 psi
- Robust design provides consistent and reliable operation
- Meets Automatic Gas Valves Z21.21, CSA 6.5 C/I Safety Shutoff standard
- Complies with ANSI/ISA-12.27.01.2003 single seal requirements
- Meets the metallurgical requirements of NACE MR-0175
- Resilient soft seating for tight shutoff
- For on-off control of fuel gas in commercial and industrial gas burners



Fluid: Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	304 Stainless Steel
Seals and Disc	Low Temp. NBR (1/2", 3/4") Low Temp. FKM (1/4", 3/8", 1")
Diaphragm	Low Temp. NBR (1/2", 3/4") Low Temp. HNBR (1")
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	Inconel
Rider Ring	PTFE

Electrical

Standard Coil and Class of Insulation	Watt Rating DC (Watts)	Ambient Temp. ºF (ºC)	Spare Coil Family Explosionproof
H	10.6	-40 to 125˚F (-40 to 52˚C)	238514
	11.6		238914
F	12.1		274646

Standard Voltages: 12, 24VDC
Note: Not for use with solenoid drivers or peak and hold external controllers.

Solenoid Enclosures

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

Leads

Standard: 72" leads

Approvals

CSA Certified:

1) Solenoid (for HV426716 & HV426780 Series DC Constructions), and valve (HV285926 DC Construction) for Hazardous Locations, File 013976.
2) Automatic Gas Valves Z21.21, CSA 6.5 C/I Safety Shutoff, File 112872.
3) Standard C22.2 No. 139 “Electrically Operated Valves”, File 112872.
4) ANSI/ISA-12.27.01.2003 Single Seal.

Consult factory for Canadian Registration Numbers (CRN).

UL Listed Explosionproof Solenoid.
(for HV426716 & HV426780 Series DC Constructions)

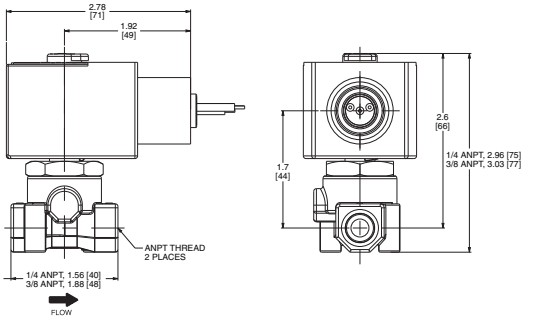
Specifications

Pipe Size (in)	Orifice Size (in)	Cv Flow	Gas Capacity Btu/hr. ①	Gas Capacity Btu/hr. ②	Operating Pressure Differential (psi) ④ Min.	Operating Pressure Differential (psi) ④ Max.	Fluid Temp. Range °F (°C) ③	Catalog Number	Voltage	Const. Ref.	Agency UL	Agency CSA	Wattage
COMBUSTION (Fuel Gas) - Normally Closed (Closed when de-energized)													
1/4	5/32	0.52	27,000	410,000	0	50	-40 to 125ºF (-40 to 52ºC)	HV426716001	12 VDC	1	❒	❍	10.6
								HV426716002	24 VDC		❒	❍	
3/8	7/32	0.82	44,000	527,000	0	35	-40 to 125ºF (-40 to 52ºC)	HV426716101	12 VDC		❒	❍	
								HV426716102	24 VDC		❒	❍	
1/2	5/8	4.3	231,900	3,529,000	0	50	14 to 125ºF (-10 to 52ºC)	HV426780001	12 VDC	2	❒	❍	11.6
								HV426780002	24 VDC		❒	❍	
3/4	5/8	4.5	242,600	3,693,000	0	50	14 to 125ºF (-10 to 52ºC)	HV426780101	12 VDC		❒	❍	
								HV426780102	24 VDC		❒	❍	
1	1	13	701,000	8,268,480	0	50	14 to 125ºF (-10 to 52ºC)	HV285926011	12 VDC	3	-	❍	12.1
								HV285926012	24 VDC		-	❍	

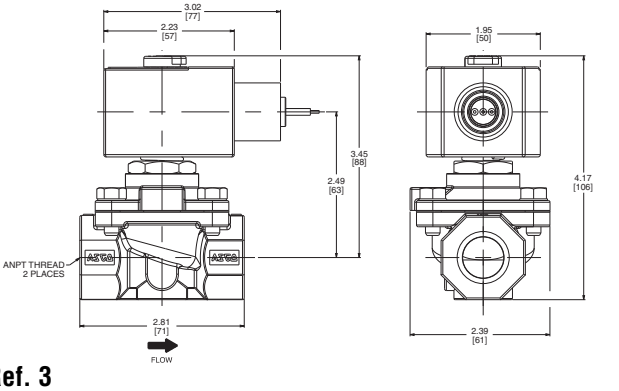
❍ = Safety Shutoff Valve. ❒ UL Listed Hazardous Location, solenoid only. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
② 10% of MOPD pressure drop @ 25% of MOPD inlet pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas (based on CSA 6.5).
③ Dewpoint - To prevent freezing of condensed water vapor in the valve, the fuel gas must have a dewpoint at least 10˚C (18˚F) below the minimum temperature to which any point of the system will be exposed.
④ Safe Working Pressure (SWP); 100 psi, is the line or system pressure to which the valve may be subjected without being damaged. To ensure proper operation, the Maximum Operating Pressure Differential (MOPD) stamped on nameplate must be adhered to.

Dimensions: inches [mm]

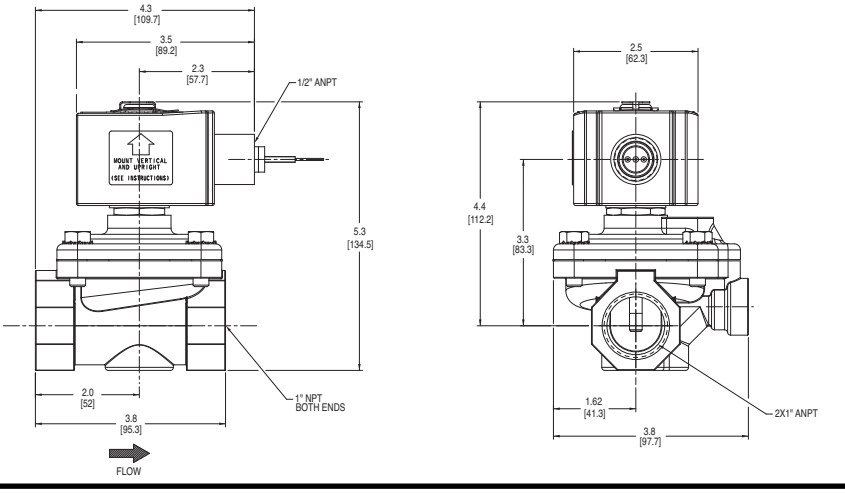
Const. Ref. 1
Can be mounted in any position.



Const. Ref. 2
Can be mounted in any position.



Const. Ref. 3
Must be mounted with solenoid vertical and upright



COMBUSTION

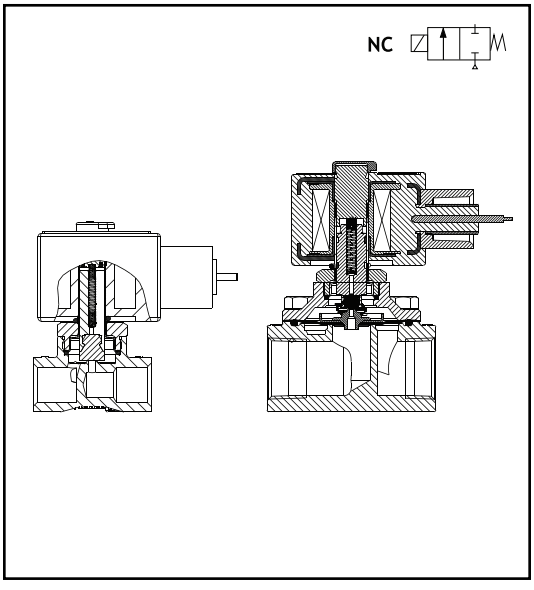
Low Power - Peak & Hold Low Temperature Gas Shutoff Valve (DC)

Stainless Steel Body • 1/4" to 1" NPT

2/2 SERIES
HV427246
HV427371
HV298568

Features

- Peak and hold design for low power consumption
- Ambient temperature range; -40˚F to 125˚F (-40˚C to 52˚C)
- Zero minimum differential pressure
- Maximum operating pressure differential up to 50 psi
- Robust design provides consistent and reliable operation
- Meets Automatic Gas Valves Z21.21, CSA 6.5 C/I Safety Shutoff standard
- Complies with ANSI/ISA-12.27.01.2003 single seal requirements
- Meets the metallurgical requirements of NACE MR-0175
- Resilient soft seating for tight shutoff
- For on-off control of fuel gas in commercial and industrial gas burners



Fluid: Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	304 Stainless Steel
Seals and Disc	Low Temp. NBR (1/2", 3/4") Low Temp. FKM (1/4", 3/8", 1")
Diaphragm	Low Temp. NBR (1/2", 3/4") Low Temp. HNBR (1")
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	Inconel
Rider Ring	PTFE

Electrical

Standard Coil and Class of Insulation	Watt Rating (DC)		Hold PWM Duty Cycle (@ 500-2000 Hz)	Ambient Temp. ºF (ºC)	Spare Coil Family
	Peak Watts	Hold Watts			Explosionproof
H	10.6	0.85 ①	29%	-40 to 125˚F (-40 to 52˚C)	238514
	10.6	1.40 ①	37%		238514
	11.6	0.5 ①	21%		238914
F	23.6	0.85 ①	19%		501696

Standard Voltages: 12, 24VDC

① Peak and hold design requires full line voltage for 0.2 to 0.5 seconds to open valve; then refer to the specified Hold PWM Duty Cycle in the above table.
External PWM controller required; Consult factory for additional information.

IMPORTANT: Supervisory and leakage current above .010 amp will cause improper operation. *Consult your local ASCO sales office for additional assistance.*

Solenoid Enclosures

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

Leads

Standard: 72" leads

Approvals

CSA Certified:

1) Solenoid (for HV427246 & HV427371 Series DC Constructions), and valve (HV298568 DC Construction) for Hazardous Locations, File 013976.
2) Automatic Gas Valves Z21.21, CSA 6.5 C/I Safety Shutoff, File 112872.
3) Standard C22.2 No. 139 "Electrically Operated Valves", File 112872.
4) ANSI/ISA-12.27.01.2003 Single Seal.

Consult factory for Canadian Registration Numbers (CRN).

UL Listed Explosionproof Solenoid.
(for HV427246 & HV427371 Series DC Constructions)

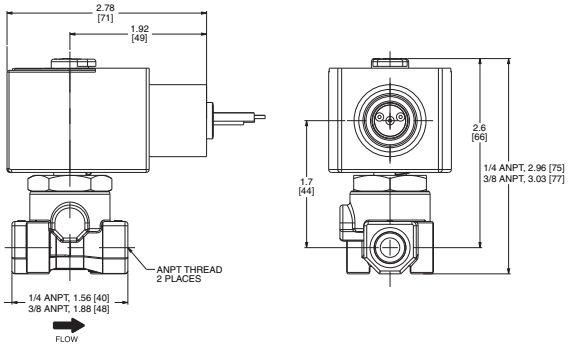
Specifications

Pipe Size (in)	Orifice Size (in)	Cv Flow	Gas Capacity Btu/hr. ①	Gas Capacity Btu/hr. ②	Operating Pressure Differential (psi) ④ Min.	Operating Pressure Differential (psi) ④ Max.	Fluid Temp. Range °F (°C) ③	Catalog Number	Voltage	Const. Ref.	Agency UL	Agency CSA	Wattage
COMBUSTION (Fuel Gas) - Normally Closed (Closed when de-energized)													
1/4	5/32	0.52	27,000	410,000	0	50	-40 to 125ºF (-40 to 52ºC)	HV427246001	12 VDC	1	❒	❍	10.6
								HV427246002	24 VDC		❒	❍	
3/8	7/32	0.82	44,000	527,000	0	35	-40 to 125ºF (-40 to 52ºC)	HV427246101	12 VDC		❒	❍	
								HV427246102	24 VDC		❒	❍	
1/2	5/8	4.3	231,900	3,529,000	0	50	14 to 125ºF (-10 to 52ºC)	HV427371001	12 VDC	2	❒	❍	11.6
								HV427371002	24 VDC		❒	❍	
3/4	5/8	4.5	242,600	3,693,000	0	50	14 to 125ºF (-10 to 52ºC)	HV427371101	12 VDC		❒	❍	
								HV427371102	24 VDC		❒	❍	
1	1	13	701,000	8,268,480	0	50	14 to 125ºF (-10 to 52ºC)	HV298568011	12 VDC	3	-	❍	23.6
								HV298568012	24 VDC		-	❍	

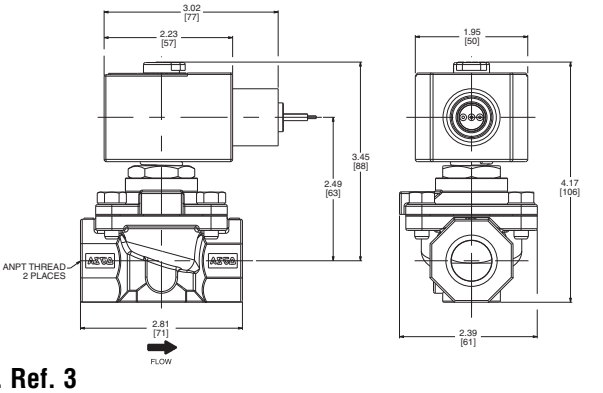
❍ = Safety Shutoff Valve. ❒ UL Listed Hazardous Location, solenoid only. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
② 10% of MOPD pressure drop @ 25% of MOPD inlet pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas (based on CSA 6.5).
③ Dewpoint - To prevent freezing of condensed water vapor in the valve, the fuel gas must have a dewpoint at least 10˚C (18˚F) below the minimum temperature to which any point of the system will be exposed.
④ Safe Working Pressure (SWP); 100 psi, is the line or system pressure to which the valve may be subjected without being damaged. To ensure proper operation, the Maximum Operating Pressure Differential (MOPD) stamped on nameplate must be adhered to.

Dimensions: inches [mm]

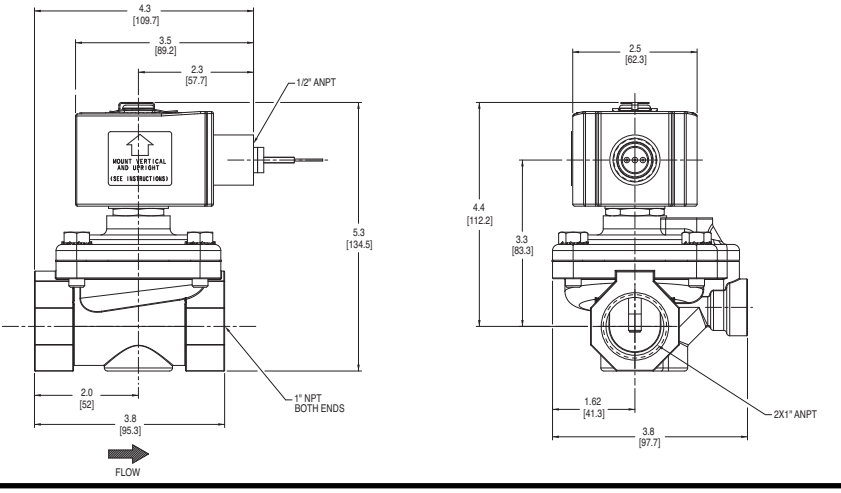
Const. Ref. 1
Can be mounted in any position



Const. Ref. 2
Must be mounted with solenoid vertical and upright



Const. Ref. 3
Must be mounted with solenoid vertical and upright



COMBUSTION

2-Way Normally Closed

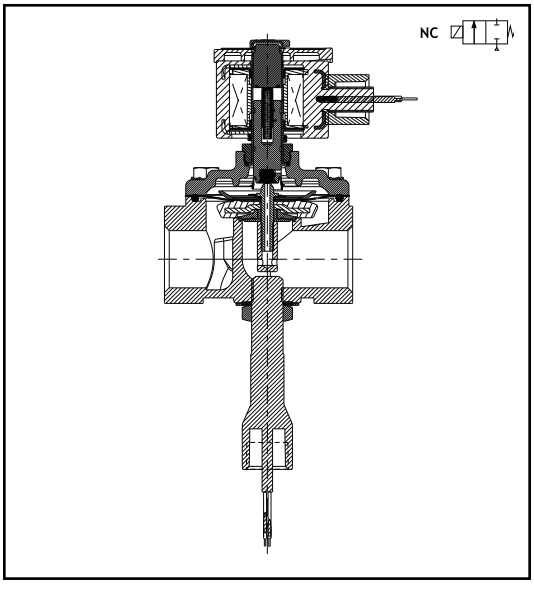
Low Temperature Gas Shutoff Valve With Proof of Closure

Stainless Steel Body • 1" NPT

2/2 SERIES
HV434696 (DC Peak & Hold)
HV434562 (AC)

Features

- Proof-of-Closure Switch - Class I, Div. 1 enclosure
- Ambient temperature range; -40˚F to 125˚F (-40˚C to 52˚C)
- Low power DC Peak & Hold constructions reduce energy consumption to 0.85 watt (Hold)
- Zero minimum pressure differential
- Maximum operating pressure differential up to 50 psi
- Resilient soft seating for tight shutoff
- Complies with ANSI/ISA-12.27.01.2003 single seal requirements
- Meets the metallurgical requirements of NACE MR0175-2003 (DC only)
- For on-off or gas pilot control of commercial and industrial gas burners



Fluid: Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	304 Stainless Steel
Seals and Disc	Low Temp. NBR
Diaphragm	
Core Tube	305 Stainless Steel
Rider Ring	PTFE
Core and Plugnut	430F Stainless Steel
Springs	Stainless Steel (AC), Inconel (DC)

Electrical

DC Peak & Hold

Standard Coil and Class of Insulation	Watt Rating and Power Consumption		Hold PWM Duty Cycle (@ 500-2000 Hz)	Spare Coil Number	Nominal Ambient Temp. ˚F (˚C)
	Peak Watts	Hold Watts	Min.	Explosionproof	
F	23.6	0.85 ①	19%	501696	-40 to 125 (-40 to 52)

Standard Voltages: 12, 24VDC

① Peak and hold design requires full line voltage for 0.2 to 0.5 seconds to open valve; then refer to the specified Hold PWM Duty Cycle in the above table.
External PWM controller required; Consult factory for additional information.

IMPORTANT: Supervisory and leakage current above .010 amp will cause improper operation. *Consult your local ASCO sales office for additional assistance.*

AC

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Number	Nominal Ambient Temp. °F (°C)
	Watts	VA Holding	VA Inrush	Explosionproof	
F	16.1	35	180	272614	-40 to 125 (-40 to 52)

Standard Voltages: 24, 120, 240 Volts AC, 60Hz (or 110, 220, 230 volts AC, 50 Hz)

Solenoid Enclosures

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

Leads

Standard 72" for coil & POC switch

Valve Response Time

Opening Time: Less than 1 second; **Closing Time:** Less than 1 second

Approvals

CSA Certified

1) Valves for Hazardous Locations, File 013976
2) Automatic Gas Valves Z21.21 CSA 6.5 C/I Safety Shutoff, File 112872
3) Standard C22.2 No. 139 “Electrically Operated Valves, File 112872
4)ANSI/ISA- 12.27.01- 2003 Single Seal requirements

Consult factory for Canadian Registration Numbers (CRN)

Proof of Closure Switch

Switch is factory set and non-adjustable
Type: Hermetically Sealed SPDT
Electrical Load: 2 amp at 120/60 / 1 amp at 24 VDC
Enclosure: 303 Stainless Steel, Class I, Div. 1

COMBUSTION

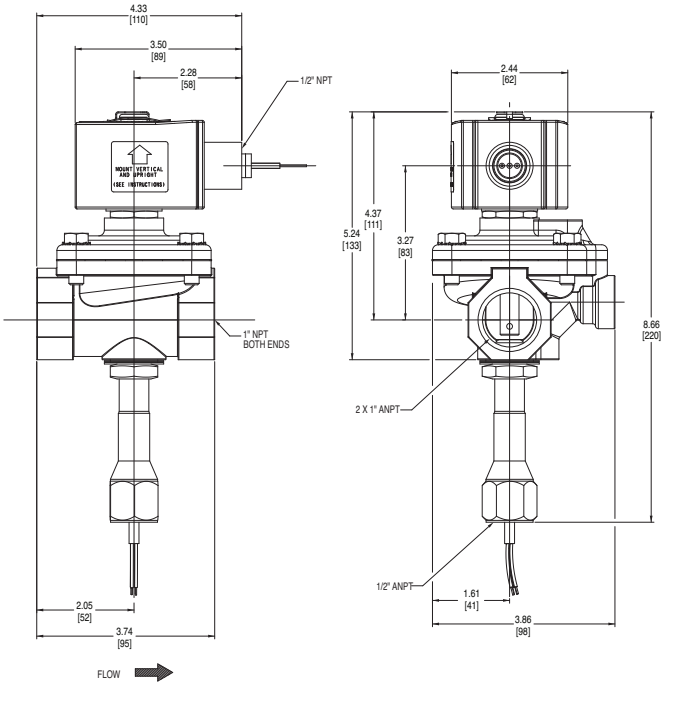
Specifications

Pipe Size (in)	Orifice Size (in)	Cv Flow	Gas Capacity Btu/hr. ①	Gas Capacity Btu/hr. ②	Operating Pressure Differential (psi) ③ Min.	Operating Pressure Differential (psi) ③ Max.	Fluid Temp. Range ˚F (˚C) ④	Catalog Number	Voltage DC	Voltage AC	Const. Ref.	Agency CSA	Wattage
COMBUSTION (Fuel Gas) - Normally Closed (Closed when de-energized)													
1	1	10.2	544,000	6,509,000	0	50	-40 to 125 (-40 to 52)	HV434696011	12 VDC	-	1	❍	23.6
								HV434696012	24 VDC	-			
						35		HV434562001	-	24/60	2	❍	16.1
								HV434562002	-	120/60			
								HV434562004	-	240/60			
								HV434562003	-	110/50			
								HV434562005	-	220/50			
								HV434562006	-	230/50			

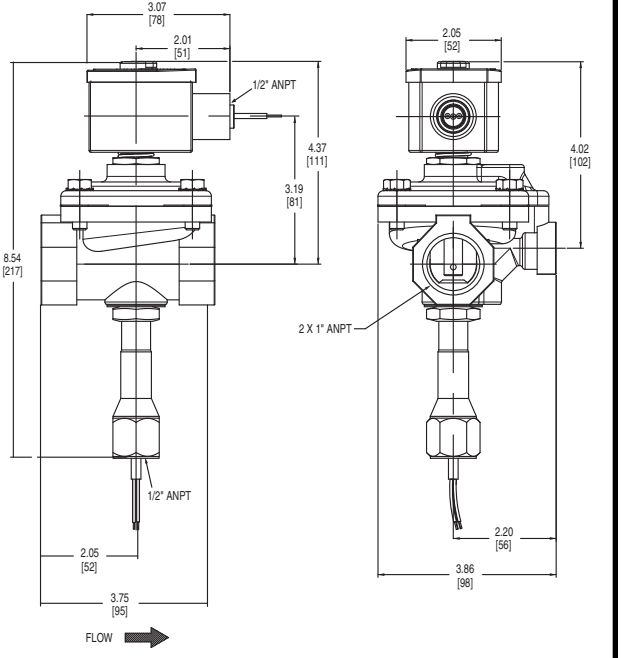
❍ = Safety Shutoff Valve.
① 1" W.C. Drop at 2" W.C. Inlet Pressure, 1,000 Btu/Cu.ft. or more, 0.64 Specific Gravity Gas
② Per CSA 6.5 at 25% Inlet Pressure / 10% pressure drop
③ Dewpoint - To prevent freezing of condensed water vapor in the valve, the fuel gas must have a dewpoint of at least 18˚F (10˚C) below the minumum temperature to which any point of the system will be exposed.
④ Safe Working Pressure (SWP): 100 psi, is the line or system pressure to which the valve may be subjected without being damaged. To ensure proper operation, the Maximum Operating Pressure Differential (MOPD) stamped on the nameplate must be adhered to.

Dimensions: Inches (mm)

Const. Ref. 1



Const. Ref. 2



Must be mounted with solenoid vertical and upright.

COMBUSTION

Features

- Unique double disc design with overtravel provides redundant sealing for leak tight shutoff
- Visual indication of open and shut position
- Proof of closure switch 1 amp
- 2-way normally closed operation
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe taps with plugs for routine testing
- 5 lb. closing spring for high force shut-off

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	304L Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302F Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
H	59.5	122	600	32 to 104	224195	-
H	66	160	936	32 to 104	224195	-
H	69	130	640	32 to 104	224195	-
H	74.5	170	990	32 to 104	224195	-
Standard Voltages: 120, 240 volts AC, 60 Hz.						

Proof of Closure Switch

Switch is factory set and not to be field adjusted.

Reed Switch: Two SPST
(1st switch closed when valve is in closed position.)
(2nd switch closed when valve is in open position.)

Max. Electricity: 1 amp, 120 volts

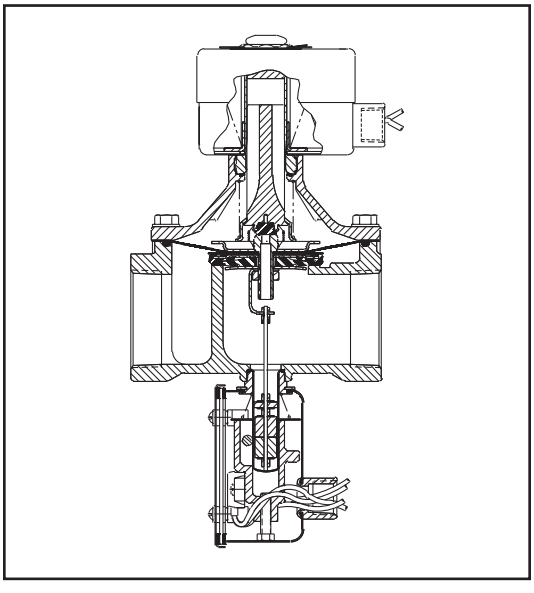
Load: 60 Hz, 15 watt (resistive)

Leads: 18" long

Enclosure: Type 1 General Purpose (std), Type 4 Watertight (opt)

Solenoid Enclosures

RedHat metal Type 1 General Purpose housing with 7/8" knock-out for 1/2" conduit connection. Type 4 Watertight housing optional.



Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618, Safety Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Standard C22.2 No 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I Safety Shutoff, File 112872.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Standard Solenoid Enclosure RedHat - Type 1		Optional Solenoid Enclosure RedHat - Type 4		Agency			Wattage	
			Btu/hr.	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	UL	FM	CSA	Type 1	Type 4
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	1 5/8	12.2	650,000	0	20	104	8043B037	1	8043B038	5	❍	❍	❍	59.5	69.0
1	1 5/8	22	1,170,000	0	20	104	8043A047	1	8043A048	5	❍	❍	❍	59.5	69.0
1 1/4	1 5/8	31	1,657,000	0	20	104	8043A057	2	8043A058	6	❍	❍	❍	59.5	69.0
1 1/2	1 5/8	35	1,867,500	0	20	104	8043A067	2	8043A068	6	❍	❍	❍	59.5	69.0
2	2 3/32	60	3,247,500	0	20	104	8043A077	3	8043A078	7	❍	❍	❍	59.5	69.0
2 1/2	3	105	5,659,500	0	5	104	8043A087	4	8043A088 ②	8	❍	❍	❍	66.0	74.5
3	3	125	6,737,500	0	5	104	8043A097	4	8043A098 ②	8	❍	❍	❍	66.0	74.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Are not UL or CSA approved.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Standard Solenoid Enclosure RedHat - Type 1		Optional Solenoid Enclosure RedHat - Type 4		Agency			Wattage	
			Btu/hr.	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	UL	FM	CSA	Type 1	Type 4
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	41	10.4	650,000	0	1.4	40	8043B037	1	8043B038	5	❍	❍	❍	59.5	69.0
1	41	18.7	1,170,000	0	1.4	40	8043A047	1	8043A048	5	❍	❍	❍	59.5	69.0
1 1/4	41	26.4	1,657,000	0	1.4	40	8043A057	2	8043A058	6	❍	❍	❍	59.5	69.0
1 1/2	41	29.8	1,867,500	0	1.4	40	8043A067	2	8043A068	6	❍	❍	❍	59.5	69.0
2	53	51.0	3,247,500	0	1.4	40	8043A077	3	8043A078	7	❍	❍	❍	59.5	69.0
2 1/2	76	89.3	5,659,500	0	0.3	40	8043A087	4	8043A088 ②	8	❍	❍	❍	66.0	74.5
3	76	106.3	6,737,500	0	0.3	40	8043A097	4	8043A098 ②	8	❍	❍	❍	66.0	74.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Are not UL or CSA approved.

Capabilities Chart

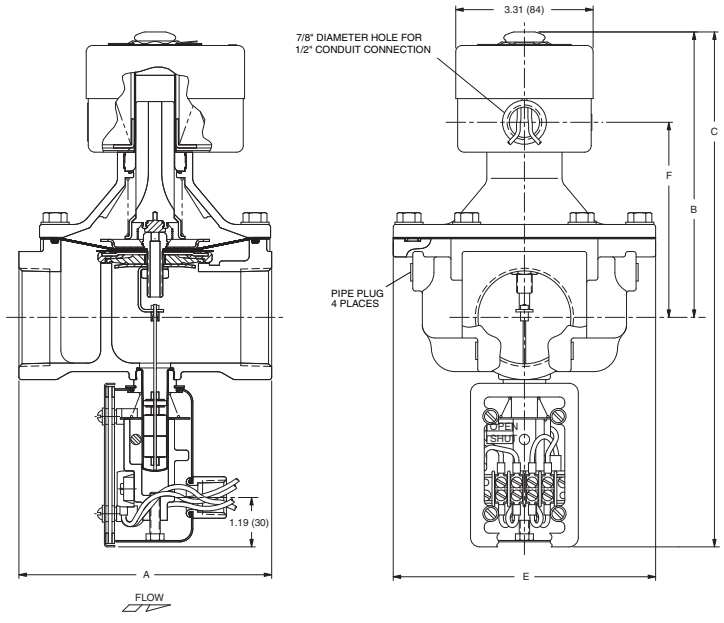
Solenoid Options		Resilient Materials	Base Catalog Number Type 1	Standard Rebuild Kit Type 1	Base Catalog Number Type 4	Standard Rebuild Kit Type 4
Rainproof	Junction Box	NBR	Aluminum	AC	Aluminum	AC
R	JB	●	8043B037	Not Available	8043B038	Not Available
R	JB	●	8043A047	Not Available	8043A048	Not Available
R	JB	●	8043A057	Not Available	8043A058	Not Available
R	JB	●	8043A067	Not Available	8043A068	Not Available
R	JB	●	8043A077	Not Available	8043A078	Not Available
R	JB	●	8043A087	Not Available	8043A088	Not Available
R	JB	●	8043A097	Not Available	8043A098	Not Available

● = Standard. Other options may be available. All option combinations may not be available.

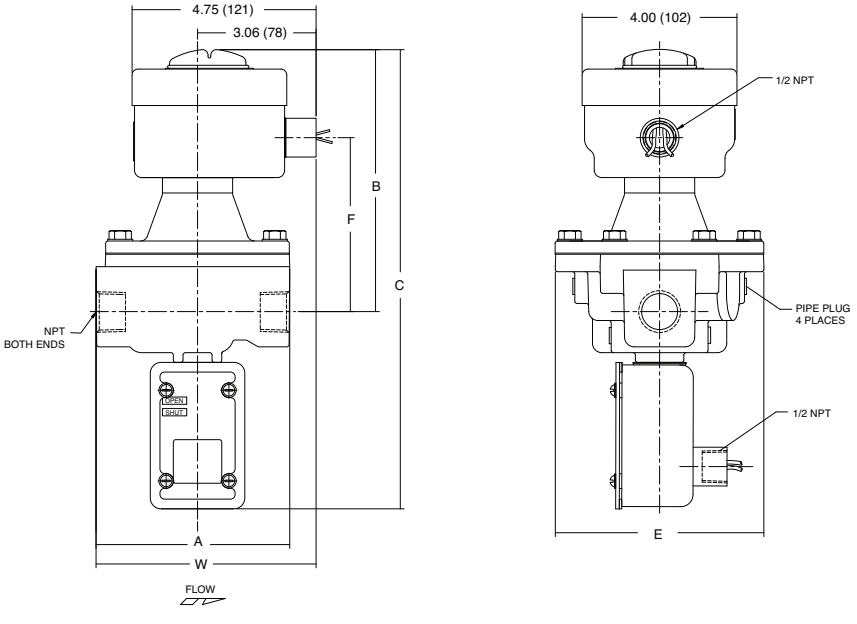
Dimensions inches (mm)

Const. Ref.		A	B	C	E	F	W
1	in	5.00	6.34	11.69	5.38	4.19	-
	mm	127	161	297	137	106	-
2	in	5.00	6.39	11.69	5.38	4.25	-
	mm	127	162	297	137	108	-
3	in	6.09	6.86	12.39	6.32	4.72	-
	mm	155	174	315	161	120	-
4	in	7.80	7.89	14.47	7.95	5.75	-
	mm	198	200	368	202	146	-
5	in	5.00	6.78	12.13	5.38	4.50	6.69
	mm	127	172	308	137	114	170
6	in	5.00	6.84	12.13	5.38	4.56	6.69
	mm	127	174	308	137	116	170
7	in	6.09	7.31	12.84	6.32	5.03	7.35
	mm	155	186	326	161	128	187
8	in	7.80	8.34	14.89	7.95	6.06	7.96
	mm	198	212	378	202	154	202

Const. Ref. 1, 2, 3, 4



Const. Ref. 5, 6, 7, 8



Must be mounted with solenoid vertical and upright.

COMBUSTION

ASCO®

Cable Controlled
Gas Shutoff Valves
For Commercial Kitchens
1/2" to 3" NPT

2/2 SERIES HV216 JV216

General Description

These 2-way aluminum body valves meet the safety standards for commercial industrial and institutional kitchens set by the National Fire protection Association.

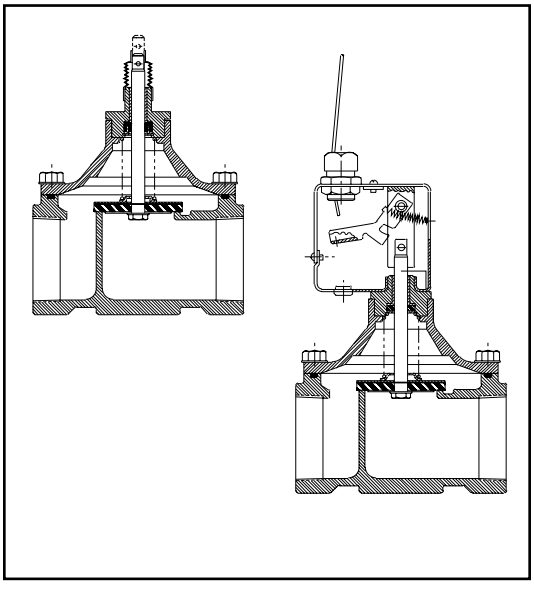
Paragraph 1023 in booklet NFPA #96 - "Ventilation of Cooking Equipment" states, "The operation of an extinguishing system shall automatically shut off all sources of fuel and heat to gas pilots. A manual operation shall be required to reestablish the fuel supply or heat supply."

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel



Types of Operation

Series HV216-585 closes to shut off gas flow when the cable holding it in the open position is released.Catalog No. HV216-585 replaces HV160-265.

Series JV216-587 closes to shut off gas flow when the cable is pulled. Catalog No. JV216-587 replaces JV182-648

Approvals

UL Component listed, File No. MH-8849, Guide No. YRPV2; UL of Canada, File MH27283, Guide No. 167E49.

COMBUSTION

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Fluid & Ambient Temp.°F		Operating Pressure Differential (psi)		Catalog Numbers Cable Operation		Agency
			Min	Max.	Min	Max.	Release to Close	Pull to Close	UL
COMBUSTION (Fuel Gas) - Normally Closed									
1/2	3/4	5.2	32	132	0	5	HV216-585-8	JV216-587-1	❍
3/4	3/4	6.5	32	132	0	5	HV216-585-1	JV216-587-2	❍
1	1 5/8	23	32	132	0	5	HV216-585-2	JV216-587-3	❍
1 1/4	1 5/8	34	32	132	0	5	HV216-585-3	JV216-587-4	❍
1 1/2	1 5/8	38	32	132	0	5	HV216-585-4	JV216-587-5	❍
2	2 3/32	54	32	132	0	5	HV216-585-5	JV216-587-6	❍
2 1/2	3	110	32	132	0	5	HV216-585-6	JV216-587-7	❍
3	3	138	32	132	0	5	HV216-585-7	JV216-587-8	❍

❍ = Safety Shutoff Valve. Safe working pressure 50 psi.

Specifications (Metric units)

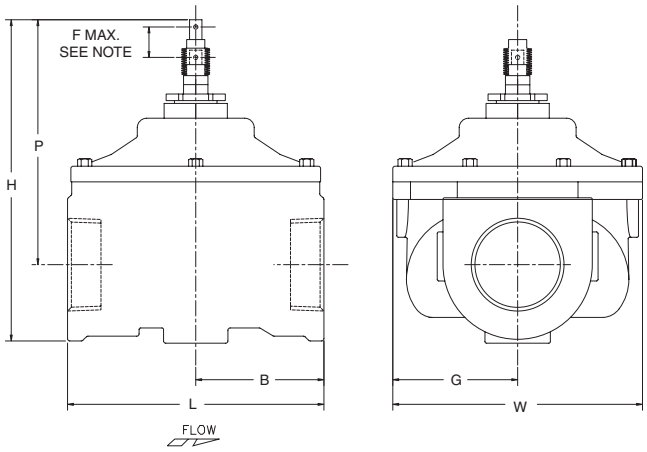
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow (m^3/hr)	Fluid & Ambient Temp.°C		Operating Pressure Differential (bar)		Catalog Numbers Cable Operation		Agency
			Min	Max.	Min	Max.	Release to Close	Pull to Close	UL
COMBUSTION (Fuel Gas) - Normally Closed									
1/2	19	4.5	0	56	0	0.3	HV216-585-8	JV216-587-1	❍
3/4	19	5.6	0	56	0	0.3	HV216-585-1	JV216-587-2	❍
1	41	21	0	56	0	0.3	HV216-585-2	JV216-587-3	❍
1 1/4	41	29	0	56	0	0.3	HV216-585-3	JV216-587-4	❍
1 1/2	41	33	0	56	0	0.3	HV216-585-4	JV216-587-5	❍
2	53	46	0	56	0	0.3	HV216-585-5	JV216-587-6	❍
2 1/2	76	96	0	56	0	0.3	HV216-585-6	JV216-587-7	❍
3	76	119	0	56	0	0.3	HV216-585-7	JV216-587-8	❍

❍ = Safety Shutoff Valve. Safe working pressure 3.4 bar.

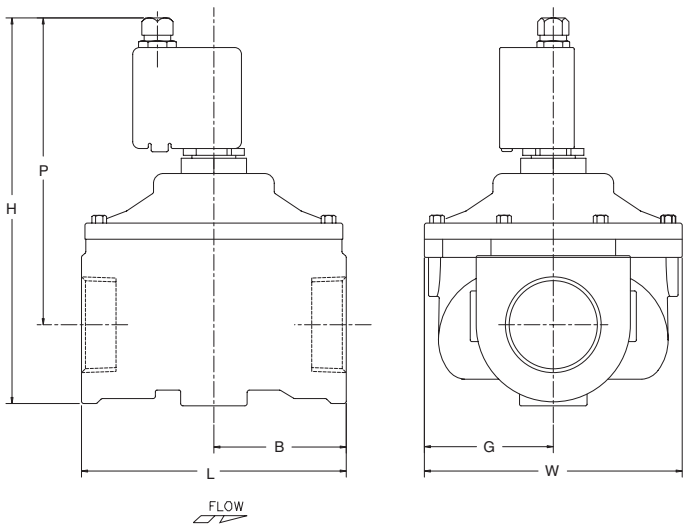
Dimensions inches (mm)

Catalog No.		B	F	G	H	L	P	W
HV216-585-8	ins.	1.37	0.19	1.14	4.37	2.75	3.81	2.45
	mm	35	5	29	111	70	97	62
HV216-585-1	ins.	1.66	0.19	1.14	4.81	3.31	4	2.45
	mm	42	5	29	122	84	102	62
HV216-585-2	ins.	2.37	0.53	2.69	7.16	5	5.84	5.38
	mm	60	13	68	182	127	148	137
HV216-585-3	ins.	2.37	0.53	2.69	7.16	5	5.84	5.38
	mm	60	13	68	182	127	148	137
HV216-585-4	ins.	2.37	0.53	2.69	7.16	5	5.8	5.38
	mm	60	13	68	182	127	147	137
HV216-585-5	ins.	2.81	0.61	3.16	7.75	6.1	6.25	6.31
	mm	71	15	80	197	155	159	160
HV216-585-6	ins.	3.9	0.9	4.12	9.95	7.8	7.62	7.95
	mm	99	23	105	253	198	194	202
HV216-585-7	ins.	3.89	0.9	4.12	9.95	7.78	7.62	7.95
	mm	99	23	105	253	198	194	202

Note: Max. is the full open position. Do not exceed as distortion of internal parts may result.



Catalog No.		B	G	H	L	P	W
JV216-587-1	ins.	1.37	1.14	6.56	2.75	6	2.36
	mm	35	29	167	70	152	60
JV216-587-2	ins.	1.66	1.16	7	3.31	6.19	2.34
	mm	42	29	178	84	157	59
JV216-587-3	ins.	2.38	2.69	8.81	5	7.5	5.38
	mm	60	68	224	127	191	137
JV216-587-4	ins.	2.38	2.69	8.81	5	7.5	5.38
	mm	60	68	224	127	191	137
JV216-587-5	ins.	2.38	2.69	8.81	5	7.56	5.38
	mm	60	68	224	127	192	137
JV216-587-6	ins.	2.81	3.16	9.53	6.1	8.03	6.31
	mm	72	80	242	155	204	160
JV216-587-7	ins.	3.9	4.13	11.4	7.8	9.06	7.9
	mm	99	105	290	198	230	201
JV216-587-8	ins.	3.9	4.13	11.4	7.8	9.06	7.9
	mm	99	105	290	198	230	201



Panel Applications

ASCO relay control panels were originally designed to New York City Board of Education specifications to operate ASCO DC solenoid valves controlling gas flow to school kitchens, domestic cooking classes, ceramic and metal shops. Because of its many features and silent operation, the ASCO relay panel has also been used in many other similar institutions and schools outside New York City. Vandalism and malicious mischief have caused some city governments to make it mandatory that the gas supply be locked off during closed hours. Other governmental bodies and consulting engineers have recognized the need and specifying the ASCO relay panel although not mandated by code.

ASCO relay panels are also used in industrial and commercial installations to control various gases and fluids.

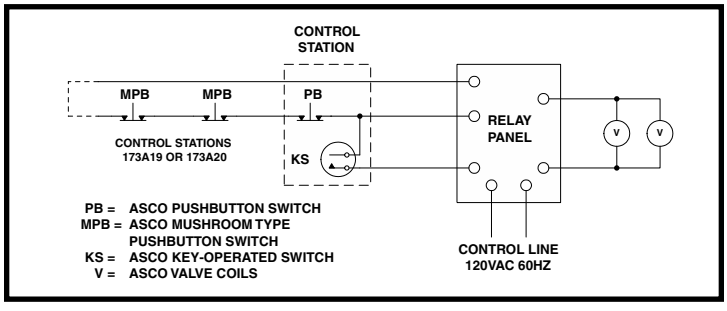
Operations

Operating the key switch on the control station energizes the relay to open a normally closed ASCO DC solenoid valve which turns on the gas flow.

Panel Features

- ASCO's reputation and long experience in control are assurances of highly dependable systems with complete ASCO coordination.
- If the control voltage is lost completely, or reduces to approximately 50% of normal value, the relay de-energizes the normally closed valve to shut off gas flow.
- The valve will not open at restoration of voltage until an authorized person operates the key switch on the control station. This eliminates the danger of gas unknowingly escaping. The gas may also be shut off by depressing the normally closed pushbutton switch located on the control station.
- For convenience, auxiliary push-buttons, such as the ASCO Catalog numbers 173A19 and 173A20 may be located at various accessible points throughout the building.
- Utilization of DC control provided by the relay panel eliminates annoying AC hum.
- Shallow-depth NEMA Type 1 flush-mounted enclosure permits installation directly into the wall for convenience and elimination of obstructions in corridors or high traffic areas.
- ASCO dust-tight industrial relay and solid-state rectifier are designed to provide long life.
- Clearly marked terminals and installation drawings are located on inside of door.
- Approved by New York City Board of Education for use in public schools.

Control System Schematic



ASCO Relay Panel

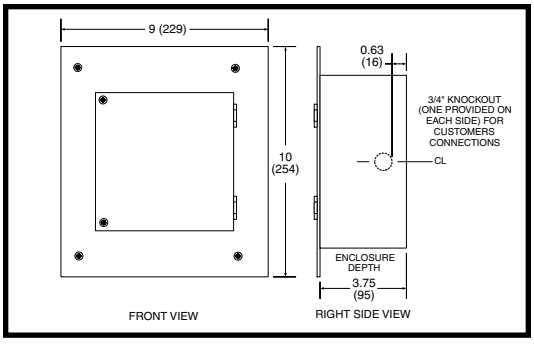
Catalog Number: 108D10C
Input Voltage: 120 volts, 60 Hz
Output Voltage: 80 volts DC
Output Current: 0.8 amp maximum
Note: No buttons on cover

AC Relay Control Panel

Catalog No. 108D90C (replaces AEP 7200) provides similar features as the DC panels described above except for its 120/60 AC voltage output, and a key-operated switch with manual "on" and "off" buttons on the cover.

(Has not been submitted for N.Y.C. Board of Education approvals.)

Panel 108D10C Dimensions

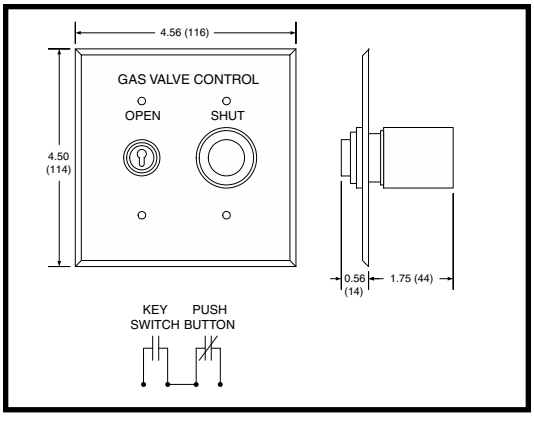


COMBUSTION

MASTER CONTROL STATION

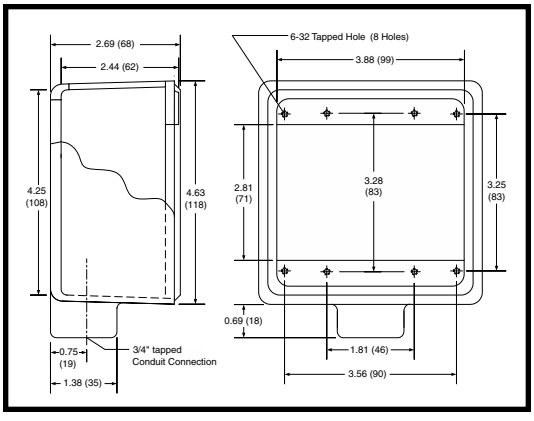
(For use with Panel 108D10C)

Catalog No. **216C89** consists of a key-operated, normally open switch and a normally closed pushbutton mounted in a stainless steel faceplate for flush installation. "Gas Valve Control" is inscribed on the faceplate, and the switches are labeled "Open" over the key switch and "Shut" over the pushbutton. Four inch square wall box is not included.



CONTROL STATIONS

Catalog No. **173A19** (flush mounted) and Catalog No. **173A20** (surface mounted) consist of a momentary mushroom pushbuton labeled "Emergency Stop." When button is hit, power to valves is shut off and they close in 0.1 second.



SOLENOID VALVES

Series 8214 and 8215 solenoid valves feature 2-way normally closed operation designed to handle city gas. Control voltage is 80 to 90 volts DC or 120/60 volts AC.

DC Valves for use with Panel 108D10C

Pipe Size (in)	Cv Flow Factor	Max. Pressure (psi)	Catalog Number	Watt Rating
1/2	4.4	5	8214G020	22.6
		25	8215G020	11.6
3/4	5.1	5	8214G030	22.6
		25	8215G030	11.6
1	21	5	8214G251	15.8
		25	8215G050	
1-1/4	32	5	8214G261	15.8
		25	8215G060	
1-1/2	35	5	8214G271	15.8
		25	8215G070	
2	55	5	8214G281	15.8
	60	15	8215G080	
Standard Enclosure (DC Valves)	**Watertight Type 4, 4X 8214 & 8215 (All sizes)**			

AC Valves for use with Panel 108D90C (replaces AEP7200)

Pipe Size (in)	Cv Flow Factor	Max. Pressure (psi)	Catalog Number	Watt Rating
1/2	4.4	5	8214G020	17.1
		50	8215G020	10.1
3/4	5.1	5	8214G030	17.1
		50	8215G030	10.1
1	21	5	8214G251	20.1
		25	8215B050	15.4
1-1/4	32	5	8214G261	20.1
		25	8215B060	15.4
1-1/2	35	5	8214G271	20.1
		25	8215B070	15.4
2	55	5	8215G281	20.1
	60	25	8215B080	15.4
Standard Enclosure (AC Valves)	**Watertight Type 4, 4X 8214 (All sizes), 8215 (1/2", 3/4" sizes) General Purpose Type 1 8215 (1", 1-1'4", 1-1/2",2" sizes)**			

Solenoid Valves

Order by Catalog Number and Voltage
(Ex. 8214G020 80-90VDC)

Contact ASCO Valve, Inc. at
800-972-2726 www.asco.com

Gas Panels, Master Stations, and Control Stations

Order by Catalog Number (Ex. 108D10C)

Contact ASCO Power Technologies at
800-800-2726 www.ascopower.com

Features

- 2-way normally closed operation
- For liquid petroleum gases (propane) in both liquified and gaseous states
- Applications such as grain dryers, incinerators, space heaters, etc
- Mountable in any position

Fluid

LP Gas (Propane)

Construction

Valve Parts in Contact with Fluids				
Series	**8262**	**8210**	**8214**	**HV226787-1**
Body	Brass	Brass	Aluminum	Brass
Seals and Disc	LT NBR	LT NBR	LT NBR	NBR
Core Tube	305 SS	305 SS	305 SS	305 SS
Core Guide	Brass			
Core and Plugnut	430F SS	430F SS	430F SS	430F SS
Springs	302 SS	17-7PH SS	17-7PH SS	302 SS
Shading Coil	Copper			
Pipe Plug	-	-	Zinc Plated Steel	-

Electrical

Standard Coil Class of Insulation	Watt Rating and Power Consumption			Spare Coil Family	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	10.1	25	70	238610	238614
F	17.1	40	93	238610	238614
F	15.05	28	55	-	064982
Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).					

Solenoid Enclosures

(8210, 8214, 8262)
RedHat II Molded Epoxy, Watertight, Types 1, 2, 3, 3S, 4 and 4X with 1/2" conduit hub.

(HV226787-1)
RedHat Metal, Explosion Proof, Types 3, 7C, 7D, 9E, F&G with 1/2" conduit hub.

Valve Response Time

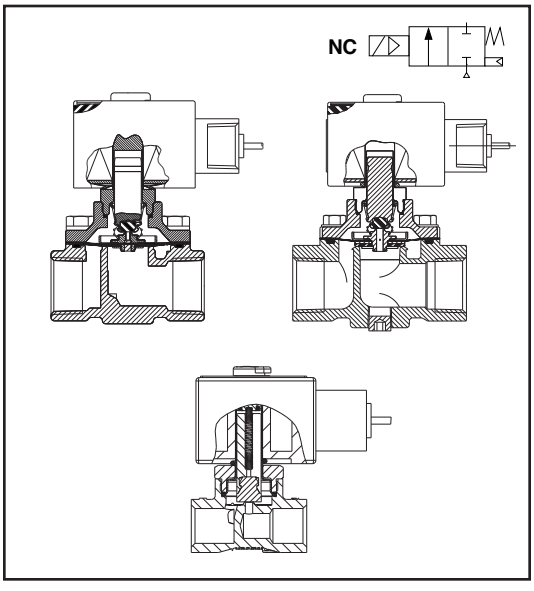
Opening Time: Less than 1 second
Closing Time: Less than 1 second

Nominal Ambient Temp. Ranges

8262 Series: -40˚F to 131˚F (-40˚C to 55˚C)
8214 Series: -40˚F to 125˚F (-40˚C to 52˚C)
8210 Series: -20˚F to 125˚F (-29˚C to 52˚C)
HV226787-1: 32˚F to 125˚F (0˚C to 52˚C)

Note: Max ambient for explosionproof (EF) is 125˚F (52˚C)

Optional: The max. ambient temperature is 140˚F (60˚C) with Class H coil (with or without prefix EF) (excludes HV226787-1)



Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP618, Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves.”

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 010381.
2) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872. (8210 & 8214)
3) Valves for Hazardous Locations, File 013976. (HV226787-1)

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow	Gas Capacity		Operating Pressure Differential (psi)		Max. Fluid Temp.˚F	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (lbs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.		Brass	Stainless Steel	Aluminum		UL	FM	CSA		
COMBUSTION (Fuel Gas) - Normally Closed																
1/4	1/8	0.35	27,250	471,900	0	250	167	8262H110B	8262H185B	-	1	❍	❍	❍	17.1	2.3
1/4	5/32	0.60	46,665	809,000	0	150	167	8262H112B	8262H187B	-	1	❍	❍	❍	17.1	2.3
1/4	5/32	0.60	46,665	809,000	0	100	167	8262H202B	8262H220B	-	1	❍	❍	❍	10.1	2.3
1/4	7/32	0.87	67,665	1,100,000	0	75	167	8262H114B	8262H188B	-	1	❍	❍	❍	17.1	2.3
1/4	7/32	0.87	67,665	1,170,000	0	55	167	8262H208B	8262H226B	-	1	❍	❍	❍	10.1	2.3
1/4	9/32	1	77,775	1,100,000	0	60	167	8262H212B	8262H230B	-	1	❍	❍	❍	17.1	2.3
1/4	9/32	1	77,775	1,345,000	0	45	167	8262H210B	8262H189B	-	1	❍	❍	❍	10.1	2.3
3/8	5/8	2.8	218,000	6,218,000	5	250	125	8210H105B	-	-	2	❍	❍	❍	17.1	3.2
3/8	3/4	3.4	265,000	4,045,000	0	50	125	-	-	8214G010B	3	❍	❍	❍	17.1	2.0
1/2	5/8	3.6	281,000	7,994,000	5	250	125	8210H106B	-	-	2	❍	❍	❍	17.1	3.2
1/2	3/4	4.4	343,000	5,235,000	0	50	125	-	-	8214G020B	3	❍	❍	❍	17.1	2.0
3/4	3/4	5.1	400,000	6,068,000	0	50	125	-	-	8214G030B	4	❍	❍	❍	17.1	2.0
3/4	3/4	6.5	508,000	14,434,000	5	350	125	HV226787-1	-	-	5	❍	-	❍	15.05	3.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 2,300 Btu/cu.ft. or more, 1.6 Specific Gravity Gas.
② Per CSA 6.5 @ 25% inlet pressure/10% pressure drop; for valves above 60 psi. max. inlet, 25%/10% calculation is based on 60 psi. inlet.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity		Operating Pressure Differential (bar)		Max. Fluid Temp.˚C	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (kgs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.		Brass	Stainless Steel	Aluminum		UL	FM	CSA		
COMBUSTION (Fuel Gas) - Normally Closed																
1/4	3.2	0.30	27,250	471,900	0	17	75	8262H110B	8262H185B	-	1	❍	❍	❍	17.1	1.0
1/4	4.0	0.52	46,665	809,000	0	10	75	8262H112B	8262H187B	-	1	❍	❍	❍	17.1	1.0
1/4	4.0	0.52	46,665	809,000	0	7	75	8262H202B	8262H220B	-	1	❍	❍	❍	10.1	1.0
1/4	5.6	0.75	67,665	1,100,000	0	5.2	75	8262H114B	8262H188B	-	1	❍	❍	❍	17.1	1.0
1/4	5.6	0.75	67,665	1,170,000	0	3.8	75	8262H208B	8262H226B	-	1	❍	❍	❍	10.1	1.0
1/4	7.1	0.86	77,775	1,100,000	0	4.1	75	8262H212B	8262H230B	-	1	❍	❍	❍	17.1	1.0
1/4	7.1	0.76	77,775	1,345,000	0	3.1	75	8262H210B	8262H189B	-	1	❍	❍	❍	10.1	1.0
3/8	16	2.4	218,000	6,218,000	5	17	52	8210H105B	-	-	2	❍	❍	❍	17.1	1.5
3/8	19	2.9	265,000	4,045,000	0	3.4	52	-	-	8214G010B	3	❍	❍	❍	17.1	0.9
1/2	16	3.1	281,000	7,994,000	5	17	52	8210H106B	-	-	2	❍	❍	❍	17.1	1.5
1/2	19	3.7	343,000	5,235,000	0	3.4	52	-	-	8214G020B	3	❍	❍	❍	17.1	0.9
3/4	19	4.3	400,000	6,068,000	0	3.4	52	-	-	8214G030B	4	❍	❍	❍	17.1	0.9
3/4	19	5.5	508,000	14,434,000	5	24	52	HV226787-1	-	-	5	❍	-	❍	15.05	1.6

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 2,300 Btu/cu.ft. or more, 1.6 Specific Gravity Gas.
② Per CSA 6.5 @ 25% inlet pressure/10% pressure drop; for valves above 4 bar max. inlet, 25%/10% calculation is based on 4 bar inlet.

Capabilities Chart

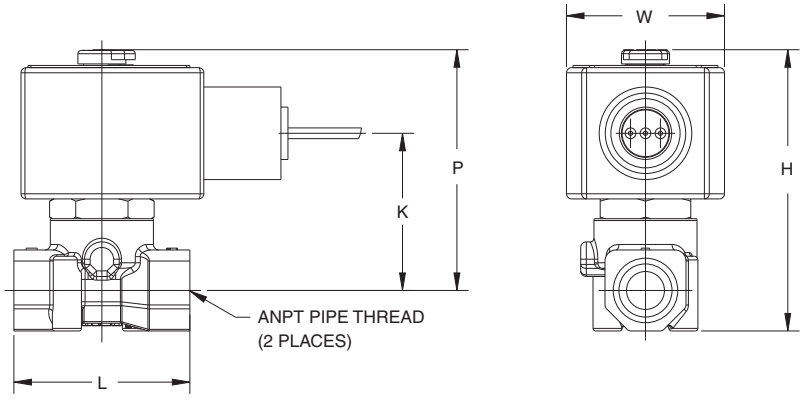
Solenoid Options					Base Catalog Number			Resilient Materials		Standard Rebuild Kit
NEMA Type 3-9	72" Leads	High Temp.	Wiring Box Screw Terminal	Spade	Brass	Stainless Steel	Aluminum	LT NBR	NBR	AC
EF	L	HB	JKP	JSP	8262H110B	8262H185B	-	●	-	323624
EF	L	HB	JKP	JSP	8262H112B	8262H187B	-	●	-	323624
EF	L	HT	JKF	JSF	8262H202B	8262H220B	-	●	-	323624
EF	L	HB	JKP	JSP	8262H114B	8262H188B	-	●	-	323624
EF	L	HT	JKF	JSF	8262H208B	8262H226B	-	●	-	323624
EF	L	HB	JKP	JSP	8262H212B	8262H230B	-	●	-	323624
EF	L	HT	JKF	JSF	8262H210B	8262H189B	-	●	-	323624
EF	L	HB	JKP	-	8210H105B	-	-	●	-	316669
-	L	HB	JKP	-	-	-	8214G010B	●	-	316667
EF	L	HB	JKP	-	8210H106B	-	-	●	-	316669
-	L	HB	JKP	-	-	-	8214G020B	●	-	316667
-	L	HB	JKP	-	-	-	8214G030B	●	-	316667
-	L	-	-	-	HV226787-1	-	-	-	●	310038

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

Const. Ref.		A	B	E	H	J	K	L	N	P	R	T	W
1	in	-	-	-	3.11	-	1.77	1.56	-	2.75	-	-	1.95
	mm	-	-	-	79	-	45	40	-	70	-	-	50
2	in	1.66	3.03	-	3.95	2.04	2.42	2.75	3.42	3.39	-	1.95	2.28
	mm	42	77	-	100	52	61	70	87	86	-	50	58
3	in	1.14	3.03	1.36	4.08	2.04	2.47	2.75	3.42	3.46	1.36	1.95	2.50
	mm	29	77	35	104	52	63	70	87	88	35	50	64
4	in	1.14	3.03	1.25	4.52	2.04	2.66	3.31	3.70	3.64	1.66	1.95	2.39
	mm	29	77	32	115	52	68	84	94	92	42	50	61
5	in	-	3.25	-	4.63	2.76	2.44	3.78	4.38	4.00	1.62	2.50	2.75
	mm	-	83	-	118	70	62	96	111	102	41	64	70

Const. Ref. 1



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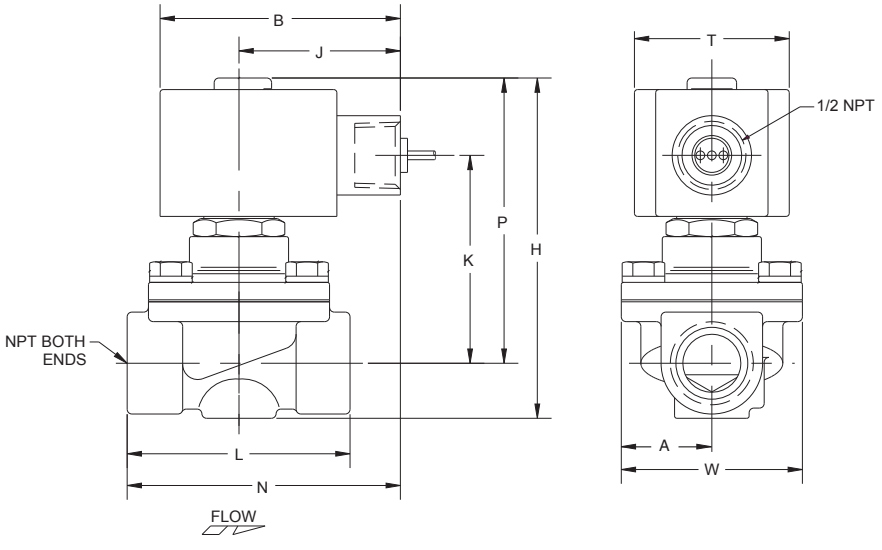
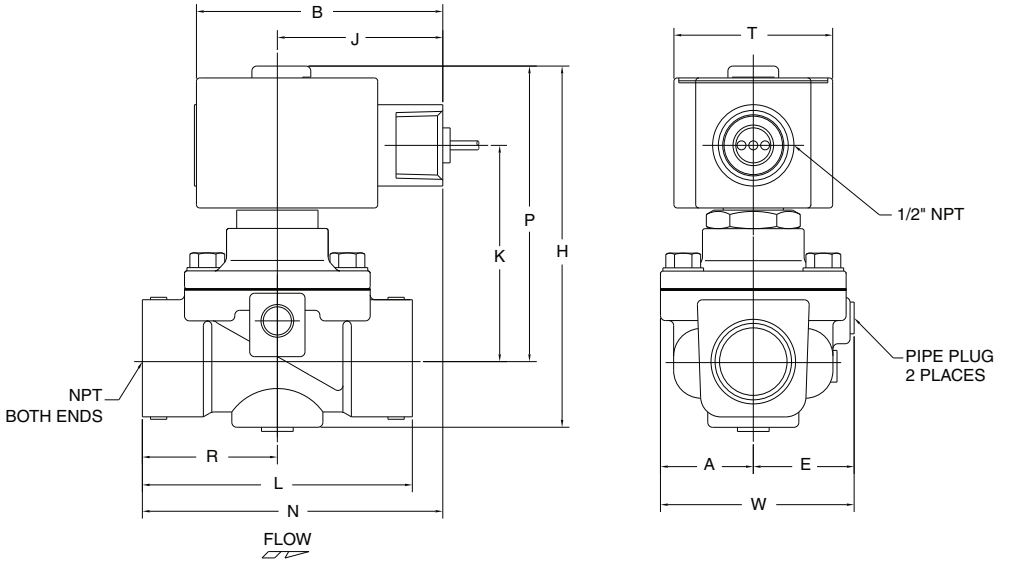


Dimensions inches (mm)

Const. Ref. 3, 4



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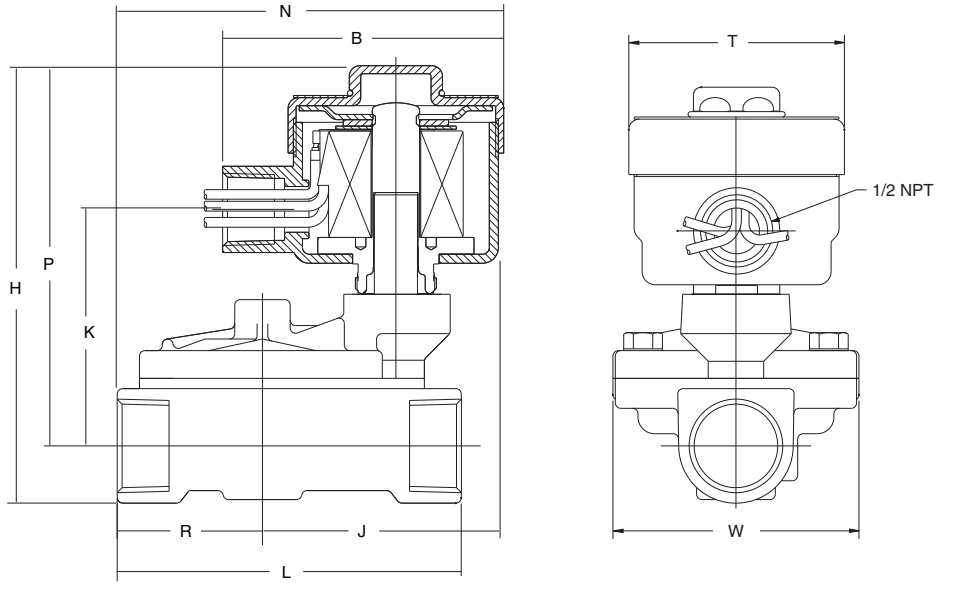

Combustion Valves

The application of valves and accessories for use on combustible media requires careful consideration of the application and use to assure proper and optimal operation. Consideration in valve selection must be given to the function of the valve. This section includes 2-way and 3-way valves for the control of combustible media. Generally a combustion train includes 2 shutoff valves on both the pilot and main media feed lines. The Agency approvals for each product range in this section are included on the individual catalog pages.

Combustible media includes natural gas and oil, and this section is organized into sections for each media.

Additionally special constructions developed for use on combustible media are shown.

Terminology:

Normally Closed or Shutoff Valves

2-way valves to shut off the flow of combustion media when de-energized. These valves permit flow from port 1 to port 2 when energized.

Normally Open or Vent Valves

2-way valves that allow flow when de-energized and are primarily used in block and bleed systems, where the normally open or Vent Valve is positioned in the pipe train between two blocking or shutoff valves.

Visual and/or electrical position indicators are optional on several series of valves and should be considered when designing products to comply with NFPA standards.

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Series	General Description	Size (NPT)	Solenoid	Additional	Page
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Normally Open /Vent Valves					
8030	Normally Open/Vent Valves	3/8" - 3/4"	Watertight	Direct Acting	291
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8214	Normally Open/Vent Valves	3/8" - 2 1/2"	GP and Watertight	Visual Indication and Proof of Closure	295
S262	Normally Open/Vent Valves	3/8" - 3"	General Purpose	-	303
Normally Closed /Blocking Valves					
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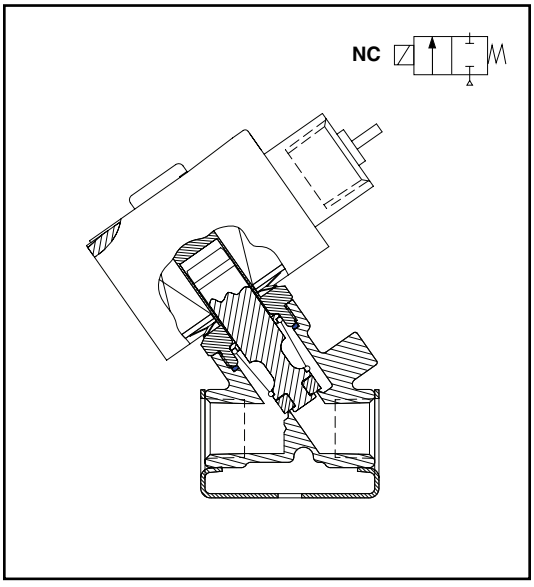
Products may vary in Canada, please call 1-519-758-2700 to check availability of specific catalog numbers.

Features

- 2-way normally closed operation
- For control of commercial and industrial gas burners
- Ideal for low pressure applications
- Brass body construction
- Mountable in any position



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core Guide	Acetal
Rider Rings	PTFE
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.1	25	70	32 to 125	238610	238614
H	10.1	25	70	32 to 140	238810	238814

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140˚F Class H coil with prefix HT.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix "EF" to catalog numbers. (e.g. EF8030G068)

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618, Safety Valves.

FM approved to Class No. 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Standard C22.2 No 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves Z21.21 (6.5), File 112872.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp. °F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED													
3/8	3/8	1.8	97,000	0	15	125	8030G068	1	❍	❍	❍	10.1	2.3
1/2	7/16	2.8	151,000	0	8	125	8030G069	2	❍	❍	❍	10.1	2.7

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp. °C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED													
3/8	10	1.5	97,000	0	1.0	52	8030G068	1	❍	❍	❍	10.1	1.0
1/2	11	2.4	151,000	0	0.6	52	8030G069	2	❍	❍	❍	10.1	1.2

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

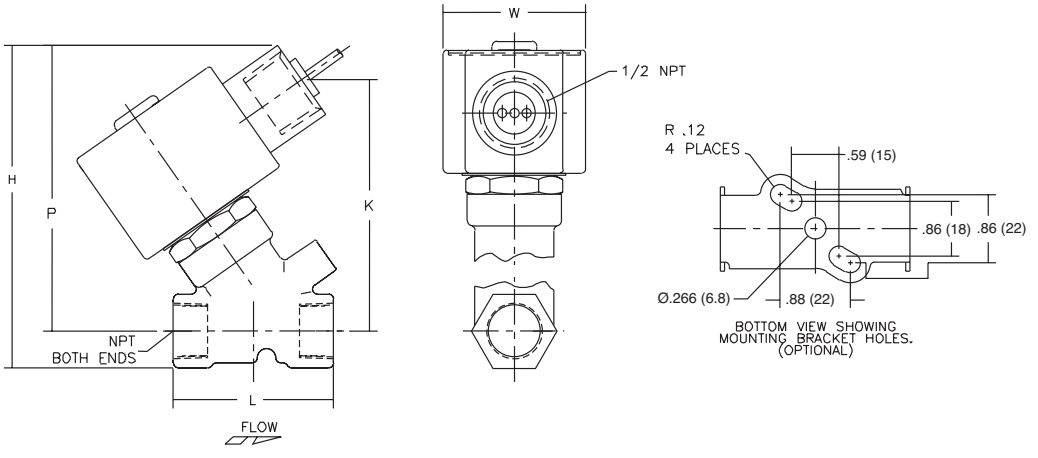
Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Junction Box	Wiring Box Screw Terminal	Brass	NBR	AC
EF	HT	JB	JKF	8030G068	●	306628
EF	HT	JB	JKF	8030G069	●	306629

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	4.00	3.14	1.91	3.55	1.95
	mm	102	80	49	90	50
2	in	4.32	3.39	2.28	3.77	1.95
	mm	110	86	58	96	50

Const. Ref. 1, 2



COMBUSTION

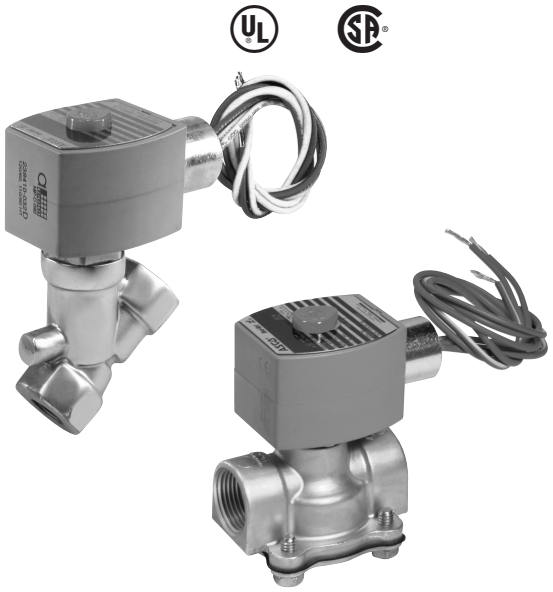
ASCO™ Gas Vent Valves

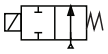
Direct Acting | 3/8" - 3/4" NPT

2/2 SERIES 8030

Features

- 2-way normally open operation
- For control of commercial and industrial gas burners
- Ideal for low pressure applications
- Brass body construction
- Mountable in any position



NO 

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Stem	PA
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.1	25	70	32 to 125	238610	238614
H	10.1	25	70	32 to 140	272810	-
F	16.1	27	160	32 to 125	272610	272614
H	16.1	27	160	32 to 140	238810	238814

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140°F Class H coil with prefix HT.

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 General Purpose Valves.

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
2) Automatic Gas Valves Z21.21 (6.5), File 112872.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix "EF" to catalog numbers. (e.g. EF8030G082)

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

COMBUSTION

Specifications English units (Metric)

Pipe Size (in)	Orifice Size in (mm)	Flow Factor Cv (Kv)	Gas Capacity ① Btu/hr.	Operating Pressure Differential psi (bar) Min.	Operating Pressure Differential psi (bar) Max.	Max. Fluid Temp. ˚F (˚C)	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx Shipping Wieght lbs (kgs)
COMBUSTION (Fuel Gas) - NORMALLY OPEN													
3/8	3/8 (10)	2.1 (1.8)	111,500	0	15 (1.0)	200 (93)	8030G070	1	●	-	●	16.1	3.4 (1.5)
1/2	3/4 (19)	5.5 (4.7)	293,400	0	2 (0.1)	180 (82)	8030G082	2	●	-	●	10.1	3.4 (1.5)
3/4	3/4 (19)	5.9 (5.1)	316,500	0	2 (0.1)	180 (82)	8030G083	3	●	-	●	10.1	3.4 (1.5)

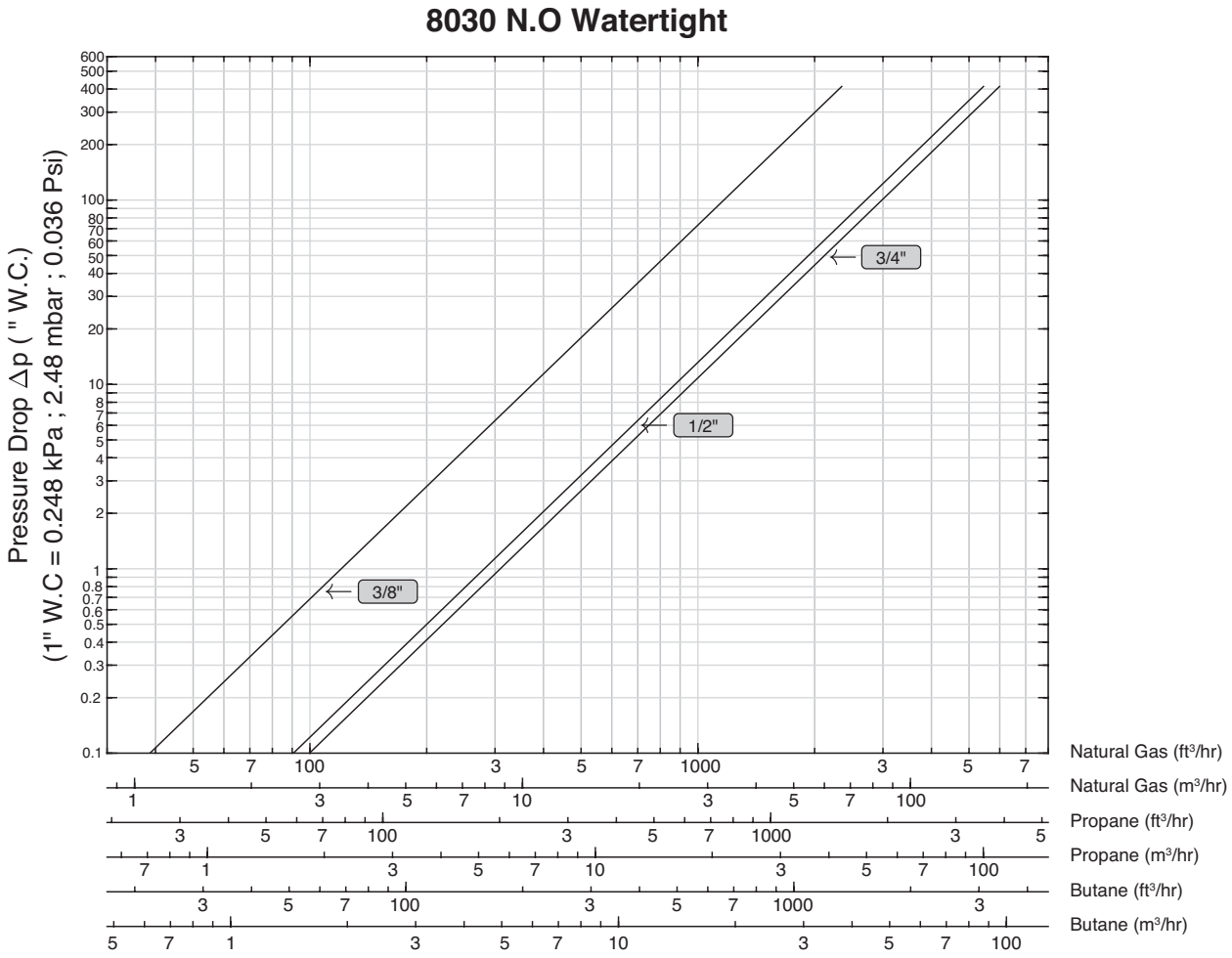
● = General Purpose Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/Cu.Ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Junction Box	Wiring Box Screw Terminal	Brass	NBR	AC
EF	HT	JB	JKF	8030G070	●	302797
EF	HT	JB	JKF	8030G082	●	302799
EF	HT	JB	JKF	8030G083	●	302799

● = Standard. Other options may be available. All option combinations may not be available.

Gas Flow Chart



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

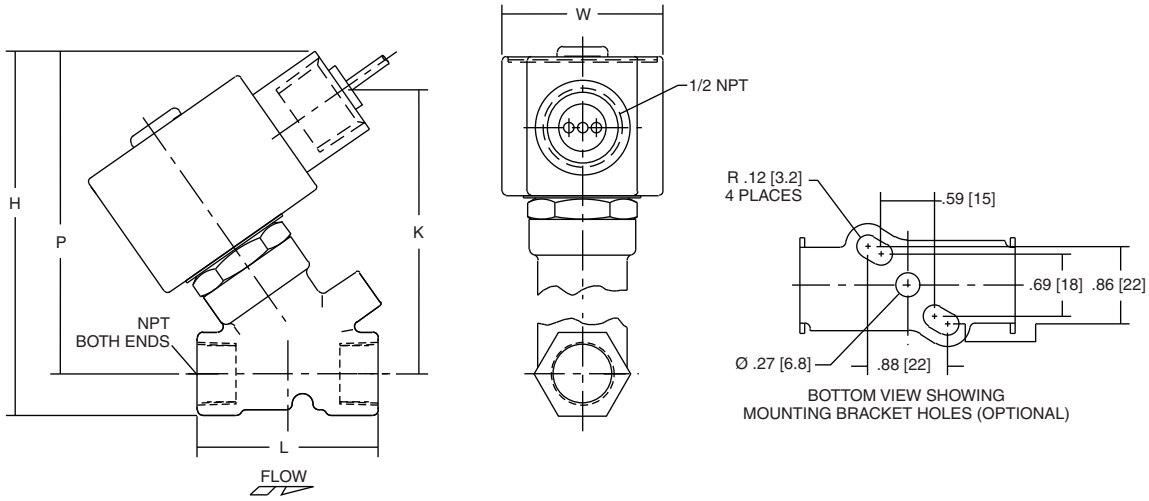
COMBUSTION

Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	in	4.16	1.10	1.91	3.72	2.06
	mm	106	28	49	94	52
2	in	3.97	1.88	2.81	2.85	2.29
	mm	101	48	71	72	58
3	in	3.97	1.88	2.81	2.85	2.29
	mm	101	48	71	72	58

Vent Valve Requirements	
Manifold Line	**Vent Valve**
3/8" through 1 1/2"	3/4
2"	1
2 1/2" through 3"	1 1/4
3 1/2"	1 1/2
4" through 5"	2
5 1/2" through 6"	2 1/2
6 1/2" through 7 1/2"	3

Const. Ref. 1



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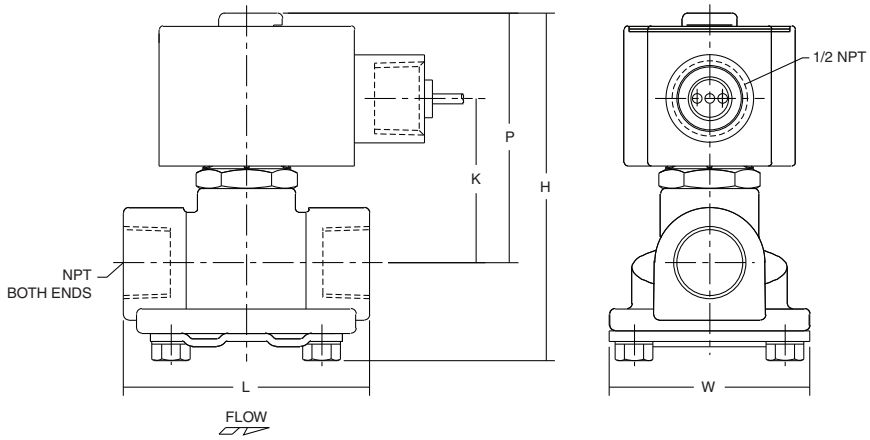


COMBUSTION

Features

- 2-way normally closed operation
- For gas pilot or main control of commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe taps with plugs for routine testing
- Mountable in any position

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core Guide	Acetal
Rider Ring	PTFE
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.1	25	70	-40 to 125	238610	238614
H	10.1	25	70	-40 to 140	238810	-
F	15.4	27	160	-40 to 125	099257	-
H	15.4	27	160	-40 to 140	222345	-

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140˚F Class H coil with prefix HT.

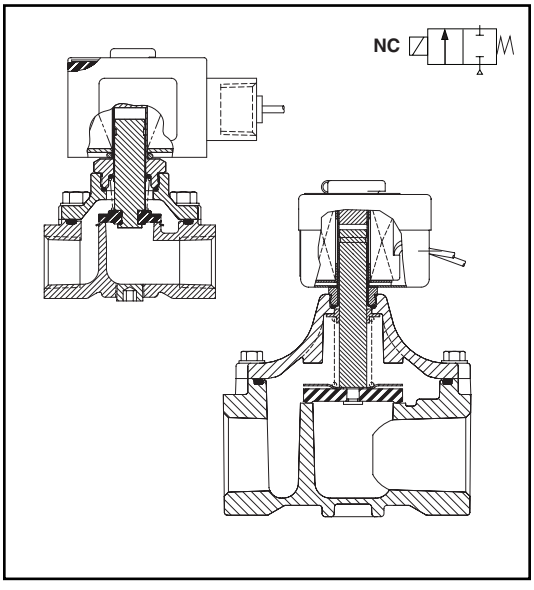
Solenoid Enclosures

Valves with the letter "G" in their catalog numbers, e.g. 8040G021, have RedHat II molded epoxy Types 1, 2, 3, 3S, 4, and 4X combinations
Standard: General Purpose and Watertight solenoid enclosures with 1/2" conduit hub as standard.
Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix "EF" to catalog numbers. (e.g. EF8040G022)

Valves with the letter "C" in their catalog numbers, e.g. 8040C004, have RedHat metal Type 1 General Purpose enclosures with 7/8" hole for 1/2" conduit connection.

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second



Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves" (3/8" thru 3/4" only).

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
2) Automatic Gas Valves Z21.21 (6.5), File 112872.
3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED													
3/8	3/4	3.9	210,000	0	2	125	8040G021	1	❍	❍	❍	10.1	2.8
1/2	3/4	5.4	291,000	0	2	125	8040G022	1	❍	❍	❍	10.1	2.8
3/4	3/4	9.5	512,000	0	2	125	8040G023	2	❍	❍	❍	10.1	2.8
1	1 5/8	16.8	900,000	0	0.5	125	8040C004	3	❍	-	❍	15.4	4.3
1 1/4	1 5/8	19.6	1,100,000	0	0.5	125	8040C005	3	❍	-	❍	15.4	4.3

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED													
3/8	19	3.3	210,000	0	0.1	52	8040G021	1	❍	❍	❍	10.1	1.3
1/2	19	4.6	291,000	0	0.1	52	8040G022	1	❍	❍	❍	10.1	1.3
3/4	19	8.1	512,000	0	0.1	52	8040G023	2	❍	❍	❍	10.1	1.3
1	41	14.3	900,000	0	0.03	52	8040C004	3	❍	-	❍	15.4	2.0
1 1/4	41	16.7	1,100,000	0	0.03	52	8040C005	3	❍	-	❍	15.4	2.0

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

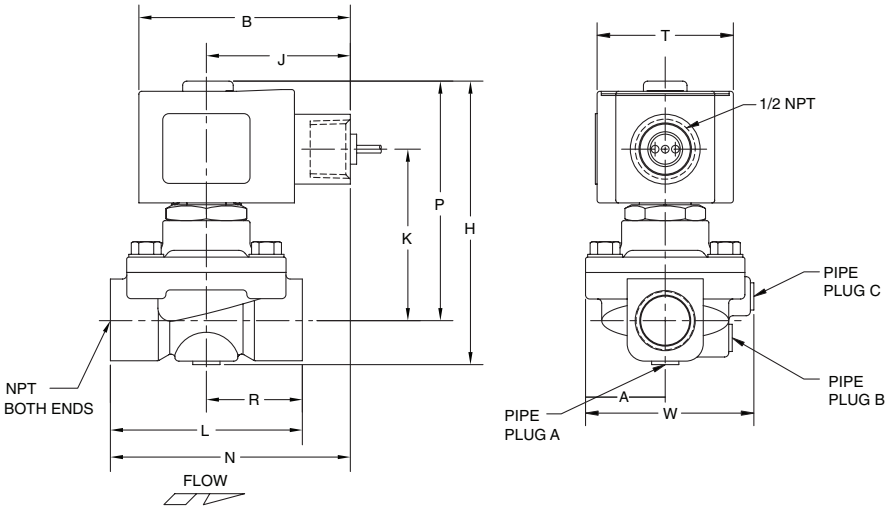
Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Junction Box	Wiring Box Screw Terminal	Aluminum	NBR	AC
EF	HT	-	JKF	8040G021	●	306633
EF	HT	JB	JKF	8040G022	●	306633
EF	HT	JB	JKF	8040G023	●	306633
-	HT	JB	JKF	8040C004	●	304079
-	HT	JB	JKF	8040C005	●	304079

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

Const. Ref.		1	2	3
A	in	1.66	1.66	2.69
	mm	42	42	68
B	in	3.03	3.03	2.69
	mm	77	77	68
H	in	4.05	4.49	6.81
	mm	103	11405	173
J	in	2.04	2.04	1.59
	mm	52	52	40
K	in	2.46	2.65	4.09
	mm	62	67	104
L	in	2.75	3.31	5.00
	mm	70	84	127
N	in	3.42	3.70	-
	mm	87	94	-
R	in	1.38	1.66	2.38
	mm	35	42	60
P	in	3.44	3.63	5.50
	mm	87	92	140
T	in	1.95	1.95	2.22
	mm	50	50	56
W	in	2.42	2.39	5.38
	mm	61	61	137
Pipe Plug		B & C	A & C	-

Const. Ref. 1, 2



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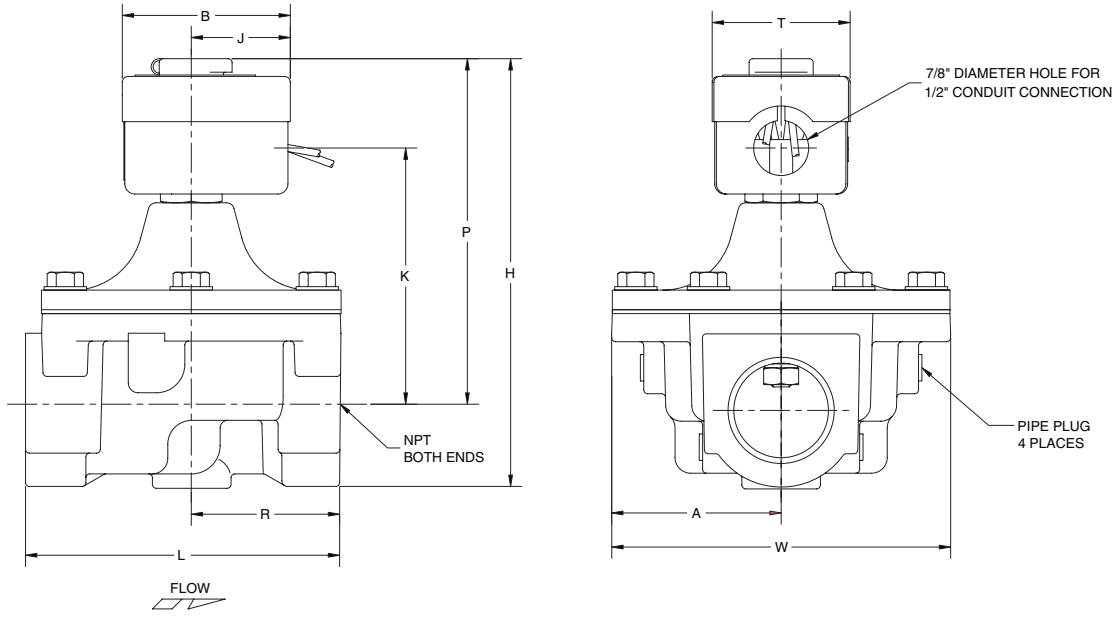
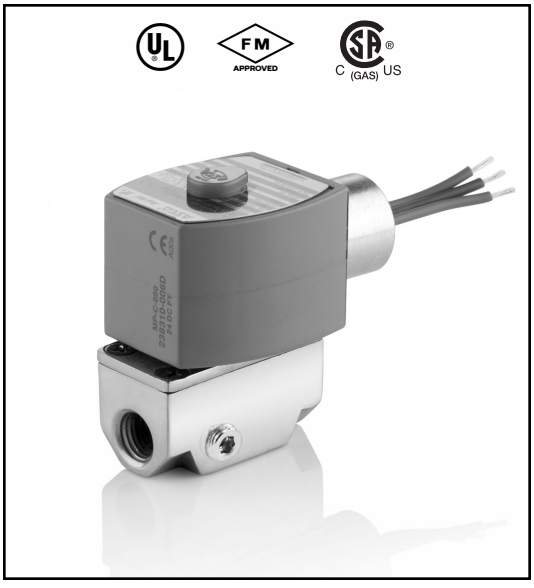
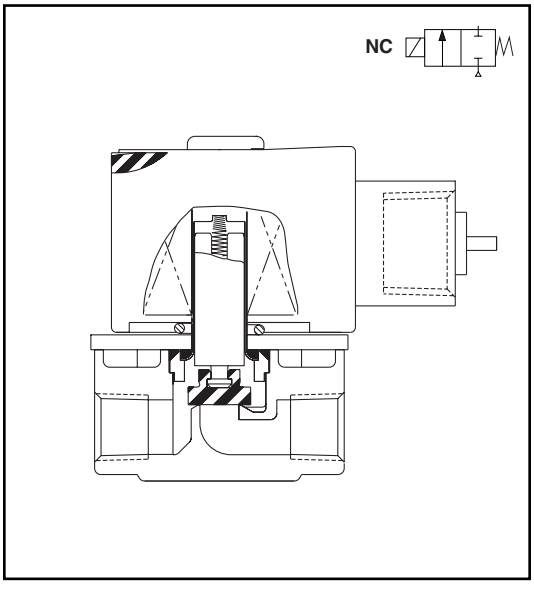


COMBUSTION

Features

- 2-way normally closed operation
- For gas pilot control of commercial and industrial gas burners
- Direct lift with resilient soft seating for tight shut-off
- Valves provided with 1/8" NPT downstream pipe tap with plug for routine testing
- Mountable in any position





Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	17-7 PH
Shading Coil	Copper
Pipe Plug	Zinc Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	6.1	16	40	-40 to 125	238210	238214
H	6.1	16	40	-40 to 140	238410	238414

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140°F Class H coil with prefix HT.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix "EF" to catalog numbers. (e.g. EF8040H006)

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
2) Automatic Gas Valves Z21.21 (6.5), File 112872.
3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage ②	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas)- NORMALLY CLOSED													
1/8	5/16	1	53,700	0	15	125	8040H006	1	❍	❍	❍	6.1	1.8
1/4	5/16	1.1	59,000	0	15	125	8040H007	1	❍	❍	❍	6.1	1.8
3/8	5/16	1.2	64,400	0	15	125	8040H008	1	❍	❍	❍	6.1	1.8

❍ = Safety Shutoff Valve; ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
② On 50 Hz service watt rating is 8.1; EF option approved to UL and CSA only.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage ②	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas)- NORMALLY CLOSED													
1/8	8.000	0.9	53,700	0	1	52	8040H006	1	❍	❍	❍	6.1	0.8
1/4	8.000	0.9	59,000	0	1	52	8040H007	1	❍	❍	❍	6.1	0.8
3/8	8.000	1.0	64,400	0	1	52	8040H008	1	❍	❍	❍	6.1	0.8

❍ = Safety Shutoff Valve; ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.
② On 50 Hz service watt rating is 8.1; EF option approved to UL and CSA only.

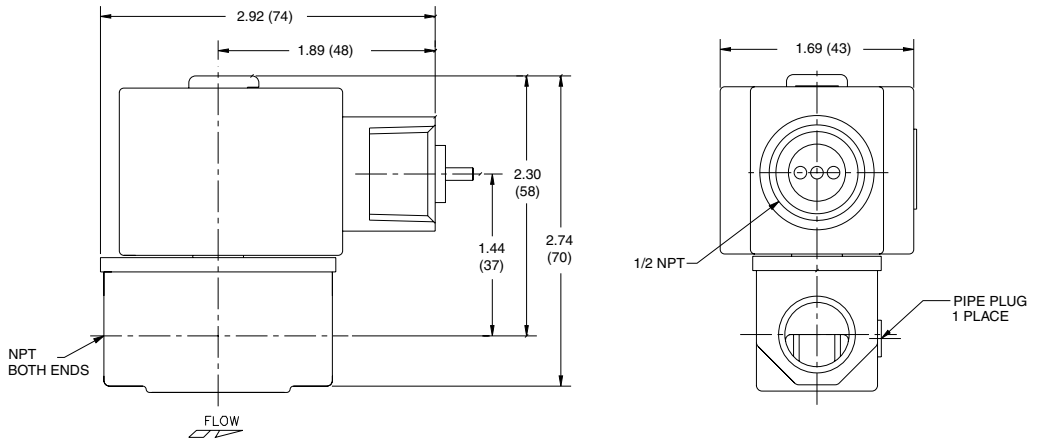
Capabilities Chart

Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Junction Box	Wiring Box Screw Terminal	Aluminum	NBR	AC
EF	HT	-	JKF	8040H006	●	318247
EF	HT	JB	JKF	8040H007	●	318247
EF	HT	JB	JKF	8040H008	●	318247

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

Const. Ref. 1



COMBUSTION

ASCO™ Gas Shutoff Valves

General Purpose Enclosure | 3/4" - 3" NPT

2/2 SERIES 8042

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe taps with plugs for routine testing
- 5 lb. closing spring for high force shut-off

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302F Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption AC			Ambient Temp.°F	Spare Coil Family	
					General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
H	59.5	122	600	32 to 104	224195	-
H	66	160	936	32 to 104	224195	-
Standard Voltages: 120, 240 volts AC, 60 Hz.						

Solenoid Enclosures

RedHat metal Type 1 General Purpose housing with 7/8" knock-out for 1/2" conduit connection.

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP618, Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves”(3/4” only).

CSA Certified to:

1) Standard C22.2 No 139 “Electrically Operated Valves,” File 010381.
2) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I Safety Shutoff, File 112872.

COMBUSTION

Specifications (English units)

Pipe Size (in)	Orifice Size in (mm)	Flow Factor Cv (Kv)	Gas Capacity ① Btu/hr.	Operating Pressure Differential psi (bar) Min.	Operating Pressure Differential psi (bar) Max.	Max. Fluid Temp. ˚F (˚C)	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage
COMBUSTION (Fuel Gas) - NORMALLY CLOSED												
3/4	1 5/8 (41)	12.2 (10.4)	650,000	0	20 (1.4)	104 (40)	8042D035	1	❍	❍	❍	59.5
1	1 5/8 (41)	24 (20.4)	1,290,000	0	20 (1.4)	104 (40)	8042C045	2	❍	-	❍	59.5
1 1/4	1 5/8 (41)	35 (29.8)	1,900,000	0	20 (1.4)	104 (40)	8042C055	2	❍	-	❍	59.5
1 1/2	1 5/8 (41)	40 (34.0)	2,145,000	0	20 (1.4)	104 (40)	8042C065	2	❍	-	❍	59.5
2	2 3/32 (53)	60 (51.0)	3,241,000	0	20 (1.4)	104 (40)	8042C075	3	❍	-	❍	59.5
2 1/2	3 (76)	120 (102.0)	6,467,500	0	5 (0.3)	104 (40)	8042C085	4	❍	-	❍	66.0
3	3 (76)	130 (110.5)	7,002,500	0	5 (0.3)	104 (40)	8042C095	4	❍	-	❍	66.0

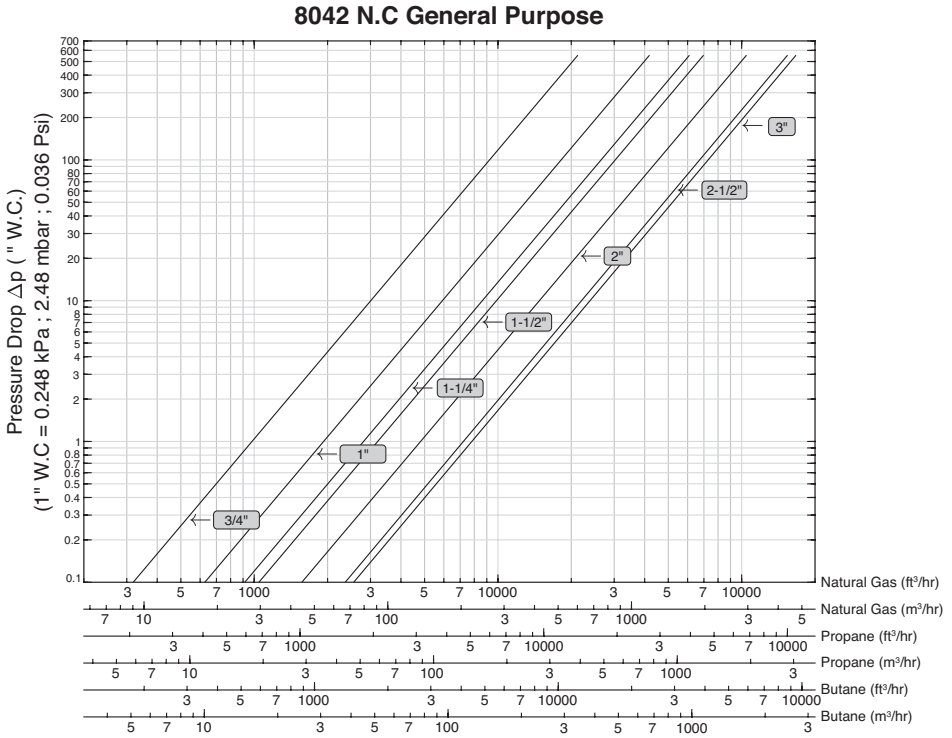
❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

Solenoid Options		Resilient Materials	Base Catalog Number	Standard Rebuild Kit
Rainproof	Junction Box	NBR	Aluminum	AC
R	JB	●	8042D035	304081
R	JB	●	8042C045	304081
R	JB	●	8042C055	304081
R	JB	●	8042C065	304081
R	JB	●	8042C075	304082
R	JB	●	8042C085	304083
R	JB	●	8042C095	304083

● = Standard. Other options may be available. All option combinations may not be available.

Gas Flow Chart

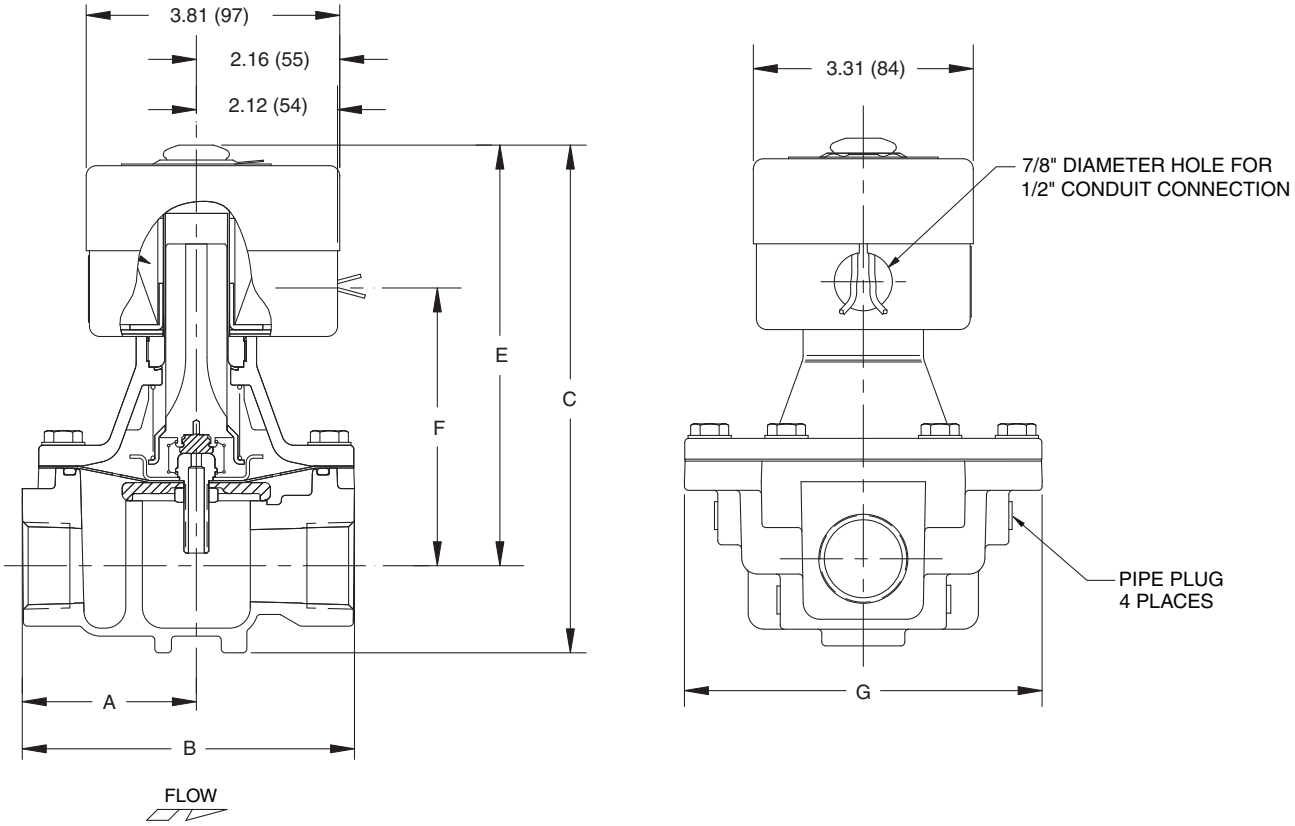


Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

COMBUSTION

Dimensions inches (mm)

Const. Ref.		A	B	C	E	F	G
1	in	2.62	5.00	7.66	6.34	4.19	5.38
	mm	67	127	195	161	106	137
2	in	2.62	5.00	7.66	6.39	4.25	5.38
	mm	67	127	195	162	108	137
3	in	3.28	6.09	8.36	6.86	4.72	6.32
	mm	83	155	212	174	120	161
4	in	3.89	7.80	10.22	7.89	5.75	7.99
	mm	99	198	260	200	146	203



Must be mounted with solenoid vertical and upright.

COMBUSTION

Features

- Unique double disc design with overtravel provides redundant sealing for leak tight shutoff
- Visual indication of open and shut position
- Proof of closure switch 1 amp
- 2-way normally closed operation
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe taps with plugs for routine testing
- 5 lb. closing spring for high force shut-off

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	304L Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302F Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
H	59.5	122	600	32 to 104	224195	-
H	66	160	936	32 to 104	224195	-
H	69	130	640	32 to 104	224195	-
H	74.5	170	990	32 to 104	224195	-
Standard Voltages: 120, 240 volts AC, 60 Hz.						

Proof of Closure Switch

Switch is factory set and not to be field adjusted.

Reed Switch: Two SPST
(1st switch closed when valve is in closed position.)
(2nd switch closed when valve is in open position.)

Max. Electricity: 1 amp, 120 volts

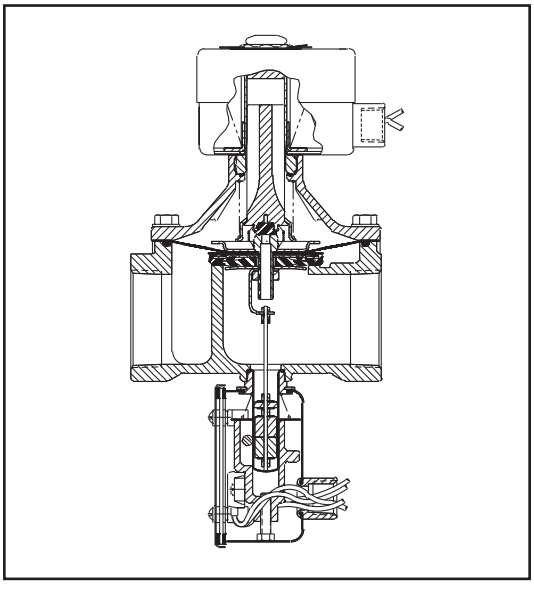
Load: 60 Hz, 15 watt (resistive)

Leads: 18" long

Enclosure: Type 1 General Purpose (std), Type 4 Watertight (opt)

Solenoid Enclosures

RedHat metal Type 1 General Purpose housing with 7/8" knock-out for 1/2" conduit connection. Type 4 Watertight housing optional.



Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618, Safety Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Standard C22.2 No 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I Safety Shutoff, File 112872.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Standard Solenoid Enclosure RedHat - Type 1		Optional Solenoid Enclosure RedHat - Type 4		Agency			Wattage	
			Btu/hr.	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	UL	FM	CSA	Type 1	Type 4
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	1 5/8	12.2	650,000	0	20	104	8043B037	1	8043B038	5	❍	❍	❍	59.5	69.0
1	1 5/8	22	1,170,000	0	20	104	8043A047	1	8043A048	5	❍	❍	❍	59.5	69.0
1 1/4	1 5/8	31	1,657,000	0	20	104	8043A057	2	8043A058	6	❍	❍	❍	59.5	69.0
1 1/2	1 5/8	35	1,867,500	0	20	104	8043A067	2	8043A068	6	❍	❍	❍	59.5	69.0
2	2 3/32	60	3,247,500	0	20	104	8043A077	3	8043A078	7	❍	❍	❍	59.5	69.0
2 1/2	3	105	5,659,500	0	5	104	8043A087	4	8043A088 ②	8	❍	❍	❍	66.0	74.5
3	3	125	6,737,500	0	5	104	8043A097	4	8043A098 ②	8	❍	❍	❍	66.0	74.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Are not UL or CSA approved.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Standard Solenoid Enclosure RedHat - Type 1		Optional Solenoid Enclosure RedHat - Type 4		Agency			Wattage	
			Btu/hr.	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	UL	FM	CSA	Type 1	Type 4
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	41	10.4	650,000	0	1.4	40	8043B037	1	8043B038	5	❍	❍	❍	59.5	69.0
1	41	18.7	1,170,000	0	1.4	40	8043A047	1	8043A048	5	❍	❍	❍	59.5	69.0
1 1/4	41	26.4	1,657,000	0	1.4	40	8043A057	2	8043A058	6	❍	❍	❍	59.5	69.0
1 1/2	41	29.8	1,867,500	0	1.4	40	8043A067	2	8043A068	6	❍	❍	❍	59.5	69.0
2	53	51.0	3,247,500	0	1.4	40	8043A077	3	8043A078	7	❍	❍	❍	59.5	69.0
2 1/2	76	89.3	5,659,500	0	0.3	40	8043A087	4	8043A088 ②	8	❍	❍	❍	66.0	74.5
3	76	106.3	6,737,500	0	0.3	40	8043A097	4	8043A098 ②	8	❍	❍	❍	66.0	74.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Are not UL or CSA approved.

Capabilities Chart

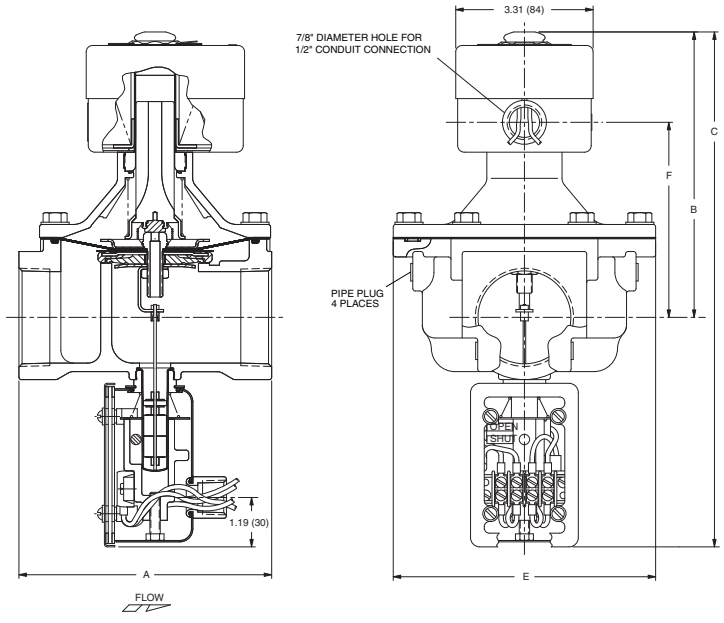
Solenoid Options		Resilient Materials	Base Catalog Number Type 1	Standard Rebuild Kit Type 1	Base Catalog Number Type 4	Standard Rebuild Kit Type 4
Rainproof	Junction Box	NBR	Aluminum	AC	Aluminum	AC
R	JB	●	8043B037	Not Available	8043B038	Not Available
R	JB	●	8043A047	Not Available	8043A048	Not Available
R	JB	●	8043A057	Not Available	8043A058	Not Available
R	JB	●	8043A067	Not Available	8043A068	Not Available
R	JB	●	8043A077	Not Available	8043A078	Not Available
R	JB	●	8043A087	Not Available	8043A088	Not Available
R	JB	●	8043A097	Not Available	8043A098	Not Available

● = Standard. Other options may be available. All option combinations may not be available.

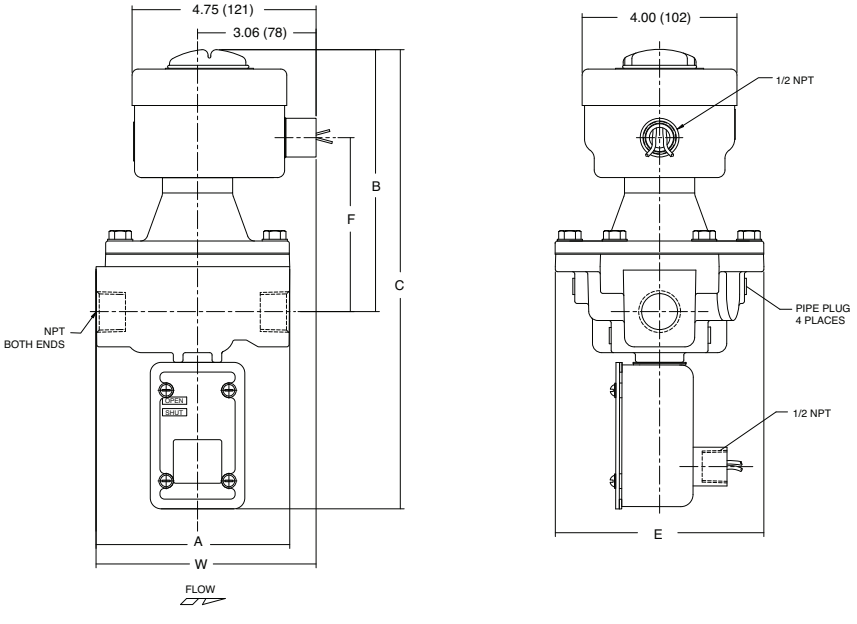
Dimensions inches (mm)

Const. Ref.		A	B	C	E	F	W
1	in	5.00	6.34	11.69	5.38	4.19	-
	mm	127	161	297	137	106	-
2	in	5.00	6.39	11.69	5.38	4.25	-
	mm	127	162	297	137	108	-
3	in	6.09	6.86	12.39	6.32	4.72	-
	mm	155	174	315	161	120	-
4	in	7.80	7.89	14.47	7.95	5.75	-
	mm	198	200	368	202	146	-
5	in	5.00	6.78	12.13	5.38	4.50	6.69
	mm	127	172	308	137	114	170
6	in	5.00	6.84	12.13	5.38	4.56	6.69
	mm	127	174	308	137	116	170
7	in	6.09	7.31	12.84	6.32	5.03	7.35
	mm	155	186	326	161	128	187
8	in	7.80	8.34	14.89	7.95	6.06	7.96
	mm	198	212	378	202	154	202

Const. Ref. 1, 2, 3, 4



Const. Ref. 5, 6, 7, 8



Must be mounted with solenoid vertical and upright.

COMBUSTION

ASCO™ Gas Shutoff Valves

Pilot Operated | 3/8" - 3/4" NPT

2/2 SERIES 8210

Features

- 2-way normally closed operation
- For control of commercial and industrial gas burners
- Ideal for high pressure applications
- Brass body construction
- Mountable in any position

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.°F	Spare Coil Family			
		AC				General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush		AC	DC	AC	DC
F	-	10.1	25	70	-20 to 125	238610	-	238614	-
H	-	10.1	25	70	-20 to 140	238810	-	238914	-
F	11.6	-	-	-	-20 to 104	-	238710	-	238714

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). 6, 12, 24, 120, 240 volts DC. Must be specified when ordering.

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP618, Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves.”

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 010381

2) Automatic Gas Valves Z21.21(6.5) C/I, File 112872.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.
Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix “EF” to catalog numbers. (e.g. EF8210G075).

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

ASCO™ Gas Shutoff Valves

Pilot Operated | 3/8" - 3/4" NPT

Specifications English units (Metric)

Pipe Size (in)	Orifice Size (in)	Flow Factor Cv (Kv)	Gas Capacity ① Btu/hr.	Operating Pressure Differential psi (bar) Min.	Max. AC	Max. DC	Max. Fluid Temp. ˚F (˚C) AC	DC	Catalog Number	Const. Ref.	Agency UL	FM	CSA	Wattage AC	DC	Approx. Shipping Weight lbs (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED																
3/8	5/8	2.8 (2.4)	150,000	0	50 (3.4)	25 (1.7)	125 (52)	104 (40)	8210G074	1	❍	❍	❍	10.1	11.6	3.2 (1.5)
1/2	5/8	3.6 (3.1)	193,000	0	50 (3.4)	25 (1.7)	125 (52)	104 (40)	8210G075	1	❍	❍	❍	10.1	11.6	3.2 (1.5)
3/4	3/4	5.0 (4.3)	295,000	0	50 (3.4)	25 (1.7)	125 (52)	104 (40)	8210G076	2	❍	❍	❍	10.1	11.6	3.2 (1.5)

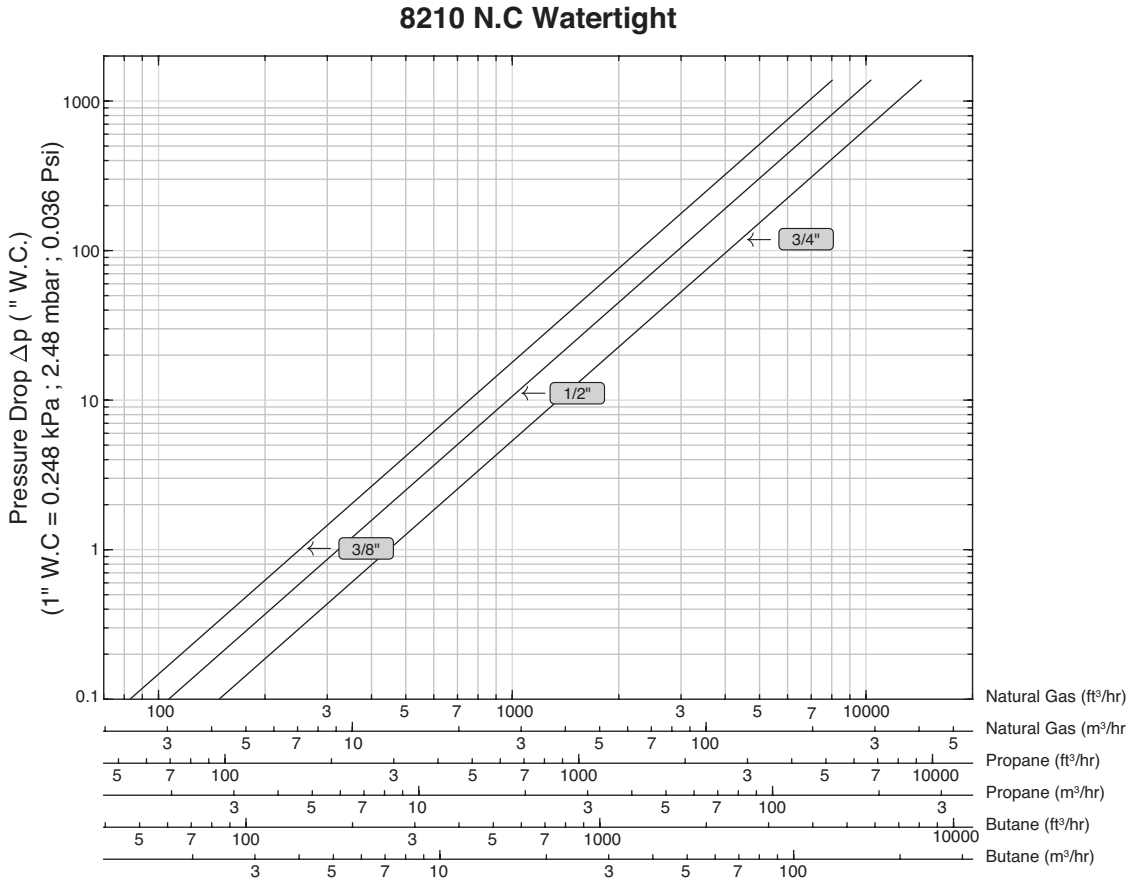
❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit	
Type 3-9	High Temp.	Junction Box ②	Wiring Box Screw Terminal	Brass	NBR	AC	DC
EF	HT	JB	JKF	8210G074	●	304076	306359
EF	HT	JB	JKF	8210G075	●	304076	306359
EF	HT	JB	JKF	8210G076	●	304076	306359

● = Standard. Other options may be available. All option combinations may not be available.
② UL and CSA only.

Gas Flow Chart



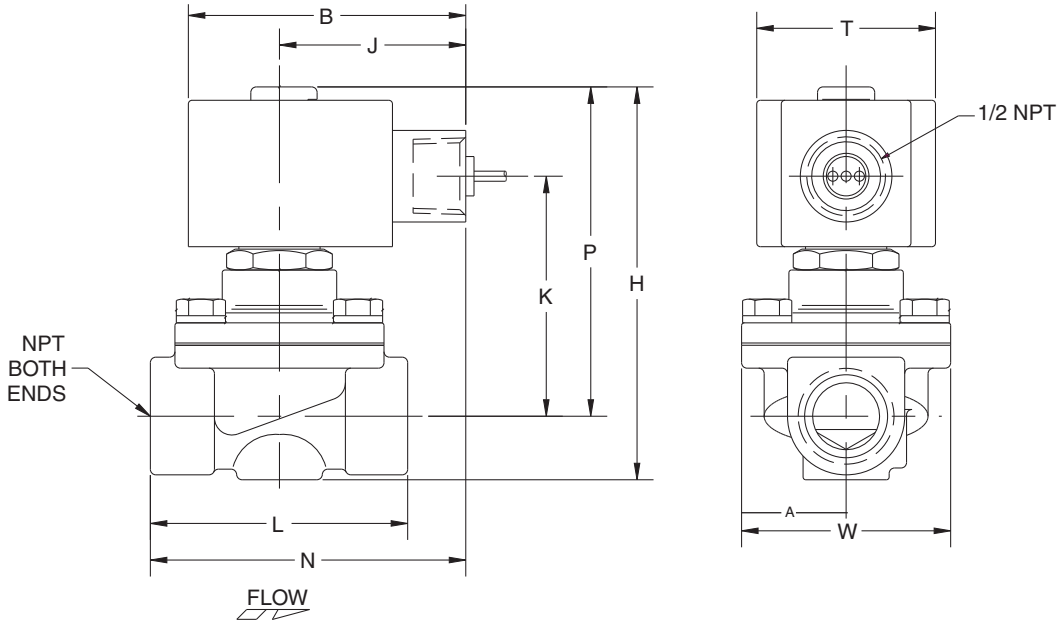
Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

COMBUSTION

Dimensions inches (mm)

Const. Ref.		A	B	H	J	K	L	N	P	T	W
1	in	1.66	3.03	3.95	2.04	2.42	2.75	3.42	3.39	1.95	2.28
	mm	42	77	100	52	61	70	87	86	50	58
2	in	1.66	3.03	4.20	2.04	2.58	2.81	3.45	3.55	1.95	2.28
	mm	42	77	107	52	66	71	88	90	50	58

Const. Ref. 1, 2



Mountable in any position.

COMBUSTION

Features

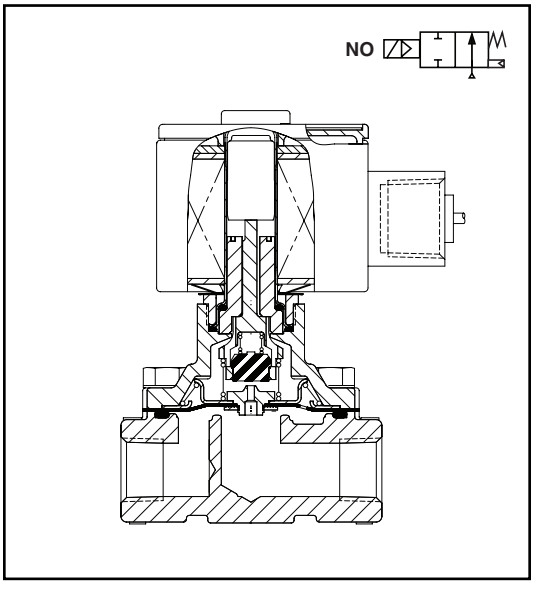
- 2-way normally open operation
- For control of commercial and industrial gas burners
- Ideal for high pressure applications
- Brass body construction
- Mountable in any position

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper



Electrical

Standard Coil Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.1	25	70	32 to 125	238610	238614
H	10.1	25	70	32 to 140	238810	238914

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140°F Class H coil with prefix HT.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix "EF" to catalog numbers. (e.g. EF8210G034)

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618, General Purpose Valves.

CSA Certified to:

Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp. °F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY OPEN													
3/8	5/8	2.8	150,000	0	125	180	8210G033	1	●	-	●	10.1	3.4
1/2	5/8	3.5	188,000	0	125	180	8210G034	1	●	-	●	10.1	3.4
3/4	3/4	5.5	295,000	0	125	180	8210G035	2	●	-	●	10.1	3.6

● = General Purpose Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp. °C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY OPEN													
3/8	16	2.4	150,000	0	8.6	82	8210G033	1	●	-	●	10.1	1.5
1/2	16	3.0	188,000	0	8.6	82	8210G034	1	●	-	●	10.1	1.5
3/4	19	4.7	295,000	0	8.6	82	8210G035	2	●	-	●	10.1	1.6

● = General Purpose Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

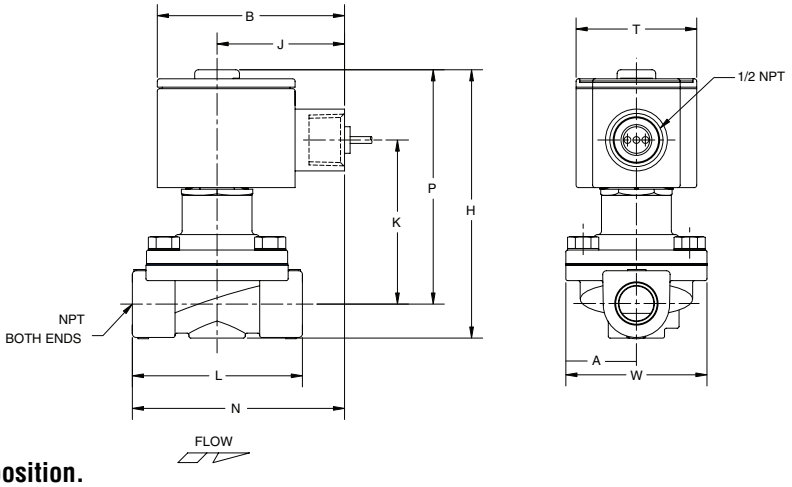
Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Junction Box	Wiring Box Screw Terminal	Brass	NBR	AC
EF	HT	JB	JKF	8210G033	●	302334
EF	HT	JB	JKF	8210G034	●	302334
EF	HT	JB	JKF	8210G035	●	302335

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

Const. Ref.		A	B	H	J	K	L	N	P	T	W
1	in	1.66	3.03	4.35	2.04	2.65	2.75	3.42	3.79	1.95	2.28
	mm	42	77	110	52	67	70	87	96	50	58
2	in	1.66	3.03	4.64	2.04	2.81	2.81	3.45	3.94	1.95	2.28
	mm	42	77	118	52	71	71	88	100	50	58

Const. Ref. 1, 2



Mountable in any position.

COMBUSTION

Features

- Unique double disc design with overtravel provides redundant sealing for leak tight shutoff
- Visual indication of open and shut position (Suffix "VI" & "C")
- Proof of closure switch 1 amp & visual indicator (Suffix "C")
- Silicon-free construction (Suffix "SF")
- For on-off control of fuel gas in commercial and industrial gas burners
- 1/8" NPT pipe taps with plugs for routine testing
- Optional flange adapters for ease of installation and service

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core Guide	POM
Rider Ring	PTFE
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

	Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.°F	Spare Coil Family	
			AC				General Purpose	
		DC Watts	Watts	VA Holding	VA Inrush		AC	DC
General Purpose	F	35.1	20	43	240	-40 to 125	099257	206410
	H	35.1	-	-	-	-40 to 132	-	236825
	H	-	20	43	240	-40 to 140	222345	-
Watertight	F	15.8	20.1	48	240	-40 to 125	272610	501695
	H	15.8	20.1	48	240	-40 to 140	272810	440162

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz) 12, 24 volts DC.

Optional High Ambient Temp: 140˚F Class H coil with prefix HB (3/4" to 2" AC only),
140˚F Class H coil with prefix HT (3/4" to 2" DC only)
132˚F Class H coil with prefix HB (2" High flow to 3" DC Only)

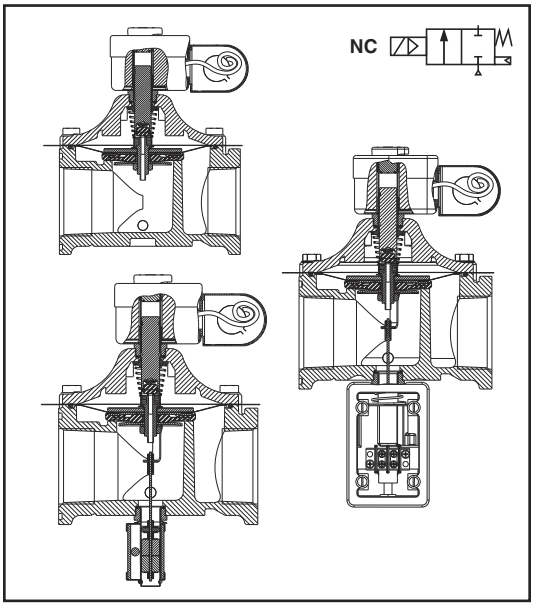
Solenoid Enclosures

General Purpose: RedHat metal Type 1 General Purpose housing has a 7/8" diameter hole to accept standard conduit hubs or connectors.
Add prefix JB to catalog number for a Junction Box construction with two 7/8" diameter knock-outs. (i.e. JB8214 265)

Watertight: RedHat II molded epoxy Type 1, 2, 3, 3S, 4 and 4X combination. General Purpose and Watertight solenoid enclosures with 1/2" conduit hub as standard.
Add prefix JKP to Watertight catalog number for a Watertight Junction Box. (i.e. JKP8214G266)

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second



Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved to Class 7400 "liquid and gas safety shutoff valves." (Suffix VI and C only)

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
2) Automatic Gas Valves Z21.21 (6.5), C/I, File 112872.
3) Automatic Gas Safety Shutoff Valves (3.9), File 112872.

ASCO®

Specifications - Standard (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Flow Capacity① ft^3/hr	Fuel Gas Capacity① Btu/hr	Operating Pressure Differential (psi) Min.	Max.	Max. Fluid Temp.°F AC	DC	Catalog Number	Const. Ref. AC	DC	Agency UL	FM	CSA	Watt Ratting/ Class of Coil Insulation AC	DC	Approx. Shipping Weight (lbs)
GENERAL PURPOSE																	
3/4	1 5/8	11	593	593,200	0	5	125	-	8214 235	1	-	❍	-	❍	20/F	-	5.1
1	1 5/8	21	1132	1,132,300	0	5	125	-	8214 250	1	-	❍	-	❍	20/F	-	5.0
1 1/4	1 5/8	32	1726	1,725,500	0	5	125	-	8214 260	1	-	❍	-	❍	20/F	-	4.9
1 1/2	1 5/8	35	1887	1,887,200	0	5	125	-	8214 270	1	-	❍	-	❍	20/F	-	4.7
1 1/4 (High Flow)	2 3/32	36	1925	1,925,000	0	5	125	-	8214 265	2	-	❍	-	❍	20/F	-	6.9
1 1/2 (High Flow)	2 3/32	45	2406	2,406,000	0	5	125	-	8214 275	2	-	❍	-	❍	20/F	-	6.6
2	2 3/32	55	2941	2,940,500	0	5	125	-	8214 280	2	-	❍	-	❍	20/F	-	6.2
2 (High Flow)	3	75	4044	4,044,100	0	5	125	125	8214 285	3	16	❍	-	❍	20/H	35.1/H	13.1
2 1/2	3	104	5608	5,607,800	0	5	125	125	8214 290	3	16	❍	-	❍	20/H	35.1/H	12.6
3	3	105	5662	5,661,700	0	5	125	125	8214 240	3	16	❍	-	❍	20/H	35.1/H	11.7
WATERTIGHT																	
3/4	1 5/8	11	593	593,200	0	5	125	125	8214G236	4	4A	❍	-	❍	20.1/F	15.8/F	5.1
1	1 5/8	21	1132	1,132,300	0	5	125	125	8214G251	4	4A	❍	-	❍	20.1/F	15.8/F	5.0
1 1/4	1 5/8	32	1726	1,725,500	0	5	125	125	8214G261	4	4A	❍	-	❍	20.1/F	15.8/F	4.9
1 1/2	1 5/8	35	1887	1,887,200	0	5	125	125	8214G271	4	4A	❍	-	❍	20.1/F	15.8/F	4.7
1 1/4 (High Flow)	2 3/32	36	1925	1,925,000	0	5	125	125	8214G266	5	5A	❍	-	❍	20.1/F	15.8/F	6.9
1 1/2 (High Flow)	2 3/32	45	2406	2,406,000	0	5	125	125	8214G276	5	5A	❍	-	❍	20.1/F	15.8/F	6.6
2	2 3/32	55	2941	2,940,500	0	5	125	125	8214G281	5	5A	❍	-	❍	20.1/F	15.8/F	6.2

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications - Standard (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor	Flow Capacity ① (m^3/hr)	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (bar) Min.	Max.	Max. Fluid Temp.°C AC	DC	Catalog Number	Const. Ref. AC	DC	Agency UL	FM	CSA	Watt Ratting/ Class of Coil Insulation AC	DC	Approx. Shipping Weight (kgs)
GENERAL PURPOSE																	
3/4	41	9.4	17	593,200	0	0.3	52	-	8214 235	1	-	❍	-	❍	20/F	-	2.3
1	41	17.9	32	1,132,300	0	0.3	52	-	8214 250	1	-	❍	-	❍	20/F	-	2.3
1 1/4	41	27.3	49	1,725,500	0	0.3	52	-	8214 260	1	-	❍	-	❍	20/F	-	2.2
1 1/2	41	29.9	53	1,887,200	0	0.3	52	-	8214 270	1	-	❍	-	❍	20/F	-	2.1
1 1/4 (High Flow)	53	30.7	55	1,925,000	0	0.3	52	-	8214 265	2	-	❍	-	❍	20/F	-	3.1
1 1/2 (High Flow)	53	38.4	68	2,406,000	0	0.3	52	-	8214 275	2	-	❍	-	❍	20/F	-	2.9
2	53	46.9	83	2,940,500	0	0.3	52	-	8214 280	2	-	❍	-	❍	20/F	-	2.8
2 (High Flow)	76	64.0	115	4,044,100	0	0.3	52	52	8214 285	3	16	❍	-	❍	20/H	35.1/H	6.0
2 1/2	76	88.7	159	5,607,800	0	0.3	52	52	8214 290	3	16	❍	-	❍	20/H	35.1/H	5.7
3	76	89.6	160	5,661,700	0	0.3	52	52	8214 240	3	16	❍	-	❍	20/H	35.1/H	5.3
WATERTIGHT																	
3/4	41	9.4	17	593,200	0	0.3	52	52	8214G236	4	4A	❍	-	❍	20.1/F	15.8/F	2.3
1	41	17.9	32	1,132,300	0	0.3	52	52	8214G251	4	4A	❍	-	❍	20.1/F	15.8/F	2.3
1 1/4	41	27.3	49	1,725,500	0	0.3	52	52	8214G261	4	4A	❍	-	❍	20.1/F	15.8/F	2.2
1 1/2	41	29.9	53	1,887,200	0	0.3	52	52	8214G271	4	4A	❍	-	❍	20.1/F	15.8/F	2.1
1 1/4 (High Flow)	53	30.7	55	1,925,000	0	0.3	52	52	8214G266	5	5A	❍	-	❍	20.1/F	15.8/F	3.1
1 1/2 (High Flow)	53	38.4	68	2,406,000	0	0.3	52	52	8214G276	5	5A	❍	-	❍	20.1/F	15.8/F	2.9
2	53	46.9	83	2,940,500	0	0.3	52	52	8214G281	5	5A	❍	-	❍	20.1/F	15.8/F	2.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity

Specifications - Visual Indication (Suffix VI) (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Flow Capacity ①	Fuel Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F		Catalog Number	Const. Ref.		Agency			Watt Ratting/ Class of Coil Insulation		Approx. Shipping Weight (lbs)
			ft^3/hr	Btu/hr	Min.	Max.	AC	DC		AC	DC	UL	FM	CSA	AC	DC	
GENERAL PURPOSE																	
3/4	1 5/8	11	593	593,200	0	5	125	77	8214 235VI	6	-	❍	❍	❍	20/F	-	5.3
1	1 5/8	21	1132	1,132,300	0	5	125	77	8214 250VI	6	-	❍	❍	❍	20/F	-	5.2
1 1/4	1 5/8	32	1726	1,725,500	0	5	125	77	8214 260VI	6	-	❍	❍	❍	20/F	-	5.1
1 1/2	1 5/8	35	1887	1,887,200	0	5	125	77	8214 270VI	6	-	❍	❍	❍	20/F	-	4.9
1 1/4 (High Flow)	2 3/32	36	1925	1,925,000	0	5	125	77	8214 265VI	7	-	❍	❍	❍	20/F	-	7.1
1 1/2 (High Flow)	2 3/32	45	2406	2,406,000	0	5	125	77	8214 275VI	7	-	❍	❍	❍	20/F	-	6.8
2	2 3/32	55	2941	2,940,500	0	5	125	77	8214 280VI	7	-	❍	❍	❍	20/F	-	6.4
2 (High Flow)	3	75	4044	4,044,100	0	5	125	-	8214 285VI	8	-	❍	❍	❍	20/H	-	13.3
2 1/2	3	104	5608	5,607,800	0	5	125	-	8214 290VI	8	-	❍	❍	❍	20/H	-	12.8
3	3	105	5662	5,661,700	0	5	125	-	8214 240VI	8	-	❍	❍	❍	20/H	-	11.9
WATERTIGHT																	
3/4	1 5/8	11	593	593,200	0	5	125	-	8214G236VI	9	9A	❍	❍	❍	20.1/F	15.8/F	5.3
1	1 5/8	21	1132	1,132,300	0	5	125	-	8214G251VI	9	9A	❍	❍	❍	20.1/F	15.8/F	5.2
1 1/4	1 5/8	32	1726	1,725,500	0	5	125	-	8214G261VI	9	9A	❍	❍	❍	20.1/F	15.8/F	5.1
1 1/2	1 5/8	35	1887	1,887,200	0	5	125	-	8214G271VI	9	9A	❍	❍	❍	20.1/F	15.8/F	4.9
1 1/4 (High	2 3/32	36	1925	1,925,000	0	5	125	-	8214G266VI	10	10A	❍	❍	❍	20.1/F	15.8/F	7.1
1 1/2 (High	2 3/32	45	2406	2,406,000	0	5	125	-	8214G276VI	10	10A	❍	❍	❍	20.1/F	15.8/F	6.8
2	2 3/32	55	2941	2,940,500	0	5	125	-	8214G281VI	10	10A	❍	❍	❍	20.1/F	15.8/F	6.4

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications - Visual Indication (Suffix VI) (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor	Flow Capacity ①	Fuel Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C		Catalog Number	Const. Ref.		Agency			Watt Ratting/ Class of Coil Insulation		Approx. Shipping Weight (kgs)
			(m^3/hr)	Btu/hr	Min.	Max.	AC	DC		AC	DC	UL	FM	CSA	AC	DC	
GENERAL PURPOSE																	
3/4	41	9.4	17	593,200	0	0.3	52	25	8214 235VI	6	-	❍	❍	❍	20/F	-	2.4
1	41	17.9	32	1,132,300	0	0.3	52	25	8214 250VI	6	-	❍	❍	❍	20/F	-	2.4
1 1/4	41	27.3	49	1,725,500	0	0.3	52	25	8214 260VI	6	-	❍	❍	❍	20/F	-	2.3
1 1/2	41	29.9	53	1,887,200	0	0.3	52	25	8214 270VI	6	-	❍	❍	❍	20/F	-	2.2
1 1/4 (High Flow)	53	30.7	55	1,925,000	0	0.3	52	25	8214 265VI	7	-	❍	❍	❍	20/F	-	3.2
1 1/2 (High Flow)	53	38.4	68	2,406,000	0	0.3	52	25	8214 275VI	7	-	❍	❍	❍	20/F	-	3.0
2	53	46.9	83	2,940,500	0	0.3	52	25	8214 280VI	7	-	❍	❍	❍	20/F	-	2.9
2 (High Flow)	76	64.0	115	4,044,100	0	0.3	52	-	8214 285VI	8	-	❍	❍	❍	20/H	-	6.1
2 1/2	76	88.7	159	5,607,800	0	0.3	52	-	8214 290VI	8	-	❍	❍	❍	20/H	-	5.8
3	76	89.6	160	5,661,700	0	0.3	52	-	8214 240VI	8	-	❍	❍	❍	20/H	-	5.4
WATERTIGHT																	
3/4	41	9.4	17	593,200	0	0.3	52	-	8214G236VI	9	9A	❍	❍	❍	20.1/F	15.8/F	2.4
1	41	17.9	32	1,132,300	0	0.3	52	-	8214G251VI	9	9A	❍	❍	❍	20.1/F	15.8/F	2.4
1 1/4	41	27.3	49	1,725,500	0	0.3	52	-	8214G261VI	9	9A	❍	❍	❍	20.1/F	15.8/F	2.3
1 1/2	41	29.9	53	1,887,200	0	0.3	52	-	8214G271VI	9	9A	❍	❍	❍	20.1/F	15.8/F	2.2
1 1/4 (High Flow)	53	30.7	55	1,925,000	0	0.3	52	-	8214G266VI	10	10A	❍	❍	❍	20.1/F	15.8/F	3.2
1 1/2 (High Flow)	53	38.4	68	2,406,000	0	0.3	52	-	8214G276VI	10	10A	❍	❍	❍	20.1/F	15.8/F	3.0
2	53	46.9	83	2,940,500	0	0.3	52	-	8214G281VI	10	10A	❍	❍	❍	20.1/F	15.8/F	2.9

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity

Specifications - Proof of Closure (Suffix C) (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Flow Capacity ① ft³/hr	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (psi) Min.	Max.	Max. Fluid Temp.°F AC	DC	Catalog Number	Const. Ref. AC	DC	Agency UL	FM	CSA	Watt Ratting/ Class of Coil Insulation AC	DC	Approx. Shipping Weight (lbs)
GENERAL PURPOSE																	
3/4	1 5/8	11	593	593,200	0	5	125	77	8214 235C	11	-	❍	❍	❍	20/F	-	5.6
1	1 5/8	21	1132	1,132,300	0	5	125	77	8214 250C	11	-	❍	❍	❍	20/F	-	5.5
1 1/4	1 5/8	32	1726	1,725,500	0	5	125	77	8214 260C	11	-	❍	❍	❍	20/F	-	5.4
1 1/2	1 5/8	35	1887	1,887,200	0	5	125	77	8214 270C	11	-	❍	❍	❍	20/F	-	5.2
1 1/4 (High Flow)	2 3/32	36	1925	1,925,000	0	5	125	77	8214 265C	12	-	❍	❍	❍	20/F	-	7.4
1 1/2 (High Flow)	2 3/32	45	2406	2,406,000	0	5	125	77	8214 275C	12	-	❍	❍	❍	20/F	-	7.1
2	2 3/32	55	2941	2,940,500	0	5	125	77	8214 280C	12	-	❍	❍	❍	20/F	-	6.7
2 (High Flow)	3	75	4044	4,044,100	0	5	125	-	8214 285C	13	-	❍	❍	❍	20/H	-	13.6
2 1/2	3	104	5608	5,607,800	0	5	125	-	8214 290C	13	-	❍	❍	❍	20/H	-	13.1
3	3	105	5662	5,661,700	0	5	125	-	8214 240C	13	-	❍	❍	❍	20/H	-	12.2
WATERTIGHT																	
3/4	1 5/8	11	593	593,200	0	5	125	-	8214G236C	14	14A	❍	❍	❍	20.1/F	15.8/F	5.6
1	1 5/8	21	1132	1,132,300	0	5	125	-	8214G251C	14	14A	❍	❍	❍	20.1/F	15.8/F	5.5
1 1/4	1 5/8	32	1726	1,725,500	0	5	125	-	8214G261C	14	14A	❍	❍	❍	20.1/F	15.8/F	5.4
1 1/2	1 5/8	35	1887	1,887,200	0	5	125	-	8214G271C	14	14A	❍	❍	❍	20.1/F	15.8/F	5.2
1 1/4 (High	2 3/32	36	1925	1,925,000	0	5	125	-	8214G266C	15	15A	❍	❍	❍	20.1/F	15.8/F	7.4
1 1/2 (High	2 3/32	45	2406	2,406,000	0	5	125	-	8214G276C	15	15A	❍	❍	❍	20.1/F	15.8/F	7.1
2	2 3/32	55	2941	2,940,500	0	5	125	-	8214G281C	15	15A	❍	❍	❍	20.1/F	15.8/F	6.7

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications - Proof of Closure (Suffix C) (Metric units)

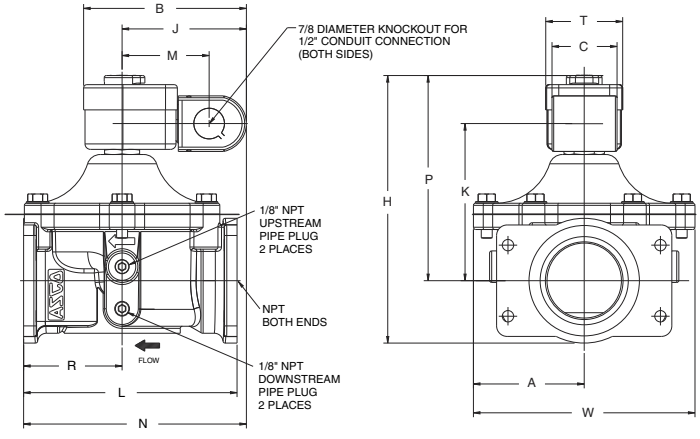
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor	Flow Capacity ① (m³/hr)	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (bar) Min.	Max.	Max. Fluid Temp.°C AC	DC	Catalog Number	Const. Ref. AC	DC	Agency UL	FM	CSA	Watt Ratting/ Class of Coil Insulation AC	DC	Approx. Shipping Weight (kgs)
GENERAL PURPOSE																	
3/4	41	9.4	17	593,200	0	0.3	52	25	8214 235C	11	-	❍	❍	❍	20/F	-	2.5
1	41	17.9	32	1,132,300	0	0.3	52	25	8214 250C	11	-	❍	❍	❍	20/F	-	2.5
1 1/4	41	27.3	49	1,725,500	0	0.3	52	25	8214 260C	11	-	❍	❍	❍	20/F	-	2.4
1 1/2	41	29.9	53	1,887,200	0	0.3	52	25	8214 270C	11	-	❍	❍	❍	20/F	-	2.3
1 1/4 (High Flow)	53	30.7	55	1,925,000	0	0.3	52	25	8214 265C	12	-	❍	❍	❍	20/F	-	3.3
1 1/2 (High Flow)	53	38.4	68	2,406,000	0	0.3	52	25	8214 275C	12	-	❍	❍	❍	20/F	-	3.1
2	53	46.9	83	2,940,500	0	0.3	52	25	8214 280C	12	-	❍	❍	❍	20/F	-	3.0
2 (High Flow)	76	64.0	115	4,044,100	0	0.3	52	-	8214 285C	13	-	❍	❍	❍	20/H	-	6.2
2 1/2	76	88.7	159	5,607,800	0	0.3	52	-	8214 290C	13	-	❍	❍	❍	20/H	-	5.9
3	76	89.6	160	5,661,700	0	0.3	52	-	8214 240C	13	-	❍	❍	❍	20/H	-	5.5
WATERTIGHT																	
3/4	41	9.4	17	593,200	0	0.3	52	-	8214G236C	14	14A	❍	❍	❍	20.1/F	15.8/F	2.5
1	41	17.9	32	1,132,300	0	0.3	52	-	8214G251C	14	14A	❍	❍	❍	20.1/F	15.8/F	2.5
1 1/4	41	27.3	49	1,725,500	0	0.3	52	-	8214G261C	14	14A	❍	❍	❍	20.1/F	15.8/F	2.4
1 1/2	41	29.9	53	1,887,200	0	0.3	52	-	8214G271C	14	14A	❍	❍	❍	20.1/F	15.8/F	2.3
1 1/4 (High	53	30.7	55	1,925,000	0	0.3	52	-	8214G266C	15	15A	❍	❍	❍	20.1/F	15.8/F	3.3
1 1/2 (High	53	38.4	68	2,406,000	0	0.3	52	-	8214G276C	15	15A	❍	❍	❍	20.1/F	15.8/F	3.1
2	53	46.9	83	2,940,500	0	0.3	52	-	8214G281C	15	15A	❍	❍	❍	20.1/F	15.8/F	3.0

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity

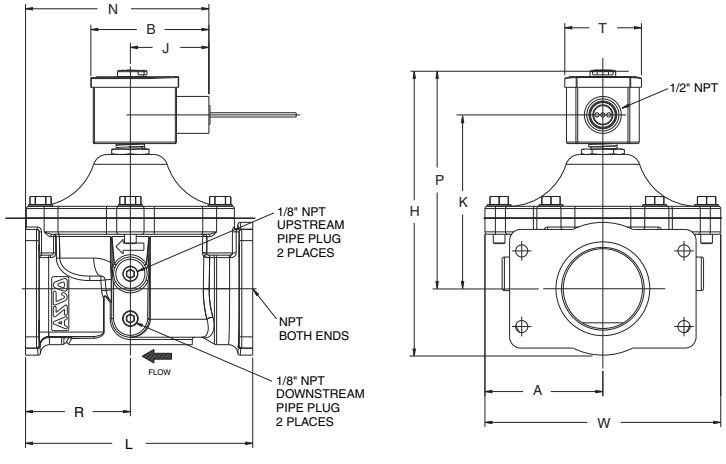
Dimensions inches (mm)

Const. Ref.		A	B	C	H	J	K	L	M	N	P	R	T	W
1	in	2.69	4.65	1.86	6.97	3.55	4.14	5.30	2.48	5.95	5.51	2.40	2.20	5.39
	mm	68	118	47	177	90	105	135	63	151	140	61	56	137
2	in	3.16	4.64	1.86	7.63	3.55	4.48	6.09	2.48	6.36	5.85	2.81	2.20	6.32
	mm	80	118	47	194	90	114	155	63	161	149	71	56	161
3	in	4.13	4.65	1.86	9.62	3.55	5.86	7.80	2.48	7.44	7.23	3.89	2.20	7.95
	mm	105	118	47	244	90	149	198	63	189	184	99	56	202
4	in	2.69	3.13	-	6.90	2.11	4.28	5.30	-	4.51	5.47	2.40	1.95	5.39
	mm	68.5	80	-	176	53	109	135	-	114	139	61	50	137
4A	in	2.69	3.72	-	6.90	2.27	4.4	5.30	-	4.67	5.5	2.40	2.45	5.39
	mm	68.5	94	-	176	58	111	135	-	119	139	61	62	137
5	in	3.16	3.13	-	7.63	2.11	4.66	6.09	-	4.92	5.85	2.81	206.	6.32
	mm	80	80	-	194	53	118	155	-	125	149	71	52	161
5A	in	3.16	3.72	-	7.6	2.27	4.7	6.09	-	5.08	5.8	2.81	2.45	6.32
	mm	80	94	-	193	58	119	155	-	129	148	71	62	161
16	in	4.13	5.49	1.86	10.3	4.13	5.71	7.8	3.31	8.03	7.91	3.89	3.31	6.32
	mm	105	147	47	261	105	145	198	84	204	201	99	84	161

Const. Ref. 1-3, 16



Const. Ref. 4, 4A, 5, 5A

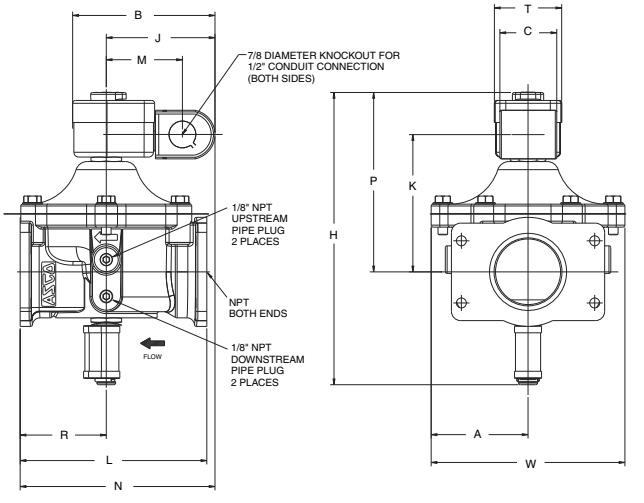


3/4" through 2" - AC constructions can be mounted with solenoid in any position above horizontal. DC constructions must be mounted with solenoid vertical and upright.
2" High Flow through 3" must be mounted with solenoid vertical and upright.

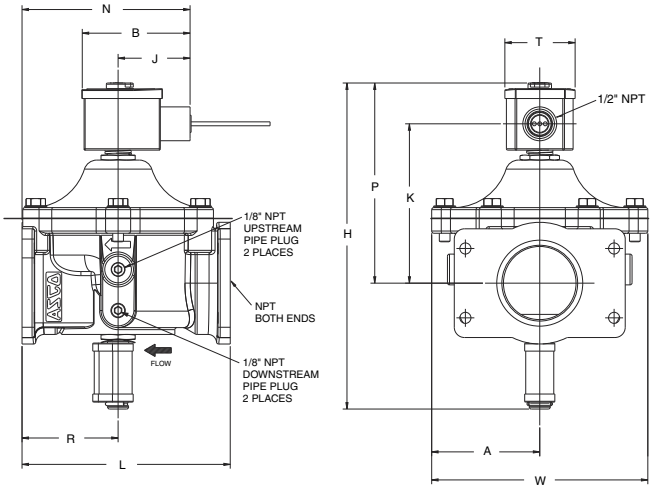
Dimensions inches (mm)

Const. Ref.		A	B	C	H	J	K	L	M	N	P	R	T	W
6	in	2.69	4.64	1.86	9.16	3.55	4.14	5.30	2.48	5.95	5.51	2.40	2.20	5.39
	mm	68	118	47	233	90	105	135	63	151	140	61	56	137
7	in	3.16	4.64	1.86	9.54	3.55	4.48	6.09	2.48	6.36	5.85	2.81	2.20	6.32
	mm	80	118	47	242	90	114	155	63	161	149	71	56	161
8	in	4.13	4.65	1.86	12.03	3.55	5.86	7.80	2.48	7.44	7.23	3.89	2.20	7.95
	mm	105	118	47	306	90	149	198	63	189	184	99	56	202
9	in	2.69	3.15	-	9.12	2.11	4.28	5.30	-	4.51	5.47	2.40	2.06	5.39
	mm	68	80	-	232	53	109	135	-	144	139	61	52	137
9A	in	2.69	3.09	-	9.12	2.03	4.25	5.30	-	4.43	5.48	2.40	2.06	5.39
	mm	68	78	-	232	51	108	135	-	112	139	61	52	137
10	in	3.16	3.15	-	9.54	2.11	4.66	6.09	-	4.92	5.85	2.81	2.06	6.32
	mm	80	80	-	242	53	118	155	-	125	149	71	52	161
10A	in	3.16	3.09	-	9.50	2.03	4.59	6.09	-	4.81	5.82	2.81	2.06	6.32
	mm	80	78	-	241	51	117	155	-	122	148	71	52	161

Const. Ref. 6-8



Const. Ref. 9, 10



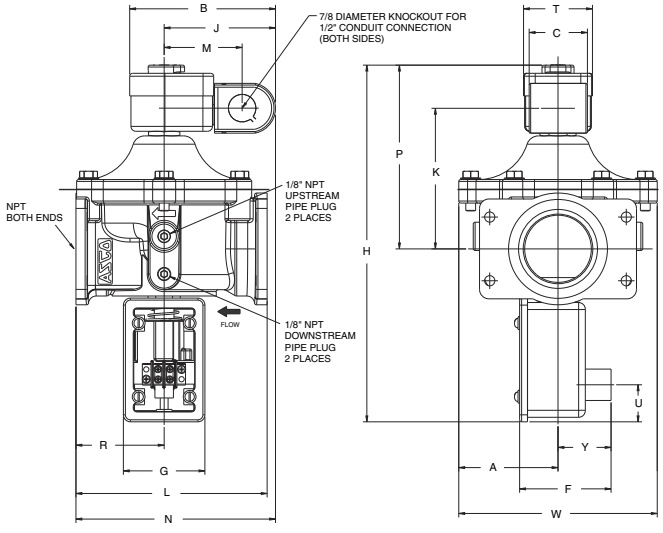
Visual Indication constructions (Suffix VI) must be mounted with solenoid vertical and upright.

COMBUSTION

Dimensions inches (mm)

Const. Ref.		A	B	C	F	G	H	J	K	L	M	N	P	R	T	U	W	Y
11	in	2.69	4.64	1.86	2.91	2.60	10.99	3.55	4.14	5.30	2.48	5.95	5.51	2.40	2.20	1.18	5.39	1.69
	mm	68	118	47	74	66	279	90	105	135	63	151	140	61	56	30	137	43
12	in	3.16	4.64	1.86	2.91	2.60	11.36	3.55	4.48	6.09	2.48	6.36	5.85	2.81	2.20	1.18	6.32	1.69
	mm	80	118	47	74	66	289	90	114	155	63	161	149	71	56	30	161	43
13	in	4.13	4.65	1.86	2.91	2.60	13.88	3.55	5.86	7.80	2.48	7.44	7.23	3.89	2.20	1.18	7.95	1.69
	mm	105	118	47	74	66	352	90	149	198	63	189	184	99	56	30	202	43
14	in	2.69	3.15	-	2.91	2.58	10.95	2.11	4.28	5.30	-	4.51	5.47	2.40	2.06	1.18	5.39	1.69
	mm	68	80	-	743	66	278	53	109	135	-	114	139	61	52	30	137	43
14A	in	2.69	3.09	-	2.91	2.06	10.95	2.03	4.25	5.30	-	4.43	5.48	2.40	2.06	1.18	5.39	1.69
	mm	68	78	-	74	66	278	51	108	135	-	112	139	61	52	30	137	43
15	in	3.16	3.17	-	2.91	2.58	11.36	2.1	4.66	6.09	-	4.92	5.85	2.81	2.06	1.18	6.32	1.69
	mm	80	80	-	74	66	289	53	118	155	-	125	149	71	52	30	161	43
15A	in	3.16	3.08	-	2.91	2.06	11.32	2.03	4.59	6.09	-	4.81	5.82	2.81	2.06	1.18	6.32	1.69
	mm	80	78	-	74	66	288	51	117	155	-	122	148	71	52	30	161	43

Const. Ref. 11-13



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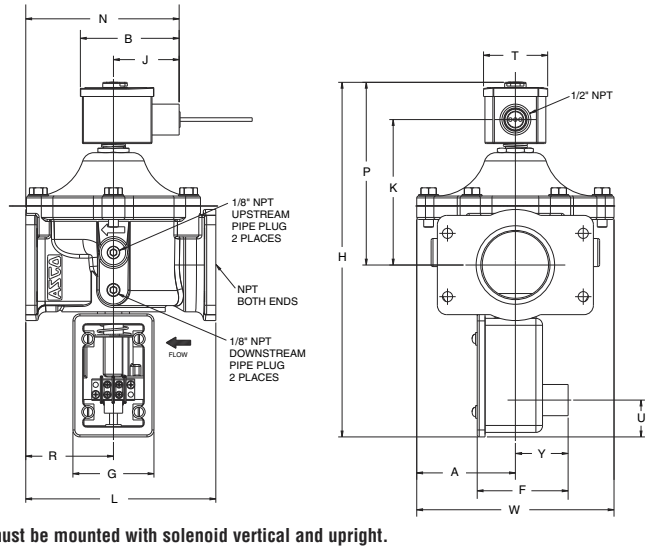
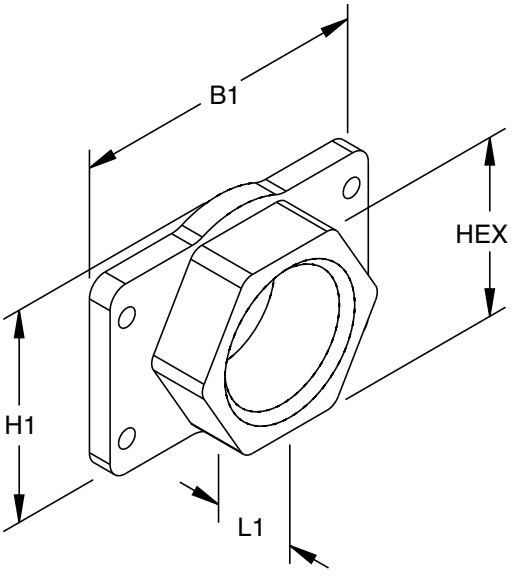


Proof of Closure constructions (Suffix C) must be mounted with solenoid vertical and upright.

COMBUSTION

Dimensions inches (mm)

Flange Adapters		B1	H1	L1	HEX
3/4" - 1"	in	4.8	2.5	1.27	2.5
	mm	122	76	32	64
1 1/4" - 2"	in	5	3.56	1.38	3
	mm	127	90	35	76
2" (High Flow) - 3"	in	7	4.5	2.015	4.5
	mm	178	114	51	114



Flange Adapter Kits (Optional)*

Pipe Size (in)	Inlet & Outlet Adapter/Hardware Kit	Approx. Shipping Weight (lbs)
3/4	296659-001	1.6
1	296659-002	1.5
1 1/4	296659-003	1.3
1 1/2	296659-004	1.2
1 1/4 (High Flow)	296659-005	2.4
1 1/2 (High Flow)	296659-006	2.1
2	296659-007	1.7
2 (High Flow)	296659-008	6.6
2 1/2	296659-009	6.0
3	296659-010	4.9

** Please refer to the Double Gas Shutoff Valves catalog pages for more kit information.*

General Purpose Rebuild Kits

Pipe Size (in)	Standard Rebuild Kit		
	Suffix	AC	DC
3/4, 1 1/4, 1 1/2, 2	None	323632	323946
	VI	323637	-
11/4 (High Flow), 11/2 (High Flow), 2	None	323499	323522
	VI	323501	-
2 (High Flow), 2 1/2, 3	None	323947	325565
	VI	323948	-

Watertight Rebuild Kits

Pipe Size (in)	Standard Rebuild Kit		
	Suffix	AC	DC
3/4, 1 1/4, 1 1/2, 2	None	323939	325741
	VI	323941	-
11/4, 11/2, 2	None	323538	325742
	VI	323539	-

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe taps with plugs for routine testing

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient* Temp.°F	Spare Coil Family			
		AC				General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush		AC	DC	AC	DC
F	-	17.1	40	93	-40 to 125	238610	-	238614	-
H	-	17.1	40	93	-40 to 140	238810	-	-	-
F	22.6	-	-	-	-40 to 104	-	238710	-	-

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz) (238610); 12, 24 volts DC.

Optional High Ambient Temp: 140°F Class H coil with prefix HB (AC only).

Solenoid Enclosures

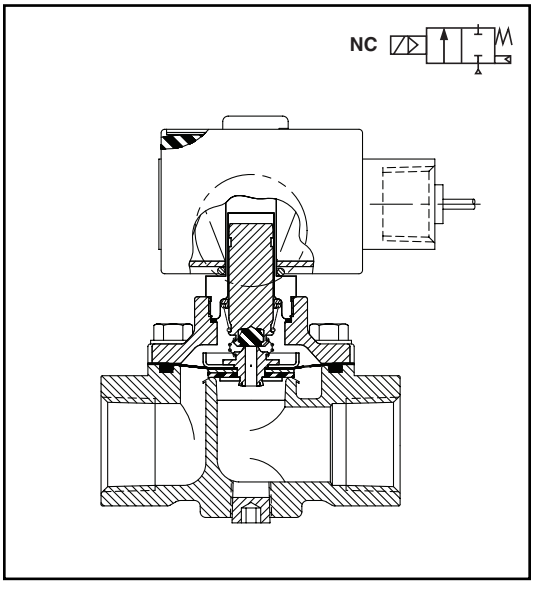
Standard: RedHat II molded epoxy Type 1, 2, 3, 3S, 4 and 4X combination. General Purpose and Watertight solenoid enclosures with 1/2" conduit hub as standard.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add Prefix "EF" to catalog numbers: 8214G -010, -020, and -030. All other constructions are not available with explosionproof enclosures.

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second



Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
2) Automatic Gas Valves Z21.21 (6.5), File 112872.
3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F		Catalog Number	Const. Ref.	Agency			Wattage		Approx. Shipping Weight (lbs)
			Btu/hr.	Min.	Max.	AC	DC			UL	FM	CSA	AC	DC	
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	3/4	3.4	183,000	0	5	125	104	8214G010	1	❍	❍	❍	17.1	22.6	2
1/2	3/4	4.4	238,500	0	5	125	104	8214G020	1	❍	❍	❍	17.1	22.6	2
3/4	3/4	5.1	247,500	0	5	125	104	8214G030	2	❍	❍	❍	17.1	22.6	2
❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.															

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C		Catalog Number	Const. Ref.	Agency			Wattage		Approx. Shipping Weight (kgs)
			Btu/hr.	Min.	Max.	AC	DC			UL	FM	CSA	AC	DC	
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	19	2.9	183,000	0	0.3	52	40	8214G010	1	❍	❍	❍	17.1	22.6	0.9
1/2	19	3.7	238,500	0	0.3	52	40	8214G020	1	❍	❍	❍	17.1	22.6	0.9
3/4	19	4.3	247,500	0	0.3	52	40	8214G030	2	❍	❍	❍	17.1	22.6	0.9
❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.															

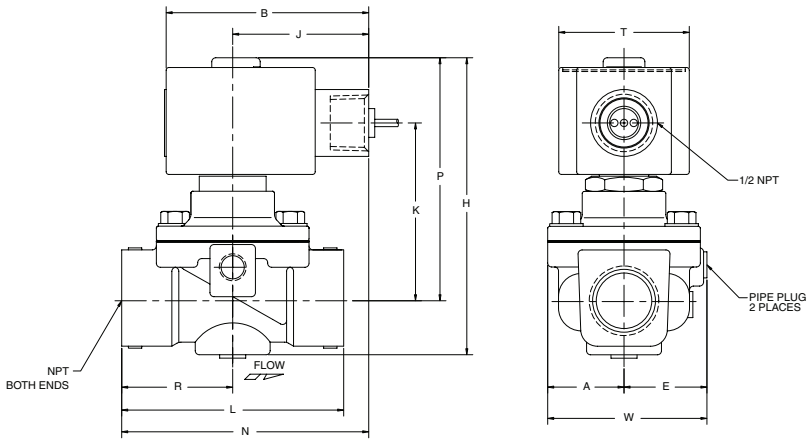
Capabilities Chart

Solenoid Options		Base Catalog Number	Resilient Materials	Standard Rebuild Kit	
High Temp.	Junction Box	Aluminum	NBR	AC	DC
HB	JB	8214G010	●	316233	316790
HB	JB	8214G020	●	316233	316790
HB	JB	8214G030	●	316233	316790
● = Standard. Other options may be available. All option combinations may not be available. Solenoid options are for AC only.					

Dimensions inches (mm)

Const. Ref.		A	B	E	H	J	K	L	N	P	R	T	W
1	in	1.14	3.03	1.36	4.08	2.04	2.47	2.75	3.42	3.46	1.38	1.95	2.50
	mm	29	77	35	104	52	63	70	87	88	35	50	64
2	in	1.14	3.03	1.25	4.52	2.04	2.66	3.31	3.70	3.64	1.66	1.95	2.39
	mm	29	77	32	115	52	68	84	94	92	42	50	61

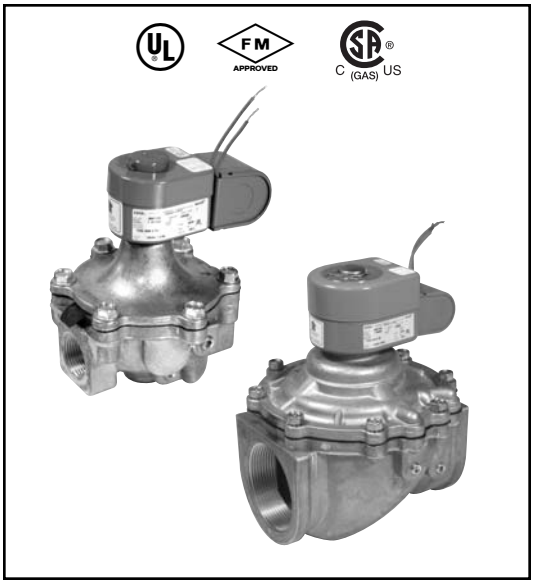
Const. Ref. 1, 2

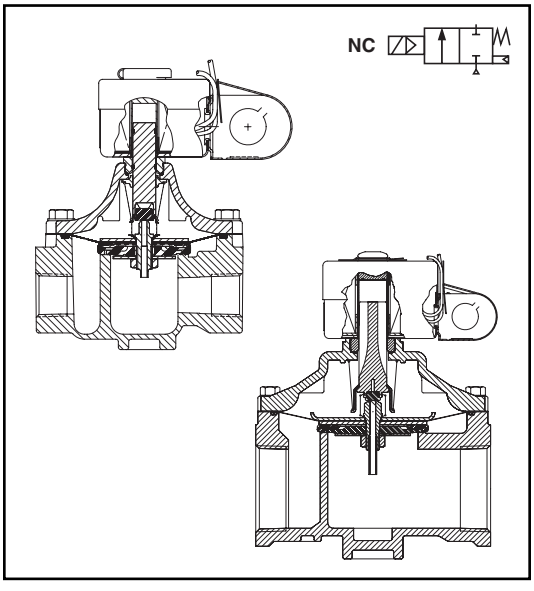


COMBUSTION

Features

- 2-way normally closed operation
- Unique double disc design with overtravel provides redundant sealing for leak tight shutoff
- Die-cast aluminum bodies
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe taps with plugs for routine testing





Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core Guide	Acetal (20 watt only)
Rider Ring	PTFE (20 watt only)
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				*Ambient Temp.°F	Spare Coil Family			
		AC				General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush		AC	DC	AC	DC
F	-	20	43	240	-40 to 125	099257	-	-	-
F	-	28.2	50	385	-40 to 125	206409	-	-	-
B	14.9	-	-	-	-40 to 77	-	062691	-	-

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz)
12, 24 volts DC. (Note: 24 volt AC, 60 Hz not available with 28.2 watt coil)

Solenoid Enclosures

RedHat metal Type 1 General Purpose Junction Box housing with two 7/8" knock-outs for 1/2" conduit connection.

Valve Response Time

Opening Time: Less than 1 second; **Closing Time:** Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved “Process Control Valves.”

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 010381.
2) Automatic Gas Valves Z21.21 (6.5), File 112872.
3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872.

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F		Catalog Number	Const. Ref.	Agency			Wattage		Approx. Shipping Weight (lbs)
			Btu/hr.	Min.	Max.	AC	DC			UL	FM	CSA	AC	DC	
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	1 5/8	11	580,000	0	5	125	77	8214 035	1	❍	②	❍	20	14.9	4.3
1	1 5/8	21	1,119,000	0	5	125	77	8214 050	1	❍	②	❍	20	14.9	4.3
1 1/4	1 5/8	32	1,730,000	0	5	125	77	8214 060	2	❍	②	❍	20	14.9	4.3
1 1/2	1 5/8	35	1,900,000	0	5	125	77	8214 070	2	❍	②	❍	20	14.9	4.3
2	2 3/32	60	2,800,000	0	5	125	77	8214 080	3	❍	②	❍	20	14.9	6.3
2 1/2	3	104	5,765,500	0	5	125	-	8214 090 ③	4	❍	②	❍	28.2	-	13.0
3	3	105	5,796,000	0	5	125	-	8214 040 ③	4	❍	②	❍	28.2	-	14.0

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② FM approved "Process Control Valves".
③ Not available with 24 volt, 60 Hz coil.

Specifications (Metric units)

Pipe Size (ins.)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C		Catalog Number	Const. Ref.	Agency			Wattage		Approx. Shipping Weight (kgs)
			Btu/hr.	Min.	Max.	AC	DC			UL	FM	CSA	AC	DC	
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	41	9.4	580,000	0	0.3	52	25	8214 035	1	❍	②	❍	20	14.9	2.0
1	41	17.9	1,119,000	0	0.3	52	25	8214 050	1	❍	②	❍	20	14.9	2.0
1 1/4	41	27.2	1,730,000	0	0.3	52	25	8214 060	2	❍	②	❍	20	14.9	2.0
1 1/2	41	29.8	1,900,000	0	0.3	52	25	8214 070	2	❍	②	❍	20	14.9	2.0
2	53	51.0	2,800,000	0	0.3	52	25	8214 080	3	❍	②	❍	20	14.9	2.9
2 1/2	76	88.4	5,765,500	0	0.3	52	-	8214 090 ③	4	❍	②	❍	28.2	-	5.9
3	76	89.3	5,796,000	0	0.3	52	-	8214 040 ③	4	❍	②	❍	28.2	-	6.4

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② FM approved "Process Control Valves".
③ Not available with 24 volt, 60 Hz coil.

Capabilities Chart

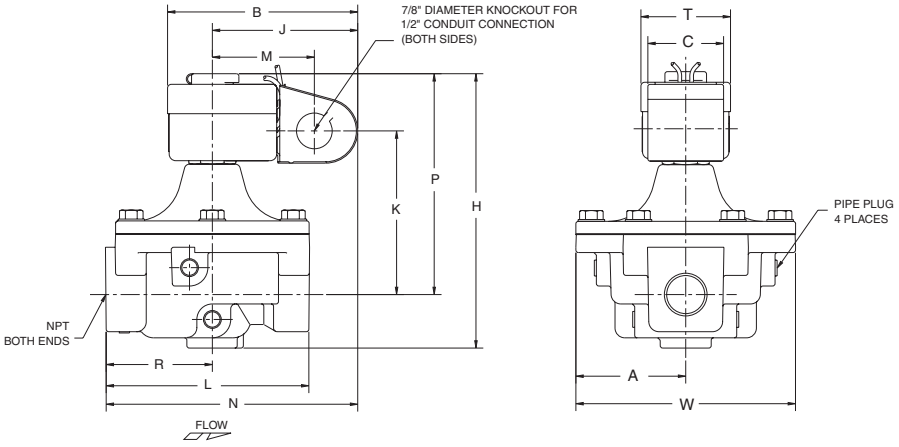
Solenoid Options		Base Catalog Number	Resilient Materials	Standard Rebuild Kit	
High Temp.	Junction Box	Aluminum	NBR	AC	DC
HB	JB	8214 035	●	316429	316777
HB	JB	8214 050	●	316429	316777
HB	JB	8214 060	●	316429	316777
HB	JB	8214 070	●	316429	316777
HB	JB	8214 080	●	316430	316778
HT	JB	8214 090	●	316828	-
HT	JB	8214 040	●	316828	-

● = Standard. Other options may be available. All option combinations may not be available. Solenoid options are for AC only.

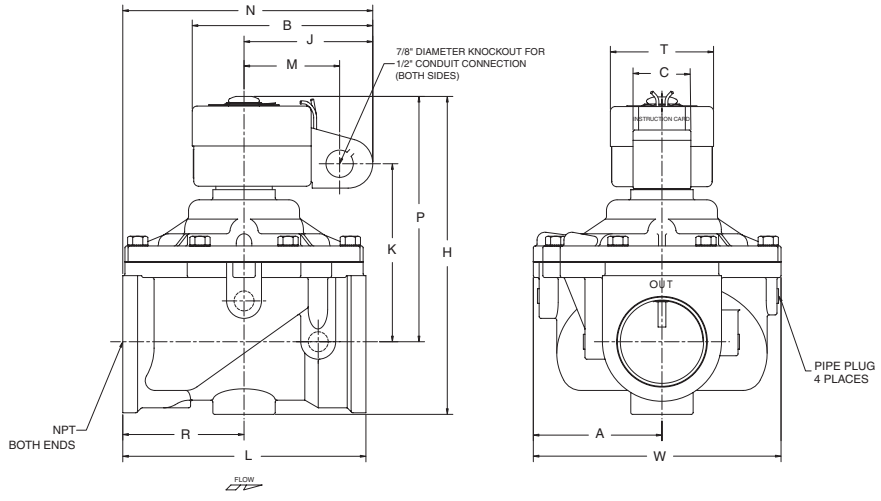
Dimensions inches (mm) Shown with Optional Junction Box

Const. Ref.		A	B	C	H	J	K	L	M	N	P	R	T	W
1	ins.	2.69	4.59	1.88	6.78	3.53	4.06	5.00	2.50	6.15	5.46	2.62	2.20	5.39
	mm	68	117	48	1620	90	103	127	64	156	139	67	56	137
2	ins.	2.69	4.59	1.88	6.78	3.53	4.13	5.00	2.50	6.15	5.53	2.62	2.20	5.39
	mm	68	117	48	172	90	105	127	64	156	140	67	56	137
3	ins.	3.16	4.59	1.88	7.39	3.53	4.49	6.09	2.50	6.81	5.89	3.28	2.20	6.32
	mm	80	117	48	188	90	114	155	64	173	150	83	56	161
4	ins.	4.13	5.72	1.88	10.20	4.07	5.71	7.80	3.07	7.96	7.87	3.89	3.31	7.95
	mm	105	145	48	259	103	145	198	78	202	200	99	84	202

Const. Ref. 1, 2, 3



Const. Ref. 4



Must be mounted with solenoid vertical and upright.

COMBUSTION

Features

- 2-way normally open operation
- Unique double disc design with overtravel provides redundant sealing for leak tight shutoff in the closed (energized) position
- Visual indication of open & shut position (suffix C)
- Proof of Closure Switch 1 amp (suffix C)
- Valves provided with 1/8" NPT downstream pipe tap with plug for routine testing

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core Guide	Acetal (20, 20.1 watt only)
Rider Ring	PTFE (20, 20.1 watt only)
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Solenoid Enclosure	Standard Coil and Class of Insulation	Watt Rating and Power Consumption AC Watts	AC VA Holding	AC VA Inrush	Ambient Temp.°F	Spare Coil Family General Purpose AC	Spare Coil Family Explosionproof AC
General Purpose	F	20	43	240	-40 to 125	99257	-
	H	20	43	240	-40 to 140	222345	-
	F	28.2	50	385	-40 to 125	206409	-
	H	28.2	50	385	-40 to 140	-	-
Watertight	F	17.1	40	93	-40 to 125	238610	238614
	H	17.1	40	93	-40 to 140	-	-
	F	20.1	43	240	-40 to 125	272610	272614
	H	20.1	43	240	-40 to 140	272810	-

Standard Voltages
General Purpose: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz) (99257); 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 hz) (206409). (Note: 24 volt AC, 60 Hz not available with 28.2 watt coil)

Watertight: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz) (238610); 120, 240 volts AC, 60 Hz (272610).

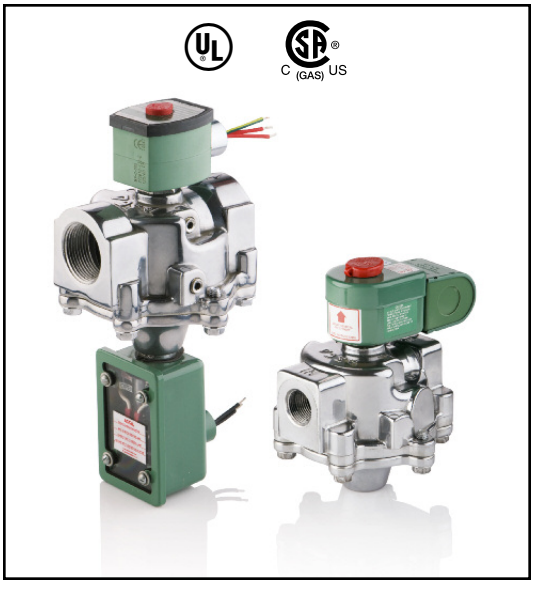
Optional High Ambient Temperature: 140°F Class H coil with prefix HB for all valves except 8214093, add prefix HT.

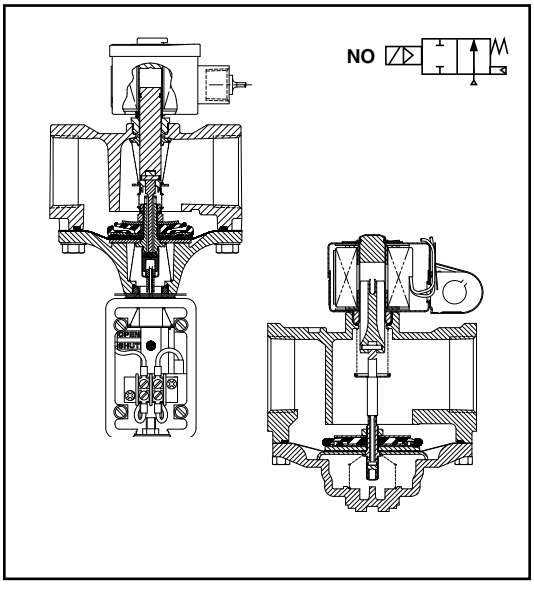
Solenoid Enclosures

General Purpose: RedHat metal Type 1 General Purpose Junction Box housing with two 7/8" knock-outs for 1/2" conduit connection.

Watertight: RedHat II molded epoxy Type 1, 2, 3, 3S, 4 and 4X combination. General Purpose and Watertight solenoid enclosures with 1/2" conduit hub as standard.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. To order, add Prefix "EF" to catalog numbers. (e.g. EF8214G013)





Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 General Purpose Valves.

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves Z21.21 (6.5), File 112872.

Specifications - Standard (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Watt Ratting	Approx. Shipping Weight (lbs)
GENERAL PURPOSE													
3/4	1 5/8	11	659,000	0	5	125	8214 037	1	●	-	●	20	4.3
1	1 5/8	21	1,179,000	0	5	125	8214 053	1	●	-	●	20	4.3
1 1/4	1 5/8	32	1,538,750	0	5	125	8214 063	2	●	-	●	20	4.3
1 1/2	1 5/8	35	1,615,250	0	5	125	8214 073	2	●	-	●	20	4.3
2	2 3/32	60	2,924,500	0	5	125	8214 083	3	●	-	●	20	6.3
2 1/2	3	109	6,022,750	0	5	125	8214 093	4	●	-	●	28.2	13.0
WATERTIGHT													
3/8	3/4	3.4	172,500	0	5	125	8214G013 ②	5	●	-	●	17.1	2.3
1/2	3/4	4.4	206,250	0	5	125	8214G023 ②	5	●	-	●	17.1	2.3
3/4	3/4	5.1	247,500	0	5	125	8214G033 ②	6	●	-	●	17.1	2.5
3/4	1 5/8	11	659,000	0	5	125	8214G038	7	●	-	●	20.1	4.3
1	1 5/8	21	1,179,000	0	5	125	8214G054	7	●	-	●	20.1	4.3
1 1/4	1 5/8	32	1,538,750	0	5	125	8214G064	8	●	-	●	20.1	4.3
1 1/2	1 5/8	35	1,615,250	0	5	125	8214G074	8	●	-	●	20.1	4.3
2	2 3/32	60	2,924,500	0	5	125	8214G084	9	●	-	●	20.1	6.3

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Single disc design used for valve sealing.

Specifications - Standard (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Watt Ratting	Approx. Shipping Weight (kgs)
GENERAL PURPOSE													
3/4	41	9.4	659,000	0	0.3	52	8214 037	1	●	-	●	20	2.0
1	41	17.9	1,179,000	0	0.3	52	8214 053	1	●	-	●	20	2.0
1 1/4	41	27.2	1,538,750	0	0.3	52	8214 063	2	●	-	●	20	2.0
1 1/2	41	29.8	1,615,250	0	0.3	52	8214 073	2	●	-	●	20	2.0
2	53	51.0	2,924,500	0	0.3	52	8214 083	3	●	-	●	20	2.9
2 1/2	76	92.7	6,022,750	0	0.3	52	8214 093	4	●	-	●	28.2	5.9
WATERTIGHT													
3/8	19	2.9	172,500	0	0.3	52	8214G013 ②	5	●	-	●	17.1	1.0
1/2	19	3.7	206,250	0	0.3	52	8214G023 ②	5	●	-	●	17.1	1.0
3/4	19	4.3	247,500	0	0.3	52	8214G033 ②	6	●	-	●	17.1	1.1
3/4	41	9.4	659,000	0	0.3	52	8214G038	7	●	-	●	20.1	2.0
1	41	17.9	1,179,000	0	0.3	52	8214G054	7	●	-	●	20.1	2.0
1 1/4	41	27.2	1,538,750	0	0.3	52	8214G064	8	●	-	●	20.1	2.0
1 1/2	41	29.8	1,615,250	0	0.3	52	8214G074	8	●	-	●	20.1	2.0
2	53	51.0	2,924,500	0	0.3	52	8214G084	9	●	-	●	20.1	2.9

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Single disc design used for valve sealing.

Specifications - Proof of Closure (Suffix C) (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Watt Ratting	Approx. Shipping Weight (lbs)
GENERAL PURPOSE													
3/4	1 5/8	11	659,000	0	5	125	8214 037C	10	●	-	●	20	4.8
1	1 5/8	21	1,179,000	0	5	125	8214 053C	10	●	-	●	20	4.8
1 1/4	1 5/8	32	1,538,750	0	5	125	8214 063C	11	●	-	●	20	4.8
1 1/2	1 5/8	35	1,615,250	0	5	125	8214 073C	11	●	-	●	20	4.8
2	2 3/32	60	2,924,500	0	5	125	8214 083C	12	●	-	●	20	6.8
WATERTIGHT													
3/4	1 5/8	11	659,000	0	5	125	8214G038C	13	●	-	●	20.1	4.8
1	1 5/8	21	1,179,000	0	5	125	8214G054C	13	●	-	●	20.1	4.8
1 1/4	1 5/8	32	1,538,750	0	5	125	8214G064C	14	●	-	●	20.1	4.8
1 1/2	1 5/8	35	1,615,250	0	5	125	8214G074C	14	●	-	●	20.1	4.8
2	2 3/32	60	2,924,500	0	5	125	8214G084C	15	●	-	●	20.1	6.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications - Proof of Closure (Suffix C) (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Fuel Gas Capacity ① Btu/hr	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Watt Ratting	Approx. Shipping Weight (kgs)
GENERAL PURPOSE													
3/4	41	9.4	659,000	0	0.3	52	8214 037C	10	●	-	●	20	2.2
1	41	17.9	1,179,000	0	0.3	52	8214 053C	10	●	-	●	20	2.2
1 1/4	41	27.2	1,538,750	0	0.3	52	8214 063C	11	●	-	●	20	2.2
1 1/2	41	29.8	1,615,250	0	0.3	52	8214 073C	11	●	-	●	20	2.2
2	53	51.0	2,924,500	0	0.3	52	8214 083C	12	●	-	●	20	3.1
WATERTIGHT													
3/4	41	9.4	659,000	0	0.3	52	8214G038C	13	●	-	●	20.1	4.8
1	41	17.9	1,179,000	0	0.3	52	8214G054C	13	●	-	●	20.1	4.8
1 1/4	41	27.2	1,538,750	0	0.3	52	8214G064C	14	●	-	●	20.1	4.8
1 1/2	41	29.8	1,615,250	0	0.3	52	8214G074C	14	●	-	●	20.1	4.8
2	53	51.0	2,924,500	0	0.3	52	8214G084C	15	●	-	●	20.1	6.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

Solenoid Options		Base Catalog Number	Resilient Materials	Standard Rebuild Kit
High Temp.	Junction Box	Aluminum	NBR	AC
GENERAL PURPOSE				
HB	JB	8214 037	●	316728
HB	JB	8214 053	●	316728
HB	JB	8214 063	●	316728
HB	JB	8214 073	●	316728
HB	JB	8214 083	●	316727
HT	JB	8214 093	●	316776
WATERTIGHT				
HB	JKP	8214G013	●	316234
HB	JKP	8214G023	●	316234
HB	JKP	8214G033	●	316234
HB	JKP	8214G038	●	322467
HB	JKP	8214G054	●	322467
HB	JKP	8214G064	●	322467
HB	JKP	8214G074	●	322467
HB	JKP	8214G084	●	322468
GENERAL PURPOSE - SUFFIX C				
HB	JB	8214 037C	●	Not Available
HB	JB	8214 053C	●	Not Available
HB	JB	8214 063C	●	Not Available
HB	JB	8214 073C	●	Not Available
HB	JB	8214 083C	●	Not Available
WATERTIGHT - SUFFIX C				
HB	JKP	8214G038C	●	Not Available
HB	JKP	8214G054C	●	Not Available
HB	JKP	8214G064C	●	Not Available
HB	JKP	8214G074C	●	Not Available
HB	JKP	8214G084C	●	Not Available

● = Standard. Other options may be available. All option combinations may not be available.

Proof of Closure Switch (Suffix C)

Reed Switch	SPST (closed when valve is in closed position.)
Max. Electricity	1 amp, 120 volts
Load	60 Hz, 15 watt (resistive)
Leads	18" long

Note: Switch is factory set and not to be field adjusted.

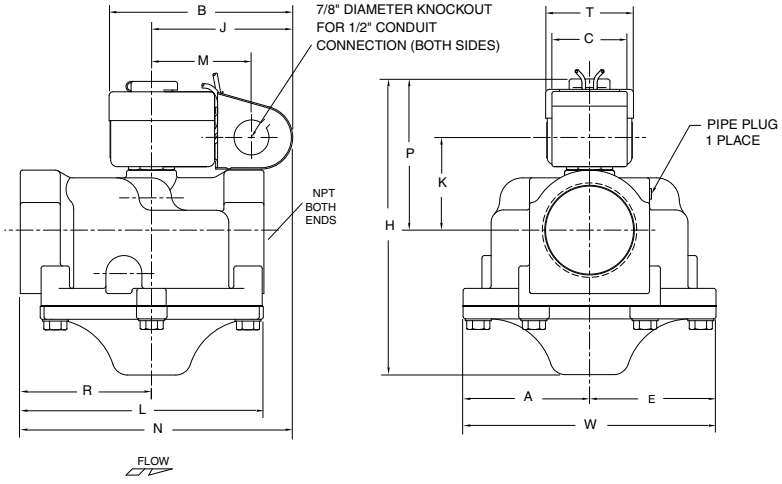
Dimensions - General Purpose inches (mm)

Const. Ref.		A	B	C	E	H	J	K	L	M	N	P	R	T	W
1	in	2.69	4.59	1.88	2.69	6.79	3.53	2.19	5.00	2.50	6.16	3.59	2.62	2.20	5.39
	mm	68	117	48	68	172	90	56	127	64	156	91	67	56	137
2	in	2.69	4.59	1.88	2.69	6.79	3.53	2.13	5.00	2.50	6.16	3.53	2.62	2.20	5.39
	mm	68	117	48	68	172	90	54	127	64	156	90	67	56	137
3	in	3.16	4.59	1.88	3.16	7.39	3.53	2.38	6.09	2.50	6.34	3.78	2.81	2.20	6.32
	mm	80	117	48	80	188	90	60	155	64	161	96	71	56	161
4	in	3.82	5.72	1.88	4.13	10.33	4.07	3.07	7.80	3.07	7.97	5.13	3.89	3.31	3.95
	mm	97	145	48	105	262	103	78	198	78	202	130	99	84	100

Vent Valve Requirements	
Manifold Line	**Vent Valve**
3/8" through 1 1/2"	3/4
2"	1
2 1/2" through 3"	1 1/4
3 1/2"	1 1/2
4" through 5"	2
5 1/2" through 6"	2 1/2
6 1/2" through 7 1/2"	3

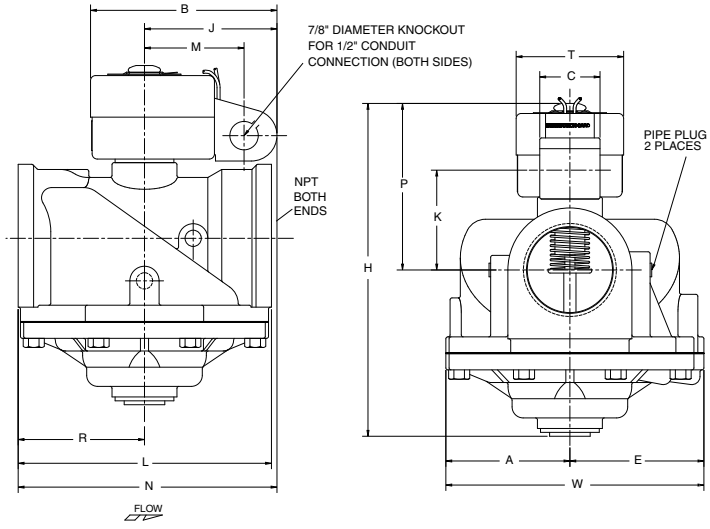
Const. Ref. 1, 2

Must be mounted with solenoid vertical and upright.



Const. Ref. 3, 4

Must be mounted with solenoid vertical and upright.



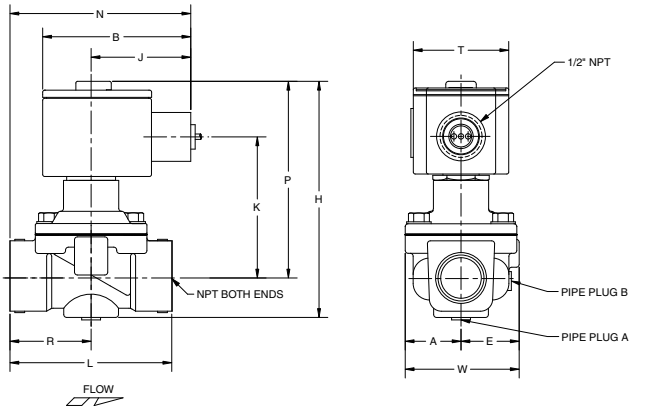
COMBUSTION

Dimensions - Watertight inches (mm)

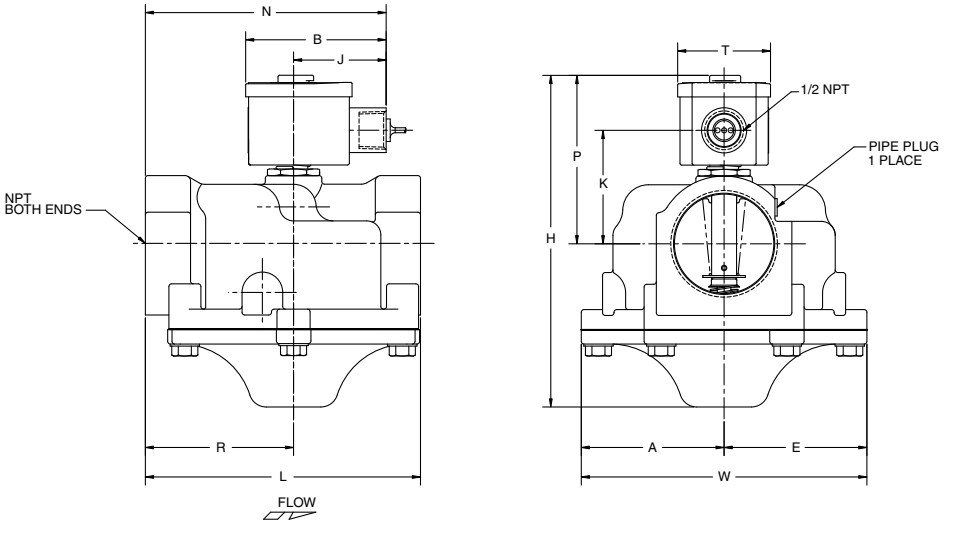
Const. Ref.		A	B	E	H	J	K	L	N	P	R	T	W	Pipe Plug
5	in	1.14	3.03	1.36	4.48	2.04	2.72	2.75	3.42	3.86	1.38	1.95	2.50	B
	mm	29	77	35	114	52	69	70	87	98	35	50	64	B
6	in	1.14	3.03	1.25	5.92	2.04	2.90	3.31	3.70	4.04	1.66	1.95	2.39	A
	mm	29	77	32	150	52	74	84	94	103	42	50	61	A
7	in	2.69	3.11	2.69	6.74	2.05	2.33	5.00	4.67	3.54	2.62	2.06	5.39	-
	mm	68	79	68	171	52	59	127	119	90	67	52	137	-
8	in	2.69	3.11	2.69	6.74	2.05	2.27	5.00	4.67	3.48	2.62	2.06	5.39	-
	mm	68	79	68	171	52	58	127	119	88	67	52	137	-
9	in	3.16	3.11	3.16	7.34	2.05	2.52	6.09	4.67	3.73	3.28	2.06	6.32	-
	mm	80	79	80	186	52	64	155	119	95	83	52	161	-

Vent Valve Requirements	
Manifold Line	**Vent Valve**
3/8" through 1 1/2"	3/4
2"	1
2 1/2" through 3"	1 1/4
3 1/2"	1 1/2
4" through 5"	2
5 1/2" through 6"	2 1/2
6 1/2" through 7 1/2"	3

Const. Ref. 5, 6
Can be mounted in any position.



Const. Ref. 7, 8, 9
Must be mounted with solenoid vertical and upright.



COMBUSTION

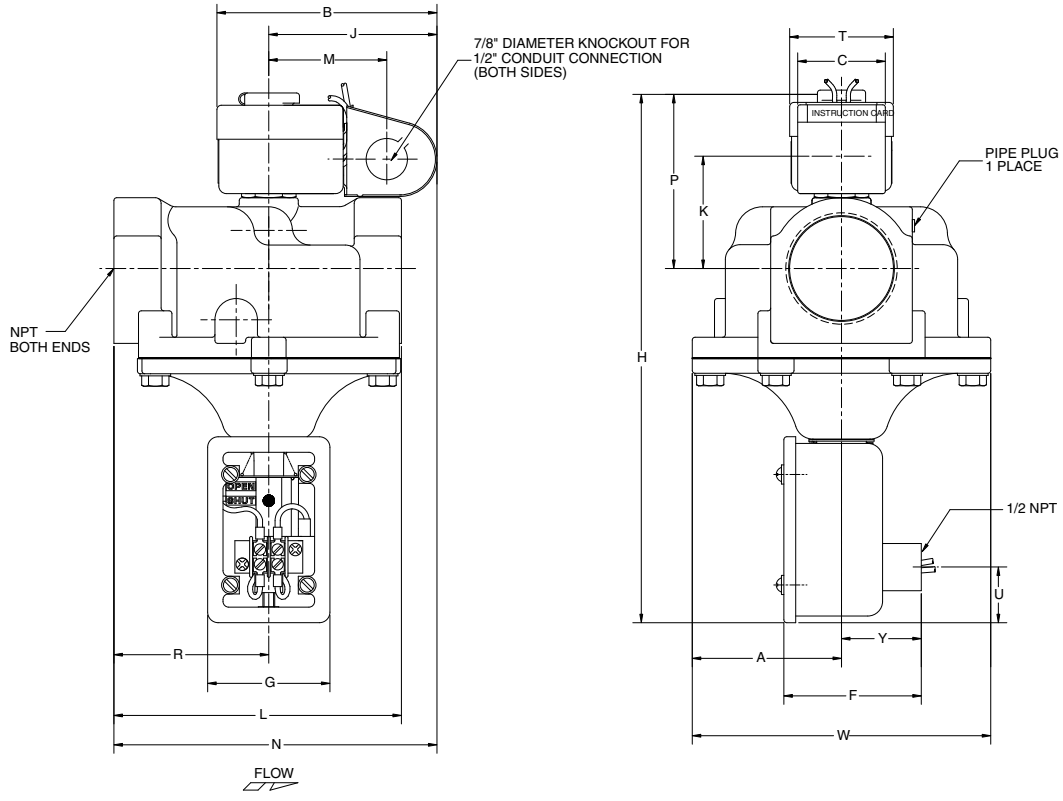
Dimensions - General Purpose & Proof of Closure (Suffix C) inches (mm)

Const. Ref.		A	B	C	F	G	H	J	K	L	M	N	P	R	T	U	W	Y
10	in	2.69	4.59	1.88	2.82	2.44	10.57	3.53	2.19	5.00	2.50	6.16	3.59	2.62	2.20	1.10	5.39	1.69
	mm	68	117	48	72	62	268	90	56	127	64	156	91	67	56	28	137	43
11	in	2.69	4.59	1.88	2.82	2.44	10.57	3.53	2.13	5.00	2.50	6.16	3.53	2.62	2.20	1.10	5.39	1.69
	mm	68	117	48	72	62	268	90	54	127	64	156	90	67	56	28	137	43
12	in	3.16	4.59	1.88	2.82	2.44	11.33	3.53	2.38	6.09	2.50	6.82	3.78	3.28	2.20	1.10	6.32	1.69
	mm	80	117	48	72	62	288	90	60	155	64	173	96	83	56	28	161	43

Vent Valve Requirements	
Manifold Line	**Vent Valve**
3/8" through 1 1/2"	3/4
2"	1
2 1/2" through 3"	1 1/4
3 1/2"	1 1/2
4" through 5"	2
5 1/2" through 6"	2 1/2
6 1/2" through 7 1/2"	3

Const. Ref. 10, 11, 12

Must be mounted with solenoid vertical and upright.



COMBUSTION

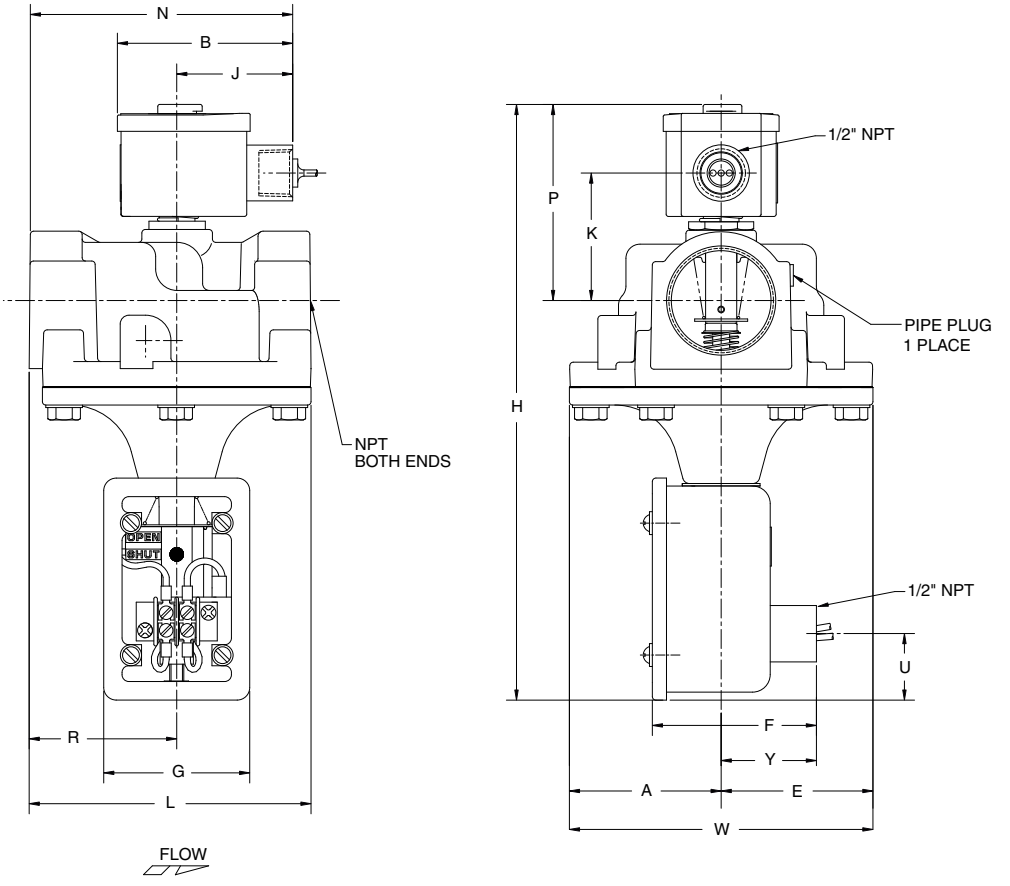
Dimensions - Watertight & Proof of Closure (Suffix C) inches (mm)

Const. Ref.		A	B	F	G	H	J	K	L	N	P	R	U	W	Y
13	in	2.69	3.11	3.07	2.32	10.54	2.05	4.06	5.00	4.67	5.46	2.62	1.18	5.39	1.69
	mm	68	79	78	59	268	52	103	127	119	139	67	30	137	43
14	in	2.69	3.11	3.07	2.32	10.54	2.05	4.13	5.00	4.67	5.53	2.62	1.18	5.39	1.69
	mm	68	79	78	59	268	52	105	127	119	140	67	30	137	43
15	in	3.16	3.11	3.07	2.32	11.33	2.05	4.62	6.09	5.33	5.84	3.28	1.18	6.32	1.69
	mm	80	79	78	59	288	52	117	155	135	148	83	30	161	43

Vent Valve Requirements	
Manifold Line	**Vent Valve**
3/8" through 1 1/2"	3/4
2"	1
2 1/2" through 3"	1 1/4
3 1/2"	1 1/2
4" through 5"	2
5 1/2" through 6"	2 1/2
6 1/2" through 7 1/2"	3

Const. Ref. 13, 14, 15

Must be mounted with solenoid vertical and upright.



COMBUSTION

Double Gas Shutoff Valves

3/4" to 3" NPT

Features

- Double solenoid gas train provides the most compact configuration for space restrictive requirements
- Double Hydramotor® gas train provides the highest flow and pressure to meet industry's most demanding requirments
- Solenoid and Hydramotor combination provides the most economical solution for slow opening applications
- Optional NPT threaded flange adapters allow direct piping that simplifies the installation and maintenance
- Suitable for boilers, furnaces, ovens, kilns, heating equipment, and gas generators used in commercial and industrial applications
- Low pressure drop and extremely high flow capacity, ideal in low gas supply pressure applications/locations

Please reference 8214(200), AH(E), or V710(B) catalog pages for additional features.

Fluid

Fuel Gas

Adapter & Connecting Hardware Kits (Optional)

Pipe Size (ins)	1 Inlet Adapter Kit	2 Outlet Adapter Kit	3 Inlet/Outlet Flange Adapter Hardware Kit	4 Connecting Hardware Kit	5 O-Ring Kit
3/4	296657-001	296658-001	296659-001	294986-001	296663-001
1	296657-002	296658-002	296659-002		
1 1/4	296657-003	296658-003	296659-003		
1 1/2	296657-004	296658-004	296659-004		
1 1/4 (High Flow)	296657-005	296658-005	296659-005	294986-002	296663-002
1 1/2 (High Flow)	296657-006	296658-006	296659-006		
2	296657-007	296658-007	296659-007		
2 (High Flow)	296657-008	296658-008	296659-008	294986-003	296663-003
2 1/2	296657-009	296658-009	296659-009		
3	296657-010	296658-010	296659-010		

Content of Hardware Kits/Adapters

Part Name	Inlet Adapter Kit	Outlet Adapter Kit	Inlet/Outlet Flange and Hardware Kit	Connecting Hardware Kit	O-Ring Kit
Inlet Flange Adapter	1	-	1	-	-
Outlet Flange Adapter	-	1	1	-	-
Bolt	-	-	8	4	-
Lock Washer	-	-	8	4	-
Flat Washer	-	-	8	4	-
Nut	-	-	8	4	-
O-Ring	1	1	2	1	10
I & M Instructions	1	1	1	1	1

Approvals

8214(200) valve

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves Z21.21 (6.5), C/I, File 112872.

3) Automatic Gas Safety Shutoff Valves (3.9), File 112872.

V710(B) valve with AH(E) Hydramotor

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP932 Safety Valves

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:

1. Automatic Gas Valves ANSI Z21.21 CSA 6.5, C/I, File 109157 and 113070.
2. Automatic Gas Safety Shutoff Valves (CGA 3.9), File 113070
3. Standard C22.2 No. 139, File 109157 and 113070

Specifications English units (Metric Units)

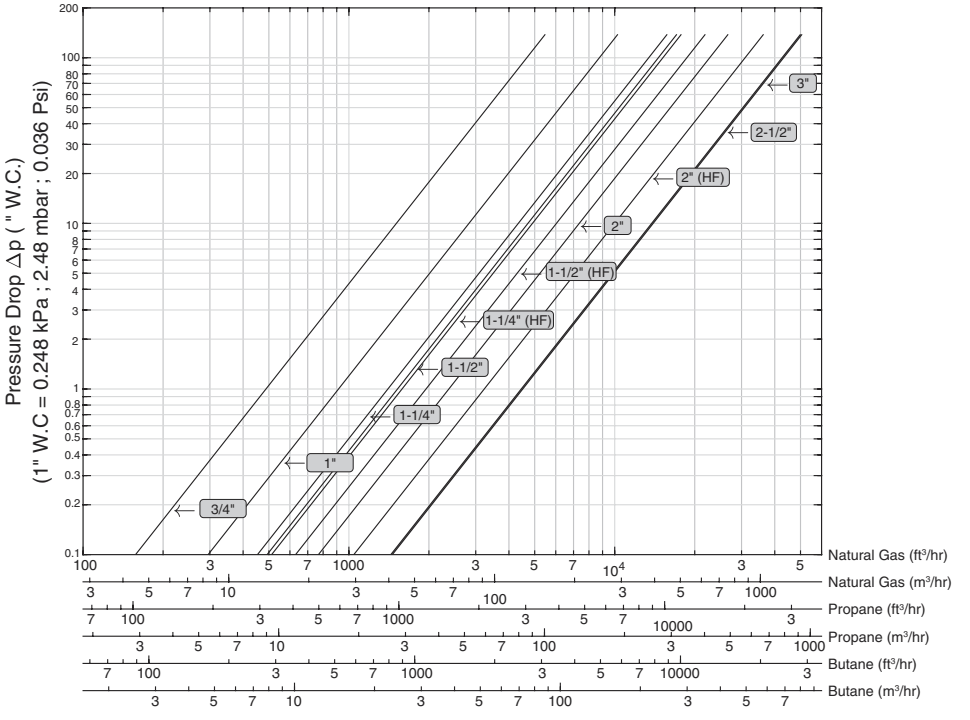
Modular Double Valves		Pipe Size (in)	Orifice Size in (mm)	Cv (Kv) Flow Factor (Double Valves)	Flow Capacity ① ft^3/hr (m^3/hr)	Gas Capacity ① Btu/hr	Const. Ref.
Valve #1	Valve #2	COMBUSTION (Fuel Gas) - NORMALLY CLOSED					
8214 (200) (On/Off)	8214 (200) (On/Off)	3/4	1 5/8 (41)	8 (6.9)	419 (12)	419,400	1
		1		15 (13.0)	801 (23)	800,700	
		1 1/4		23 (20.0)	1220 (35)	1,220,100	
		1 1/2		25 (21.6)	1335 (38)	1,334,500	
		1 1/4 (High Flow)	2 3/32 (53)	26 (22.5)	1362 (39)	1,362,000	
		1 1/2 (High Flow)		32 (28)	1711 (49)	1,711,000	
		2		39 (34)	2085 (59)	2,085,000	
		2 (High Flow)	3 (76)	53 (46)	2860 (81)	2,860,000	
		2 1/2		73 (63)	3970 (112)	3,970,000	
		3		74 (64)	4003 (113)	4,003,400	

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Note: The flow values are calculated for joined double valve construction, please reference 8214(200) and V710(B) catalog pages for discrete valve flows, and optional features.

Gas Flow Chart - Dual 8214(200) Gas Train N.C.

Dual 8214(200) Gas Trains N.C



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

COMBUSTION

Specifications English units (Metric Units)

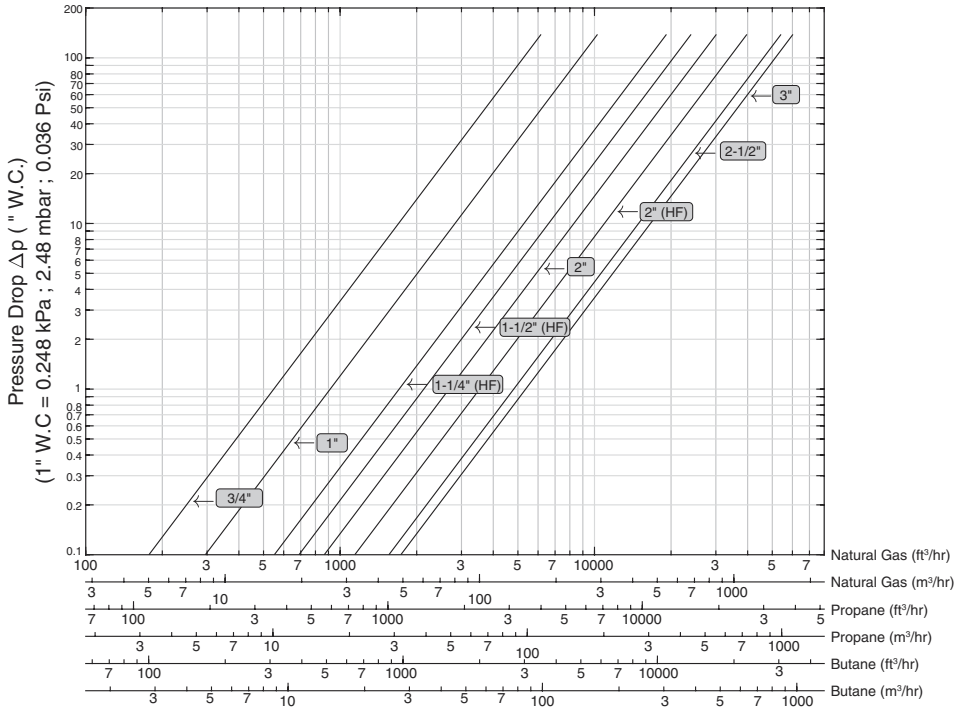
Modular Double Valves		Pipe Size (in)	Orifice Size (in)	Flow Factor (Double Valves) Cv (Kv)	Flow Capacity ① ft^3/hr (m^3/hr)	Gas Capacity ① Btu/hr	Const. Ref.
Valve #1	**Valve #2**	**COMBUSTION (Fuel Gas) - NORMALLY CLOSED**					
8214 (200) (On/Off)	AH2E/V710(B) (On/Off)	3/4	1 5/8 (41)	9 (7.8)	466 (13)	466,400	2
		1		15 (13.0)	801 (23)	800,700	
		1 1/4 (High Flow)	2 3/32 (53)	28 (24.2)	1,490 (42)	1,490,000	
		1 1/2 (High Flow)		35 (30)	1,890 (54)	1,890,000	
		2		44 (38)	2,360 (67)	2,360,000	
		2 (High Flow)	3 (76)	58 (50)	3,121 (88)	3,121,000	
		2 1/2		79 (68)	4,238 (120)	4,238,000	
		3		88 (76)	4,733 (134)	4,733,000	
8214 (200) (On/Off)	AH4E/V710(B) (Low/High/Off)	3/4	1 5/8 (41)	9 (7.8)	466 (13)	466,400	2
		1		14 (12.1)	755 (22)	754,900	
		1 1/4 (High Flow)	2 3/32 (53)	27 (23.4)	1,462 (42)	1,462,000	
		1 1/2 (High Flow)		34 (29)	1,820 (52)	1,820,000	
		2		43 (37)	2,273 (65)	2,273,000	
		2 (High Flow)	3 (76)	57 (49)	3,052 (87)	3,052,000	
		2 1/2		74 (64)	3,957 (112)	3,957,000	
		3		81 (70)	4,341 (123)	4,341,000	

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Note: The flow values are calculated for joined double valve construction, please reference 8214(200) and V710(B) catalog pages for discrete valve flows, and optional features.

Gas Flow Charts

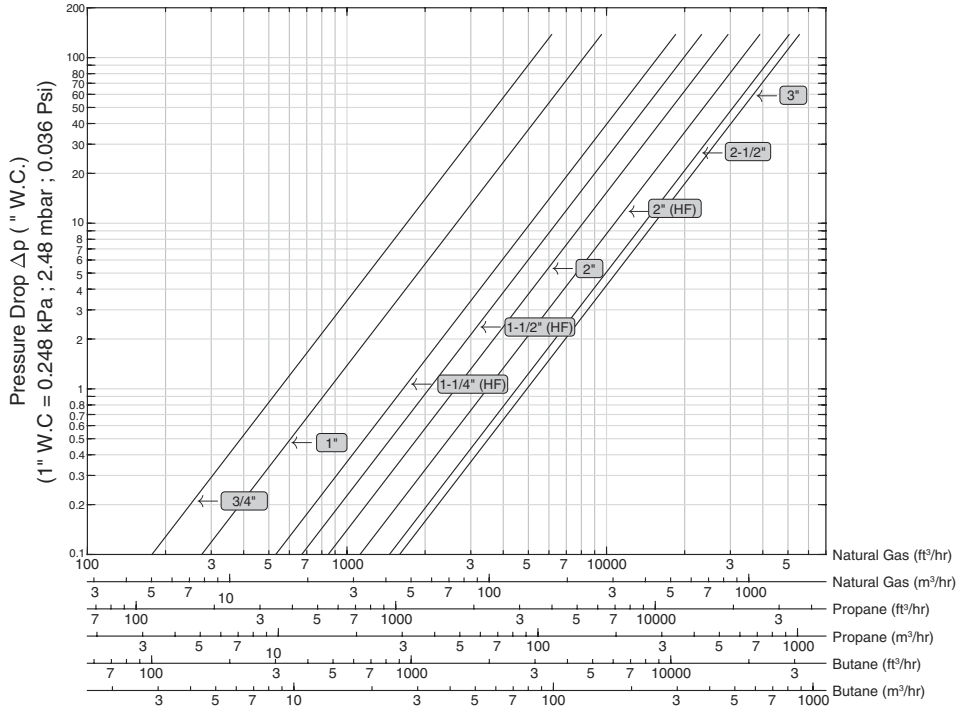
8214(200) & V710(B) (AH2E)



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

Gas Flow Charts

8214(200) & V710(B) (AH4E)



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

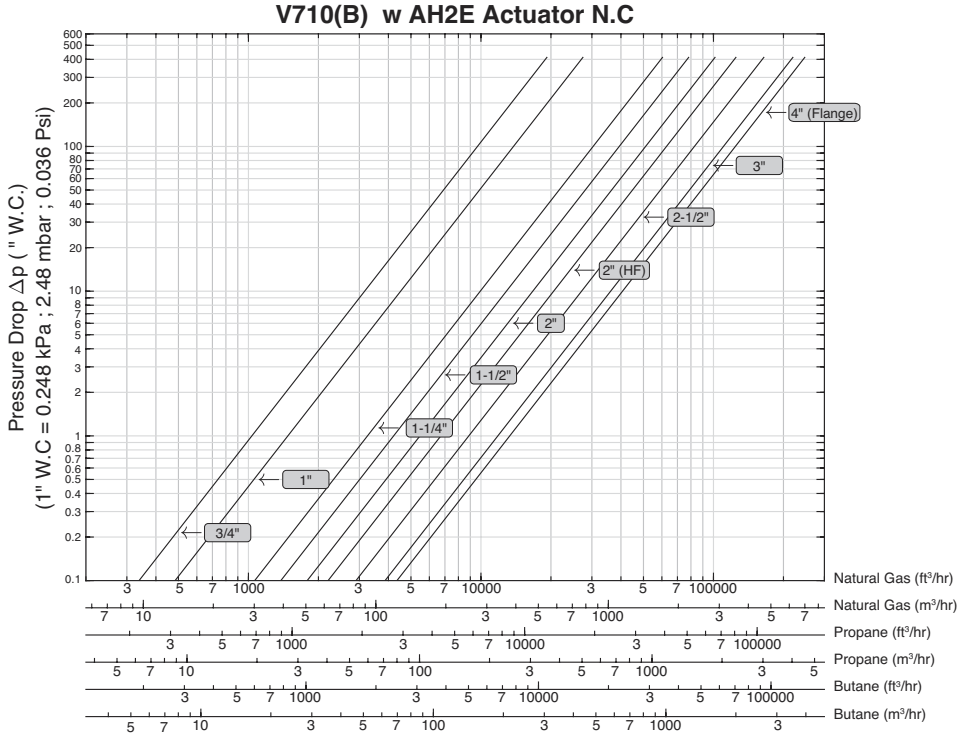
Specifications English units (Metric Units)

Modular Double Valves		Pipe Size (in)	Orifice Size in (mm)	Cv (Kv) Flow Factor (Double Valves)	Flow Capacity ① ft^3/hr (m^3/hr)	Gas Capacity ① Btu/hr	Const. Ref.
Valve #1	**Valve #2**	**COMBUSTION (Fuels Gas) - NORMALLY CLOSED**					
AH2E/V710(B) (On/Off)	AH2E/V710(B) (On/Off)	3/4	1 5/8 (41)	10 (8.7)	535 (15)	535,000	3
		1		14 (12.1)	755 (21)	754,900	
		1 1/4	2 3/32 (53)	31 (27)	1,664 (47)	1,664,000	
		1 1/2		40 (35)	2,155 (61)	2,155,300	
		2		52 (45)	2,798 (79)	2,798,000	
		2 (High Flow)	3 (76)	64 (55)	3,470 (98)	3,470,000	
		2 1/2		85 (74)	4,580 (130)	4,580,000	
		3		113 (98)	6,100 (173)	6,100,400	
AH2E/V710(B) (On/Off)	AH4E/V710(B) (Low/High/Off)	3/4	1 5/8 (41)	10 (8.7)	535 (15)	535,000	3
		1		14 (12.1)	755 (21)	754,900	
		1 1/4	2 3/32 (53)	31 (27)	1,664 (47)	1,664,000	
		1 1/2		39 (34)	2,085 (59)	2,085,200	
		2		50 (43)	2,673 (76)	2,673,400	
		2 (High Flow)	3 (76)	64 (55)	3,470 (98)	3,470,000	
		2 1/2		79 (68)	4,224 (120)	4,224,000	
		3		100 (87)	5,347 (152)	5,347,000	

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

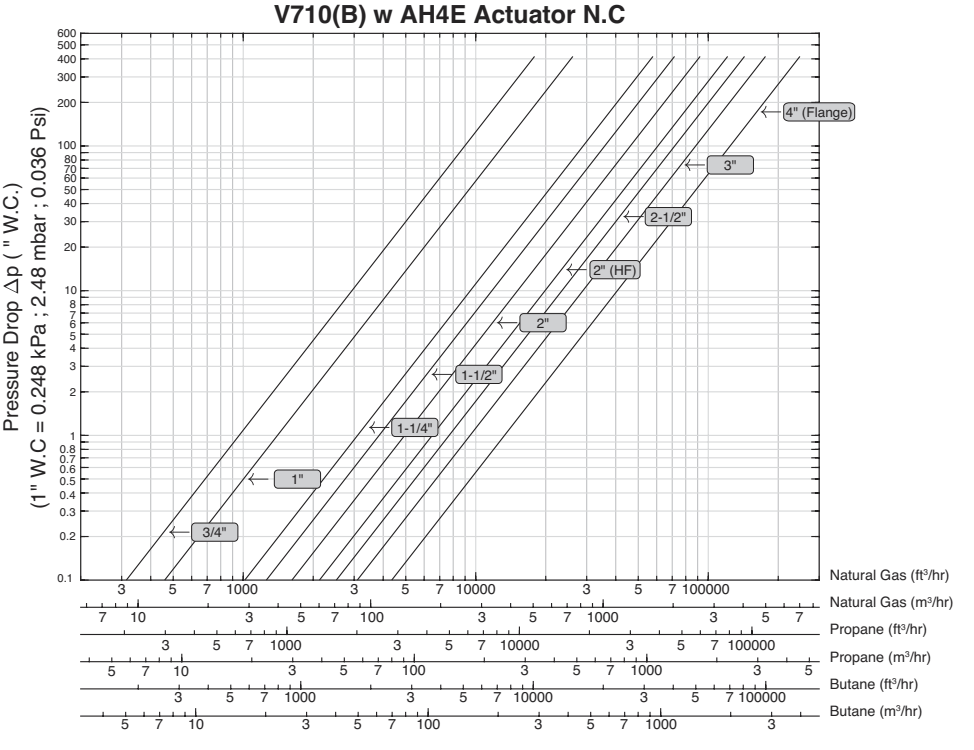
Note: The flow values are calculated for joined double valve construction, please reference 8214(200) and V710(B) catalog pages for discrete valve flows, and optional features.

Gas Flow Charts



Note: Flow curves are based on the following standard conditions: 15 psi (1 bar) inlet pressure and 68 F (20 C) fluid temperature.

Gas Flow Charts

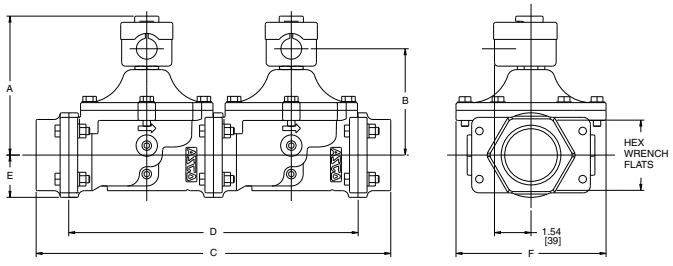


Note: Flow curves are based on the following standard conditions: 15 psi (1 bar) inlet pressure and 68 F (20 C) fluid temperature.

Dimensions inches (mm)

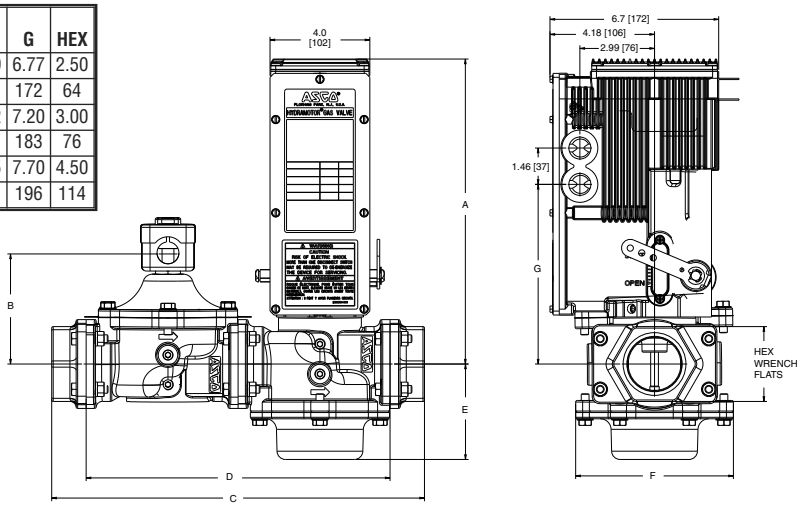
Const. Ref. 1

Const. Ref.	Valve Size (in)		A	B	C	D	E	F	G	HEX
1	3/4 to 1 1/2	in	5.51	4.14	13.14	10.60	1.46	5.39	-	2.50
		mm	140	105	334	269	37	137	-	64
	1 1/2 (High Flow) to 2	in	5.85	4.48	14.94	12.18	1.78	6.32	-	3.00
		mm	149	114	379	309	45	161	-	76
	2 (High Flow) to 3	in	7.23	5.86	19.64	15.60	2.39	7.95	-	4.50
		mm	184	149	498	396	61	202	-	114



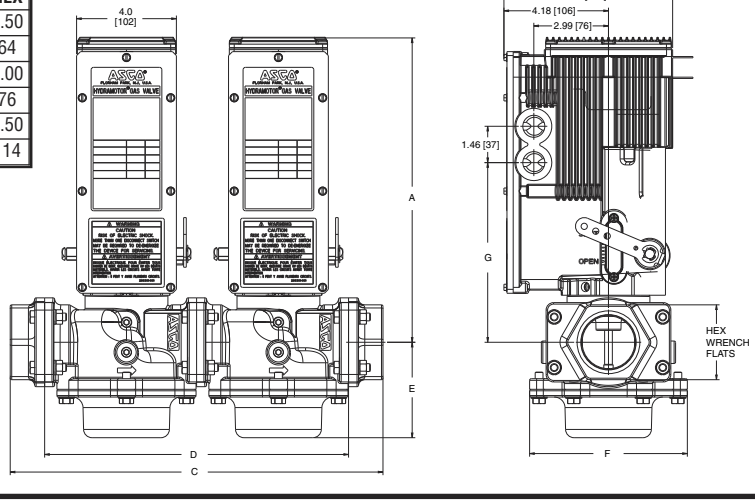
Const. Ref. 2

Const. Ref.	Valve Size (in)		A	B	C	D	E	F	G	HEX
2	3/4 to 1	in	11.81	4.14	13.14	10.60	3.47	5.39	6.77	2.50
		mm	300	105	334	269	88	137	172	64
	1 1/2 (High Flow) to 2	in	12.22	4.48	14.94	12.18	3.83	6.32	7.20	3.00
		mm	310	114	379	309	97	161	183	76
	2 (High Flow) to 3	in	12.72	5.86	19.64	15.60	5.28	7.95	7.70	4.50
		mm	323	149	498	396	134	202	196	114

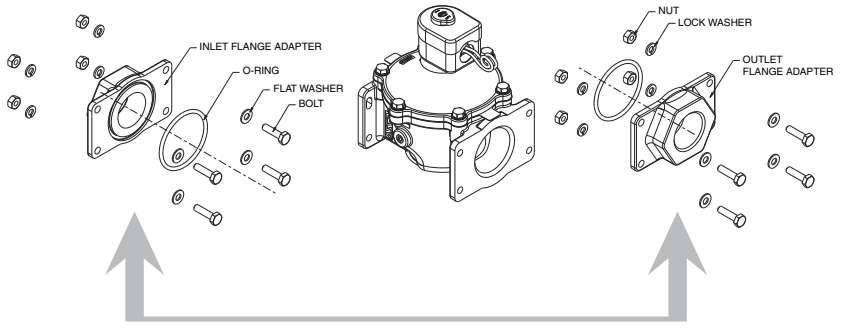


Const. Ref. 3

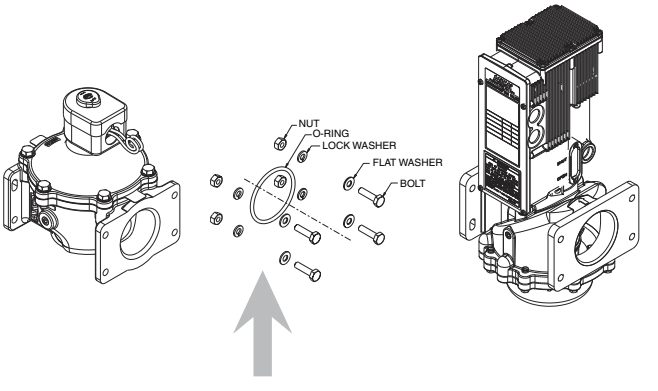
Const. Ref.	Valve Size (in)		A	B	C	D	E	F	G	HEX
3	3/4 to 1	in	11.81	-	13.14	10.60	3.47	5.39	6.77	2.50
		mm	300	-	334	269	88	137	172	64
	1 1/2 to 2	in	12.22	-	14.94	12.18	3.83	6.32	7.20	3.00
		mm	310	-	379	309	97	161	183	76
	2 (High Flow) to 3	in	12.72	-	19.64	15.60	5.28	7.95	7.70	4.50
		mm	323	-	498	396	134	202	196	114



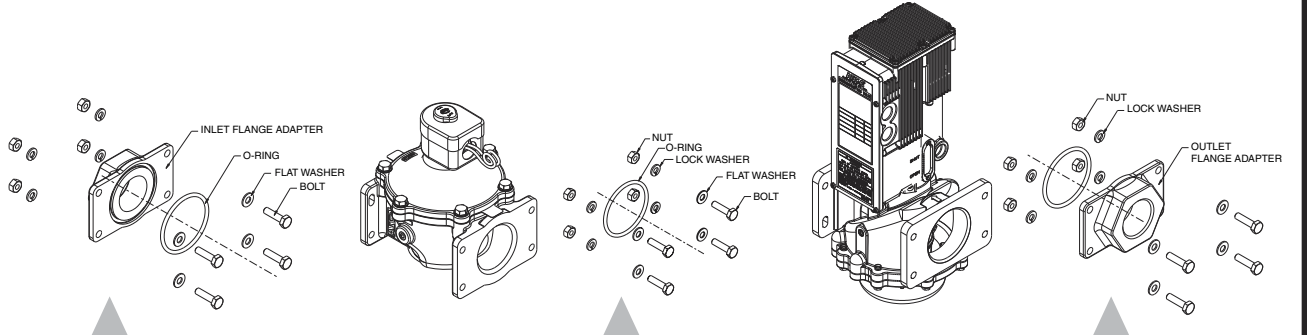
Adapter & Joining Hardware Kits (Optional)



INLET / OUTLET
FLANGE ADAPTERS AND HARDWARE KIT



CONNECTING
HARDWARE KIT



CONNECTING
HARDWARE KIT

INLET / OUTLET
FLANGE ADAPTERS AND HARDWARE KIT

COMBUSTION

Features

- 2-way normally closed operation
- For control of commercial and industrial gas pilot controls
- Brass body construction
- Mountable in any position
- Direct lift with resilient soft sealing for tight shutoff

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Core Tube/ Bonnet	Stainless Steel / Plated Steel
Core and Plugnut	Stainless Steel
Springs	Stainless Steel
Seals and Disc	NBR / FKM
Shading Coil	Copper

Electrical

Prefix	Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.˚F	Spare Coil Family	
		DC Watts	AC					
			Watts	VA Holding	VA Inrush		AC	DC
U	F	6.9	6.3	8.8	12.1	-22 to 140	400117	400117
SC	F	6.9	6.3	8.8	12.1	-22 to 140	400127	400127
Standard voltages: 24,120, 240 volts AC, 50-60 Hz. 12, 24, 120 volts DC Must be specified when ordering.								

Solenoid Enclosures

Standard: Open frame (Prefix U) 18" leads

Optional: DIN (size 11mm, form B) (Prefix SC). Watertight/IP-65 when used with DIN connector kit for SC coils (see kits below).

Valve Response Time

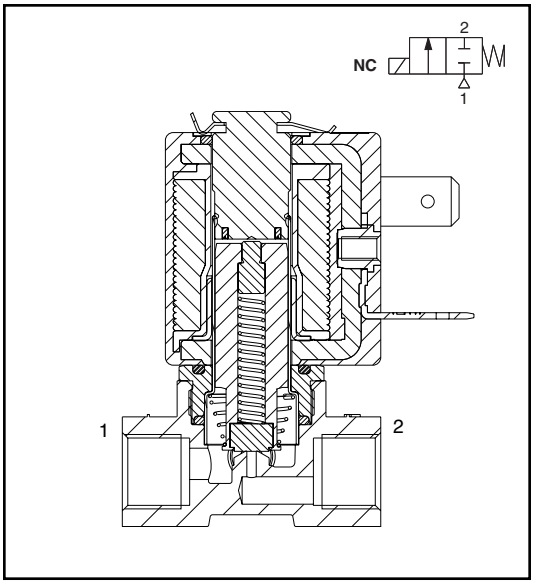
Opening Time: Less than 1 second

Closing Time: Less than 1 second

Kits

1/2" NPT conduit hub kit for leaded coils 224735-001-*
(Kit contains 10 pcs. of each: threaded hub, gasket and attaching screw.)

DIN connector kit for SC coils 226061-001-*
(Kit contains 10 pcs of each: connector, gasket, and attaching screw.)



Approvals

UL recognized component to standard 429 “Electrically Operated Valves,” Guide YIOZ2, File MP618 Safety Shutoff Valves.

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 235078.
2) Automatic Gas Valves Z21.21 (6.5), File 235078.
3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 235078.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Max. AC Fuel Gas	Max. DC Fuel Gas	Min. Fluid Temp.˚F	Max. Fluid Temp.˚F AC	Max. Fluid Temp.˚F DC	Brass	Wattage AC	Wattage DC	Approx. Shipping Weight (lbs.)
Fuel Gas Shutoff - Normally Closed													
1/8	7/64	0.16	9000	0	200	65	-22	180	180	U8256A091V	6.3	6.9	0.5

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Max. AC Fuel Gas	Max. DC Fuel Gas	Min. Fluid Temp.˚C	Max. Fluid Temp.˚C AC	Max. Fluid Temp.˚C DC	Brass	Wattage AC	Wattage DC	Approx. Shipping Weight (kgs.)
Fuel Gas Shutoff - Normally Closed													
1/8	2.8	0.14	9000	0	14	4	-30	82	82	U8256A091V	6.3	6.9	0.22

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

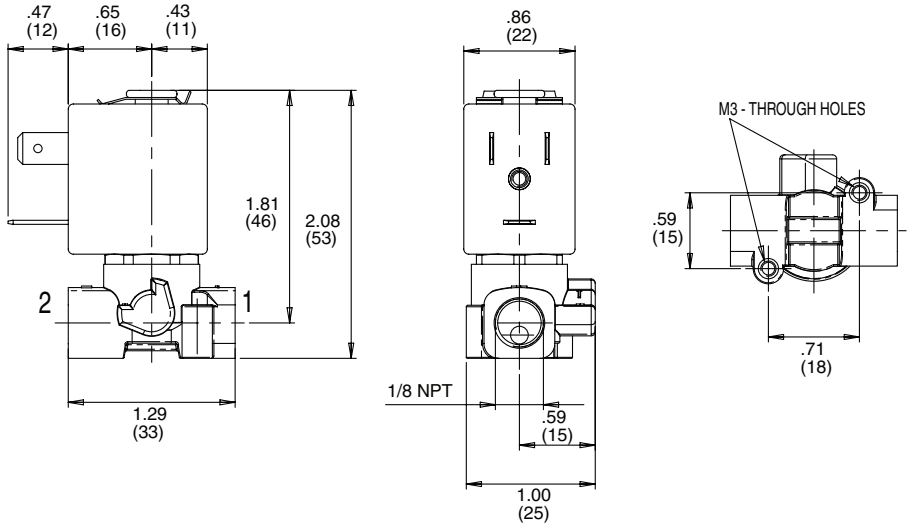
Capabilities Chart

Solenoid Options ① NEMA Type 3-9	High Temp. DIN	Wiring Box Screw Terminal	Multipin	DIN	Spade	Open Frame with Leads	Base Catalog Number Brass	Resilient Materials NBR	FKM	EPDM	RUBY	Oxygen Service	PTFE	Urethane	Vacuum	Other Manual Operator	Mounting Bracket	Standard Rebuild Kit Brass AC/DC
-	-	-	-	SC	-	●	U8256A091V	-	●	-	-	-	-	-	-	-	-	-

● = Standard. ① Replace U prefix with SC prefix.

Dimensions: inches (mm)

Shown with DIN coil without connector



COMBUSTION

Features

- 2-way normally closed operation
- For gas pilot control of commercial and industrial gas burners
- Direct lift with resilient soft seating for tight shutoff
- Brass body construction
- Mountable in any position

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	LT NBR
Core Tube	305 Stainless Steel
Core Guide	Acetal
Rider Ring	PTFE
Core and Plugnut	430F Stainless Steel
Springs	Inconel 600
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.1	25	70	-40 to 131	238610	238614
H	10.1	25	70	-40 to 140	238810	238814

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140˚F Class H coil with prefix HT.

Solenoid Enclosures

Standard: Watertight; Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.)

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

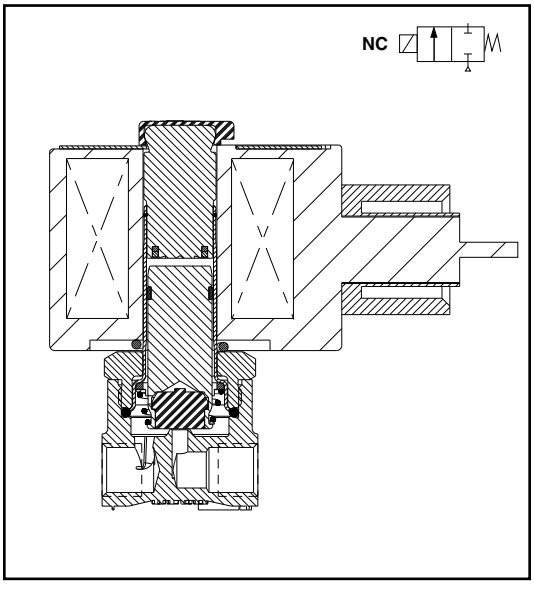
Options

High Ambient 140˚F (prefix HT)

Din Connector (prefix SC for standard, prefix SU for high temperature)

Mounting Bracket (suffix MB)

Silicone Free Service (suffix SF)



Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves Z21.21 (6.5), File 112872.

3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED (Closed when de-energized)													
1/8	1/8	.35	18,700	0	200	167	8262H077	1	❍	❍	❍	10.1	1.2
1/4	9/32	1.0	53,500	0	50	167	8262H078	2	❍	❍	❍	10.1	1.3

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED (Closed when de-energized)													
1/8	3	0.30	15,000	0	13.8	75	8262H077	1	❍	❍	❍	10.1	0.5
1/4	7	0.87	51,700	0	3.4	75	8262H078	2	❍	❍	❍	10.1	0.6

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

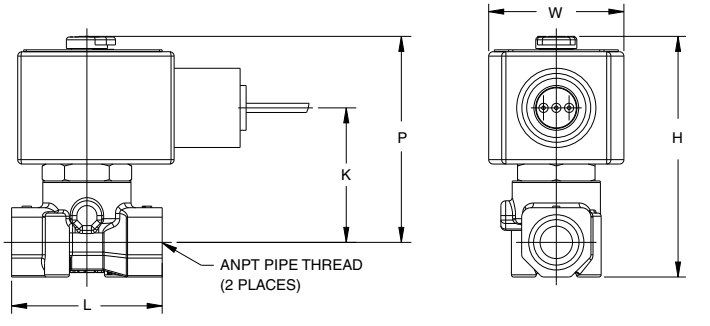
Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Screw Terminal Wiring Box	Spade Wiring Box	Brass	LT NBR	AC
EF	HT	JKF	JSF	8262H077	●	325039
EF	HT	JKF	JSF	8262H078	●	325039

● = Standard. Other options may be available. All option combinations may not be available.

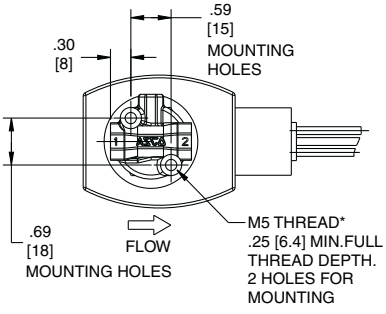
Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	ins	3.05	1.71	1.19	2.69	1.95
	mm	77	43	30	68	50
2	ins	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50

Const. Ref. 1, 2



Const. Ref. 1



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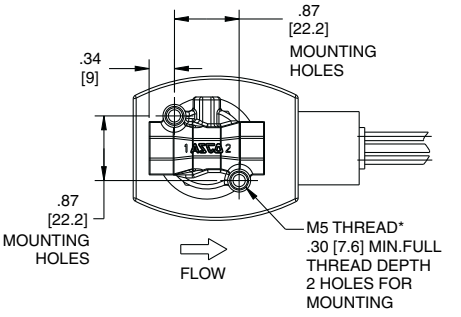


*ACCEPTS STANDARD #10-32 MACHINE SCREW

COMBUSTION

General Description

The AH2E Hydramotors are push-type, self-contained, electrohydraulic linear actuators which extend when powered and retract by spring force upon power interruption.

AH2E Hydramotors provide a fast spring return shutoff time of one second or less. When the actuator is mounted to a V710 gas valve, position indicators on both sides of the actuator show the open or closed position of the valve.

The AH2E Hydramotor/V710 gas valve combination provides main line gas control for a wide range of applications, including boilers, furnaces, ovens and all types of industrial and commercial burners. It is available in either a slow or fast opening construction.

AH2E shown on V710(B) body.

Specifications

Power Requirement: 220 VA max.

Closing Time: One second max.

Opening Time:
Fast Opening: 14 seconds max.
Slow Opening: 26 seconds max.

Note: Opening time is double between -30˚F and -40˚F ambient. Opening time increases 20% when operating on 50Hz.

Enclosure

Standard: General Purpose Type 1

Optional: Watertight Type 4
(Also meets General Purpose Type 1 and Raintight Type 3)

Ambient Temperature

-40˚F to 150˚F (-40˚C to 66˚C)

Electrical

Standard voltages: 120V/60Hz, 110V/50Hz
Non-standard voltages: 24V/60Hz, 240V/60Hz, 220V/50Hz

Proof of Closure Switch: (optional)
A factory set, non-field adjustable SPDT switch. 1800VA max. connected load (e.g. one 15A max. load @ 24V or 120V; one 7.5A max. load at 240V).

Auxiliary Switches: (optional)
One or two integral SPDT switches; field adjustable to actuate at any position of stroke. 1800 VA max. connected load (e.g. one 15A max. load @ 24V or 120V; one 7.5A max. load at 240V).
(Only one aux. switch available with proof of closure construction.)

Electrical Characteristics

Voltage/Hz*	Amperes		
	Inrush	Opening	Holding
24V/60	28	8.2	0.49
120V/60, 110/50	5.6	2.1	0.09
240V/60, 220/50	2.8	1.1	0.04

*Current increases by 20% for 50 Hz operation.

Installation

AH2E Hydramotor mounts in any position directly to a V710 valve with 3 set screws.

Damper Arm Rating

Drives damper in one direction only. 20 lb. max. at 2.85" radius at 20˚F to 150˚F and 10 lb. max. at -40˚F to 20˚F. Travel 2" max.

Approvals

AH2E Hydramotor with V710 valve
UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP932 Safety Valves

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:
1. Automatic Gas Valves ANSI Z21.21 CSA 6.5, C/I, File 109157 and 113070.
2. Automatic Gas Safety Shutoff Valves (CGA 3.9), File 113070

Ordering Information

Important: Order by Catalog Number and add suffix number for desired optional feature. e.g. AH2E112A5

Specifications

Applications	Catalog Number		
	24V/60Hz	120V/60Hz, 110V/50Hz	240V/60Hz, 220V/50Hz
On-Off Slow Opening (26 seconds Max) (Watertight)			
Standard	AH2E101A	AH2E102A	AH2E104A
Proof of closure	AH2E101S	AH2E102S	AH2E104S
On-Off Slow Opening (26 seconds Max) (General Purpose)			
Standard	AH2E201A	AH2E202A	AH2E204A
Proof of closure	AH2E201S	AH2E202S	AH2E204S
On-Off Fast Opening (14 seconds Max) (Watertight)			
Standard	AH2E111A	AH2E112A	AH2E114A
Proof of closure	AH2E111S	AH2E112S	AH2E114S
On-Off Fast Opening (14 seconds Max) (General Purpose)			
Standard	AH2E211A	AH2E212A	AH2E214A
Proof of closure	AH2E211S	AH2E212S	AH2E214S

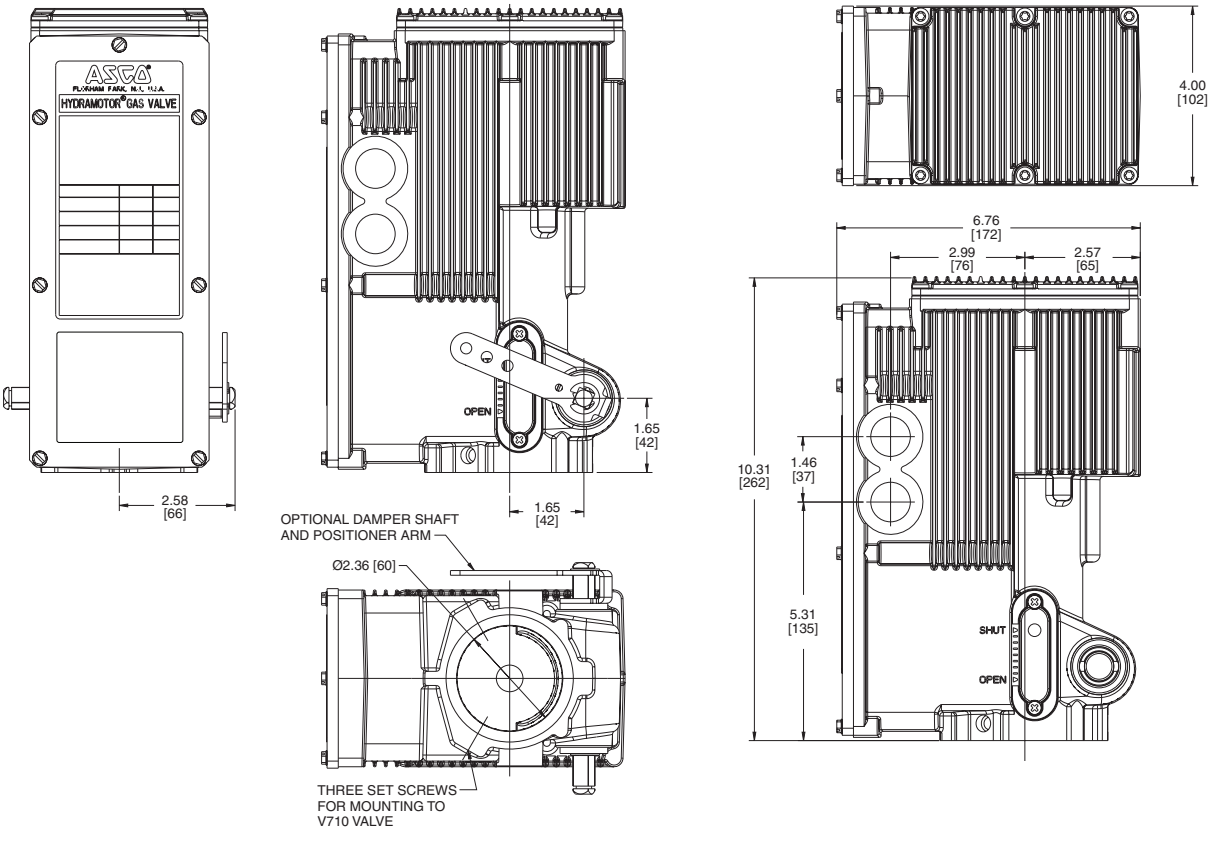
Optional Features

Add appropriate suffix number to catalog number

Damper shaft (add Suffix 1)
One auxiliary switch (add Suffix 2)
Damper shaft & arm (add Suffix 4)
Damper shaft, arm & one auxiliary switch (add Suffix 5)
Two auxiliary switches (add Suffix 6)*
Damper shaft w/arm & two auxiliary switches (add Suffix 7)*

*Not available with proof of closure constructions

Dimensions inches (mm)



COMBUSTION

General Description

The AH4E Hydramotors are three-position push-type, self-contained, electrohydraulic linear actuators featuring dual internal control valves for repeatable positioning. The low-fire position is factory set at the stroke midpoint, but can be field adjustable to any position between 15% and 100% of stroke.

When power is applied, the actuator shaft travels to the low-fire position. After an external switch completes the low-fire controller circuit, the shaft continues on to the high-fire setting. Opening the external switch returns the shaft to the low-fire setting, and power interruption fully closes the valve in one second or less from any position.

The AH4E Hydramotor/V710(B) gas valve combination provides reliable main line gas control for a wide range of applications, including boilers, furnaces, ovens and all types of industrial and commercial burners.

AH4E shown on V710(B) body.

Specifications

Power Requirement: 220 VA max.

Closing Time: One second max.

Opening Time:
Fast Opening: 14 seconds max.
Slow Opening: 26 seconds max.

Note: Opening time is double between -30˚F and -40˚F ambient. Opening time increases 20% when operating on 50Hz.

Enclosure

Standard: General Purpose Type 1

Optional: Watertight Type 4
(Also meets General Purpose Type 1 and Raintight Type 3)

Ambient Temperature

-40˚F to 150˚F (-40˚C to 66˚C)

Electrical

Standard voltages: 120V/60Hz, 110V/50Hz

Non-standard voltages: 240V/60Hz, 220V/50Hz

Proof of Closure Switch (POC): (optional)
A factory set, non-field adjustable SPDT switch. 1800VA max. connected load (e.g. 15A max. load @ 120V; 7.5A max. load at 240V).

Auxiliary Switch: (optional)
One integral SPDT switch; field adjustable to actuate at any position of stroke. 1800 VA max. connected load (e.g. 15A max. load @ 120V; 7.5A max. load at 240V). (Note: Not available if optional POC switch is ordered)

Electrical Characteristics

Voltage/Hz*	Amperes		
	Inrush	Opening	Holding
120V/60, 110/50	3.6	2.2	0.18
240V/60, 220/50	1.9	1.2	0.09

*Current increases by 20% for 50 Hz operation.

Installation

AH4E Hydramotor mounts in any position directly to a V710 valve with 3 set screws.

Damper Arm Rating

Drives damper in one direction only. 20 lb. max. at 2.85" radius at 20˚F to 150˚F and 10 lb. max. at -40˚F to 20˚F. Travel 2" max.

Approvals

AH4E Hydramotor with V710 valve
UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP932 Safety Valves

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:
1. Automatic Gas Valves ANSI Z21.21 CSA 6.5, C/I, File 109157 and 113070.
2. Automatic Gas Safety Shutoff Valves (CGA 3.9), File 113070

Ordering Information

Important: Order by Catalog Number and add suffix number for desired optional feature. e.g. AH4E112A1

Specifications

Applications	Catalog Number	
	120V/60Hz, 110V/50Hz	240V/60Hz, 220V/50Hz
On-Off Slow Opening (26 seconds Max) (Watertight)		
Standard	AH4E102A	AH4E104A
Proof of closure	AH4E102S	AH4E104S
On-Off Slow Opening (26 seconds Max) (General Purpose)		
Standard	AH4E202A	AH4E204A
Proof of closure	AH4E202S	AH4E204S
On-Off Fast Opening (14 seconds Max) (Watertight)		
Standard	AH4E112A	AH4E114A
Proof of closure	AH4E112S	AH4E114S
On-Off Fast Opening (14 seconds Max) (General Purpose)		
Standard	AH4E212A	AH4E214A
Proof of closure	AH4E212S	AH4E214S

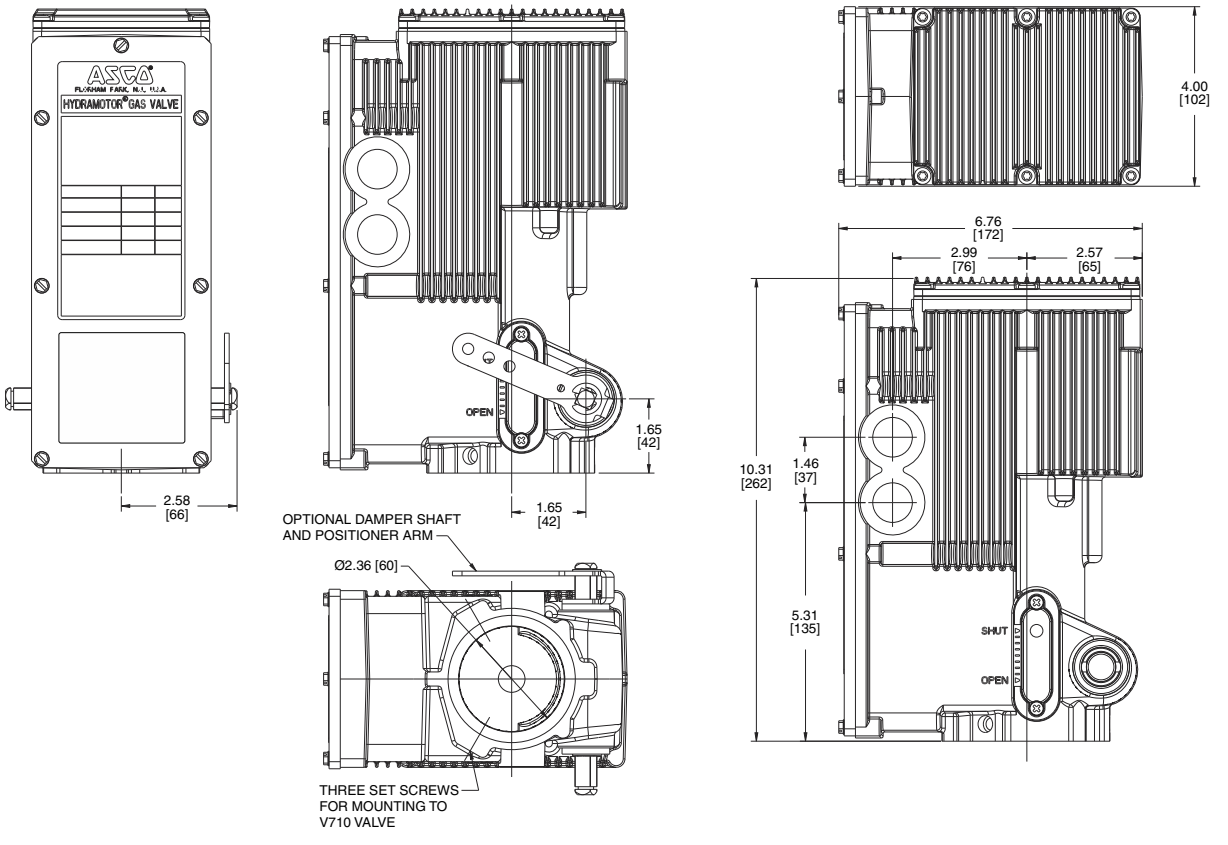
Optional Features

Add appropriate suffix number to catalog number

Damper shaft (add Suffix 1)
Damper shaft & arm (add Suffix 4)
One auxiliary switch (add Suffix 2)*
Damper shaft, arm & one auxiliary switch (add Suffix 5)*

*Not available with proof of closure constructions

Dimensions inches (mm)



COMBUSTION

General Description

These 2-way normally closed valve bodies are designed for on/off control of commecial or industrial gas burners. The V710(B) is designed exclusively for use with the AH(E) Hydramotor® actuator. The AH(E) Hydramotor valve consists of two assemblies; the V710(B) valve body and the AH(E) Hydramotor actuator.

The V710(B) is a push-to-open valve which opens when the valve stem is depressed by an AH(E) Hydramotor. An internal return spring closes the valve when the Hydramotor actuator is de-energized. Optional flange adapters are available for ease of installation and service. These valves are provided with upstream and downstream pipe taps with plugs for routine testing.

Series V710(B) valve body with AH(E) Hydramotor

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Die-cast aluminum
Bonnet	Die-cast aluminum
Seals	Nitrile
Springs	Zinc-plated steel
Stem Bushing	Delrin
Valve Stem	303 stainless steel
Discs	NBR
Retaining Ring	303 stainless steel
Pipe Plugs	Zinc-plated steel
Seal Ring	PTFE (models with overtravel)
Stem Connector	303 stainless steel

Model Types

Quick Opening Trim: (Standard)
For applications where metered flow control is not required.

Quick Opening w/Valve Seal Overtravel Trim: (Suffix V22)
For any "on-off" application where the user, code or approval agency requires a valve seal overtravel arrangement.

Linear Trim: (Suffix V15)
For applications that require flow control, such as slow opening, or low fire turn down

Linear w/Valve Seal Overtravel Trim: (Suffix V25)
For applications where both valve seal overtravel and flow control are required. (Not available in 4" flange size).

Closeoff Pressure

50 psi (3.5 bar) maximum

Installation

V710(B) valve body mounts in any position directly to AH(E) Hydromotor Actuator.

Approvals

V710(B) valve with AH(E) Hydramotor

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP932 Safety Valves

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:

1. Automatic Gas Valves ANSI Z21.21 CSA 6.5, C/I, File 109157 and 113070.
2. Automatic Gas Safety Shutoff Valves (CGA 3.9), File 113070
3. Standard C22.2 No. 139, File 109157 and 113070

Ordering Information

Important: Order by Catalog Number and add suffix number for desired optional feature. e.g. V710EBSV22

Specifications (English units) - with AH2E Actuator Only

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Flow Capacity ft^3/hr ①	Gas Capacity Btu/hr. ①	Operating Pressure Differential (psi)		Fluid Temp.˚F		Catalog Numbers		Const. Ref.	Approx. Shipping Weight (lbs)
					Min.	Max.	Min.	Max.	Quick Opening Trim	Quick Opening w/Valve Seal Overtravel Trim		
COMBUSTION (Fuel Gas) - Normally Closed												
3/4	1 5/8	14	755	754,900	0	15	-40	150	V710EBS	V710EBSV22	1	4.3
1	1 5/8	20	1,078	1,078,400	0	15	-40	150	V710FBS	V710FBSV22	1	4.2
1 1/4	2 3/32	44	2,353	2,353,000	0	15	-40	150	V710GBS	V710GBSV22	2	6.3
1 1/2	2 3/32	57	3,048	3,048,000	0	15	-40	150	V710HBS	V710HBSV22	2	6.1
2	2 3/32	74	3,956	3,956,500	0	15	-40	150	V710JBS	V710JBSV22	2	5.8
2 (High Flow)	3	91	4,906	4,906,800	0	15	-40	150	V710MBS	V710MBSV22	3	13.2
2 1/2	3	120	6,470	6,470,500	0	15	-40	150	V710KBS	V710KBSV22	3	12.7
3	3	160	8,627	8,627,300	0	15	-40	150	V710LBS	V710LBSV22 ②	3	11.7
4 (Flange)	4	180	10,200	10,200,000	0	15	-40	150	V710NCF	V710NCFV22	4	100

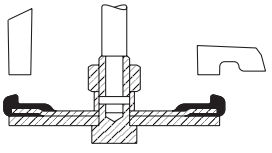
① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Cv flow factor is 149.

Specifications (Metric units) - with AH2E Actuator Only

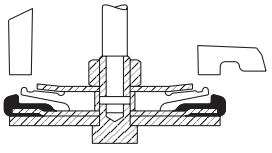
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor	Flow Capacity m^3/hr ①	Gas Capacity Btu/hr. ①	Operating Pressure Differential (bar)		Fluid Temp.˚C		Catalog Numbers		Const. Ref.	Approx. Shipping Weight (kgs)
					Min.	Max.	Min.	Max.	Quick Opening Trim	Quick Opening w/Valve Seal Overtravel Trim		
COMBUSTION (Fuel Gas) - Normally Closed												
3/4	41	12.1	21	754,900	0	1	-40	66	V710EBS	V710EBSV22	1	2.0
1	41	17.3	31	1,078,400	0	1	-40	66	V710FBS	V710FBSV22	1	1.9
1 1/4	53	38	67	2,353,000	0	1	-40	66	V710GBS	V710GBSV22	2	2.9
1 1/2	53	49	86	3,048,000	0	1	-40	66	V710HBS	V710HBSV22	2	2.8
2	53	64	112	3,956,500	0	1	-40	66	V710JBS	V710JBSV22	2	2.6
2 (High Flow)	76	79	139	4,906,800	0	1	-40	66	V710MBS	V710MBSV22	3	6.0
2 1/2	76	104	183	6,470,500	0	1	-40	66	V710KBS	V710KBSV22	3	5.8
3	76	138	244	8,627,300	0	1	-40	66	V710LBS	V710LBSV22 ②	3	5.3
4 (Flange)	102	156	289	10,200,000	0	1	-40	66	V710NCF	V710NCFV22	4	45.5

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Kv flow factor is 129.

Trim Types



QUICK OPENING TRIM
(STANDARD)



QUICK OPENING WITH
VALVE SEAL OVERTRAVEL TRIM
(SUFFIX V22)

Specifications (English units) - with AH4E Actuator Only

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Flow Capacity ft^3/hr ①	Gas Capacity Btu/hr. ①	Operating Pressure Differential (psi)		Fluid Temp.˚F		Catalog Numbers		Const. Ref.	Approx. Shipping Weight (lbs)
					Min.	Max.	Min.	Max.	Linear Trim	Linear w/Valve Seal Overtravel Trim		
COMBUSTION (Fuel Gas) - Normally Closed												
3/4	1 5/8	13	695	695,100	0	15	-40	150	V710EBSV15	V710EBSV25	1	4.3
1	1 5/8	19	1016	1,016,000	0	15	-40	150	V710FBSV15	V710FBSV25	1	4.2
1 1/4	2 3/32	42	2246	2,246,000	0	15	-40	150	V710GBSV15	V710GBSV25	2	6.3
1 1/2	2 3/32	52	2780	2,780,300	0	15	-40	150	V710HBSV15	V710HBSV25	2	6.1
2	2 3/32	67	3582	3,582,300	0	15	-40	150	V710JBSV15	V710JBSV25	2	5.8
2 (High Flow)	3	88	4705	4,705,100	0	15	-40	150	V710MBSV15	V710MBSV25	3	13.2
2 1/2	3	104	5561	5,561,000	0	15	-40	150	V710KBSV15	V710KBSV25	3	12.7
3	3	128	6844	6,844,000	0	15	-40	150	V710LBSV15	V710LBSV25 ②	3	11.7
4 (Flange)	4	180	10,200	10,200,000	0	15	-40	150	V710NCFSV15	-	4	100

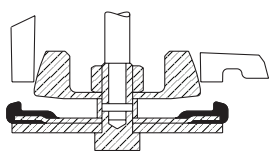
① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Cv flow factor is 124.

Specifications (Metric units) - with AH4E Actuator Only

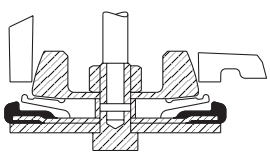
Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor	Flow Capacity m^3/hr ①	Gas Capacity Btu/hr. ①	Operating Pressure Differential (bar)		Fluid Temp.˚C		Catalog Numbers		Const. Ref.	Approx. Shipping Weight (kgs)
					Min.	Max.	Min.	Max.	Linear Trim	Linear w/Valve Seal Overtravel Trim		
COMBUSTION (Fuel Gas) - Normally Closed												
3/4	41	11.3	20	695,100	0	1	-40	66	V710EBSV15	V710EBSV25	1	2.0
1	41	16.4	29	1,016,000	0	1	-40	66	V710FBSV15	V710FBSV25	1	1.9
1 1/4	53	36	64	2,246,000	0	1	-40	66	V710GBSV15	V710GBSV25	2	2.9
1 1/2	53	45	79	2,780,300	0	1	-40	66	V710HBSV15	V710HBSV25	2	2.8
2	53	58	101	3,582,300	0	1	-40	66	V710JBSV15	V710JBSV25	2	2.6
2 (High Flow)	76	76	133	4,705,100	0	1	-40	66	V710MBSV15	V710MBSV25	3	6.0
2 1/2	76	90	157	5,561,000	0	1	-40	66	V710KBSV15	V710KBSV25	3	5.8
3	76	111	194	6,844,000	0	1	-40	66	V710LBSV15	V710LBSV25 ②	3	5.3
4 (Flange)	102	156	289	10,200,000	0	1	-40	66	V710NCFSV15	-	4	45.5

① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Kv flow factor is 107.

Trim Types



LINEAR TRIM
(SUFFIX V15)

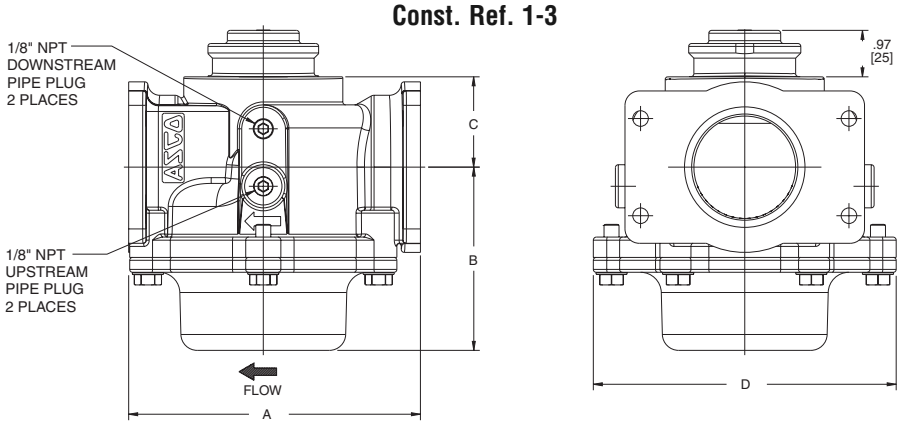


LINEAR WITH VALVE SEAL
OVERTRAVEL TRIM
(SUFFIX V25)

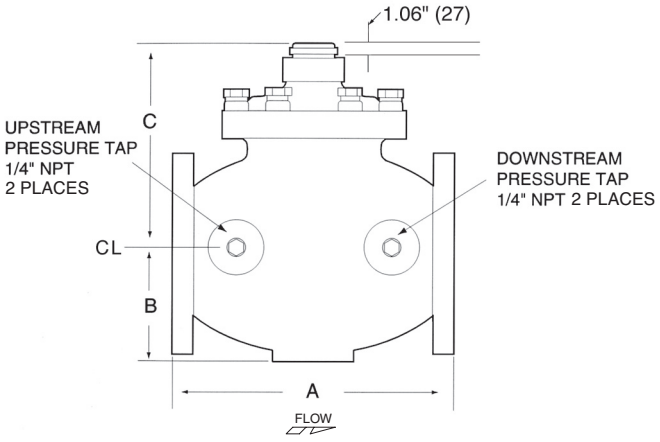
Dimensions inches (mm)

Const. Ref.		A	B	C	D
1	in	5.3	3.48	1.46	5.39
	mm	135	88	37	137
2	in	6.09	3.83	1.89	6.32
	mm	155	97	48	161
3	in	7.80	5.28	2.38	7.94
	mm	198	134	60	202
4	in	13.88	5	7.40	9
	mm	353	127	188	229

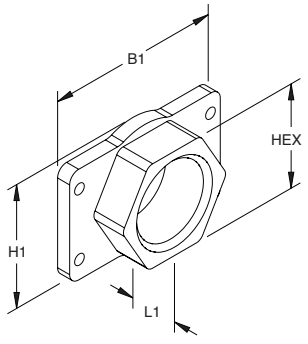
Const. Ref. 1-3



Const. Ref. 4



Flange Adapters



Flange Adapters		B1	H1	L1	HEX
3/4" - 1"	in	4.8	2.5	1.27	2.5
	mm	122	76	32	64
1 1/4" - 2"	in	5	3.56	1.38	3
	mm	127	90	35	76
2" (High Flow) - 3"	in	7	4.5	2.015	4.5
	mm	178	114	51	114

Flange Adapter Kits (Optional)*

Pipe Size (in)	Inlet & Outlet Adapter/Hardware Kit
3/4	296659-001
1	296659-002
1 1/4	296659-005
1 1/2	296659-006
2	296659-007
2 (High Flow)	296659-008
2 1/2	296659-009
3	296659-010

** Please refer to the Double Gas Shutoff Valves catalog pages for more kit information.*

ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 2"-3" NPT, 4" Flange | Cast-Iron Body

2/2 SERIES H117

General Description

The normally closed H117 is a combination Hydramotor actuator and safety shutoff/control gas valve. It is used for commercial and industrial burners in applications such as furnaces, dryers, dehydrators, conversion burners and heaters.

The cast iron valve body provides high flow and self cleaning operation. Its soft synthetic seat and integral, heavy-duty return spring closes the valve tightly upon current interruption, in one second or less.

The self-contained, hermetically sealed, pull-type electrohydraulic actuator consists of a motor/pump unit immersed in oil, reducing wear and providing highly reliable operation.

Fluid

Fuel Gas - Use with natural, mixed, manufactured, or LP gas.
Also suitable for the following service: Scrubbed and dried coke, sewer and digester gases.

Specifications

Opening Time: 20 second max.

Closing Time: 1 second max.

Note: Opening time increased 20% with 50Hz.

Enclosure: Type 1 General Purpose standard
Type 4/7 Watertight/Explosion proof optional

Ambient Temperature: -40˚F to 150˚F (-40˚C to 66˚C)

Body Class: Cast Iron, 1" to 3" - 250# screw, 4" - 125# flange

Pipe Taps: 1/4" upstream & downstream taps for routine leak testing

Electrical

Power Requirement: 158 VA max

Standard Voltage: 120V/60Hz
240V/60Hz (Optional)

Operating Voltage	Amperes		
	Inrush	Opening	Holding
120V/60Hz	13.2	1.32	0.14
240V/60Hz	6.6	0.66	0.07

Auxiliary Switches:
One integral SPDT switch, 15A@120V, 7.5A@240V, (1800VA max). Actuates at full open position of actuator stroke (not adjustable). Up to 6 adjustable yoke mounted switches may be added.

Proof of Closure Switch:
Optional factory set non-field adjustable SPDT switch, 15A@120V, 7.5A@240V (1800VA max.).

Installation

Multi-poise, may be mounted in any position.

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves.”

CSA Certified to Automatic Gas Valves ANSI Z21.21
CSA 6.5 C/I, (Meets standard C22.2 No 139, File113070.)

ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 2"-3" NPT, 4" Flange | Cast-Iron Body

Specifications (English units)

Pipe Size (in)	Flow Factor Cv (Kv)	Gas Capacity ①	Operating Pressure Differential psi (bar)		Max. Fluid Temp. ˚F (˚C)	Catalog Number ②	Const. Ref.	Agency	Opening Time (Sec)	Approx Shipping Wieght lbs (kgs)
		Cu.Ft./Hr.	Min	Max				UL, FM, CSA		
Combustion (Fuel Gas) - Normally Closed										
Standard Trim, Type 1 General Purpose Enclosure										
2	151(128)	8,000	0	20(1.4)	150(66)	H117AJ122F1	1	❍	12-18	75(34.1)
2-1/2	244(207)	12,900	0	8(0.6)	150(66)	H117AK122F1	2	❍	12-18	105(47.7)
3	320(272)	17,000	0	8(0.6)	150(66)	H117AL122F1	3	❍	12-18	105(47.7)
4 (Flange)	510(434)	27,000	0	4(0.3)	150(66)	H117AN122F1	4	❍	12-20	140(63.6)
Standard Trim, Type 4/7 Watertight/Explosionproof Enclosure										
2	151(128)	8,000	0	20(1.4)	150(66)	H117BJ122F1	5	❍	12-18	85(38.5)
2-1/2	244 (207)	12,900	0	8(0.6)	150(66)	H117BK122F1	6	❍	12-18	115(52.2)
3	320 (272)	17,000	0	8(0.6)	150(66)	H117BL122F1	7	❍	12-18	115(52.2)
4 (Flange)	510 (434)	27,000	0	4(0.3)	150(66)	H117BN122F1	8	❍	12-20	150(68)
Valave Seal Overtravel Trim (Proof of Closure), Type 1 General Purpose Enclosure										
2	124 (105)	6,600	0	20(1.4)	150(66)	H117AJ122F1F26V16	1	❍	12-18	80(36.4)
2-1/2	171 (145)	9,100	0	8(0.6)	150(66)	H117AK122F1F26V16	2	❍	12-18	110(50)
3	320 (272)	17,000	0	8(0.6)	150(66)	H117AL122F1F26V16	3	❍	12-18	110(50)
4 (Flange)	444 (377)	24,000	0	4(0.3)	150(66)	H117AN122F1F26V16	4	❍	12-20	145(65.9)
Valave Seal Overtravel Trim (Proof of Closure), Type 4/7 Watertight/Explosionproof Enclosure										
2	124 (105)	6,600	0	20(1.4)	150(66)	H117BJ122F1F26V16	5	❍	12-18	90(40.8)
2-1/2	171 (145)	9,100	0	8(0.6)	150(66)	H117BK122F1F26V16	6	❍	12-18	120(54.4)
3	320 (272)	17,000	0	8(0.6)	150(66)	H117BL122F1F26V16	7	❍	12-18	120(54.4)
4 (Flange)	444 (377)	24,000	0	4(0.3)	150(66)	H117BN122F1F26V16	8	❍	12-20	155(70.3)

❍ = Safety Shutoff Valve
① One cu.ft./hr. = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.
② 240V/60Hz change 9th digit to "4" (Example: H117AJ124F1)

COMBUSTION

Replacement Actuators

Enclosure ①	Catalog	Const. Ref.	Voltage ②
Type 1 General Purpose	H10B620B5F1	9	120V/60Hz
Type 4/7 Watertight Explosionproof	H10B620BC25F1	10	120V/60Hz

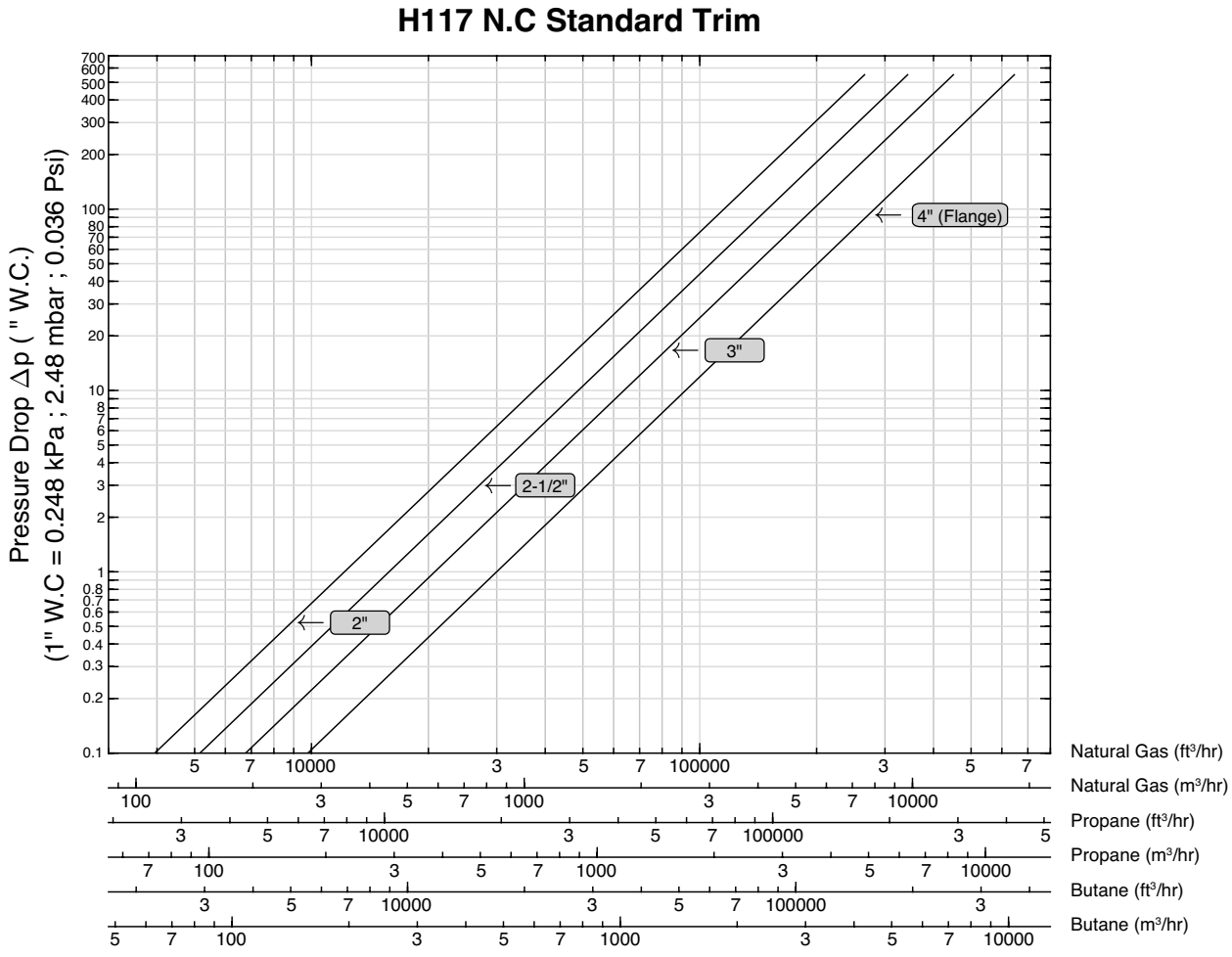
① For Proof of Closure add F26 to Catalog Number (Example: H10B620B5F1F26)
② 240V/60Hz change 6th digit to "4" (Example: H10B640B5F1)

Replacement Switches

Kits	Switches*	Type
S104772EA1	1	Auxiliary (Adjustable)
S104772EA2	2	
S104772EA3	3	
S104772EAX1	1	Proof of Closure

* Yoke Mounted

Gas Flow Chart



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

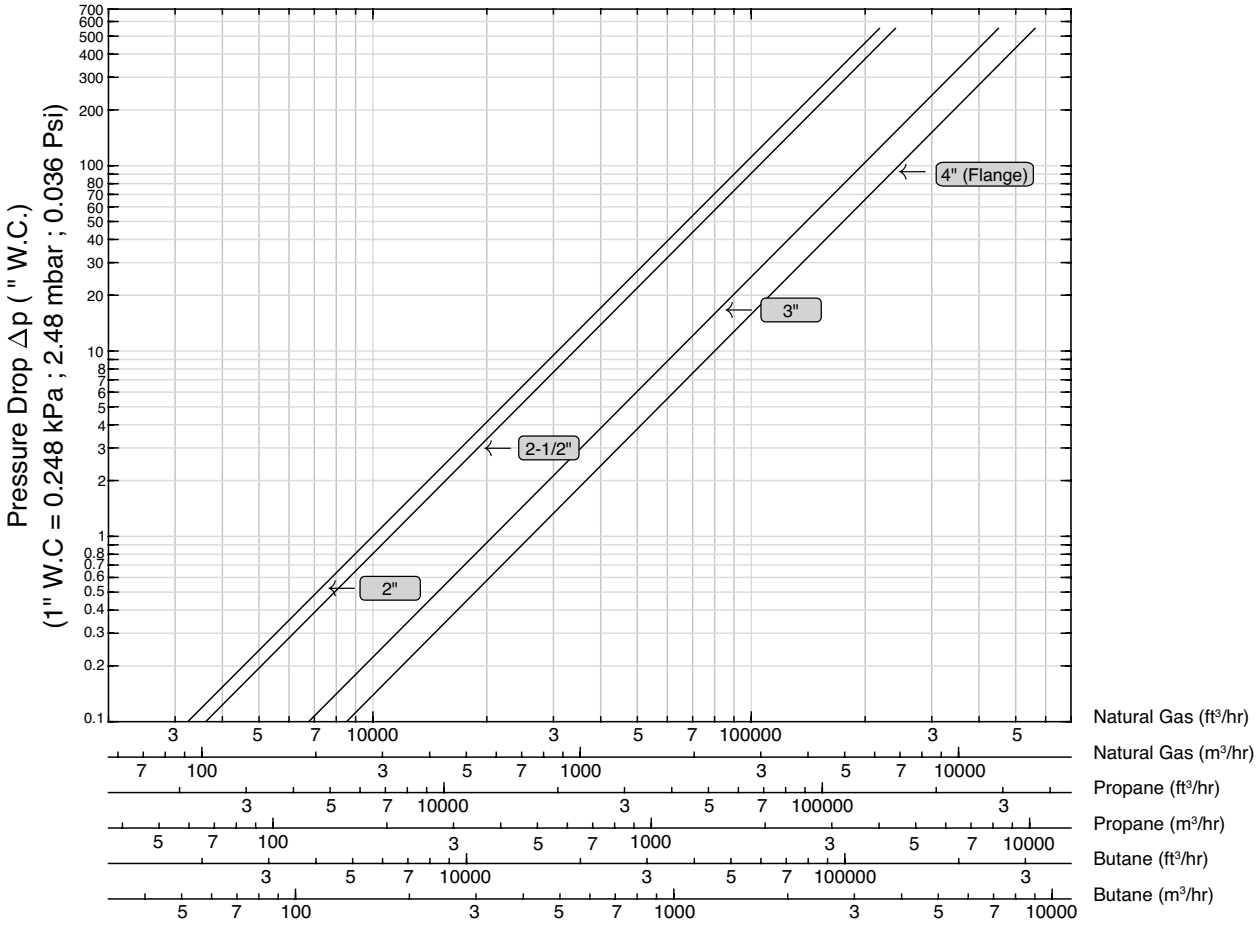
COMBUSTION

ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 2"-3" NPT, 4" Flange | Cast-Iron Body

Gas Flow Chart

H117 N.C Valve Seal Overtravel Trim



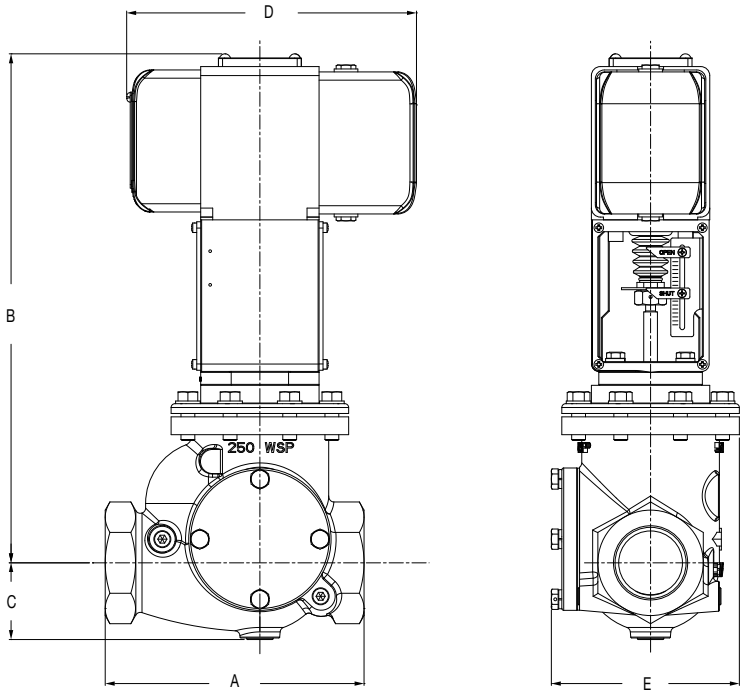
Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

COMBUSTION

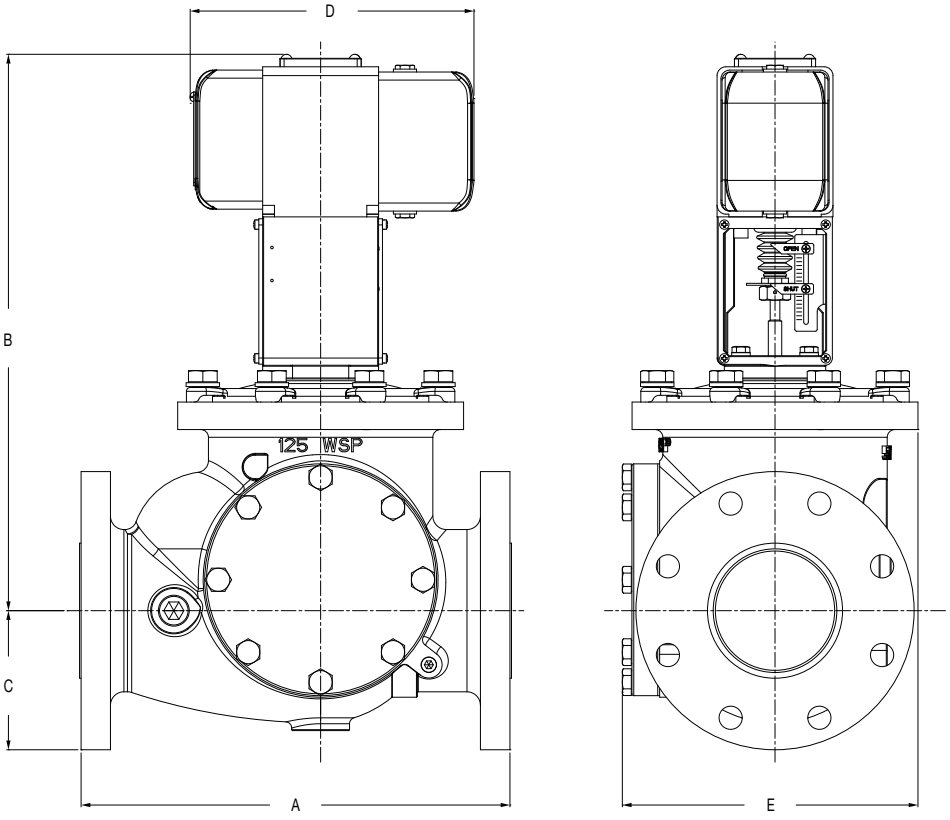
Dimensions inches (mm)

Pipe Size	Type 1 General Purpose						
	Const. Ref.		A	B	C	D	E
2" NPT	1	in	8.20	15.00	2.50	9.23	5.96
		mm	208	381	64	235	151
2-1/2" NPT	2	in	11.00	16.50	2.91	9.23	7.5
		mm	279	419	74	235	191
3" NPT	3	in	11.00	16.50	2.91	9.23	7.5
		mm	279	419	74	235	191
4' flange	4	in	13.88	17.95	4.50	9.23	9.57
		mm	353	456	114	235	243

Const. Ref. 1, 2, 3



Const. Ref. 4



COMBUSTION

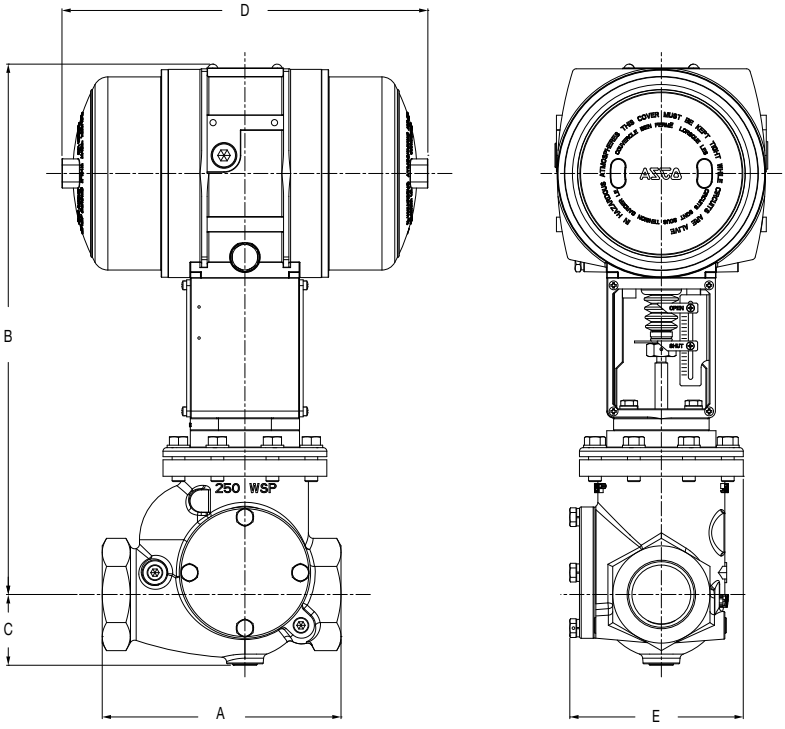
ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 2"-3" NPT, 4" Flange | Cast-Iron Body

Dimensions inches (mm)

Pipe Size	Type 4/7 Watertight/Explosionproof						
	Const Ref.		A	B	C	D	E
2" NPT	5	in	8.20	18.22	2.50	12.57	7.26
		mm	208	463	64	319	184
2-1/2" NPT	6	in	11.00	18.67	2.91	12.57	7.5
		mm	279	474	74	319	191
3" NPT	7	in	11.00	18.67	2.91	12.57	7.5
		mm	279	474	74	319	191
4' flange	8	in	13.88	20.00	4.50	12.57	9.74
		mm	353	509	114	319	247

Const. Ref. 5



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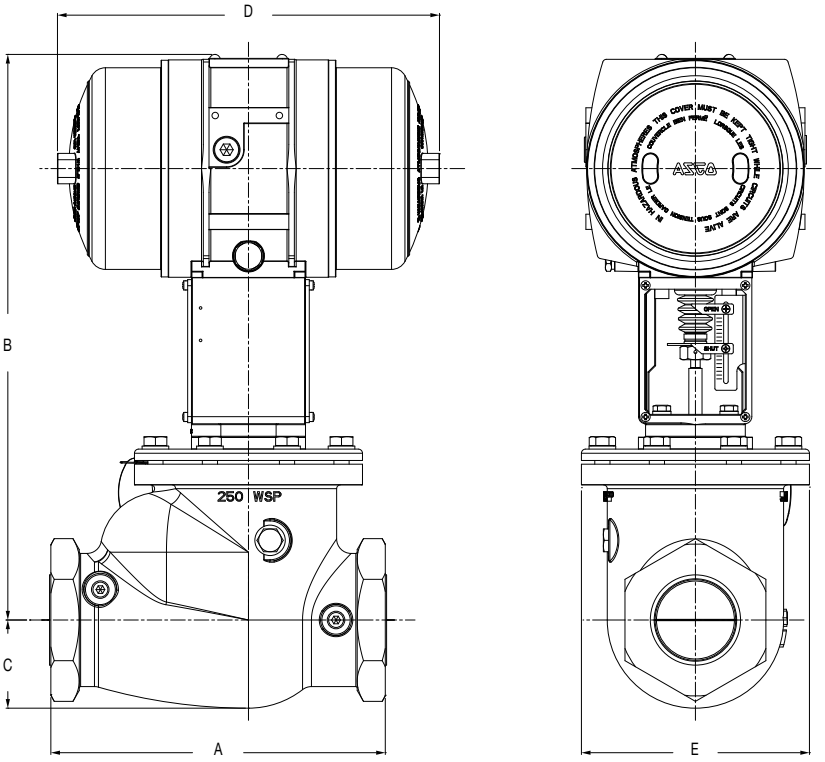
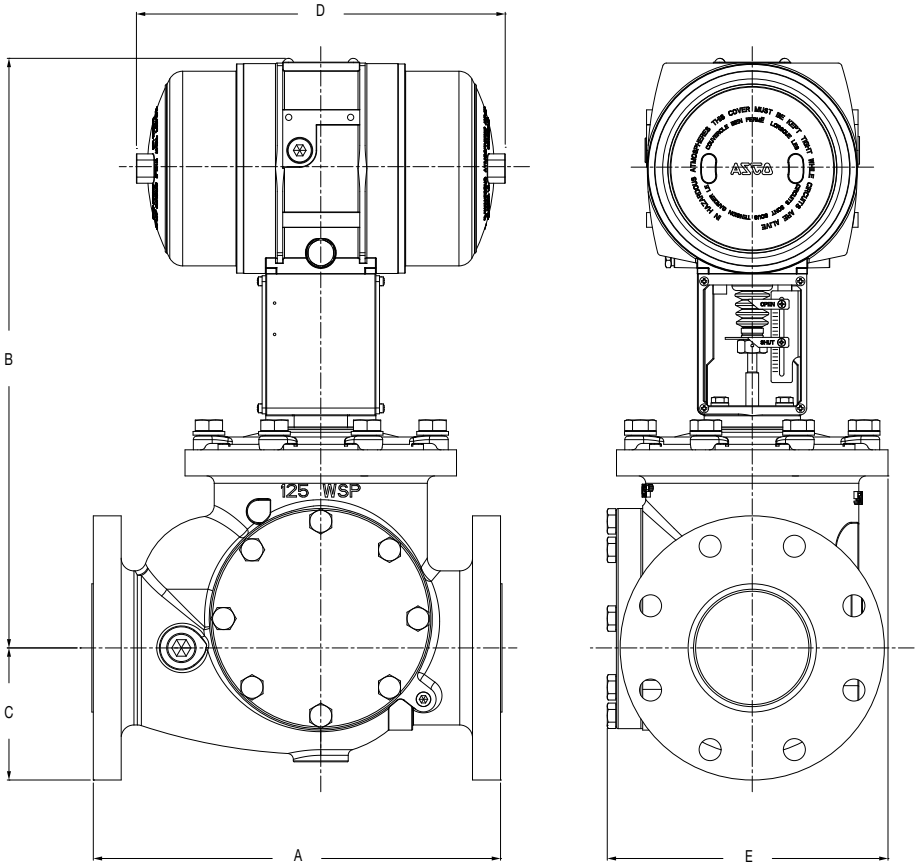


COMBUSTION

Dimensions inches (mm)

Const. Ref. 8



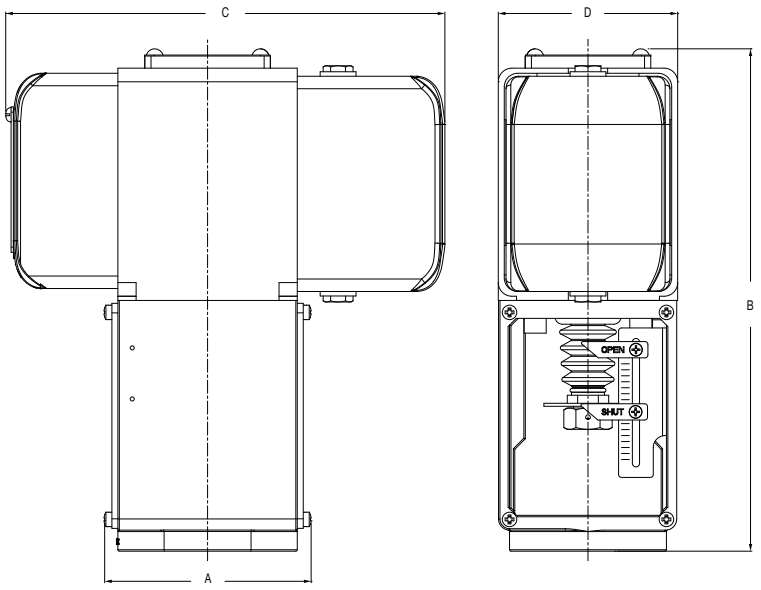
ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 2"-3" NPT, 4" Flange | Cast-Iron Body

Dimensions inches (mm)

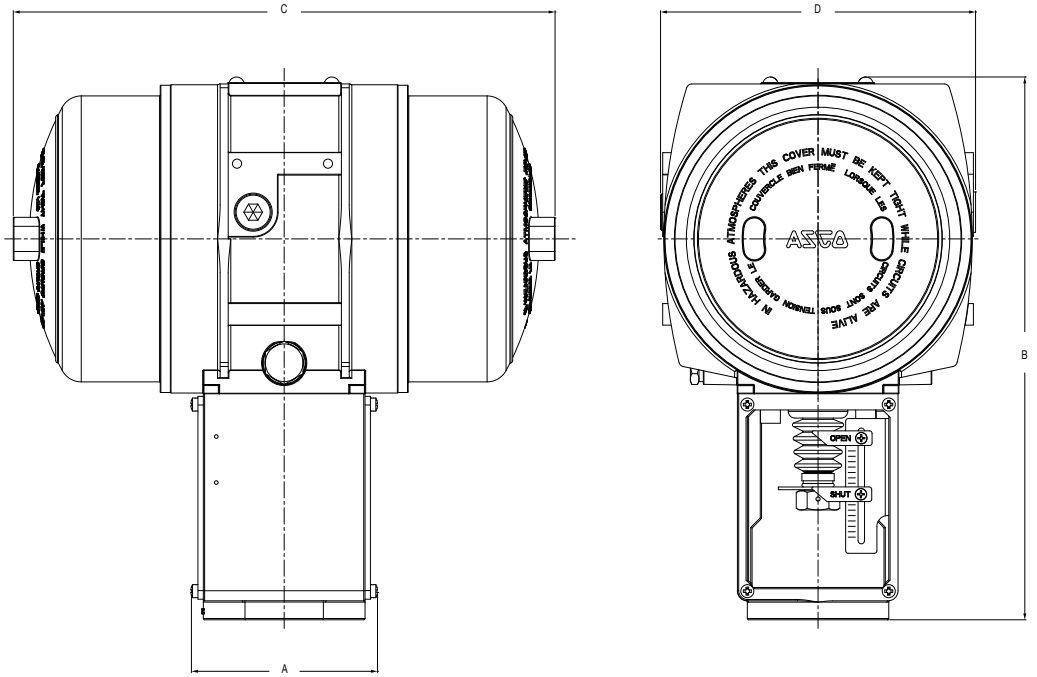
Type 1 General Purpose					
H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
9	in	4.32	10.51	9.23	3.74
	mm	110	267	235	95

Const. Ref. 9



Type 4/7 Watertight/Explosionproof					
H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
10	in	4.32	11.60	12.57	7.26
	mm	110	295	319	184

Const. Ref. 10



COMBUSTION

ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 1"-3" NPT, 4" Flangen | Cast-Iron Body

2/2 SERIES H118

General Description

The normally closed H118 is a combination Hydramotor actuator and safety shutoff/control gas valve. It is used for commercial and industrial burners in applications such as furnaces, dryers, dehydrators, conversion burners and heaters.

The cast iron, globe-type valve body features a soft synthetic seat and integral heavy-duty return spring for tight and certain closure in one second or less upon current interruption.

The self-contained, hermetically sealed, pull-type electrohydraulic actuator consists of a motor/pump unit immersed in oil, reducing wear and providing highly reliable operation.

Fluid

Fuel Gas - Use with natural, mixed, manufactured, or LP gas.
Also suitable for the following service: Scrubbed and dried coke, sewer and digester gases.

Specifications

Opening Time: 28 second max.

Closing Time: 1 second max.

Enclosure: Type 1 General Purpose standard
Type 4/7 Watertight/Explosion proof optional

Ambient Temperature: -40˚F to 150˚F (-40˚C to 66˚C)

Body Class: Cast Iron, 1" to 3" - 250# screw, 4" - 125# flange

Pipe Taps: 1/4" upstream & downstream taps for routine leak testing

Electrical

Power Requirement: 158 VA max (1-3"), 288 VA max. (4")

Standard Voltage: 120V/60Hz
240V/60Hz (Optional)

Operating Voltage	Amperes		
	Inrush	Opening	Holding
1" Through 3"			
120V/60Hz	13.2	1.32	0.14
240V/60Hz	6.6	0.66	0.07
4" Only			
120V/60Hz	24.0	2.40	0.18

Auxiliary Switches:
One integral SPDT switch, 15A@120V, 7.5A@240V, (1800VA max). Actuates at full open position of actuator stroke (not adjustable). Up to 6 adjustable yoke mounted switches may be added.

Proof of Closure Switch:
Optional factory set non-field adjustable SPDT switch, 15A@120V, 7.5A@240V (1800VA max.).

Installation

Multi-poise, may be mounted in any position.

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves.”

CSA Certified to Automatic Gas Valves ANSI Z21.21
CSA 6.5 C/I, (Meets standard C22.2 No 139, File113070.)

ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 1"-3" NPT, 4" Flangen | Cast-Iron Body

Specifications (English units)

Pipe Size (in)	Flow Factor Cv (Kv)	Gas Capacity ①	Operating Pressure Differential psi (bar)		Max. Fluid Temp. ˚F (˚C)	Catalog Number ②	Const. Ref.	Agency	Opening Time (Sec)	Approx Shipping Wieght lbs (kgs)
		Cu.Ft./Hr.	Min	Max				UL, FM, CSA		
Combustion (Fuel Gas) - Normally Closed										
Standard Trim, Type 1 General Purpose Enclosure										
1	17(14)	915	0	35(2.4)	150(66)	H118AF142F1	1	0	7-18	22(10.0)
1-1/4	25(21)	1,155	0	35(2.4)	150(66)	H118AG142F1	1	0	7-18	23(10.5)
1-1/2	35(30)	1,525	0	25(1.7)	150(66)	H118AH142F1	2	0	8-20	28(12.7)
2	67(57)	3,300	0	15(1)	150(66)	H118AJ142F1	3	0	10-24	32(14.5)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118AK142F1	4	0	11-28	52(23.6)
3	125(106)	6,095	0	15(1)	150(66)	H118AL142F1	5	0	12-18	54(24.5)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118AN132F1	6	0	15-24	148(67.3)
Standard Trim, Type 4/7 Watertight/Explosionproof Enclosure										
1	17(14)	915	0	35(2.4)	150(66)	H118BF142F1	7	0	7-18	32(14.5)
1-1/4	25(21)	1,155	0	35(2.4)	150(66)	H118BG142F1	7	0	7-18	33(15.0)
1-1/2	35(30)	1,525	0	25(1.7)	150(66)	H118BH142F1	8	0	8-20	38(17.2)
2	67(57)	3,300	0	15(1)	150(66)	H118BJ142F1	9	0	10-24	42(19.1)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118BK142F1	10	0	11-28	62(28.1)
3	125(106)	6,095	0	15(1)	150(66)	H118BL142F1	11	0	12-18	64(29.0)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118BN132F1	12	0	15-24	160(72.6)
Valave Seal Overtravel Trim (Proof of Closure), Type 1 General Purpose Enclosure										
2	67(57)	3,300	0	15(1)	150(66)	H118AJ142F1F26V16	3	0	9-17	37(16.8)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118AK142F1F26V16	4	0	11-20	57(25.9)
3	125(106)	6,095	0	15(1)	150(66)	H118AL142F1F26V16	5	0	13-23	59(26.8)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118AN132F1F26V16	6	0	15-24	153(69.5)
Valave Seal Overtravel Trim (Proof of Closure), Type 4/7 Watertight/Explosionproof Enclosure										
2	67(57)	3,300	0	15(1)	150(66)	H118BJ142F1F26V16	9	0	9-17	47(21.3)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118BK142F1F26V16	10	0	11-20	67(30.4)
3	125(106)	6,095	0	15(1)	150(66)	H118BL142F1F26V16	11	0	13-23	69(31.3)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118BN132F1F26V16	12	0	15-24	165(74.8)

❍ = Safety Shutoff Valve
① One cu.ft./hr. = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.
② 240V/60Hz change 9th digit to "4" (Example: H118AF144F1)

COMBUSTION

Replacement Actuators

Enclosure	Catalog ①	Const. Ref.	Voltage ②
Type 1 General Purpose	H10B620B5F1	13	120V/60Hz
Type 4/7 Watertight Explosionproof	H10B620BC25F1	14	120V/60Hz
Type 1 General Purpose	H30B2220B20F1 ③	15	120V/60Hz
Type 4/7 Watertight Explosionproof	H30B2220B20C2F1 ③	16	120V/60Hz

① For Proof of Closure add F26 to Catalog Number (Example: H10B620B5F1F26)
② 240V/60Hz change 6th digit to "4" (Example: H10B640B5F1)
③ 4" Size only

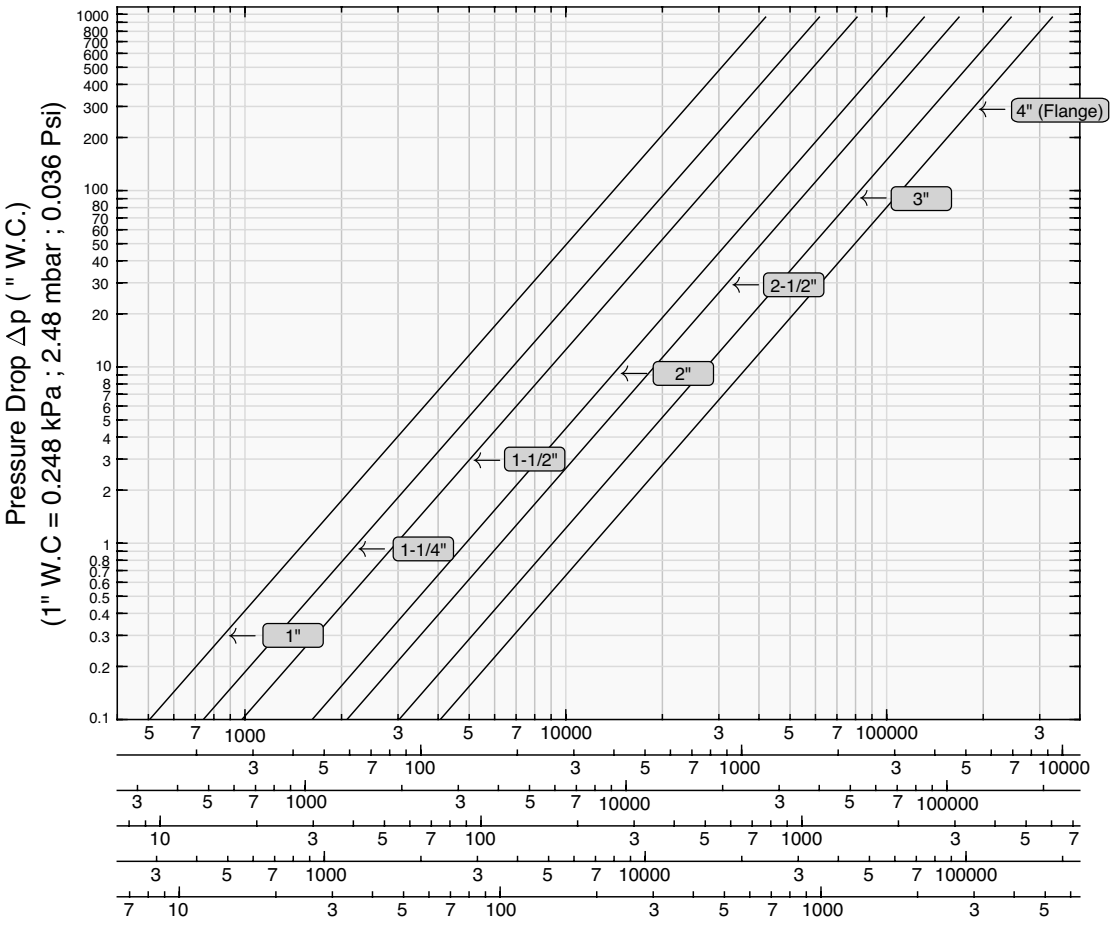
Replacement Switches

Kits	Switches*	Type
1" Through 3"		
S104772EA1	1	Auxiliary (Adjustable)
S104772EA2	2	
S104772EA3	3	
S104772EAX1	1	Proof of Closure
4" Only		
S104772FA1	1	Auxiliary (Adjustable)
S104772FA2	2	
S104772FA3	3	
S104772FAX1	1	Proof of Closure

* Yoke Mounted

Gas Flow Chart

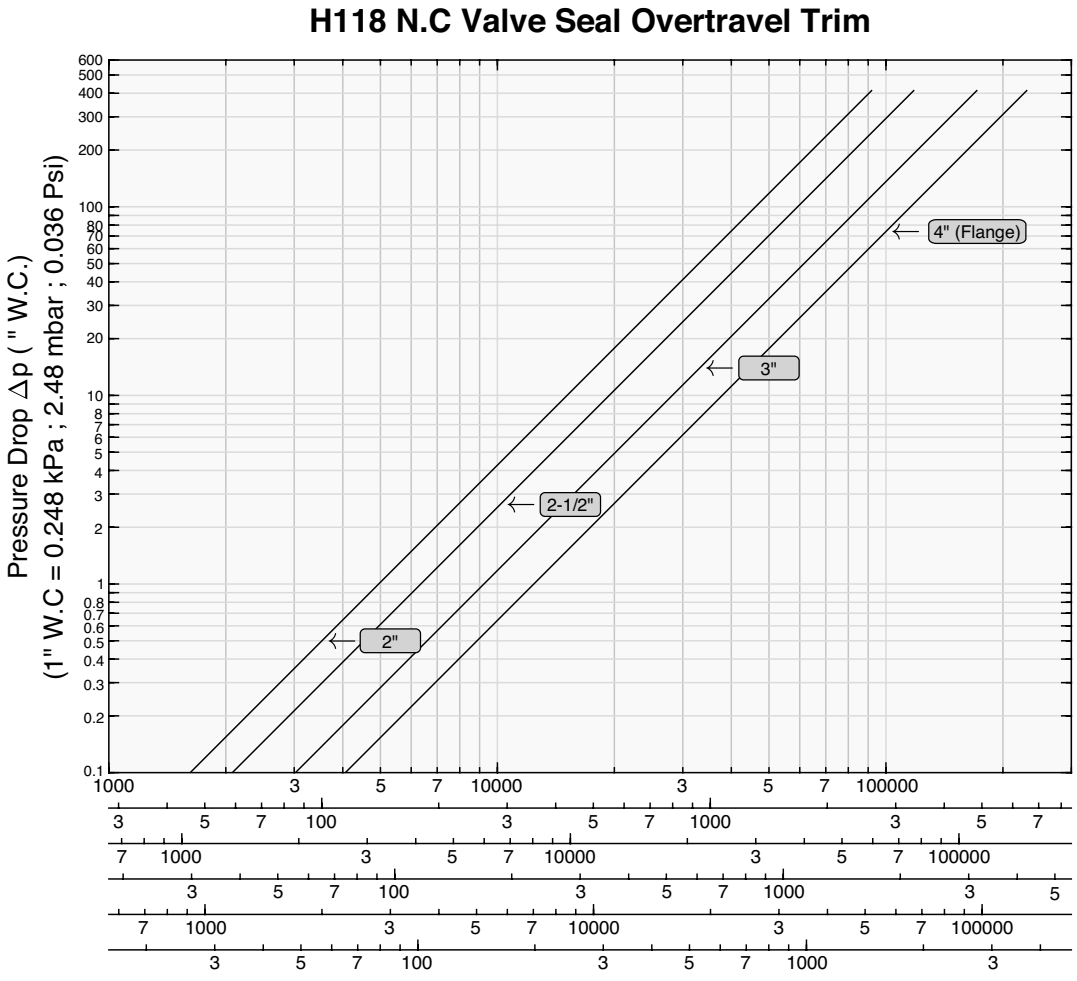
H118 N.C Standard Trim



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

COMBUSTION

Gas Flow Chart



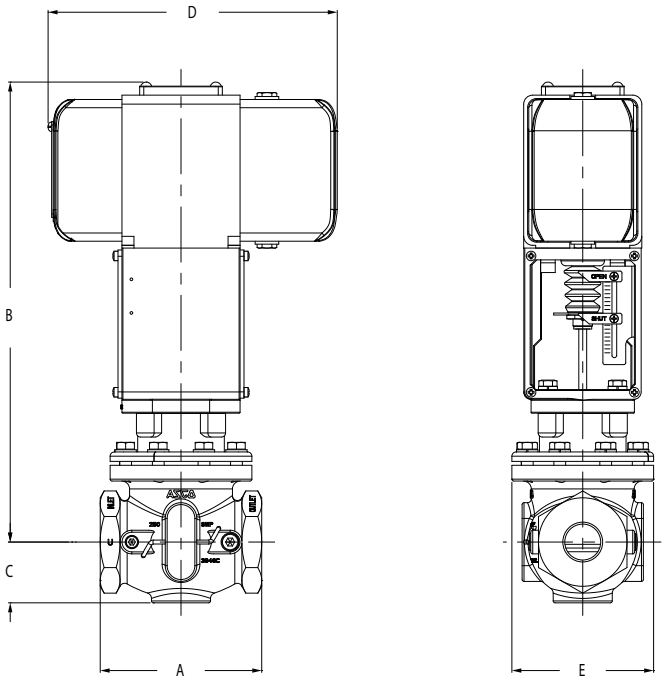
Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68˚F (20˚C) fluid temperature.

COMBUSTION

Dimensions inches (mm)

Pipe Size	Type 1 General Purpose						
	Const. Ref.		A	B	C	D	E
1" NPT	1	in	5.13	14.65	1.93	9.23	4.50
1-1/4" NPT		mm	130	372	49	235	114
1-1/2" NPT	2	in	6.50	15.14	2.56	9.23	5.13
		mm	165	385	65	235	130
2" NPT	3	in	8.13	14.98	2.71	9.23	5.63
		mm	206	381	70	235	143
2-1/2" NPT	4	in	9.50	14.98	3.46	9.23	7.50
		mm	241	381	88	235	191
3" NPT	5	in	10.87	15.70	3.75	9.23	7.50
		mm	276	399	95	235	191
4' flange	6	in	13.89	23.40	4.81	11.92	9.25
		mm	353	594	122	303	235

Const. Ref. 1-5



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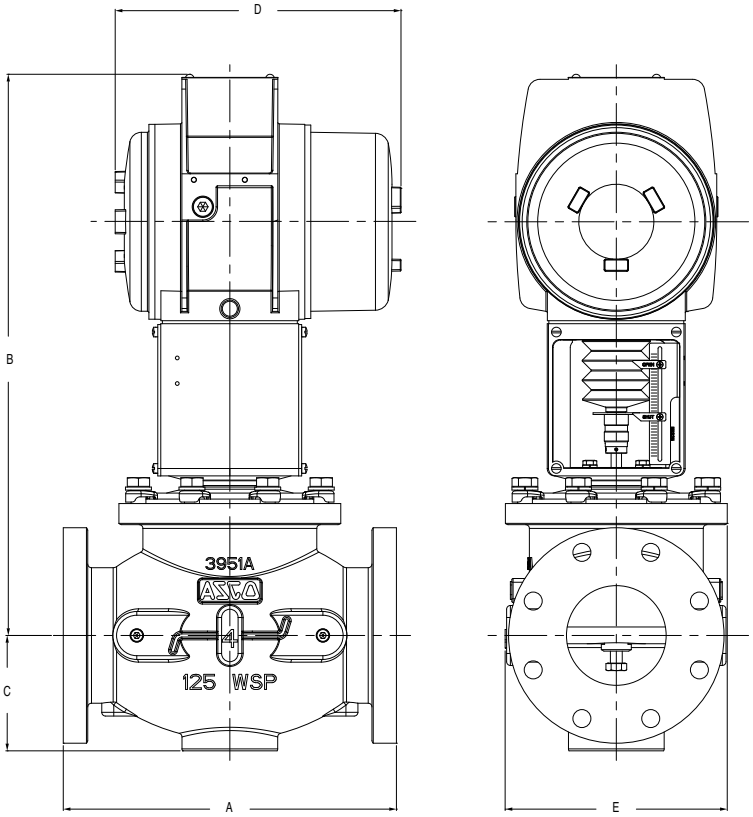


COMBUSTION

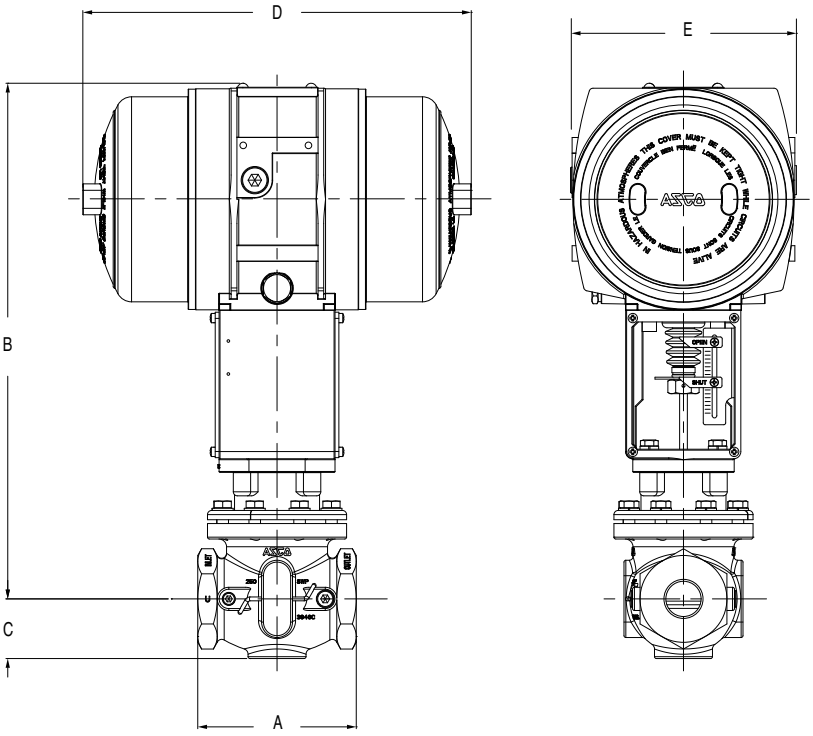
ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 1"-3" NPT, 4" Flangen | Cast-Iron Body

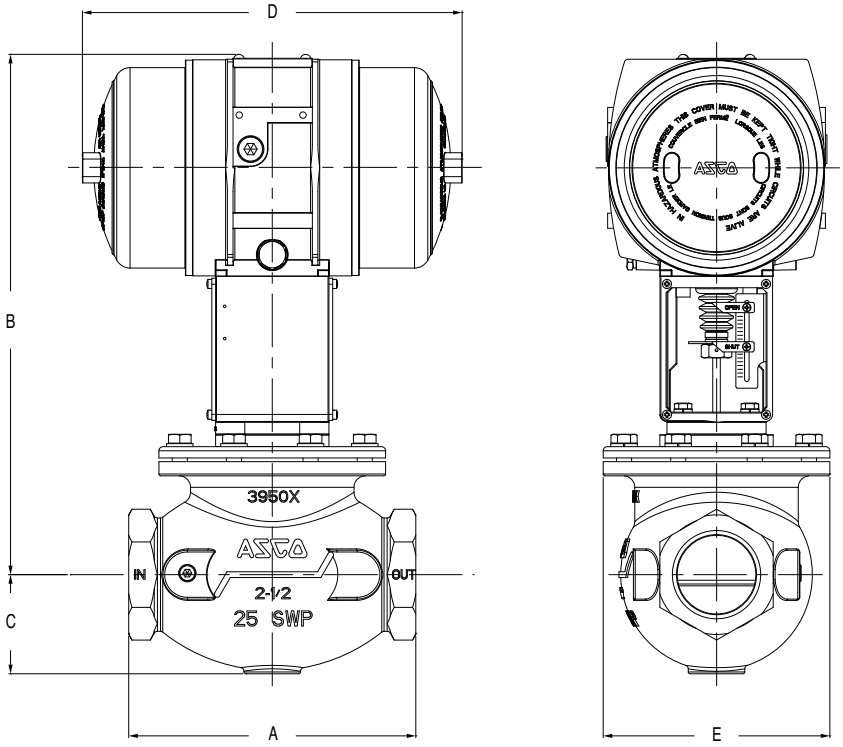
Dimensions inches (mm)

Pipe Size	Type 4/7 Watertight/Explosionproof						
	Const. Ref.		A	B	C	D	E
1" NPT	7	in	5.13	16.75	1.93	12.57	7.26
1-1/4" NPT		mm	130	426	49	319	184
1-1/2" NPT	8	in	6.50	17.25	2.56	12.57	7.26
		mm	165	438	65	319	184
2" NPT	9	in	8.13	17.09	2.71	12.57	7.26
		mm	206	434	70	319	184
2-1/2" NPT	10	in	9.50	17.30	3.46	12.57	7.50
		mm	241	440	88	319	191
3" NPT	11	in	10.87	17.81	3.75	9.23	7.50
		mm	276	452	95	235	191
4' flange	12	in	13.89	23.40	4.81	12.89	9.25
		mm	353	594	122	327	235

Const. Ref. 7, 8, 9



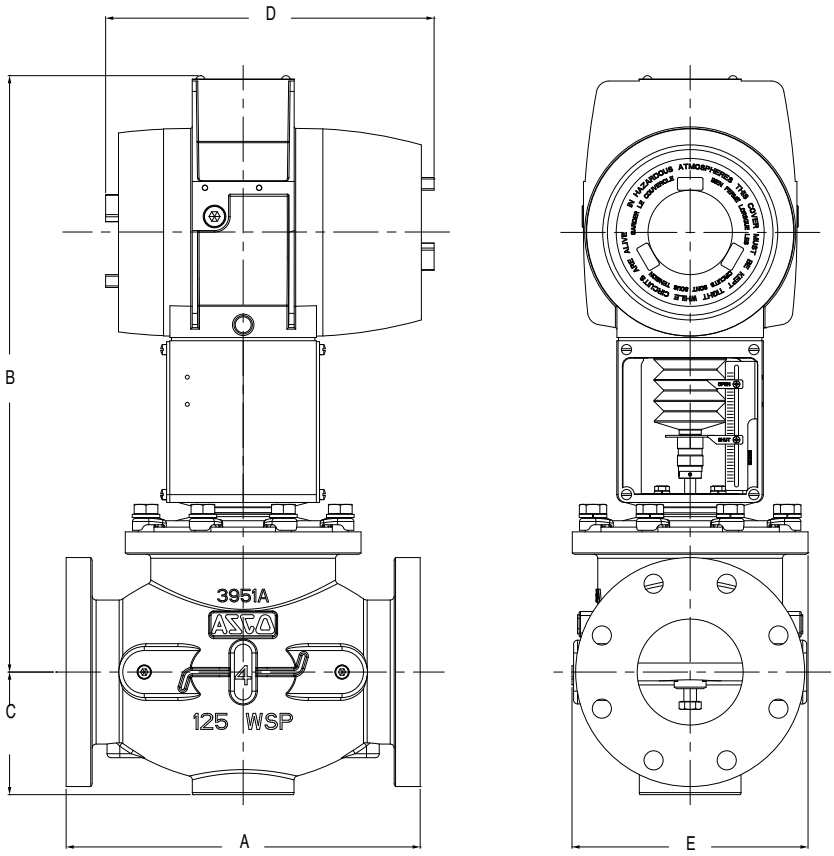
Const. Ref. 10, 11



COMBUSTION

Dimensions inches (mm)

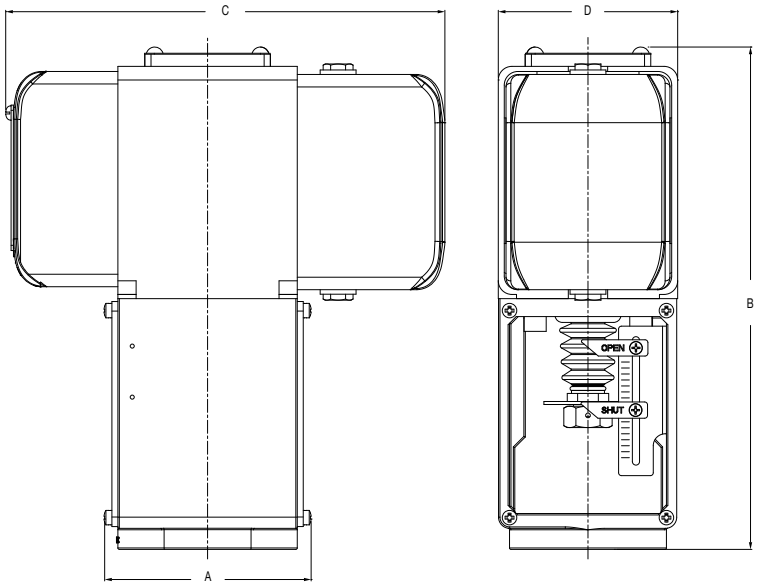
Const. Ref. 12



Dimensions inches (mm)

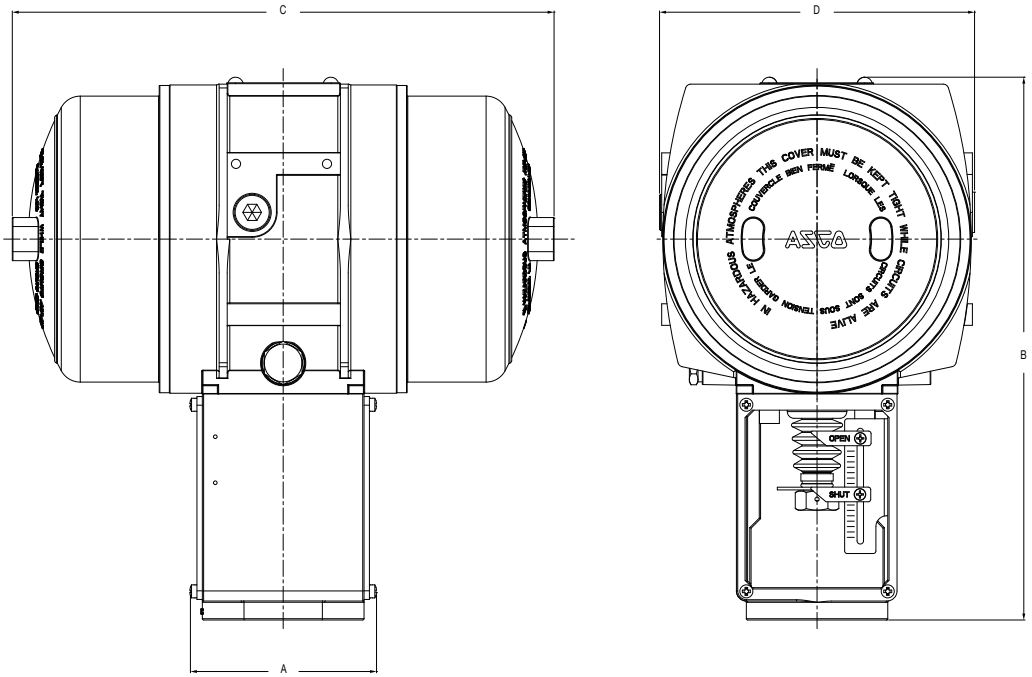
Type 1 General Purpose					
H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
13	in	4.32	10.51	9.23	3.74
	mm	110	267	235	95

Const. Ref. 13



Type 4/7 Watertight/Explosionproof					
H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
14	in	4.32	11.60	12.57	7.26
	mm	110	295	319	184

Const. Ref. 14

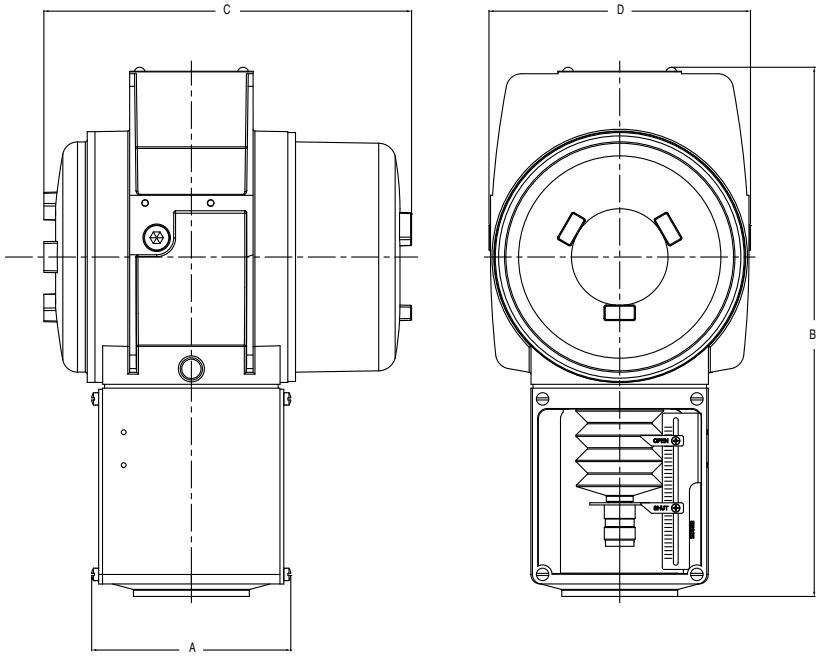


COMBUSTION

Dimensions inches (mm)

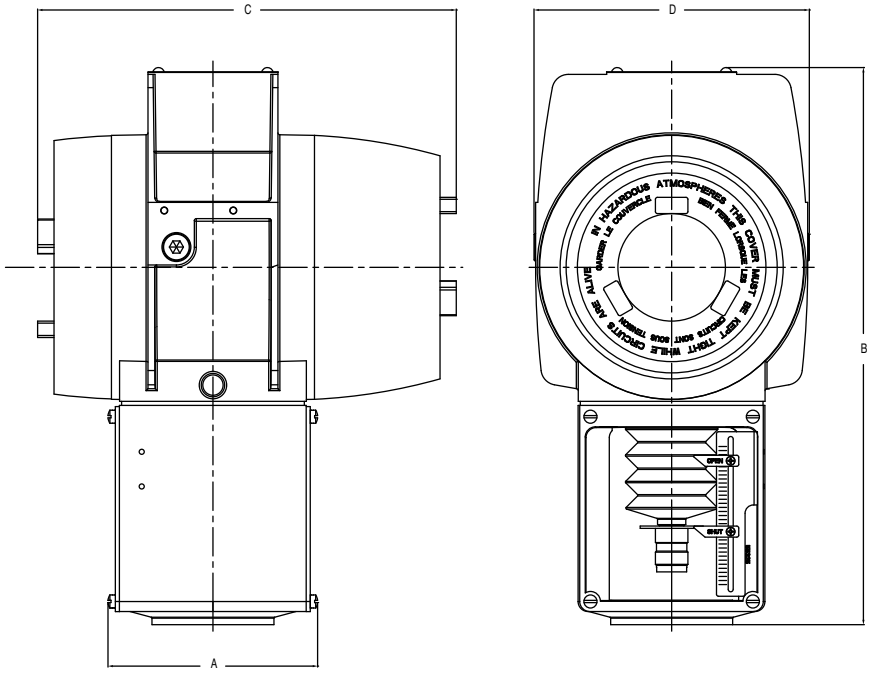
Type 1 General Purpose					
H30 Series Replacement Actuator					
Const. Ref.		A	B	C	D
15	in	6.45	17.15	11.92	8.48
	mm	164	436	303	215

Const. Ref. 15



Type 4/7 Watertight/Explosionproof					
H30 Series Replacement Actuator					
Const. Ref.		A	B	C	D
16	in	6.45	17.15	12.89	8.48
	mm	164	436	327	215

Const. Ref. 16



COMBUSTION

General Description

The H137 is a 2-way, normally closed, safety shutoff valve providing trouble free, electrohydraulic on-off control of combustion gas for boilers, industrial furnaces, dryers, dehydrators, large conversion burners, air heaters and similar applications.

The self-contained Hydramotor actuator is a powerful, pull-type hydraulic ram providing output force of 1,400 pounds to fully open the valve. Upon current interruption, dual redundant relief valves dump hydraulic pressure, closing the valve in one second. The Hydramotor consists of a motor/pump unit immersed in oil, reducing wear and provides highly reliable operation.

The H137 is a cast iron-bodied valve with Nitrile seat and aluminum trim. Pulling force from the Hydramotor actuator moves a lever (providing mechanical advantage) against spring and gas pressure to open the soft-seated flap, allowing straight-through gas flow.

A simple, two-wire circuit controls the motorized valve. Each H137 is equipped with one standard SPDT switch which actuates at the fully-open (energized) position. Each is equipped with a valve seal overtravel interlock switch which can be wired into the startup or pre-ignition interlock circuit to permit supervision of the valve's closed position (FM proof of closure).

Fluid

Fuel Gas - Use with natural, mixed, manufactured, or LP gas. Also suitable for the following service: Scrubbed and dried coke, sewer and digester gases.

Specifications

Opening Time: 27 second max.

Closing Time: 1 second max.

Enclosure: Type 4 Watertight standard
Type 7 Explosion proof optional

Ambient Temperature: -40˚F to 150˚F (-40˚C to 66˚C)

Body Class: Cast Iron, 2" to 3": 250# screw, 4" - 6": 125# flanges

Pipe Taps: 1/4" upstream & downstream taps for routine leak testing

Electrical

Power Requirement: 324 VA

Standard Voltage: 120V/60Hz

Operating Voltage	Amperes		
	Inrush	Opening	Holding
120V/60Hz	27	2.7	0.18

Auxiliary Switch: Integral SPDT switch, 15A@120V Actuates at full open position of actuator stroke (not adjustable). Up to 2 adjustable yoke mounted switches may be added.

Proof of Closure Switch: Integral factory set, non-field adjustable SPDT switch, 1/4 HP@120V.

Installation

Multi-poise, may be mounted in any position.

Approvals

UL listed
FM Approved
CSA Certified to:

1) Automatic Gas Safety Shutoff Valves C/I (3.9), File 113070.

Specifications (English units)

Pipe Size (in)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Catalog Number ②	Const. Ref.	Agency			Opening Time (Sec.)	Approx. Shipping Weight (lbs)
		Cu.Ft/hr.	Min.	Max.				UL	FM	CSA		
COMBUSTION (Fuel Gas) - Normally Closed												
Valve Seal Overtravel Trim (Proof of Closure)												
2	151	8,000	0	60	150	H137CJ12F1F26V16	1	❍	❍	❍	22	130
2 1/2	244	12,900	0	50	150	H137CK12F1F26V16	2	❍	❍	❍	22	135
3	320	17,000	0	50	150	H137CL12F1F26V16	2	❍	❍	❍	22	135
4 (Flange)	510	27,000	0	30	150	H137CN32F1F26V16	3	❍	❍	❍	27	143
6 (Flange)	1020	50,000	0	20	150	H137CQ32F1F26V16	4	❍	❍	❍	27	150

❍ = Safety Shutoff Valve. ① One cu. ft/hr = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.
② Type 7 Explosionproof change 5th digit to "B" (EX: H137BJ12F1F26V16)

Specifications (Metric units)

Pipe Size (in)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Catalog Number ②	Const. Ref.	Agency			Opening Time (Sec.)	Approx. Shipping Weight (kgs)
		Cu.Ft/hr.	Min.	Max.				UL	FM	CSA		
COMBUSTION (Fuel Gas) - Normally Closed												
Valve Seal Overtravel Trim (Proof of Closure)												
2	128	8,000	0	4.1	66	H137CJ12F1F26V16	1	❍	❍	❍	22	59
2 1/2	207	12,900	0	3.4	66	H137CK12F1F26V16	2	❍	❍	❍	22	61
3	272	17,000	0	3.4	66	H137CL12F1F26V16	2	❍	❍	❍	22	61
4 (Flange)	434	27,000	0	2.1	66	H137CN32F1F26V16	3	❍	❍	❍	27	65
6 (Flange)	867	50,000	0	1.4	66	H137CQ32F1F26V16	4	❍	❍	❍	27	68

❍ = Safety Shutoff Valve. ① One cu. ft/hr = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.
② Type 7 Explosionproof change 5th digit to "B" (EX: H137BJ12F1F26V16)

Replacement Actuators:

Catalog Number	Voltage
H30A4820B20C1F1F26	120V/60Hz

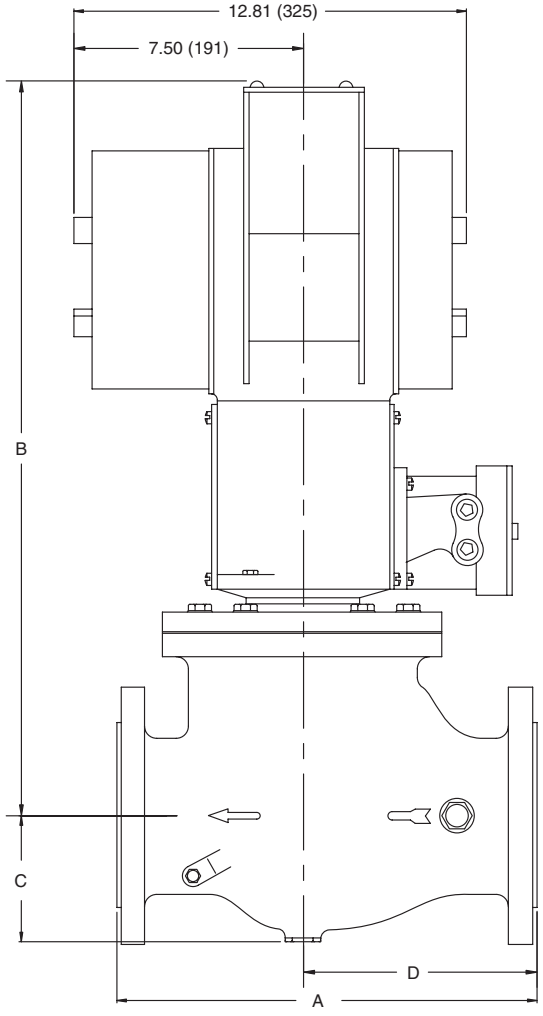
Replacement Switches:

Kits	Switches*	Type
S104772FAX1	1	Proof of Closure
S104772FAX2	2	1 Proof of Closure and 1 Auxiliary
S104772FAX3	3	1 Proof of Closure and 2 Auxiliary

* Yoke Mounted

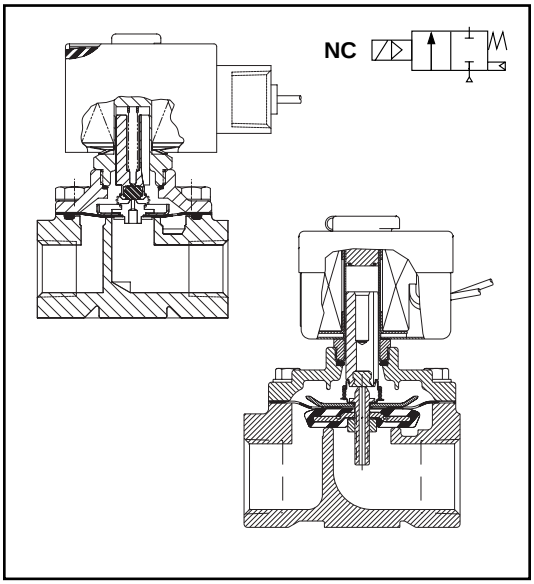
Dimensions inches (mm)

Const Ref.		A	B	C	D
1	in	8.12	25.25	2.50	4.95
	mm	206	641	64	126
2	in.	11.00	26.09	2.88	6.50
	mm	279	663	73	165
3	in	13.87	28.69	4.06	7.75
	mm	352	729	103	197
4	in	17.81	29.75	5.13	10.35
	mm	452	756	130	263



Features

- 2-way normally closed operation
- For control of commercial and industrial gas burners
- Ideal for high pressure applications
- Stainless steel body construction
- Mountable in any position



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Stainless Steel (300 Series)
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Silver

Electrical

Standard Coil Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	17.1	40	90	32 to 125	238610	238614
F	15.4	27	160	32 to 125	99257	-
F	16.1	35	180	32 to 125	272610	272614
Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).						

Solenoid Enclosures

General Purpose, Type 1 metal enclosure with 7/8" hole for 1/2" conduit connector (HV266343-1).

Watertight, Types 1, 2, 3, 3S, 4 & 4X molded epoxy enclosure with 1/2" conduit hub (HV266342-1, HV266342-2, HV266343-2).

Explosion & Watertight, Types 1, 2, 3, 3S, 4X, 7 & 9 molded epoxy enclosure with 1/2" conduit hub (HV266342-3, HV266342-4, HV266343-3).

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to:

1) Standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP618 Safety Valves.

2) Standard 429 “Electrically Operated Valves for use in Hazardous Locations” Guide YTSX, File E25549 Safety Valves.

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 010381. (HV266342-1, HV266342-2, HV266343-2)

2) Automatic Gas Safety Shutoff Valves C/I (3.9) File 112872. (HV266342-3, HV266342-4, HV266343-3)

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED													
1/2	5/8	4.0	203,000	0	150	175	HV266342-1	1	❍	-	❍	17.1	3.5
1/2	5/8	4.0	203,000	0	150	175	HV266342-3	1	❍	-	❍	17.1	3.5
3/4	5/8	4.5	203,000	0	150	175	HV266342-2	1	❍	-	❍	17.1	3.5
3/4	5/8	4.5	203,000	0	150	175	HV266342-4	1	❍	-	❍	17.1	3.5
1	1	11.2	505,000	0	150	175	HV266343-1	2	❍	-	❍	15.4	8.8
1	1	11.2	505,000	0	150	175	HV266343-2	3	❍	-	❍	16.1	8.8
1	1	11.2	505,000	0	150	175	HV266343-3	3	❍	-	❍	16.1	8.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

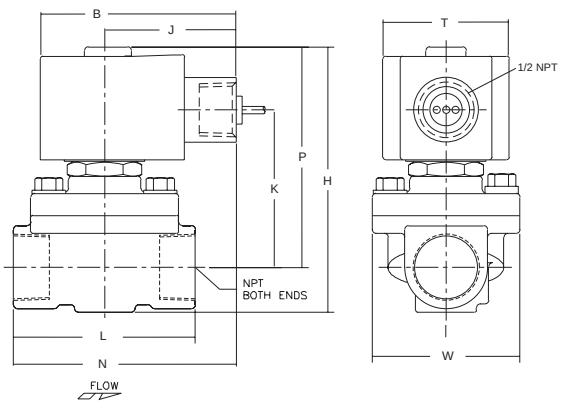
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED													
1/2	16	3.4	203,000	0	10.3	79	HV266342-1	1	❍	-	❍	17.1	1.6
1/2	16	3.4	203,000	0	10.3	79	HV266342-3	1	❍	-	❍	17.1	1.6
3/4	16	3.4	203,000	0	10.3	79	HV266342-2	1	❍	-	❍	17.1	1.6
3/4	16	3.4	203,000	0	10.3	79	HV266342-4	1	❍	-	❍	17.1	1.6
1	25	9.5	505,000	0	10.3	79	HV266343-1	2	❍	-	❍	15.4	4.0
1	25	9.5	505,000	0	10.3	79	HV266343-2	3	❍	-	❍	16.1	4.0
1	25	9.5	505,000	0	10.3	79	HV266343-3	3	❍	-	❍	16.1	4.0

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Dimensions inches (mm)

Const. Ref.		B	H	J	K	L	N	P	T	W
1	ins.	3.03	4.19	2.05	2.50	2.81	3.45	3.47	1.95	2.39
	mm	77	106	52	64	71	88	88	50	61
2	ins.	2.67	5.31	1.58	3.03	3.75	-	4.43	2.20	3.84
	mm	68	135	40	77	95	-	113	56	98
3	ins.	3.11	5.26	2.05	3.17	3.75	4.10	4.38	2.06	3.84
	mm	79	134	52	81	95	104	111	52	98

Const. Ref. 1, 3



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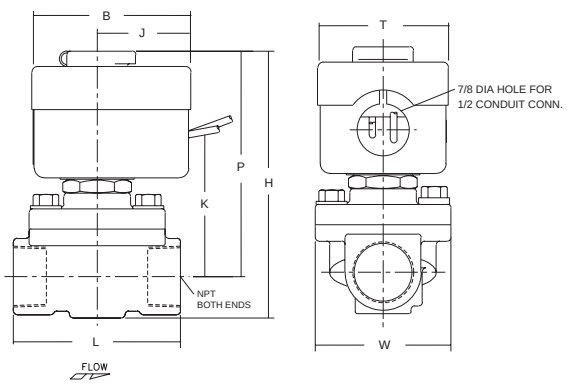
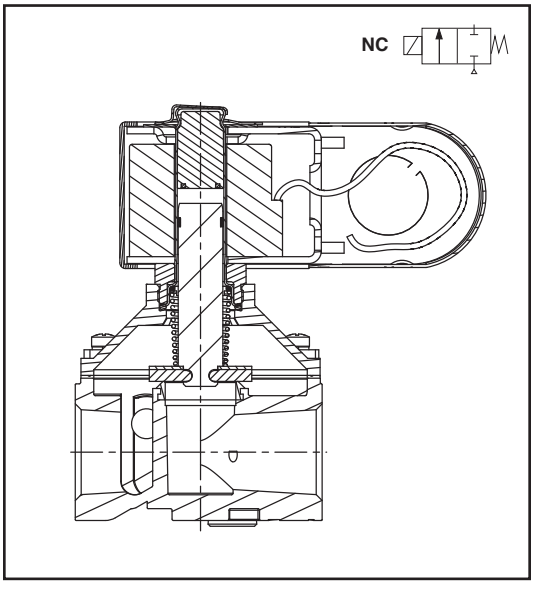


COMBUSTION

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- For positive shutoff on pilot or main gas lines of commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and dowstream pipe tap with plug for routine testing
- Suitable for ambient temperatures up to 175˚F



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Guide	CA
Springs	302F Stainless Steel
Shading Coil	Copper
Body Gasket	Cork
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.5	23	55	-40 to 175	064982	-

Standard Voltages: 120 volts AC, 60 Hz (or 110 volts AC, 50 Hz).
Optional Voltages: 24, 240 volts AC, 60 Hz (or 220 volts AC, 50 Hz)
K3A catalog number includes codification for voltage. However, voltage must be specified when ordering spare coil.

Solenoid Enclosures

Standard: Type 1 General Purpose Junction Box Housing with two 7/8" knock-outs.

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves” (3/8" thru 3/4" only).

CSA Certified to:

1) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I (meets standard C22.2 No. 139 “Electrically Operated Valves”, File 113070
2) Automatic Gas Safety Shutoff Valves CSA/CGA 3.9, File 113070

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number 24V 60 Hz	Catalog Number 110-120V 50-60 Hz	Catalog Number 220-240V 50-60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	0.456	4	215,000	0	0.5	77	K3A431U	K3A432U	K3A434U	1	❍	❍	❍	10.5	1.4
1/2	0.687	6	350,000	0	0.5	77	K3A441U	K3A442U	K3A444U	1	❍	❍	❍	10.5	1.4
3/4	0.812	9	520,000	0	0.5	77	K3A451U	K3A452U	K3A454U	2	❍	❍	❍	10.5	1.5
1	1.000	14	755,000	0	0.5	77	K3A461U	K3A462U	K3A464U	3	❍	-	❍	10.5	1.7

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

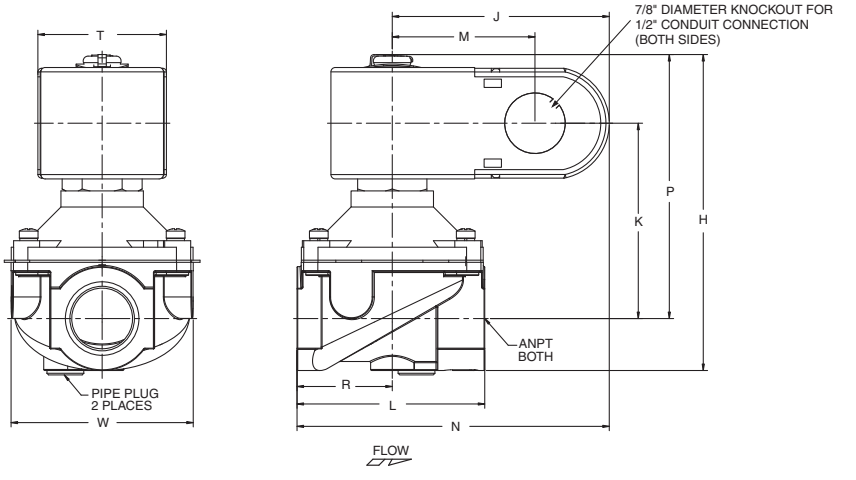
Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number 24V 60 Hz	Catalog Number 110-120V 50-60 Hz	Catalog Number 220-240V 50-60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	12	3.4	215,000	0	0.03	25	K3A431U	K3A432U	K3A434U	1	❍	❍	❍	10.5	0.6
1/2	17	5.1	350,000	0	0.03	25	K3A441U	K3A442U	K3A444U	1	❍	❍	❍	10.5	0.6
3/4	21	7.7	520,000	0	0.03	25	K3A451U	K3A452U	K3A454U	2	❍	❍	❍	10.5	0.7
1	25	11.9	755,000	0	0.03	25	K3A461U	K3A462U	K3A464U	3	❍	-	❍	10.5	0.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Dimensions inches (mm)

Const. Ref.		H	J	K	L	M	N	P	R	T	W
1	in	4.25	3.11	2.70	2.75	2.04	4.52	3.69	1.41	1.86	2.63
	mm	108	79	69	70	52	115	94	36	47	67
2	in	4.56	3.11	2.82	2.75	2.04	4.49	3.81	1.37	1.86	2.63
	mm	116	79	72	70	52	114	97	35	47	67
3	in	4.88	3.11	3.01	4.00	2.04	5.11	4.00	2.00	1.86	3.25
	mm	124	79	76	102	52	130	102	51	47	83

Const. Ref. 1, 2, 3

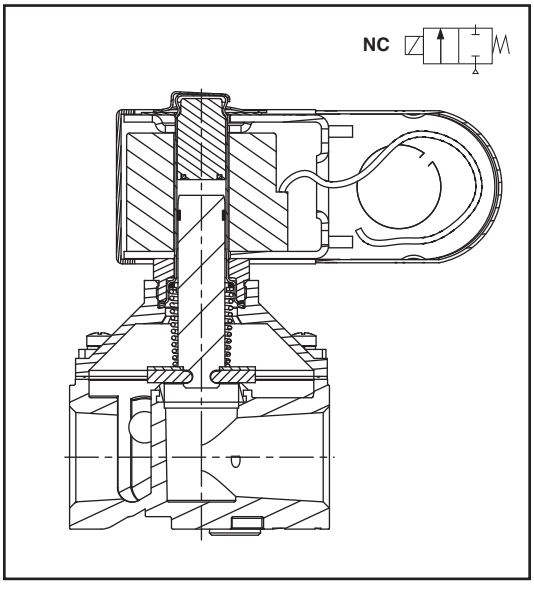


Must be mounted with solenoid vertical and upright or in a horizontal position.

COMBUSTION

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- For positive shutoff on pilot or main gas lines of commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe tap with plug for routine testing
- Suitable for ambient temperatures up to 175˚F



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Guide	CA
Springs	302F Stainless Steel
Shading Coil	Copper
Body Gasket	Cork
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
N	16.7	35	78	-40 to 175	216758	-

Standard Voltages: 120 volts AC, 60 Hz (or 110 volts AC, 50 Hz).
Optional Voltages: 24, 240 volts AC, 60 Hz (or 220 volts AC, 50 Hz)
K3A catalog number includes codification for voltage. However, voltage must be specified when ordering spare coil.

Solenoid Enclosures

Standard: Type 1 General Purpose Junction Box housing with two 7/8" knockouts.

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves” (3/8" thru 3/4" only).

CSA Certified to:

1) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I (meets standard C22.2 No. 139 “Electrically Operated Valves”, File 113070
2) Automatic Gas Safety Shutoff Valves CSA/CGA 3.9, File 113070

ASCO®

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (lbs)
			Btu/hr.	Min.	Max.		24V 60 Hz	110-120V 50-60 Hz	220-240V 50-60 Hz		UL	FM	CSA		
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	0.456	4	215,000	0	10	77	K3A531U	K3A532U	K3A534U	1	❍	❍	❍	16.7	1.4
1/2	0.687	6	350,000	0	6	77	K3A541U	K3A542U	K3A544U	1	❍	❍	❍	16.7	1.4
3/4	0.812	9	520,000	0	3	77	K3A551U	K3A552U	K3A554U	2	❍	❍	❍	16.7	1.5
1	1.000	14	755,000	0	1.5	77	K3A561U	K3A562U	K3A564U	3	❍	-	❍	16.7	1.7

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

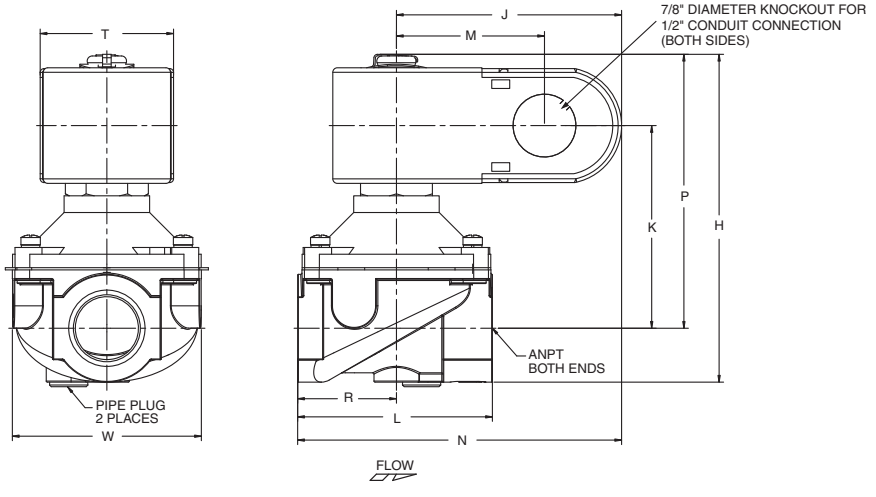
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (kgs)
			Btu/hr.	Min.	Max.		24V 60 Hz	110-120V 50-60 Hz	220-240V 50-60 Hz		UL	FM	CSA		
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	12	3.4	215,000	0	0.7	25	K3A531U	K3A532U	K3A534U	1	❍	❍	❍	16.7	0.6
1/2	17	5.1	350,000	0	0.4	25	K3A541U	K3A542U	K3A544U	1	❍	❍	❍	16.7	0.6
3/4	21	7.7	520,000	0	0.2	25	K3A551U	K3A552U	K3A554U	2	❍	❍	❍	16.7	0.7
1	25	11.9	755,000	0	0.1	25	K3A561U	K3A562U	K3A564U	3	❍	-	❍	16.7	0.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Dimensions inches (mm)

Const. Ref.		H	J	K	L	M	N	P	R	T	W
1	ins.	4.25	3.11	2.70	2.75	2.04	4.52	3.69	1.41	1.86	2.63
	mm	108	79	69	70	52	115	94	36	47	67
2	ins.	4.56	3.11	2.82	2.75	2.04	4.49	3.81	1.37	1.86	2.63
	mm	116	79	72	70	52	114	97	35	47	67
3	ins.	4.88	3.11	3.01	4.00	2.04	5.11	4.00	2.00	1.86	3.25
	mm	124	79	76	102	52	130	102	51	47	83

Const. Ref. 1, 2, 3

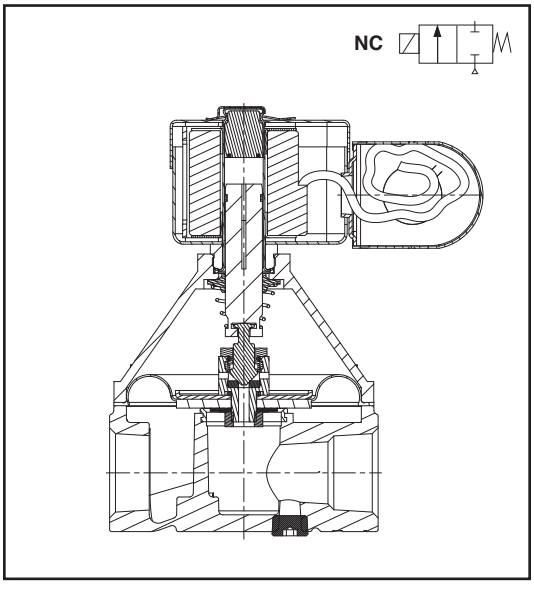


Must be mounted with solenoid vertical and upright or in a horizontal position.

COMBUSTION

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- For positive shutoff on pilot or main gas lines of commercial and industrial gas burners.
- Valves provided with 1/8" NPT upstream and downstream pipe tap with plug for routine testing
- Suitable for ambient temperatures up to 175˚F



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Guide	CA
Springs	302F Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	20	43	240	-40 to 175	222345	-

Standard Voltages: 120 volts AC, 60 Hz
Optional Voltages: 24, 240 volts AC, 60 Hz
K3A catalog number includes codification for voltage. However, voltage must be specified when ordering spare coil.

Solenoid Enclosures

Standard: Type 1 General Purpose Junction Box housing with two 7/8" knockouts.

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves” (3/4" only).

CSA Certified to:

1) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I (meets standard C22.2 No. 139 “Electrically Operated Valves”, File 113070
2) Automatic Gas Safety Shutoff Valves CSA/CGA 3.9, File 113070

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number 24V 60 Hz	Catalog Number 120V 60 Hz	Catalog Number 240V 60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	1.25	12	667,000	0	5	77	K3A651U	K3A652U	K3A654U	1	❍	❍	❍	20	4.5
1	1.25	17	960,000	0	5	77	K3A661U	K3A662U	K3A664U	1	❍	-	❍	20	4.7
1 1/4	1.75	23	1,290,000	0	5	77	K3A671U	K3A672U	K3A674U	2	❍	-	❍	20	4.5
1 1/2	1.75	27	1,509,000	0	5	77	K3A681U	K3A682U	K3A684U	2	❍	-	❍	20	4.7

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

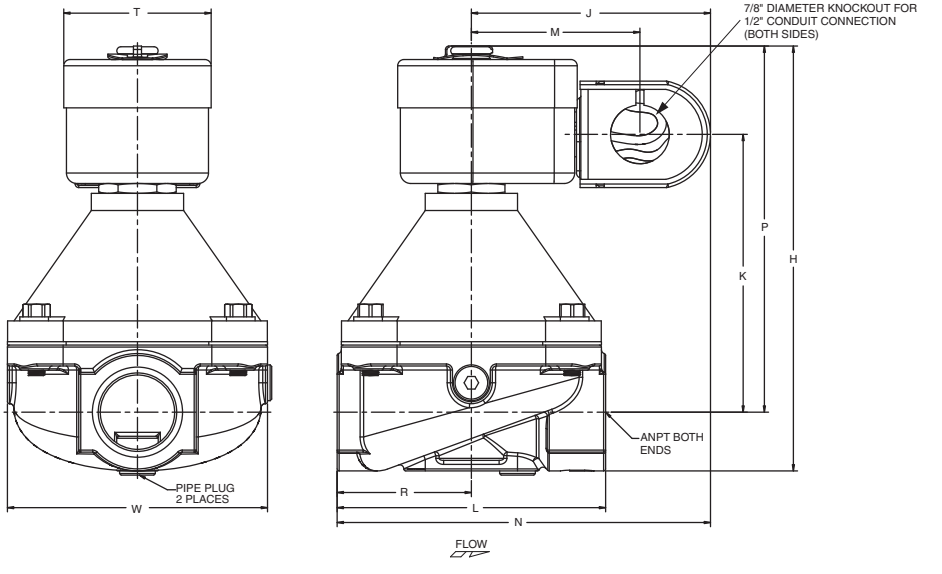
Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number 24V 60 Hz	Catalog Number 120V 60 Hz	Catalog Number 240V 60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/4	32	12	667,000	0	0.3	25	K3A651U	K3A652U	K3A654U	1	❍	❍	❍	20	2.0
1	32	17	960,000	0	0.3	25	K3A661U	K3A662U	K3A664U	1	❍	-	❍	20	2.1
1 1/4	44	23	1,290,000	0	0.3	25	K3A671U	K3A672U	K3A674U	2	❍	-	❍	20	2.0
1 1/2	44	27	1,509,000	0	0.3	25	K3A681U	K3A682U	K3A684U	2	❍	-	❍	20	2.1

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Dimensions inches (mm)

Const. Ref.		H	J	K	L	M	N	P	R	T	W
1	in	6.33	3.53	4.14	4.00	2.50	5.53	5.46	2.00	2.19	3.87
	mm	161	90	105	102	64	140	139	51	56	98
2	in	7.03	3.53	4.47	5.19	2.50	6.15	5.78	2.62	2.19	3.87
	mm	179	90	114	132	64	156	147	67	56	98

Const. Ref. 1, 2

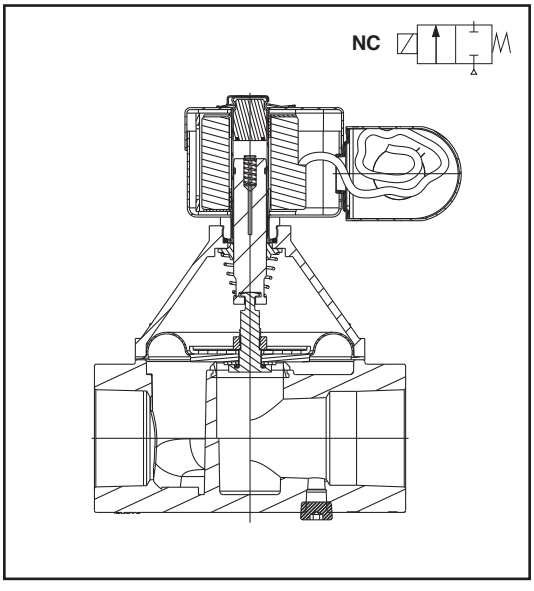


Must be mounted with solenoid vertical and upright or in the horizontal position.

COMBUSTION

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with 1/8" NPT upstream and downstream pipe tap with plug for routine testing
- Suitable for ambient temperatures up to 175˚F



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Guide	CA
Springs	302F Stainless Steel
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	20	43	240	-40 to 175	222345	-

Standard Voltages: 120 volts AC, 60 Hz
Optional Voltages: 24, 240 volts AC, 60 Hz
K3A catalog number includes codification for voltage. However, voltage must be specified when ordering spare coil.

Solenoid Enclosures

Standard: Type 1 General Purpose Junction Box housing with two 7/8" knockouts.

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

CSA Certified to:

1) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I (meets standard C22.2 No. 139 “Electrically Operated Valves”, File 113070
2) Automatic Gas Safety Shutoff Valves CSA/CGA 3.9, File 113070

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number 24V 60 Hz	Catalog Number 120V 60 Hz	Catalog Number 240V 60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
1 1/4	1.25	18	1,028,000	0	1.5	77	K3A771U	K3A772U	K3A774U	1	❍	-	❍	20	4.5
1 1/2	1.25	20	1,159,000	0	1.5	77	K3A781U	K3A782U	K3A784U	1	❍	-	❍	20	4.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

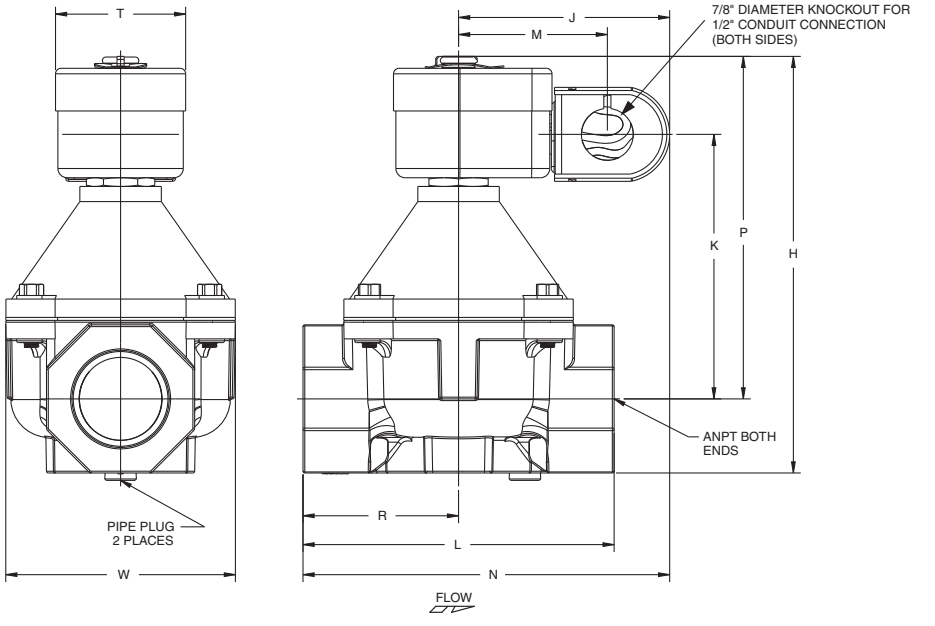
Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number 24V 60 Hz	Catalog Number 120V 60 Hz	Catalog Number 240V 60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
1 1/4	32	15.3	1,028,000	0	0.1	25	K3A771U	K3A772U	K3A774U	1	❍	-	❍	20	2
1 1/2	32	17.0	1,159,000	0	0.1	25	K3A781U	K3A782U	K3A784U	1	❍	-	❍	20	2

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Dimensions inches (mm)

Const. Ref.		H	J	K	L	M	N	P	R	T	W
1	in	7.03	3.53	4.47	5.25	2.50	6.15	5.78	2.62	2.19	3.87
	mm	179	90	114	133	64	156	147	67	56	98

Const. Ref. 1



Must be mounted with solenoid vertical and upright or in the horizontal position.

COMBUSTION

Features

- 2-way normally closed operation
- For gas pilot control of commercial and industrial gas burners
- Direct lift with resilient soft seating for tight shutoff
- Brass body construction
- Mountable in any position

Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	LT NBR
Core Tube	305 Stainless Steel
Core Guide	Acetal
Rider Ring	PTFE
Core and Plugnut	430F Stainless Steel
Springs	Inconel 600
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	10.1	25	70	-40 to 131	238610	238614
H	10.1	25	70	-40 to 140	238810	238814

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140˚F Class H coil with prefix HT.

Solenoid Enclosures

Standard: Watertight; Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.)

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

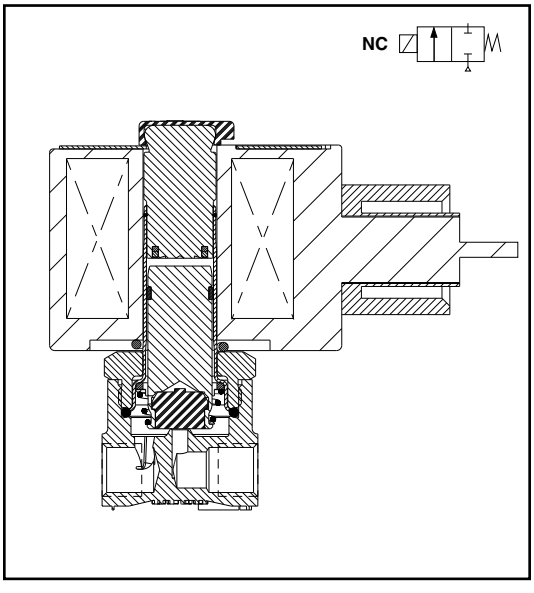
Options

High Ambient 140˚F (prefix HT)

Din Connector (prefix SC for standard, prefix SU for high temperature)

Mounting Bracket (suffix MB)

Silicone Free Service (suffix SF)



Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.

2) Automatic Gas Valves Z21.21 (6.5), File 112872.

3) Automatic Gas Safety Shutoff Valves C/I (3.9), File 112872.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED (Closed when de-energized)													
1/8	1/8	.35	18,700	0	200	167	8262H077	1	❍	❍	❍	10.1	1.2
1/4	9/32	1.0	53,500	0	50	167	8262H078	2	❍	❍	❍	10.1	1.3

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED (Closed when de-energized)													
1/8	3	0.30	15,000	0	13.8	75	8262H077	1	❍	❍	❍	10.1	0.5
1/4	7	0.87	51,700	0	3.4	75	8262H078	2	❍	❍	❍	10.1	0.6

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Capabilities Chart

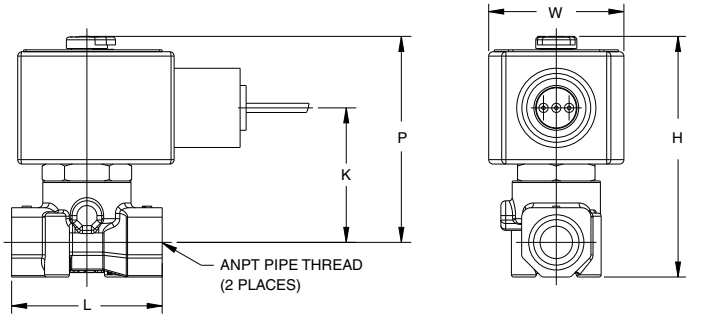
Solenoid Options				Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Screw Terminal Wiring Box	Spade Wiring Box	Brass	LT NBR	AC
EF	HT	JKF	JSF	8262H077	●	325039
EF	HT	JKF	JSF	8262H078	●	325039

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

Const. Ref.		H	K	L	P	W
1	ins	3.05	1.71	1.19	2.69	1.95
	mm	77	43	30	68	50
2	ins	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50

Const. Ref. 1, 2



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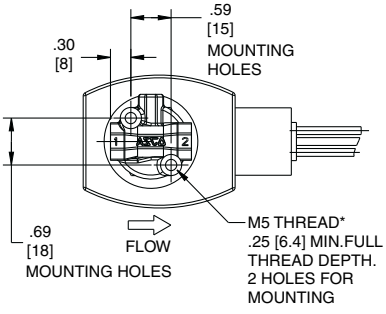

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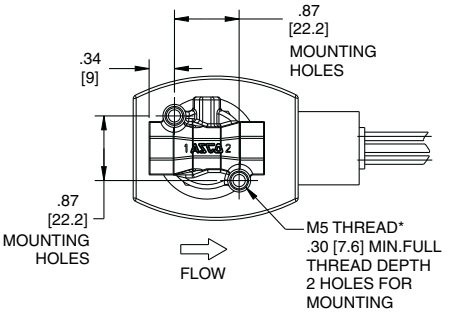
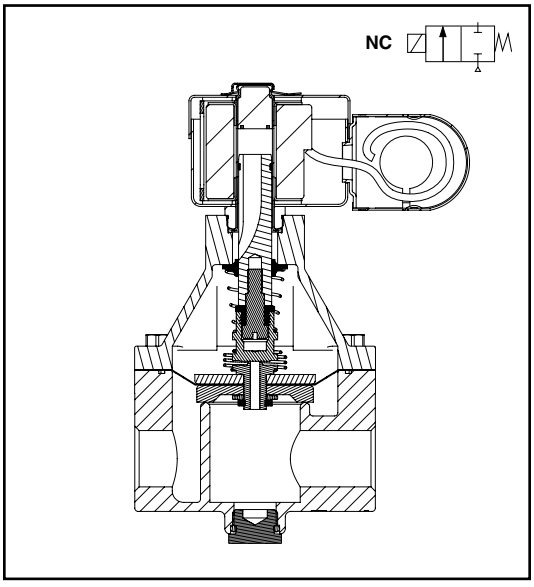


*ACCEPTS STANDARD #10-32 MACHINE SCREW

COMBUSTION

Features

- 2-way normally closed operation
- Die-cast aluminum bodies
- Zero differential piloted diaphragm
- For on-off control of fuel gas in commercial and industrial gas burners
- Valves provided with pipe tap(s) with plug for routine testing
- Suitable for ambient temperatures up to 175˚F



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Washer	302 Stainless Steel
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Core Guide	CA
Springs	302F Stainless Steel
Shading Coil	Copper
Body Gasket	Cork
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
N	20	43	240	-20 to 175	222345	-
Standard Voltages: 24, 120, 240 volts AC, 60 Hz						

Solenoid Enclosures

Standard: Type 1 General Purpose Junction Box housing with two 7/8" knockouts.

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 “Electrically Operated Valves,” Guide YIOZ, File MP932 Safety Valves.

FM Approved to Class 7400 “Liquid and Gas Safety Shutoff Valves” (3/8" thru 3/4" only).

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 113070.
2) Automatic Gas Valves Z21.21 (6.5), File 109157 and 113070.
2) Automatic Gas Safety Shutoff Valves C/I (3.9), File 113070.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ①	Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (lbs)
			Btu/hr.	Min.	Max.		24V 60 Hz	120V 60 Hz	240V 60 Hz		UL	FM	CSA		
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	3/4	5.3	217,000	0	30	77	S261SG01N3CG5	S261SG02N3CG5	S261SG04N3CG5	1	❍	❍	❍	20	3.0
1/2	3/4	6.2	322,000	0	30	77	S261SG01N3DG5	S261SG02N3DG5	S261SG04N3DG5	1	❍	❍	❍	20	3.2
3/4	3/4	8	370,000	0	30	77	S261SG01N3EG5	S261SG02N3EG5	S261SG04N3EG5	1	❍	❍	❍	20	3.3
1	1 1/2	18	1,120,000	0	25	77	S261SG01N3FJ5	S261SG02N3FJ5	S261SG04N3FJ5	2	❍	-	❍	20	4.4
1 1/4	2	34	1,710,000	0	25	77	S261SG01N3GJ7	S261SG02N3GJ7	S261SG04N3GJ7	3	❍	-	❍	20	4.4
1 1/2	2	37	1,790,000	0	25	77	S261SG01N3HJ7	S261SG02N3HJ7	S261SG04N3HJ7	3	❍	-	❍	20	12.5
2	4 1/2	80	4,180,000	0	25	77	S261SG01N3JK4	S261SG02N3JK4	S261SG04N3JK4	4	❍	-	❍	20	12.5
2 1/2	4 1/2	110	5,700,000	0	25	77	S261SG01N3KK4	S261SG02N3KK4	S261SG04N3KK4	5	❍	-	❍	20	14.2
3	4 1/2	135	7,100,000	0	25	77	S261SG01N3LK4	S261SG02N3LK4	S261SG04N3LK4	5	❍	-	❍	20	14.2

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Specifications (Metric units)

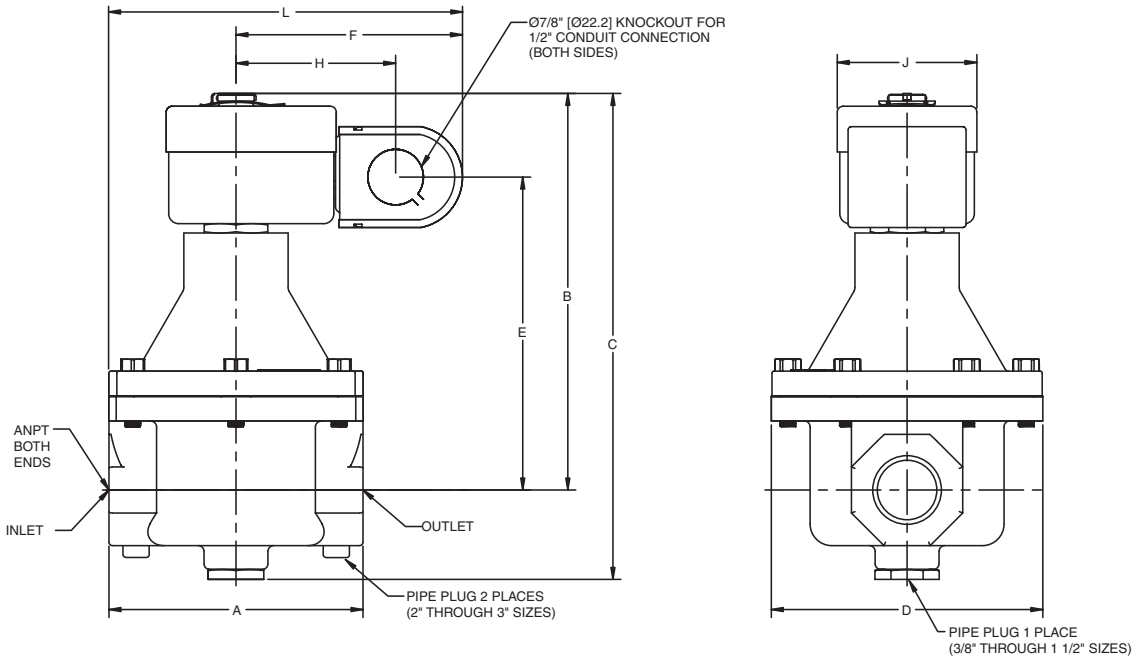
Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ①	Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (kgs)
			Btu/hr.	Min.	Max.		24V 60 Hz	120V 60 Hz	240V 60 Hz		UL	FM	CSA		
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
3/8	19	4.5	217,000	0	2.1	25	S261SG01N3CG5	S261SG02N3CG5	S261SG04N3CG5	1	❍	❍	❍	20	1.4
1/2	19	5.3	322,000	0	2.1	25	S261SG01N3DG5	S261SG02N3DG5	S261SG04N3DG5	1	❍	❍	❍	20	1.5
3/4	19	6.8	370,000	0	2.1	25	S261SG01N3EG5	S261SG02N3EG5	S261SG04N3EG5	1	❍	❍	❍	20	1.5
1	38	15.3	1,120,000	0	1.7	25	S261SG01N3FJ5	S261SG02N3FJ5	S261SG04N3FJ5	2	❍	-	❍	20	2.0
1 1/4	51	28.9	1,710,000	0	1.7	25	S261SG01N3GJ7	S261SG02N3GJ7	S261SG04N3GJ7	3	❍	-	❍	20	2.0
1 1/2	51	31.5	1,790,000	0	1.7	25	S261SG01N3HJ7	S261SG02N3HJ7	S261SG04N3HJ7	3	❍	-	❍	20	5.7
2	114	68.0	4,180,000	0	1.7	25	S261SG01N3JK4	S261SG02N3JK4	S261SG04N3JK4	4	❍	-	❍	20	5.7
2 1/2	114	93.5	5,700,000	0	1.7	25	S261SG01N3KK4	S261SG02N3KK4	S261SG04N3KK4	5	❍	-	❍	20	6.5
3	114	114.5	7,100,000	0	1.7	25	S261SG01N3LK4	S261SG02N3LK4	S261SG04N3LK4	5	❍	-	❍	20	6.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

Dimensions inches (mm)

Const. Ref.		A	B	C	D	E	F	H	J	L
1	in	2.75	5.48	6.54	2.31	4.07	3.53	2.50	2.19	4.90
	mm	70	139	166	59	103	90	64	56	124
2	in	4.00	6.35	7.60	4.27	4.94	3.53	2.50	2.19	5.53
	mm	102	161	193	108	125	90	64	56	140
3	in	4.76	6.73	8.35	4.77	5.32	3.53	2.50	2.19	5.91
	mm	121	171	212	121	135	90	64	56	150
4	in	8.12	7.20	9.57	7.69	5.85	3.53	2.50	2.19	7.59
	mm	206	183	243	195	149	90	64	56	193
5	in	9.00	8.06	10.62	7.69	6.65	3.53	2.50	2.19	8.03
	mm	229	205	270	195	169	90	64	56	204

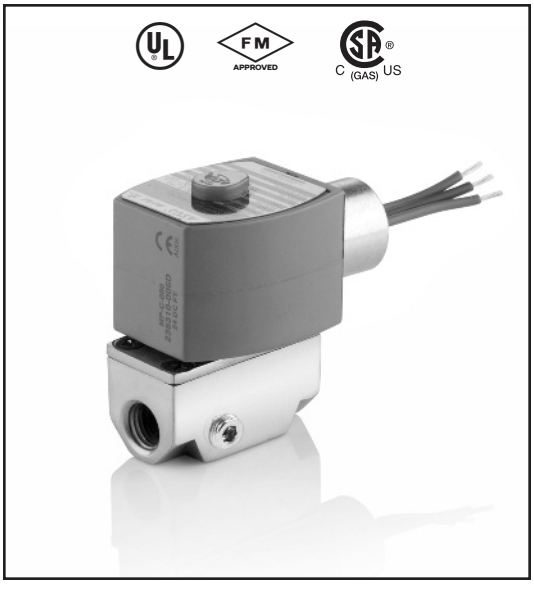
Const. Ref. 1 - 5

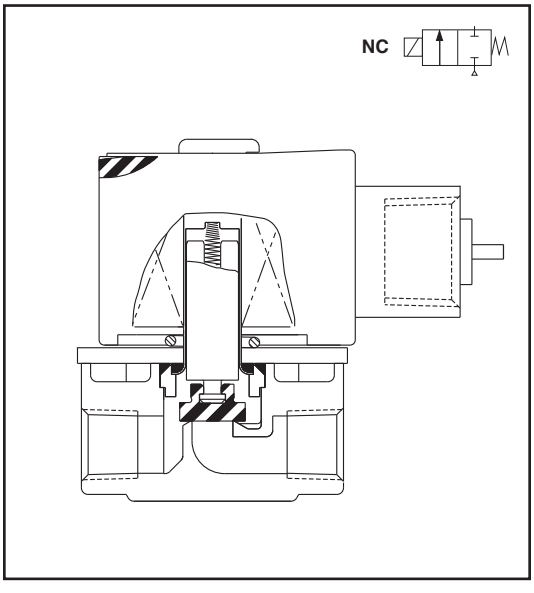


Valves up to 1 1/2" NPT must be mounted with solenoid vertical and upright or in a horizontal position.
Valves larger than 1 1/2" NPT must be mounted with solenoid vertical and upright.

Features

- 2-way normally closed operation
- For gas pilot control of commercial and industrial gas burners
- Direct lift with resilient soft seating for tight shutoff
- Valves provided with 1/8" NPT downstream pipe tap with plug for routine testing
- Suitable for ambient temperatures up to 175˚F





Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	17-7PH
Shading Coil	Copper
Pipe Plug	Zinc-Plated Steel

Electrical

Standard Coil Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family
	AC				General Purpose
	Watts	VA Holding	VA Inrush		AC
F	6.1	16	40	-40 to 175	238210
Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).					

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Options

Extended lead length (Suffix "K"): Provides 72" lead length vs. 18" lead length (EX: SV311A02N6AF5K).

Approvals

UL listed to standard 429 "Electrically Operated Valves."

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to:

1) Automatic Gas Valves ANSI Z21.21, CSA 6.5 C/I (meets standard C22.2 No. 139 "Electrically Operated Valves", File 112872
2) Automatic Gas Safety Shutoff Valves CSA/CGA 3.9, File 112872

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Gas Capacity ① Btu/hr.	Operating Pressure Differential (psi) Min.	Operating Pressure Differential (psi) Max.	Max. Fluid Temp.°F	Catalog Number 24V 60 Hz	Catalog Number 110-120V 50-60 Hz	Catalog Number 220-240V 50-60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage ②	Approx. Shipping Weight (lbs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
1/8	5/16	1.0	53,700	0	15	125	SV311A01N6AF5	SV311A02N6AF5	SV311A04N6AF5	1	❍	❍	❍	6.1	1.8
1/4	5/16	1.1	59,000	0	15	125	SV311A01N6BF5	SV311A02N6BF5	SV311A04N6BF5	1	❍	❍	❍	6.1	1.8
3/8	5/16	1.2	64,000	0	15	125	SV311A01N6CF5	SV311A02N6CF5	SV311A04N6CF5	1	❍	❍	❍	6.1	1.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas; ② On 50 Hz service watt rating is 8.1.

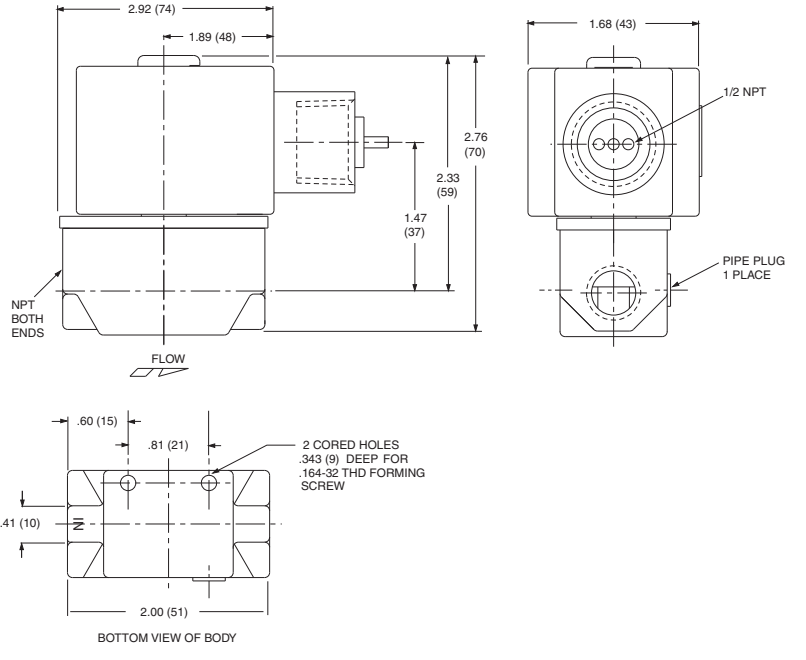
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Gas Capacity ① Btu/hr.	Operating Pressure Differential (bar) Min.	Operating Pressure Differential (bar) Max.	Max. Fluid Temp.°C	Catalog Number 24V 60 Hz	Catalog Number 110-120V 50-60 Hz	Catalog Number 220-240V 50-60 Hz	Const. Ref.	Agency UL	Agency FM	Agency CSA	Wattage ②	Approx. Shipping Weight (kgs)
COMBUSTION (Fuel Gas) - NORMALLY CLOSED															
1/8	8	0.9	53,700	0	1	52	SV311A01N6AF5	SV311A02N6AF5	SV311A04N6AF5	1	❍	❍	❍	6.1	0.8
1/4	8	0.9	59,000	0	1	52	SV311A01N6BF5	SV311A02N6BF5	SV311A04N6BF5	1	❍	❍	❍	6.1	0.8
3/8	8	1.0	64,000	0	1	52	SV311A01N6CF5	SV311A02N6CF5	SV311A04N6CF5	1	❍	❍	❍	6.1	0.8

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas; ② On 50 Hz service watt rating is 8.1.

Dimensions inches (mm)

Const. Ref. 1



Mountable in any position.

ASCO® RedHat

Open Frame & General Purpose Enclosure

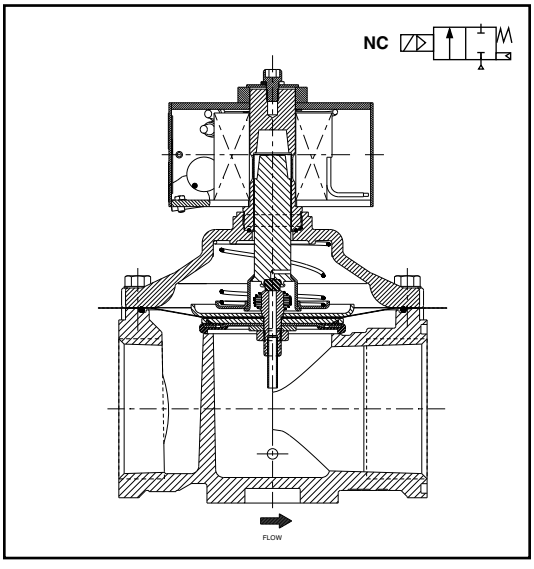
Gas Shutoff Valves

3/4" to 3" NPT

2/2 SERIES X214

Features

- DC construction (12 & 24 VDC)
- High-force closing spring provides positive shutoff for reverse pressure up to 15" W.C.
- Low Power 24 VDC Peak & Hold: Reduces energy consumption to 3.2 W (Hold). Ideal for remote power-critical installations (2" High Flow to 3")
- Broad ambient temperature range: -40˚F to 140˚F (-40˚C to 60˚C)
- 2-way normally closed operation
- Zero differential piloted diaphragm
- High-flow die-cast aluminum bodies
- 1/8" NPT pipe taps with plugs for routine testing
- Optional flange adapters for ease of installation and service
- For on/off control of fuel gas in emergency and standby power systems requiring a primary and alternate fuel source



Fluid

Fuel Gas

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Bushing	PTFE Coated Fiberglass
Core, Bonnet and Plugnut	Zinc-Plated CRS
Springs	302 Stainless Steel
Pipe Plug	Zinc-Plated Steel
Pilot Seat	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Pipe Sizes (in)	Watt Rating (DC)			Ambient Temp. ˚F (˚C)
		Standard	Peak Watts	Hold Watts	
H	3/4" to 2"	45	-	-	-40 to 140 (-40 to 60)
F	2" High Flow to 3"	-	61	3.2	
Standard DC Voltages: 12, 24 (3/4" to 2"); 24 only (2" High Flow to 3")					

Solenoid Enclosures

Open Frame: 18" leads std; 72" leads optional

Type 1 General Purpose: Metal housing with 7/8" hole for 1/2" conduit connection

Valve Response Time

Valve Opening/Closing Time: Less than 1 second

Closeoff Pressure

50 psi (3.5 bar) maximum (3/4" to 2")
5 psi (0.35 bar) maximum (2" High Flow to 3")

Approvals

Open Frame: UL recognized component to standard 429 "Electrically Operated Valve", Guide YIOZ2, File MP618 Safety Valves

General Purpose: UL Listed to standard 429 "Electrically Operated Valve", Guide YIOZ, File MP618 Safety Valves

Open Frame/General Purpose: CSA Certified to:

1) Standard C22.2 No.139 "Electrically Operated Valves", File 010381
2) Automatic Gas Valves Z21.21, CSA 6.5 C/I, File 112872

COMBUSTION

ASCO®

How to Order (Example: X2144399980001H3)

X 2 1 4 4 3 9 9 9 8 | **0 0 1** | **H 3**

Base Catalog Number		Item	Voltage / Class
X214439998	Small body, Open frame	001* 3/4"	H3 12VDC / H H1 24VDC / H
		002* 1"	
		003* 1-1/4"	
		004* 1-1/2"	
X214439999	Medium body Open frame	005* 1-1/4", High flow	H3 12VDC / H H1 24VDC / H
		006* 1-1/2", High flow	
		007* 2"	
X214440000	Large body, Type 1 General Purpose Enclosure	018 2", High flow	F1 24VDC / F
		019 2-1/2"	
		010 3"	

* 18" leads std. For 72" Leads change 1st digit to 1 (example, 101)

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Fuel Gas Capacity		Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Base Catalog Number	Item	Const. Ref.	Agency		Wattage	Approx. Shipping Weight (lbs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.	DC				UL	CSA	DC	
Open Frame														
3/4"	1 5/8	11	593,200	1,411,500	0	5	140	X214439998	001 ③	1	❍	❍	45	9.2
1"	1 5/8	21	1,132,300	2,695,000	0	5	140		002 ③	1	❍	❍	45	9
1-1/4"	1 5/8	32	1,725,500	4,107,000	0	5	140		003 ③	1	❍	❍	45	8.9
1-1/2"	1 5/8	35	1,887,200	4,492,000	0	5	140		004 ③	1	❍	❍	45	8.7
1-1/4" (High Flow)	2 3/32	36	1,925,000	4,620,000	0	5	140	X214439999	005 ③	2	❍	❍	45	10.2
1-1/2" (High Flow)	2 3/32	45	2,406,000	5,775,500	0	5	140		006 ③	2	❍	❍	45	10
2"	2 3/32	55	2,940,500	7,059,000	0	5	140		007 ③	2	❍	❍	45	9.7
General Purpose														
2 (High Flow)	3	75	4,044,100	15,388,000	0	5	140	X214440000	018	3	❍	❍	61/3.2 ④	19.2
2-1/2	3	104	5,607,800	21,339,000	0	5	140		019	3	❍	❍	61/3.2 ④	18.5
3	3	105	5,661,700	21,544,000	0	5	140		010	3	❍	❍	61/3.2 ④	17.5

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Per CSA 6.5 @ 25% Inlet Pressure / 10% pressure drop. ③ 18" leads standard. For 72" leads change 1st digit to 1 (example, 101). ④ Peak & Hold Construction, 61 watts for up to 2 seconds to pull in and 3.2 watts to hold.

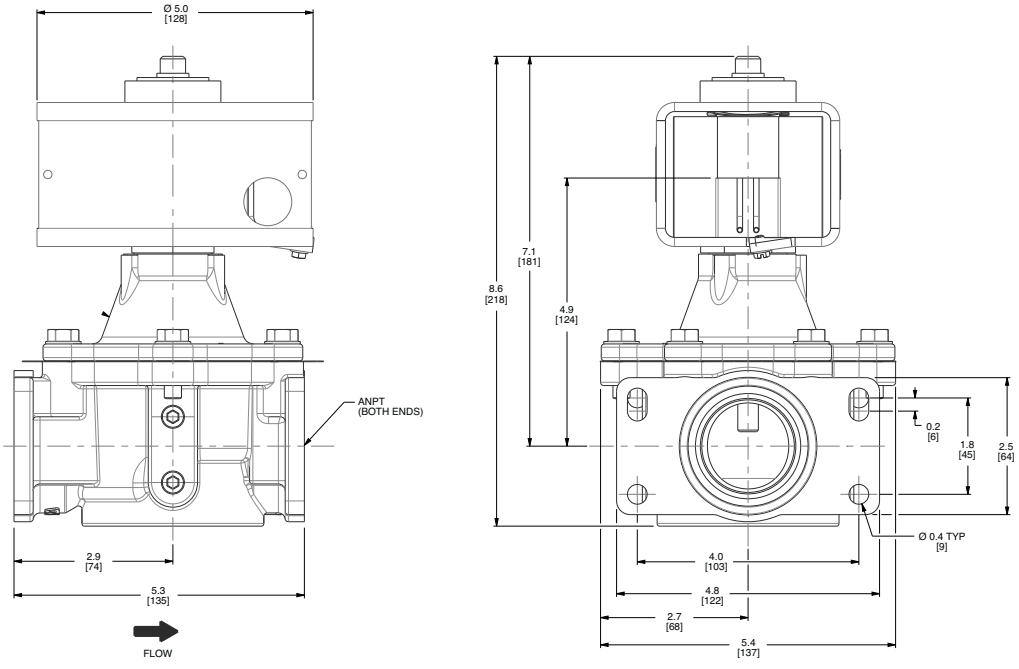
Specifications (Metric units)

Pipe Size (in)	Orifice Size (in)	Kv Flow (m^3/hr)	Fuel Gas Capacity		Operating Pressure Differential (bar)		Max. Fluid Temp. °C	Base Catalog Number	Item	Const. Ref.	Agency		Wattage	Approx. Shipping Weight (kgs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.	DC				UL	CSA	DC	
Open Frame														
3/4"	41	9.4	593,200	1,411,500	0	0.3	60	X214439998	001 ③	1	❍	❍	45	4.2
1"	41	17.9	1,132,300	2,695,000	0	0.3	60		002 ③	1	❍	❍	45	4.1
1-1/4"	41	27.3	1,725,500	4,107,000	0	0.3	60		003 ③	1	❍	❍	45	4
1-1/2"	41	29.9	1,887,200	4,492,000	0	0.3	60		004 ③	1	❍	❍	45	3.9
1-1/4" (High Flow)	53	30.7	1,925,000	4,620,000	0	0.3	60	X214439999	005 ③	2	❍	❍	45	4.6
1-1/2" (High Flow)	53	38.4	2,406,000	5,775,500	0	0.3	60		006 ③	2	❍	❍	45	4.5
2"	53	46.9	2,940,500	7,059,000	0	0.3	60		007 ③	2	❍	❍	45	4.4
General Purpose														
2 (High Flow)	76	64	4,044,100	15,388,000	0	0.3	60	X214440000	018	3	❍	❍	61/3.2 ④	8.7
2-1/2	76	88.7	5,607,800	21,339,000	0	0.3	60		019	3	❍	❍	61/3.2 ④	8.4
3	76	89.6	5,661,700	21,544,000	0	0.3	60		010	3	❍	❍	61/3.2 ④	7.9

❍ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Per CSA 6.5 @ 25% Inlet Pressure / 10% pressure drop. ③ 18" leads standard. For 72" leads change 1st digit to 1 (example, 101). ④ Peak & Hold Construction, 61 watts for up to 2 seconds to pull in and 3.2 watts to hold.

Dimensions inches (mm)

Const. Ref. 1



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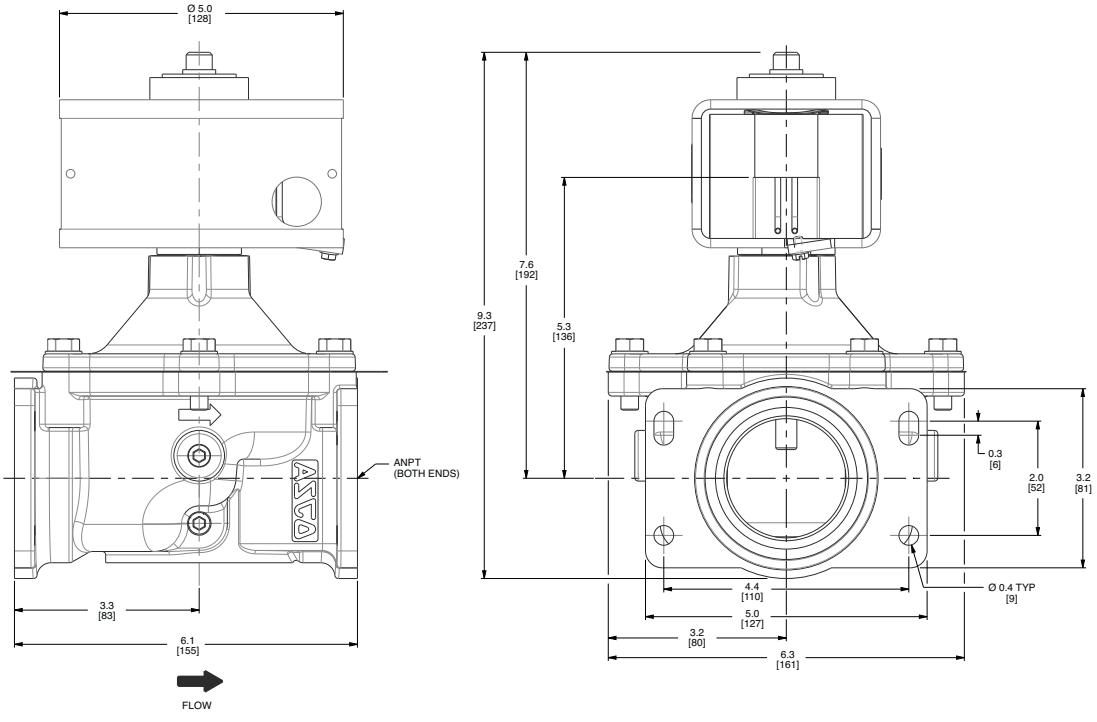
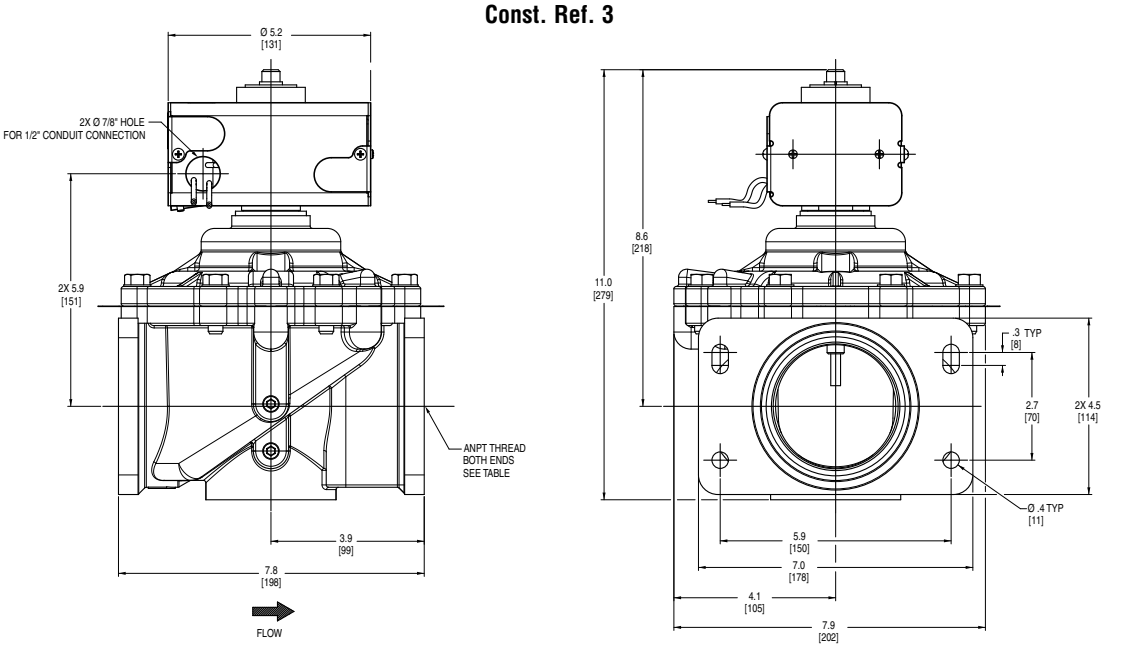


Must be mounted with solenoid vertical and upright.

Dimensions inches (mm)

Const. Ref. 3



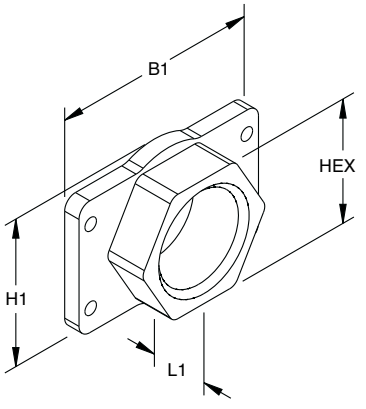
Must be mounted with solenoid vertical and upright.

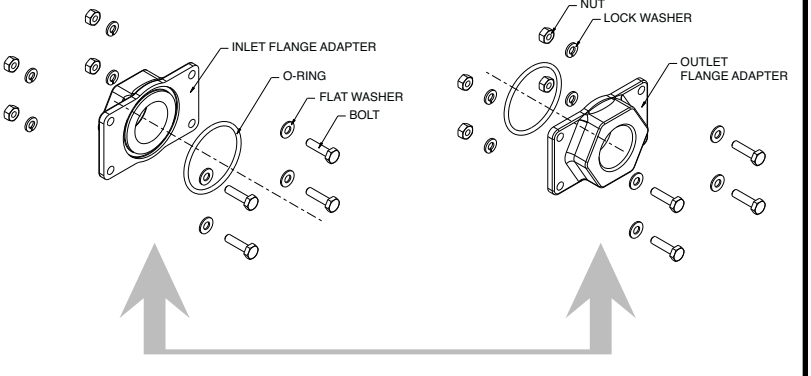
Flange Adapters

Pipe Size (in)		B1	H1	L1	HEX
3/4", 1"	in	4.8	2.5	1.27	2.5
	mm	122	76	32	64
1-1/4" 2"	in	5	3.56	1.38	3
	mm	127	90	35	76
2" (High Flow) - 3"	in	7	4.5	2.01	4.5
	mm	178	114	51	114

Flange Adapter Kits (Optional)

Pipe Size (in)	Inlet & Outlet Adapter/Hardware Kit	Approx. Shipping Weight (lbs)
3/4	296659-001	1.6
1	296659-002	1.5
1-1/4	296659-003	1.3
1-1/2	296659-004	1.2
1-1/4 (High Flow)	296659-005	2.4
1-1/2 (High Flow)	296659-006	2.1
2	296659-007	1.7
2 (High Flow)	296659-008	6.6
2-1/2	296659-009	6.0
3	296659-010	4.9



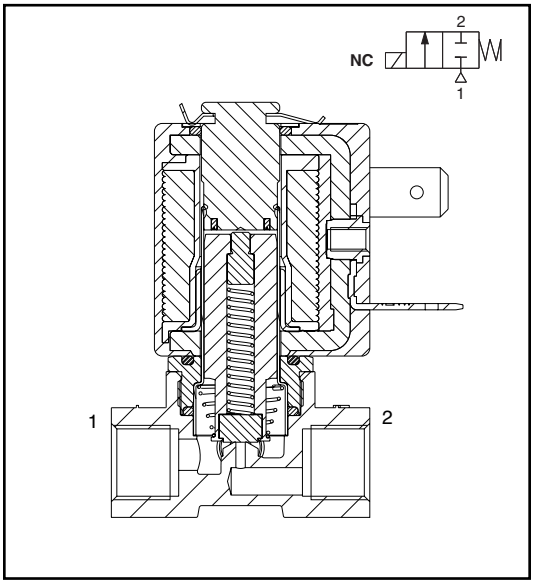


INLET & OUTLET
FLANGE ADAPTERS AND HARDWARE KIT

COMBUSTION

Features

- 2-way normally closed operation
- For control of commercial and industrial oil burners
- Brass body construction
- Mountable in any position
- Direct lift with resilient soft sealing for tight shutoff



Fluid

No. 2 Fuel Oil at 60 SSU
No. 4 Fuel Oil at 300 SSU

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Core Tube/ Bonnet	Stainless Steel / Plated Steel
Core and Plugnut	Stainless Steel
Springs	Stainless Steel
Seals and Disc	NBR / FKM
Shading Coil	Copper

Electrical

Prefix	Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Ambient Temp.°F	Spare Coil Family	
		DC Watts	AC					
			Watts	VA Holding	VA Inrush		AC	DC
U	F	6.9	6.3	8.8	12.1	-22 to 140	400117	400117
SC	F	6.9	6.3	8.8	12.1	-22 to 140	400127	400127
Standard voltages: 24,120, 240 volts AC, 50-60 Hz. 12, 24, 120 volts DC Must be specified when ordering.								

Solenoid Enclosures

Standard: Open frame (Prefix U) 18" leads

Optional: DIN (size 11mm, form B) (Prefix SC). Watertight/IP-65 when used with DIN connector kit for SC coils (see kits below).

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Kits

1/2" NPT conduit hub kit for leaded coils 224735-001-*
(Kit contains 10 pcs. of each: threaded hub, gasket and attaching screw.)

DIN connector kit for SC coils 226061-001-*
(Kit contains 10 pcs of each: connector, gasket, and attaching screw.)

Approvals

UL recognized component to standard 429 “Electrically Operated Valves,” Guide YIOZ2, File MP618 Safety Shutoff Valves.

CSA Certified to:

1) Standard C22.2 No. 139 “Electrically Operated Valves,” File 235078.

ASCO®

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)					Min. Fluid Temp.˚F	Max. Fluid Temp.˚F		Brass	Wattage		Approx. Shipping Weight (lbs.)
			Min.	Max. AC		Max. DC			AC	DC		AC	DC	
				#2 Fuel Oil at 60 SSU	#4 Fuel Oil at 300 SSU	#2 Fuel Oil at 60 SSU	#4 Fuel Oil at 300 SSU							
General Service - Normally Closed														
1/8	3/64	0.06	0	500	500	330	330	5	180	180	U8256A089V	6.3	6.9	0.5
1/8	1/16	0.09	0	430	430	250	250	5	180	180	U8256A090V	6.3	6.9	0.5

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow Factor (m^3/hr)	Operating Pressure Differential (bar)					Min. Fluid Temp.˚C	Max. Fluid Temp.˚C		Brass	Wattage		Approx. Shipping Weight (kgs.)
			Min.	Max. AC		Max. DC			AC	DC		AC	DC	
				#2 Fuel Oil at 60 SSU	#4 Fuel Oil at 300 SSU	#2 Fuel Oil at 60 SSU	#4 Fuel Oil at 300 SSU							
General Service - Normally Closed														
1/8	1.2	0.05	0	34	34	22	22	-15	82	82	U8256A089V	6.3	6.9	0.22
1/8	1.6	0.08	0	29	29	17	17	-15	82	82	U8256A090V	6.3	6.9	0.22

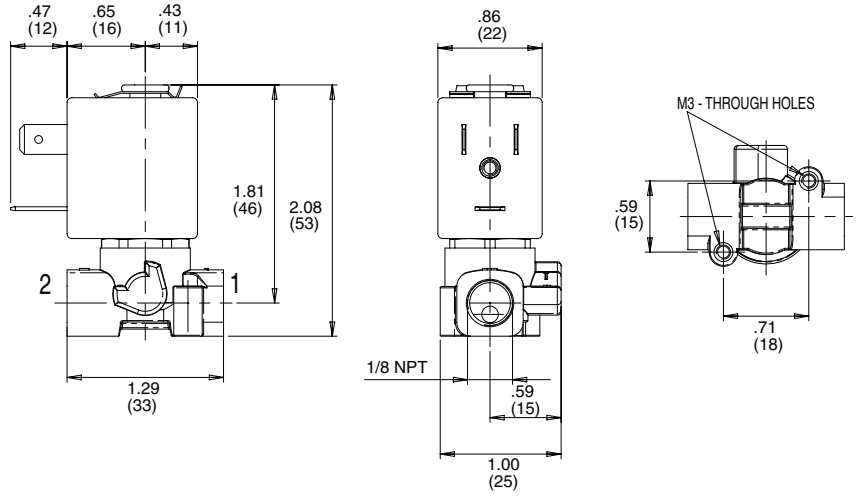
Capabilities Chart

Solenoid Options ①							Base Catalog Number	Resilient Materials								Other		Standard Rebuild Kit
NEMA Type 3-9	High Temp. DIN	Wiring Box Screw Terminal	Multipin	DIN	Spade	Open Frame with Leads	Brass	NBR	FKM	EPDM	RUBY	Oxygen Service	PTFE	Urethane	Vacuum	Manual Operator	Mounting Bracket	Brass AC/DC
-	-	-	-	SC	-	●	U8256A089V	-	●	-	-	-	-	-	-	-	-	-
-	-	-	-	SC	-	●	U8256A090V	-	●	-	-	-	-	-	-	-	-	-

● = Standard. ① Replace U prefix with SC prefix.

Dimensions: inches (mm)

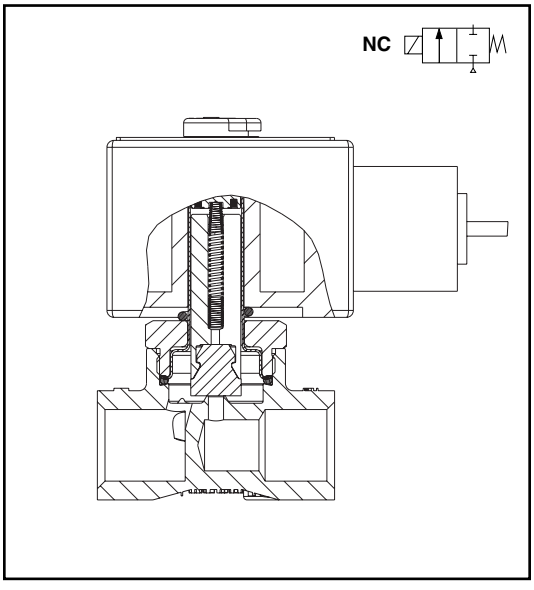
Shown with DIN coil without connector



COMBUSTION

Features

- 2-way normally closed operation
- For control of commercial and industrial oil burners
- Direct lift with resilient soft seating for tight shutoff
- Brass body construction
- Mountable in any position



Fluid

No. 2 Fuel Oil at 60 SSU
No. 4 Fuel Oil at 300 SSU

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	FKM
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper

Electrical

Standard Coil and Class of Inulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	6.1	16	30	5 to 131	238210	238214
H	6.1	16	30	5 to 140	238410	238414
F	9.1	25	40	5 to 131	238210	238214
H	9.1	25	40	5 to 140	238410	-
F	10.1	25	50	5 to 131	238610	238614
H	10.1	25	50	5 to 140	238810	-
F	17.1	40	70	5 to 131	238610	238614
H	17.1	40	70	5 to 140	238810	238814

Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
Optional High Ambient Temp: 140˚F Class H coil with prefix HT.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Optional: RedHat II - Explosionproof and Watertight. To order, add Prefix "EF" to catalog numbers. (e.g. EF8262G011V)

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed to standard 429 "Electrically Operated Valves." Guide YIOZ, File MP618 Safety Shutoff Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves," & "Oil Safety Shutoff Valves."

CSA Certified to:
1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. ① Fluid Temp.°F	Catalog Number	Const. Ref.	Agency			Wattage	Approx. Shipping Weight (lbs)
			Min.	Max. #2 Fuel Oil at 60 SSU	Max. #4 Fuel Oil at 300 SSU				UL	FM	CSA		
COMBUSTION (Fuel Oil) - NORMALLY CLOSED													
1/8	3/64	0.06	0	750	725	210	8262H001V	1	❍	❍	❍	6.1	2.3
1/8	3/32	0.21	0	350	325	210	8262H011V	1	❍	❍	❍	9.1	2.3
1/8	1/8	0.35	0	180	120	210	8262H002V	1	❍	❍	❍	6.1	2.3
1/4	3/32	0.21	0	350	270	210	8262H021V	2	❍	❍	❍	9.1	2.4
1/4	1/8	0.35	0	230	150	210	8262H023V	2	❍	❍	❍	9.1	2.4
1/4	7/32	0.73	0	100	100	210	8262H208V	3	❍	❍	❍	10.1	2.4
3/8	1/8	0.35	0	230	140	210	8263H003V	4	❍	❍	❍	9.1	2.5
3/8	7/32	0.73	0	100	100	210	8263H206V	5	❍	❍	❍	17.1	2.5

❍ = Safety Shutoff Valve. ① Max. fluid temp. of 250˚F with optional H Class coil (Prefix HT/HB)

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Operating Pressure Differential (bar)			Max. ① Fluid Temp.°C	Catalog Number	Const. Ref.	Agency			Wattage	Approx. Shipping Weight (kgs)
			Min.	Max. #2 Fuel Oil at 60 SSU	Max. #4 Fuel Oil at 300 SSU				UL	FM	CSA		
COMBUSTION (Fuel Oil) - NORMALLY CLOSED													
1/8	1	0.5	0	51.7	50.0	99	8262H001V	1	❍	❍	❍	6.1	1.0
1/8	2	0.18	0	24.1	22.4	99	8262H011V	1	❍	❍	❍	9.1	1.0
1/8	3	0.3	0	12.4	8.3	99	8262H002V	1	❍	❍	❍	6.1	1.0
1/4	2	0.5	0	24.1	18.6	99	8262H021V	2	❍	❍	❍	9.1	1.1
1/4	3	0.3	0	15.9	10.3	99	8262H023V	2	❍	❍	❍	9.1	1.1
1/4	6	0.63	0	6.9	6.9	99	8262H208V	3	❍	❍	❍	10.1	1.1
3/8	3	0.3	0	15.9	9.7	99	8263H003V	4	❍	❍	❍	9.1	1.1
3/8	6	0.63	0	6.9	6.9	99	8263H206V	5	❍	❍	❍	17.1	1.1

❍ = Safety Shutoff Valve. ① Max. fluid temp. of 121˚C with optional H Class coil (Prefix HT/HB)

Capabilities Chart

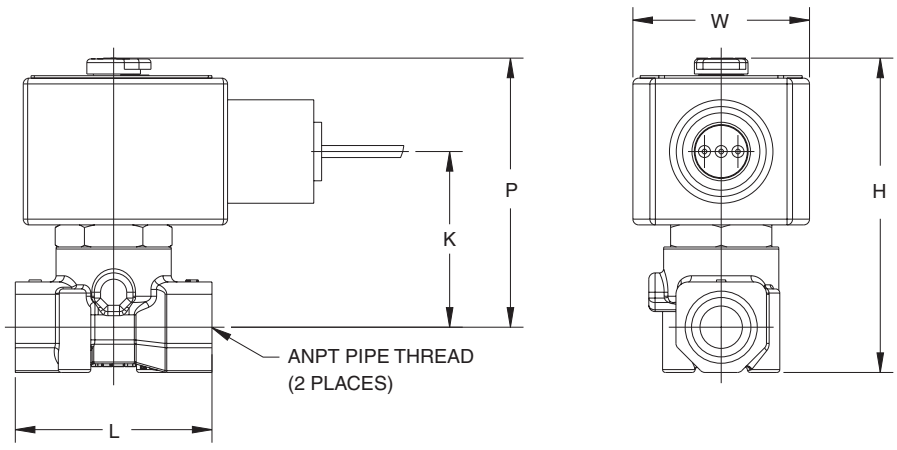
Solenoid Options			Base Catalog Number	Resilient Materials	Standard Rebuild Kit
NEMA Type 3-9	High Temp.	Wiring Box Screw Terminal	Brass	FKM	AC
EF	HT	JKF	8262H001V	●	323587-V
EF	HB	JKP	8262H011V	●	323581-V
EF	HT	JKF	8262H002V	●	323581-V
EF	HB	JKP	8262H021V	●	323581-V
EF	HB	JKP	8262H023V	●	323581-V
EF	HT	JKF	8262H208V	●	323593-V
EF	HB	JKP	8263H003V	●	323581-V
EF	HB	JKP	8263H206V	●	323593-V

● = Standard. Other options may be available. All option combinations may not be available.

Dimensions inches (mm)

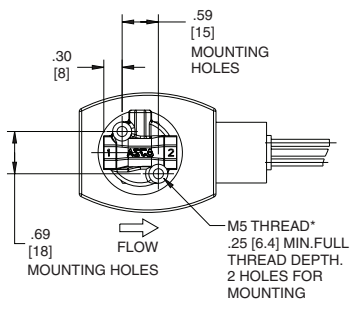
Const. Ref.		H	K	L	P	W
1	in	2.85	1.60	1.19	2.50	1.69
	mm	72	41	30	63	43
2	in	2.96	1.72	1.56	2.60	1.69
	mm	75	44	40	66	43
3	in	3.12	1.79	1.56	2.76	1.95
	mm	79	45	40	70	50
4	in	3.01	1.68	1.88	2.57	1.69
	mm	76	43	48	65	43
5	in	3.20	1.79	1.88	2.77	1.95
	mm	81	45	48	70	50

Const. Ref. 1-5

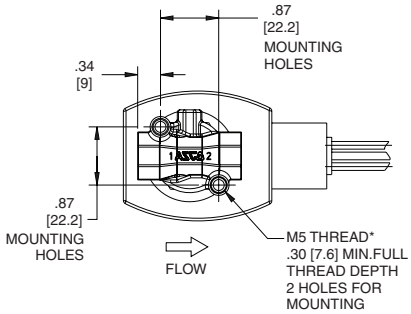


Mounting Dimensions

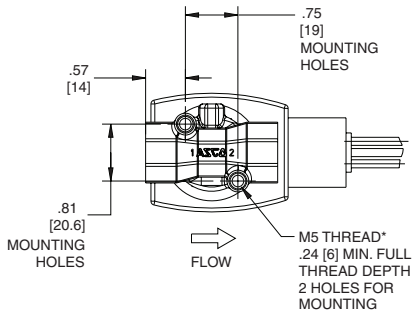
Const. Ref. 1
(1/8" Pipe)



Const. Ref. 2, 3
(1/4" Pipe)



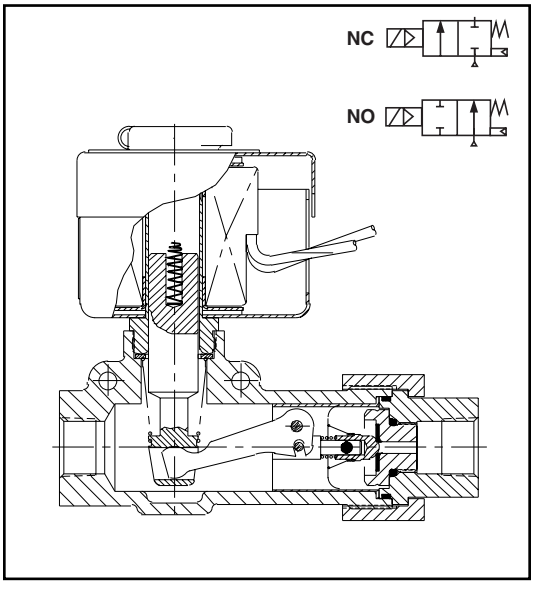
Const. Ref. 4, 5
(3/8" Pipe)



*ACCEPTS STANDARD #10-32 MACHINE SCREW

Features

- General Purpose Enclosure
- 2-way normally closed or normally open operation
- Zero differential lever actuated
- For on-off control of fuel oil in commercial and industrial oil burners
- Suitable for light and heavy fuel oils



Fluid

No. 2 Fuel Oil at 60 SSU
No. 4 Fuel Oil at 300 SSU
No. 5 Fuel Oil at 5000 SSU
No. 6 Fuel Oil at 5000 SSU (Heated)

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	FKM (Suffix V), SS (Suffix L)
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Family		
	AC			General Purpose		
	Watts	VA Holding	VA Inrush	24/60	120/60 110/50	240/60 220/50
F	15.4	27	160	099257	099257	099257
F	20	43	240	099257	099257	099257
Standard lead length 18" (72" leads optional - change suffix "D" to "K").						

Solenoid Enclosures

Standard: RedHat Type 1 General Purpose.
Optional: RedHat Type 3R Rainproof (prefix "R").

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second

Approvals

(Normally Closed Valves)
UL listed Shutoff Valves.
FM Approved Oil Safety Shutoff Valves
CSA Safety Valves

(Normally Open Valves)
UL listed General Purpose Valves.
CSA Electrically Operated Valves

Specifications (English units)

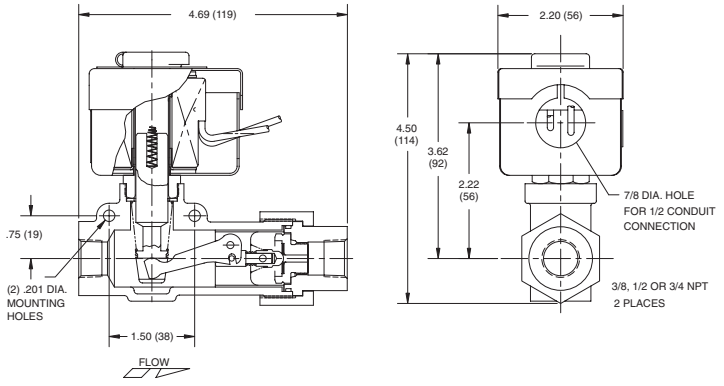
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Minimum Operating Pressure Differential (psi)	Maximum Operating Pressure Differential (psi)		Max. Fluid Temp.°F	Catalog Number		Const. Ref.	Agency			Wattage
				#2 Fuel Oil at 60 SSU, #4 Fuel Oil @ 300 SSU	#5 or Heated #6 Oil up to 5000 SSU		FKM Seating	Stainless Steel Seating		UL	FM	CSA	
COMBUSTION (Fuel Oil) - Normally Closed without Bypass													
3/8	1/8	0.34	0	400	350	See Table Below	8266D001V	8266D001L	1	❍	❍	❍	15.4/F
3/8	3/16	0.68	0	200	175		8266D007V	8266D007L	1	❍	❍	❍	15.4/F
3/8	3/16	0.68	0	300	250		8266D011V	8266D011L	1	❍	❍	❍	15.4/F
3/8	1/4	1.20	0	110	100		8266D023V	8266D023L	1	❍	❍	❍	15.4/F
1/2	1/8	0.34	0	400	350		8266D047V	8266D047L	1	❍	❍	❍	15.4/F
1/2	3/16	0.68	0	200	175		8266D053V	8266D053L	1	❍	❍	❍	15.4/F
1/2	3/16	0.68	0	300	250		8266D057V	8266D057L	1	❍	❍	❍	20/F
1/2	13/64	0.78	0	170	140		8266D061V	8266D061L	1	❍	❍	❍	15.4/F
1/2	1/4	1.20	0	110	100		8266D069V	8266D069L	1	❍	❍	❍	15.4/F
1/2	5/16	1.80	0	70	70		8266D077V	8266D077L	1	❍	❍	❍	15.4/F
1/2	3/8	2.50	0	40	35		8266D085V	8266D085L	1	❍	❍	❍	15.4/F
COMBUSTION (Fuel Oil) - Normally Closed with 1/2" NPT Bypass													
1/2	1/8	0.34	0	650	600	See Table Below	8266C203V	8266C203L	1	❍	❍	❍	20/F
1/2	1/4	1.20	0	180	160		8266C215V	8266C215L	1	❍	❍	❍	20/F
1/2	5/16	1.80	0	110	100		8266C219V	8266C219L	1	❍	❍	❍	20/F
1/2	3/8	2.50	0	75	70		8266C223V	8266C223L	1	❍	❍	❍	20/F
3/4	1/4	1.20	0	180	160		8266C239V	8266C239L	1	❍	❍	❍	20/F
3/4	5/16	1.80	0	110	100		8266C243V	8266C243L	1	❍	❍	❍	20/F
3/4	3/8	2.50	0	75	70		8266C247V	8266C247L	1	❍	❍	❍	20/F
COMBUSTION (Fuel Oil) - Normally Open without Bypass													
3/8	1/8	0.34	0	425	400	See Table Below	8266D101V	8266D101L	1	❍	-	❍	15.4/F
3/8	3/16	0.68	0	160	150		8266D107V	8266D107L	1	❍	-	❍	15.4/F
3/8	1/4	1.20	0	90	75		8266D123V	8266D123L	1	❍	-	❍	15.4/F
1/2	3/16	0.68	0	160	150		8266D153V	8266D153L	1	❍	-	❍	15.4/F
1/2	13/64	0.78	0	130	125		8266D161V	8266D161L	1	❍	-	❍	15.4/F
1/2	1/4	1.20	0	90	75		8266D169V	8266D169L	1	❍	-	❍	15.4/F

❍ = Safety Shutoff Valve.

Dimensions inches (mm)

Coil	Watt Rating	Class of Coil Insulation	Fluid Temp.˚F	Ambient Temp.˚F	Catalog No. Prefix
Standard	15.4	F F	250 225	95 104	None Required
	20	F F F	225 200 180	77 95 104	
For Higher Fluid and/or Ambient Temp. Use	15.4	H	250	122	HT
	20	H	250	122	HB

Const. Ref. 1



Must be mounted with solenoid vertical and upright.

COMBUSTION

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Minimum Operating Pressure Differential (bar)	Maximum Operating Pressure Differential (bar)		Max. Fluid Temp.°C	Catalog Number		Const. Ref.	Agency			Wattage
				#2 Fuel Oil at 60 SSU, #4 Fuel Oil @ 300 SSU	#5 or Heated #6 Oil up to 5000 SSU		FKM Seating	Stainless Steel Seating		UL	FM	CSA	
COMBUSTION (Fuel Oil) - Normally Closed without Bypass													
3/8	3	0.3	0	27.6	24.1	See Table Below	8266D001V	8266D001L	1	❍	❍	❍	15.4/F
3/8	5	0.6	0	13.8	12.1		8266D007V	8266D007L	1	❍	❍	❍	15.4/F
3/8	5	0.6	0	20.7	17.2		8266D011V	8266D011L	1	❍	❍	❍	15.4/F
3/8	6	1.0	0	7.6	6.9		8266D023V	8266D023L	1	❍	❍	❍	15.4/F
1/2	3	0.3	0	27.6	24.1		8266D047V	8266D047L	1	❍	❍	❍	15.4/F
1/2	5	0.6	0	13.8	12.1		8266D053V	8266D053L	1	❍	❍	❍	15.4/F
1/2	5	0.6	0	20.7	17.2		8266D057V	8266D057L	1	❍	❍	❍	20/F
1/2	5	0.7	0	11.7	9.7		8266D061V	8266D061L	1	❍	❍	❍	15.4/F
1/2	6	1.0	0	7.6	6.9		8266D069V	8266D069L	1	❍	❍	❍	15.4/F
1/2	8	1.5	0	4.8	4.8		8266D077V	8266D077L	1	❍	❍	❍	15.4/F
1/2	10	2.1	0	2.8	2.4		8266D085V	8266D085L	1	❍	❍	❍	15.4/F
COMBUSTION (Fuel Oil) - Normally Closed with 1/2" NPT Bypass													
1/2	3	0.3	0	44.8	41.4	See Table Below	8266C203V	8266C203L	1	❍	❍	❍	20/F
1/2	6	1.0	0	12.4	11.0		8266C215V	8266C215L	1	❍	❍	❍	20/F
1/2	8	1.5	0	7.6	6.9		8266C219V	8266C219L	1	❍	❍	❍	20/F
1/2	10	2.1	0	5.2	4.8		8266C223V	8266C223L	1	❍	❍	❍	20/F
3/4	6	1.0	0	12.4	11.0		8266C239V	8266C239L	1	❍	❍	❍	20/F
3/4	8	1.5	0	7.6	6.9		8266C243V	8266C243L	1	❍	❍	❍	20/F
3/4	10	2.1	0	5.2	4.8		8266C247V	8266C247L	1	❍	❍	❍	20/F
COMBUSTION (Fuel Oil) - Normally Open without Bypass													
3/8	3	0.3	0	29.3	27.6	See Table Below	8266D101V	8266D101L	1	❍	-	❍	15.4/F
3/8	5	0.6	0	11.0	10.3		8266D107V	8266D107L	1	❍	-	❍	15.4/F
3/8	6	1.0	0	6.2	5.2		8266D123V	8266D123L	1	❍	-	❍	15.4/F
1/2	5	0.6	0	11.0	10.3		8266D153V	8266D153L	1	❍	-	❍	15.4/F
1/2	5	0.7	0	9.0	8.6		8266D161V	8266D161L	1	❍	-	❍	15.4/F
1/2	6	1.0	0	6.2	5.2		8266D169V	8266D169L	1	❍	-	❍	15.4/F

❍ = Safety Shutoff Valve.

Coil	Watt Rating	Class of Coil Insulation	Fluid Temp. °F (°C)	Ambient Temp. °F (°C)	Catalog No. Prefix
Standard	15.4	F	250 (121)	95 (35)	None Required
		F	225 (107)	104 (40)	
	20	F	225 (107)	77 (25)	
		F	200 (93)	95 (35)	
		F	180 (82)	104 (40)	
For Higher Fluid and/or Ambient Temp. Use	15.4	H	250 (121)	122 (50)	HT
	20	H	250 (121)	122 (50)	HB

General Description

The HOV1(B) is a push-type, self-contained, fuel oil valve with a single, quick-opening, stem-guided seat. This 2-way normally closed, bronze safety shutoff valve features a spring-loaded stem which, upon power interruption, drives the PTFE seat firmly closed within one second.

The electrohydraulic actuator can be purchased separately, and consists of a pump applying pressure to a piston pushing the valve stem. Its power unit is immersed in oil and sealed. The HOV1(B) assembly, which consists of an actuator and the valve body mounted together by users, requires no adjustment or service. Stroke is controlled by a travel limit switch and electromagnetic relief valve. The unit rotates 360° for ease of installation. Two-wire connection via 1/2 inch threaded conduit terminal box is standard.

The HOV1(B) comes standard with valve seal overtravel and electrical interlock proof of closure switch. An optional auxiliary switch is also available.

Fluid

No. 2 Fuel Oil at 60 SSU
No. 4 Fuel Oil at 300 SSU
No. 5 Fuel Oil at 5000 SSU
No. 6 Fuel Oil at 5000 SSU (Heated)

Specifications

Opening Time: 9 seconds max.

Closing Time: 1 second max.

Note: Opening time is double between -30ºF and -40ºF ambient. Opening time increased 20% when operating at 50Hz.

Ambient Temperature: -40˚F to 150˚F (-40˚C to 66˚C)

Fluid Temperature: 267˚F max. (131˚C)

Body/Trim: Bronze, 300# screw

Seal Material: PTFE

Port Size: 9/16"

Enclosure

Standard: General Purpose Type 1

Optional: Watertight Type 4
(Also meets General Purpose Type 1 and Raintight Type 3)

Electrical

Standard voltages: 120V/60Hz (or 110V/50Hz)
Non-standard voltages: 24V/60Hz; 240V/60Hz (or 220V/50Hz)

Proof of Closure Switch: (standard)
A factory set, non-field adjustable SPDT switch. 1800VA max. connected load (e.g. one 15A max. load @ 24V or 120V; one 7.5A max. load at 240V).

Auxiliary Switch: (optional)
One integral SPDT switch; field adjustable to actuate at any position of stroke. 1800 VA max. connected load
(e.g. one 15A max. load @ 24V or 120V; one 7.5A max. load at 240V).
To order, change last digit of part number from "0" to "1".
(e.g. assembly, HOV1B302T171; e.g. actuator, HO1B252A171)

Electrical Characteristics

Voltage/Hz*	Amperes		
	Inrush	Opening	Holding
24V/60	28	8.2	0.49
120V/60, 110/50	5.6	2.1	0.09
240V/60, 220/50	2.8	1.1	0.04

*Current increases by 20% for 50 Hz operation.

Installation

HO(B) actuator mounts in any position directly to a V2 valve body with 3 set screws.

Approvals

UL listed to standard 429 "Electrically Operated Valves", Guide YIOZ, File MP932

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves"

CSA Certified to "Electrically Operated Valves", CSA Std C22.2 No. 139, File 109157

Ordering Information

Important: HOV1(B) can be purchased as an assembly, which includes the actuator & valve packaged in one box, or seperately as HO(B) actuator & V2 valve body.
(e.g. assembly, H0V1B302T170)
(e.g. actuator, H01B252A170)
(e.g. valve body, V2JS2DT166)

Specifications (English units)

Pipe Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. ºF	Catalog Number 120V/60Hz (or 110V/50Hz)			Const. Ref.	Agency			Max. Opening Time (Sec.)
		Min.	Max.		HO(B) Actuator ①	V2 Valve Body	HOV1(B) Assembly ②		UL	FM	CSA	
COMBUSTION (Fuel Oil) - General Purpose												
With Proof of Closure Switch												
1/2	4.5	0	300	267	HO1B252A170	V2JS2DT166	HOV1B302T170	1	❍	❍	❍	9
3/4	5.5	0	300	267		V2JS2E03T166	HOV1B307T170		❍	❍	❍	9
1	6	0	300	267		V2JS2F04T166	HOV1B312T170	2	❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	4.5	0	300	267	HO1B252A171	V2JS2DT166	HOV1B302T171	1	❍	❍	❍	9
3/4	5.5	0	300	267		V2JS2E03T166	HOV1B307T171		❍	❍	❍	9
1	6	0	300	267		V2JS2F04T166	HOV1B312T171	2	❍	❍	❍	9
COMBUSTION (Fuel Oil) - Watertight												
With Proof of Closure Switch												
1/2	4.5	0	300	267	HO2B252A170	V2JS2DT166	HOV2B302T170	1	❍	❍	❍	9
3/4	5.5	0	300	267		V2JS2E03T166	HOV2B307T170		❍	❍	❍	9
1	6	0	300	267		V2JS2F04T166	HOV2B312T170	2	❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	4.5	0	300	267	HO2B252A171	V2JS2DT166	HOV2B302T171	1	❍	❍	❍	9
3/4	5.5	0	300	267		V2JS2E03T166	HOV2B307T171		❍	❍	❍	9
1	6	0	300	267		V2JS2F04T166	HOV2B312T171	2	❍	❍	❍	9

① For 24V/60Hz, change 7th digit to "1" (EX: HO1B25**1**A170); For 240V/60Hz (or 220V/50Hz), change 7th digit to "4" (EX: HO1B25**4**A170)

② For 24V/60Hz, change 8th digit, for 1/2" to "1", for 3/4" to "6", for 1" to "1" (EX: HOV1B30**1**T170, HOV1B30**6**T170, HOV1B31**1**T170)
For 240V/60Hz (or 220V/50Hz), change 8th digit, for 1/2" to "3", for 3/4" to "8", for 1" to "3" (EX: HOV1B30**3**T170, HOV1B30**8**T170, HOV1B31**3**T170)

Specifications (Metric units)

Pipe Size (in)	Kv Flow (m^3/hr)	Operating Pressure Differential (bar)		Max. Fluid Temp. ºC	Catalog Number 120V/60Hz (or 110V/50Hz)			Const. Ref.	Agency			Max. Opening Time (Sec.)
		Min.	Max.		HO(B) Actuator ①	V2 Valve Body	HOV(B) Assembly ②		UL	FM	CSA	
COMBUSTION (Fuel Oil) - General Purpose												
With Proof of Closure Switch												
1/2	3.9	0	20.7	131	HO1B252A170	V2JS2DT166	HOV1B302T170	1	❍	❍	❍	9
3/4	4.8	0	20.7	131		V2JS2E03T166	HOV1B307T170		❍	❍	❍	9
1	5.1	0	20.7	131		V2JS2F04T166	HOV1B312T170	2	❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	3.9	0	20.7	131	HO1B252A171	V2JS2DT166	HOV1B302T171	1	❍	❍	❍	9
3/4	4.8	0	20.7	131		V2JS2E03T166	HOV1B307T171		❍	❍	❍	9
1	5.1	0	20.7	131		V2JS2F04T166	HOV1B312T171	2	❍	❍	❍	9
COMBUSTION (Fuel Oil) - Watertight												
With Proof of Closure Switch												
1/2	3.9	0	20.7	131	HO2B252A170	V2JS2DT166	HOV2B302T170	1	❍	❍	❍	9
3/4	4.8	0	20.7	131		V2JS2E03T166	HOV2B307T170		❍	❍	❍	9
1	5.1	0	20.7	131		V2JS2F04T166	HOV2B312T170	2	❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	3.9	0	20.7	131	HO2B252A171	V2JS2DT166	HOV2B302T171	1	❍	❍	❍	9
3/4	4.8	0	20.7	131		V2JS2E03T166	HOV2B307T171		❍	❍	❍	9
1	5.1	0	20.7	131		V2JS2F04T166	HOV2B312T171	2	❍	❍	❍	9

① For 24V/60Hz, change 7th digit to "1" (EX: HO1B25**1**A170); For 240V/60Hz (or 220V/50Hz), change 7th digit to "4" (EX: HO1B25**4**A170)

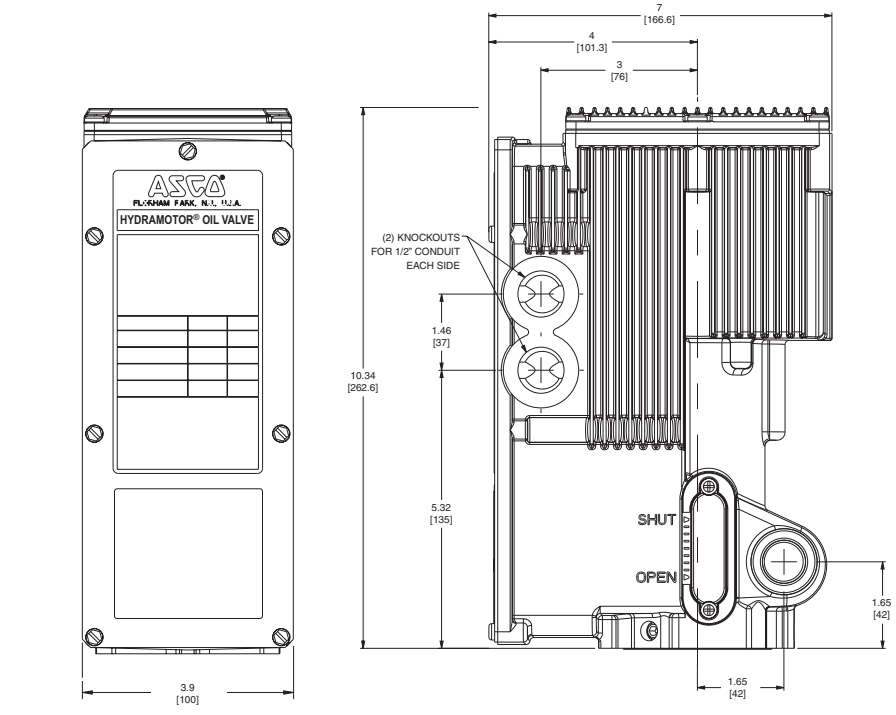
② For 24V/60Hz, change 8th digit, for 1/2" to "1", for 3/4" to "6", for 1" to "1" (EX: HOV1B30**1**T170, HOV1B30**6**T170, HOV1B31**1**T170)
For 240V/60Hz (or 220V/50Hz), change 8th digit, for 1/2" to "3", for 3/4" to "8", for 1" to "3" (EX: HOV1B30**3**T170, HOV1B30**8**T170, HOV1B31**3**T170)

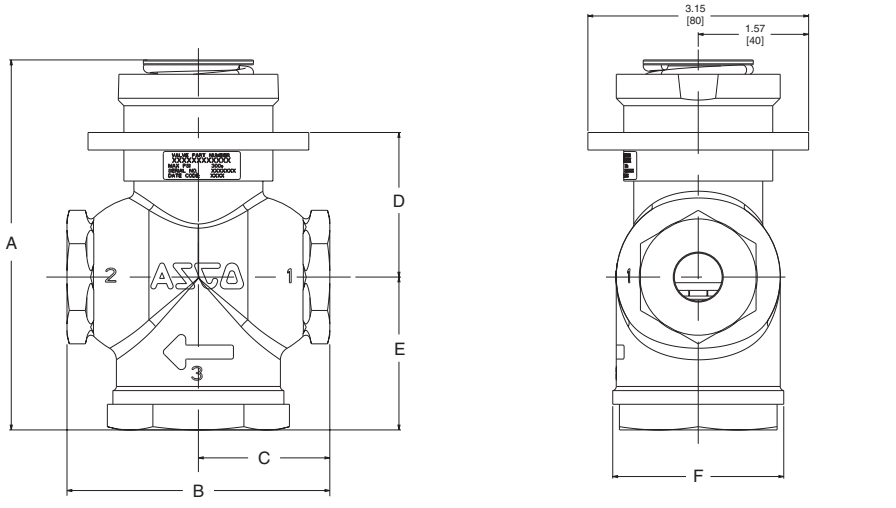
Dimensions inches (mm)

2-Way Valve Body Dimensions Table							
Const. Ref.		A	B	C	D	E	F
1	in	5.28	3.75	1.87	2.06	2.18	2.44
	mm	134.1	95.3	47.6	52.4	55.4	62
2	in	5.46	4.25	2.12	2.50	2.32	2.87
	mm	138.8	103.7	51.7	61.0	59.0	72.9

Approx. Shipping Weight (lbs)		
Actuator	Valve Body	HOV1B Assembly
10.4	6.4	16.8

Const. Ref. 1, 2





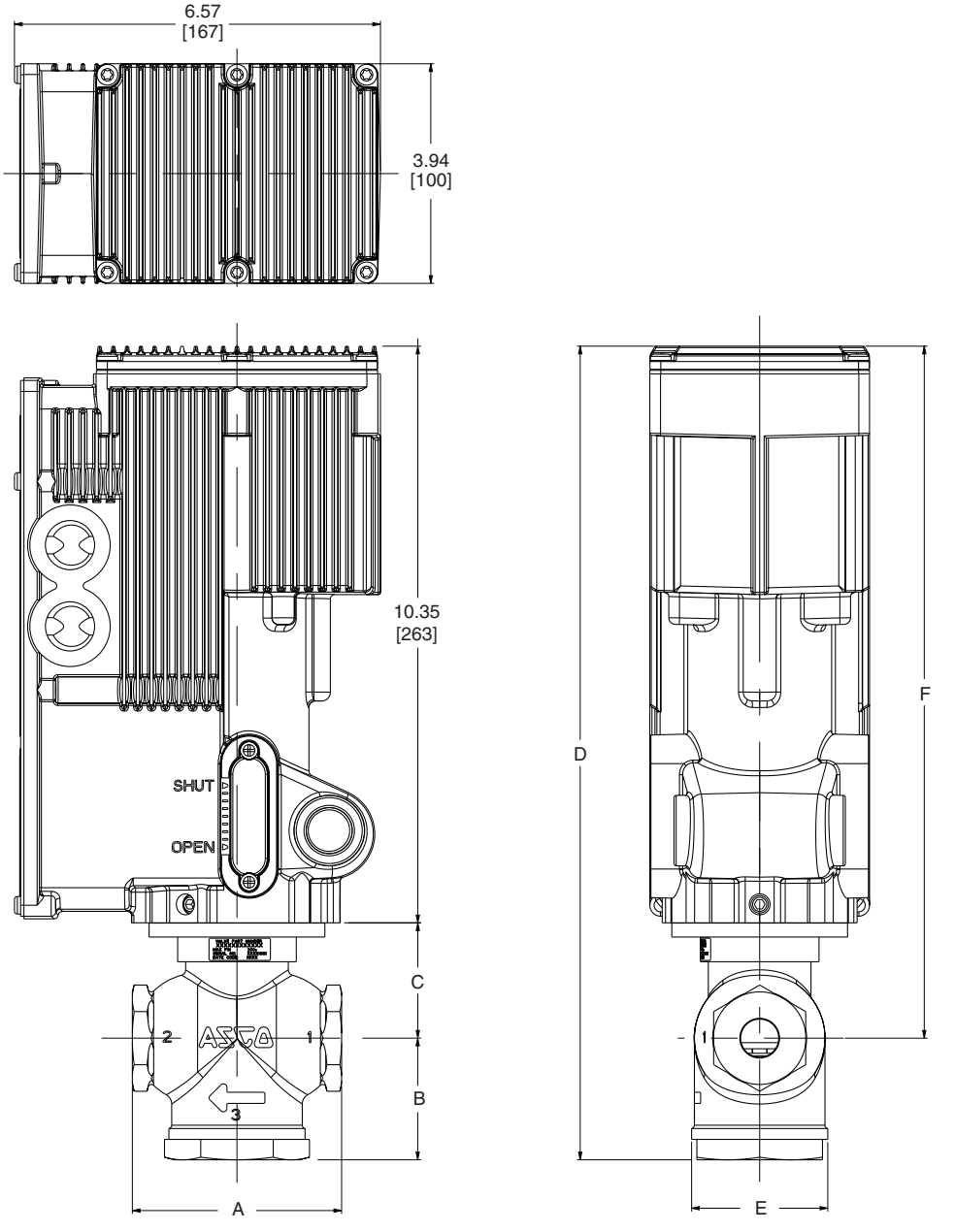
COMBUSTION

Dimensions inches (mm)

2-Way Assembly Dimensions Table							
Const. Ref.		A	B	C	D	E	F
1	in	3.75	2.18	2.06	14.61	2.44	12.40
	mm	95.3	55.4	52.4	371	62	315
2	in	4.25	2.32	2.50	14.80	2.87	12.76
	mm	103.7	59.0	61.0	375.9	72.9	324

Actuator Rebuild Kit	Part Number
Auxiliary Switch Kit	296804
Proof of Closure Switch Kit	296806
Limit Switch Kit	296807

Const. Ref. 1, 2



Features

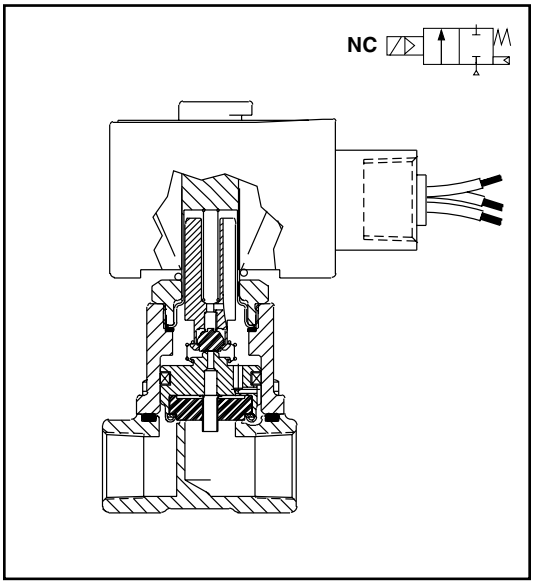
- 2-way normally closed operation
- Zero minimum
- For control of commercial and industrial oil burners
- Ideal for high pressure applications
- Brass body construction
- Mountable with solenoid upright and vertical

Fluid

No. 2 Fuel Oil at 60 SSU
No. 4 Fuel Oil at 300 SSU
No. 5 Fuel Oil at 5000 SSU
No. 6 Fuel Oil at 5000 SSU (Heated)

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	FKM
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper
Piston	Brass



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family
	AC				General Purpose
	Watts	VA Holding	VA Inrush		AC
H	17.1	40	93	32 to 150	238810
Standard Voltages: 120 volts AC, 60 Hz (or 110 volts AC, 50 Hz). **Optional Voltages:** 24, 240 volts AC, 60 Hz (or 220 volts AC, 50 Hz).					

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X with 1/2" conduit hub.

Valve Response Time

Opening Time: Less than 1 second

Closing Time: Less than 1 second

Approvals

UL listed File MO-932 Safety Valves.

FM Approved "Oil Safety Shutoff Valves."
File JIOD9A5.AF

CSA Certified to:

1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
2) Safety Valves File LR702258.

Specifications (English units)

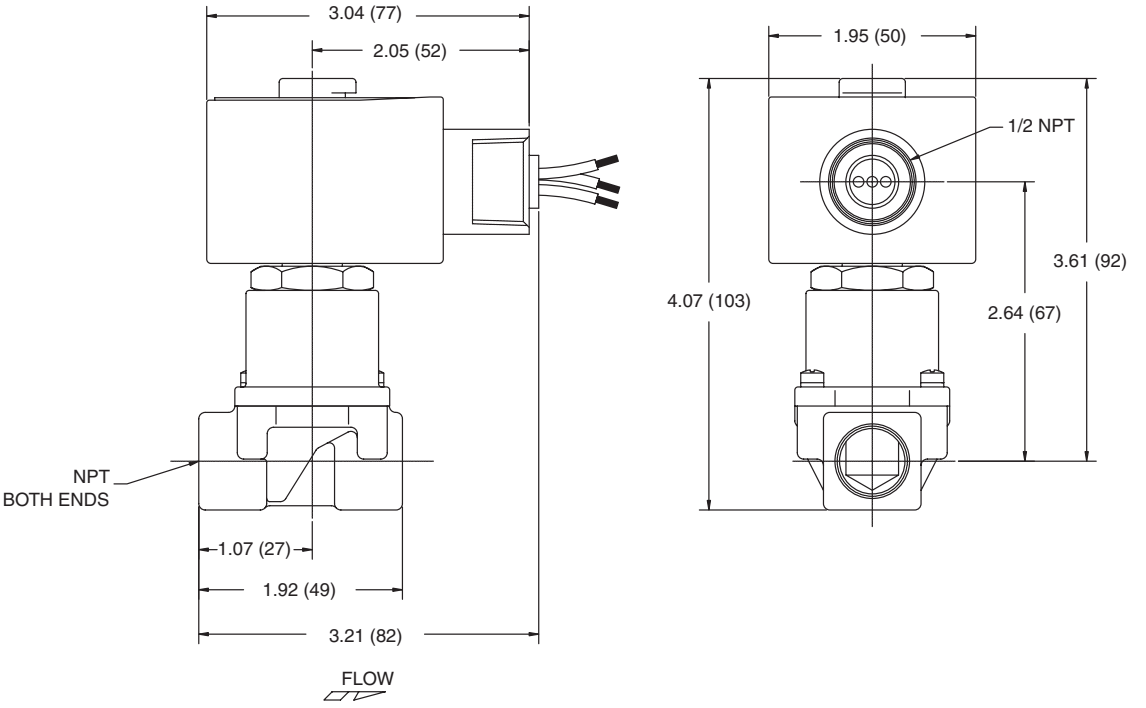
Pipe Size (in)	Orifice Size (in)	Cv Flow	Operating Pressure Differential (psi)		Nominal Fluid Temp.°F	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (lbs)
			Min.	Max.		24V 60Hz	110-120V 50-60Hz	220-240V 50-60Hz		UL	FM	CSA		
COMBUSTION (Fuel Oil) - NORMALLY CLOSED														
1/4	1/2	1.1	0	300	250	SV401A01V9BF7	SV401A02V9BF7	SV401A04V9BF7	1	❍	❍	❍	17.1	3.2
3/8	1/2	1.5	0	300	250	SV401A01V9CF7	SV401A02V9CF7	SV401A04V9CF7	1	❍	❍	❍	17.1	3.2
❍ = Safety Shutoff Valve.														

Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Operating Pressure Differential (bar)		Nominal Fluid Temp.°C	Catalog Number			Const. Ref.	Agency			Wattage	Approx. Shipping Weight (kgs)
			Min.	Max.		24V 60Hz	110-120V 50-60Hz	220-240V 50-60Hz		UL	FM	CSA		
COMBUSTION (Fuel Oil) - NORMALLY CLOSED														
1/4	13	0.9	0	20.7	121	SV401A01V9BF7	SV401A02V9BF7	SV401A04V9BF7	1	❍	❍	❍	17.1	1.5
3/8	13	1.3	0	20.7	121	SV401A01V9CF7	SV401A02V9CF7	SV401A04V9CF7	1	❍	❍	❍	17.1	1.5
❍ = Safety Shutoff Valve.														

Dimensions inches (mm)

Const. Ref. 1



Features

- General Purpose Enclosure
- 3-way operation allows diversion of flow from commercial/industrial oil burners to recirculatory system
- Zero differential

Fluid

Fuel Oil up to 1500 SSU

Construction

Valve Parts in Contact with Fluids	
Body	Brass
Seals and Disc	FKM
Core and Plugnut	430F Stainless Steel
Springs	302 Stainless Steel
Shading Coil	Copper

Electrical

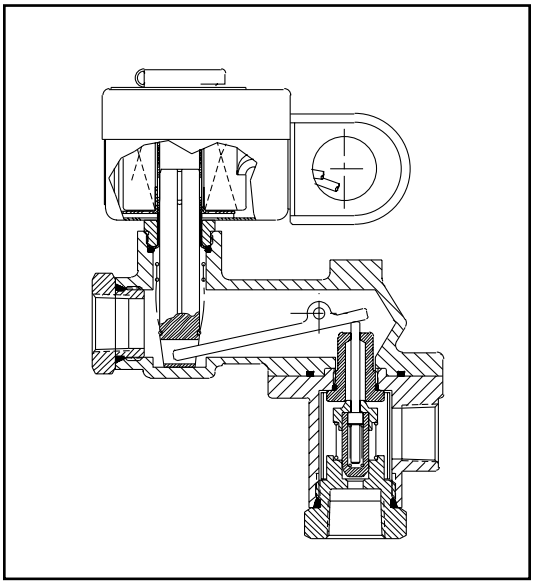
Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Ambient Temp.°F	Spare Coil Family	
	AC				General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush		AC	AC
F	15.4	27	160	32 to 115	099257	-
Standard Voltages: 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).						

Solenoid Enclosures

Standard: RedHat Type 1 General Purpose.
Optional: RedHat Type 3R Rainproof (prefix "R").

Valve Response Time

Opening Time: Less than 1 second
Closing Time: Less than 1 second



Approvals

UL listed Shutoff Valve.
FM Approved Oil Safety Shutoff Valves
CSA Electrically Operated Valves

COMBUSTION

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi) Fuel Oil up to 1500 SSU ②		Max. Fluid Temp.°F		Inlet Position ①	Catalog Number	Const. Ref.	Agency			Wattage
			Min.	Max.	Fluid	Ambient				UL	FM	CSA	AC
COMBUSTION (Fuel Oil) - NORMALLY CLOSED													
3/8	1/4	1.0	0	100	265	115	A	8377 001	1	❍	❍	❍	15.4
3/8	1/4	1.0	0	100	265	115	B	8377 003	1	❍	❍	❍	15.4
3/8	1/4	1.0	0	100	265	115	C	8377 005	1	❍	❍	❍	15.4
3/8	1/4	1.0	0	100	265	115	D	8377 013	1	❍	❍	❍	15.4
1/2	1/4	1.0	0	100	265	115	A	8377 007	1	❍	❍	❍	15.4
1/2	1/4	1.0	0	100	265	115	B	8377 009	1	❍	❍	❍	15.4
1/2	1/4	1.0	0	100	265	115	C	8377 011	1	❍	❍	❍	15.4
1/2	1/4	1.0	0	100	265	115	D	8377 015	1	❍	❍	❍	15.4

❍ = Safety Shutoff Valve. ① Before ordering, refer to Diagram A below for description of inlet positions.
② Valve intended for burner control with low pressure drop when energized. For other applications, be sure pressure drop when energized does not exceed 65 psi.

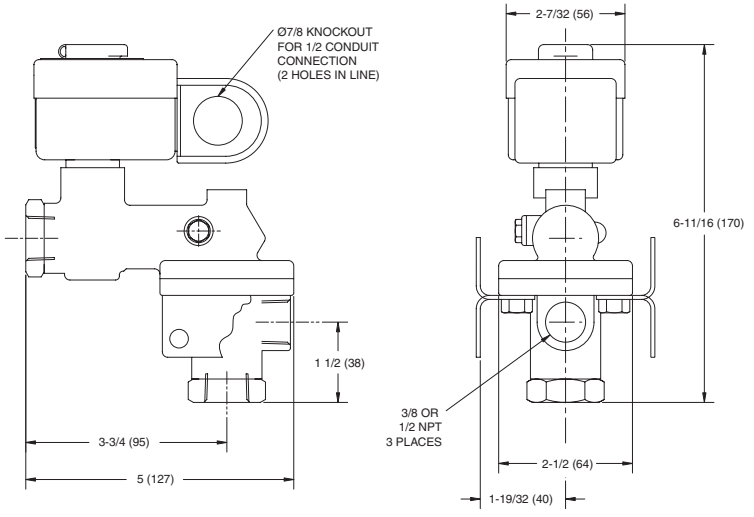
Specifications (Metric units)

Pipe Size (in)	Orifice Size (mm)	Kv Flow (m^3/hr)	Operating Pressure Differential (bar) Fuel Oil up to 1500 SSU ②		Max. Fluid Temp.°C		Inlet Position ①	Catalog Number	Const. Ref.	Agency			Wattage
			Min.	Max.	Fluid	Ambient				UL	FM	CSA	AC
COMBUSTION (Fuel Oil) - NORMALLY CLOSED													
3/8	6	0.9	0	6.9	129	46	A	8377 001	1	❍	❍	❍	15.4
3/8	6	0.9	0	6.9	129	46	B	8377 003	1	❍	❍	❍	15.4
3/8	6	0.9	0	6.9	129	46	C	8377 005	1	❍	❍	❍	15.4
3/8	6	0.9	0	6.9	129	46	D	8377 013	1	❍	❍	❍	15.4
1/2	6	0.9	0	6.9	129	46	A	8377 007	1	❍	❍	❍	15.4
1/2	6	0.9	0	6.9	129	46	B	8377 009	1	❍	❍	❍	15.4
1/2	6	0.9	0	6.9	129	46	C	8377 011	1	❍	❍	❍	15.4
1/2	6	0.9	0	6.9	129	46	D	8377 015	1	❍	❍	❍	15.4

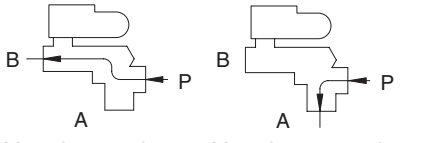
❍ = Safety Shutoff Valve. ① Before ordering, refer to Diagram A below for description of inlet positions.
② Valve intended for burner control with low pressure drop when energized. For other applications, be sure pressure drop when energized does not exceed 4.5 bar.

Dimensions inches (mm)

Const. Ref. 1

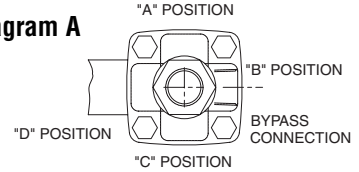


Flow Diagrams

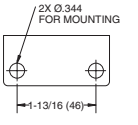


SOLENOID ENERGIZED SOLENOID DE-ENERGIZED

Diagram A



MOUNTING BRACKET
STANDARD



Must be mounted with solenoid vertical and upright.

COMBUSTION

General Description

The HOV13(B) is a push-type, bronze bodied safety valve, electrohydraulically operated to provide reliable ON-OFF control of fuel oil. The spring-loaded stem-guided PTFE seat opens within nine seconds of power application and firmly closes within one second of power interruption.

The valve is agency approved for fuel oil safety shutoff service on the N.C. port. The N.O. port typically provides return to the oil preheater during the off cycle.

The electrohydraulic actuator can be purchased separately, and consists of a pump applying pressure to a piston pushing the valve stem. Its power unit is immersed in oil and sealed. The HOV13(B) assembly, which consists of an actuator and the valve body mounted together by users, requires no adjustment or service. Stroke is controlled by a travel limit switch and electromagnetic relief valve. The unit rotates 360° for ease of installation. Two-wire connection via 1/2 inch threaded conduit terminal box is standard.

The HOV13(B) comes standard with valve seal overtravel and electrical interlock proof of closure switch. An optional auxiliary switch is also available.

Fluid

No. 2 Fuel Oil at 60 SSU	No. 5 Fuel Oil at 5000 SSU
No. 4 Fuel Oil at 300 SSU	No. 6 Fuel Oil at 5000 SSU (Heated)

Specifications

Opening Time: 9 seconds max.

Closing Time: 1 second max.

Note: Opening time is double between -30ºF and -40ºF ambient. Opening time increases 20% when operating at 50Hz.

Ambient Temperature: -40ºF to 150ºF (-40ºC to 66ºC)

Fluid Temperature: 267˚ max. (131˚C)

Body/Trim: Bronze, 300# screw

Seal Material: PTFE

Port Size: 13/32"

Enclosure

Standard: General Purpose Type 1

Optional: Watertight Type 4
(Also meets General Purpose Type 1 and Raintight Type 3)

Electrical

Standard voltages: 120V/60Hz (or 110V/50Hz)

Non-standard voltages: 24V/60Hz; 240V/60Hz (or 220V/50Hz)

Proof of Closure Switch (POC): (standard)
A factory set, non-field adjustable SPDT switch. 1800VA max. connected load (e.g. one 15A max. load @ 24V or 120V; one 7.5A max. load at 240V).

Auxiliary Switch: (optional)
One integral SPDT switch; field adjustable to actuate at any position of stroke. 1800 VA max. connected load
(e.g. one 15A max. load @ 24V or 120V; one 7.5A max. load at 240V).
To order, change last digit of part number from "0" to "1".
(e.g. assembly, HOV13B162T171; e.g. actuator, HO1B252A171)

Electrical Characteristics

Voltage/Hz*	Amperes		
	Inrush	Opening	Holding
24V/60	28	8.2	0.49
120V/60, 110/50	5.6	2.1	0.09
240V/60, 220/50	2.8	1.1	0.04

*Current increases by 20% for 50 Hz operation.

Installation

HO(B) actuator mounts in any position directly to a V13 valve body with 3 set screws.

Approvals

UL listed to standard 429 "Electrically Operated Valves", Guide YIOZ, File MP932

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves"

CSA Certified to "Electrically Operated Valves", CSA Std C22.2 No. 139, File 109157

Ordering Information

Important: HOV13(B) can be purchased as an assembly, which includes the actuator & valve packaged in one box, or seperately as HO(B) actuator & V13 valve body.
(e.g. assembly, HOV13B162T170)
(e.g. actuator, H01B252A170)
(e.g. valve body, V13FS2D03T166)

Specifications (English units)

Pipe Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number 120V/60Hz (or 110V/50Hz)			Const. Ref.	Agency			Max. Opening Time (Sec.)
		Min.	Max.		HO(B) Actuator ①	V13 Valve Body	HOV13(B) Assembly ②		UL	FM	CSA	
COMBUSTION (Fuel Oil) - General Purpose												
With Proof of Closure Switch												
1/2	2.5	0	300	267	HO1B252A170	V13FS2D03T166	HOV13B162T170	1	❍	❍	❍	9
3/4	3	0	300	267		V13FS2E04T166	HOV13B167T170		❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	2.5	0	300	267	HO1B252A171	V13FS2D03T166	HOV13B162T171	1	❍	❍	❍	9
3/4	3	0	300	267		V13FS2E04T166	HOV13B167T171		❍	❍	❍	9
COMBUSTION (Fuel Oil) - Watertight												
With Proof of Closure Switch												
1/2	2.5	0	300	267	HO2B252A170	V13FS2D03T166	HOV23B162T170	1	❍	❍	❍	9
3/4	3	0	300	267		V13FS2E04T166	HOV23B167T170		❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	2.5	0	300	267	HO2B252A171	V13FS2D03T166	HOV23B162T171	1	❍	❍	❍	9
3/4	3	0	300	267		V13FS2E04T166	HOV23B167T171		❍	❍	❍	9

① For 24V/60Hz, change 7th digit to "1" (EX: HO1B25**1**A170); For 240V/60Hz (or 220V/50Hz), change 7th digit to "4" (EX: HO1B25**4**A170)
② For 24V/60Hz, change 9th digit, for 1/2" to "1", for 3/4" to "6" (EX: HOV13B16**1**T170, HOV13B16**6**T170)
For 240V/60Hz (or 220V/50Hz), change 9th digit, for 1/2" to "3", for 3/4" to "8" (EX: HOV13B16**3**T170, HOV13B16**8**T170)

Specifications (Metric units)

Pipe Size (in)	Kv Flow (m^3/hr)	Operating Pressure Differential (bar)		Max. Fluid Temp. °C	Catalog Number 120V/60Hz (or 110V/50Hz)			Const. Ref.	Agency			Max. Opening Time (Sec.)
		Min.	Max.		HO(B) Actuator ①	V13 Valve Body	HOV13(B) Assembly ②		UL	FM	CSA	
COMBUSTION (Fuel Oil) - General Purpose												
With Proof of Closure Switch												
1/2	2.1	0	20.7	131	HO1B252A170	V13FS2D03T166	HOV13B162T170	1	❍	❍	❍	9
3/4	2.6	0	20.7	131		V13FS2E04T166	HOV13B167T170		❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	2.1	0	20.7	131	HO1B252A171	V13FS2D03T166	HOV13B162T171	1	❍	❍	❍	9
3/4	2.6	0	20.7	131		V13FS2E04T166	HOV13B167T171		❍	❍	❍	9
COMBUSTION (Fuel Oil) - Watertight												
With Proof of Closure Switch												
1/2	2.1	0	20.7	131	HO2B252A170	V13FS2D03T166	HOV23B162T170	1	❍	❍	❍	9
3/4	2.6	0	20.7	131		V13FS2E04T166	HOV23B167T170		❍	❍	❍	9
With Proof of Closure & Auxiliary Switch												
1/2	2.1	0	20.7	131	HO2B252A171	V13FS2D03T166	HOV23B162T171	1	❍	❍	❍	9
3/4	2.6	0	20.7	131		V13FS2E04T166	HOV23B167T171		❍	❍	❍	9

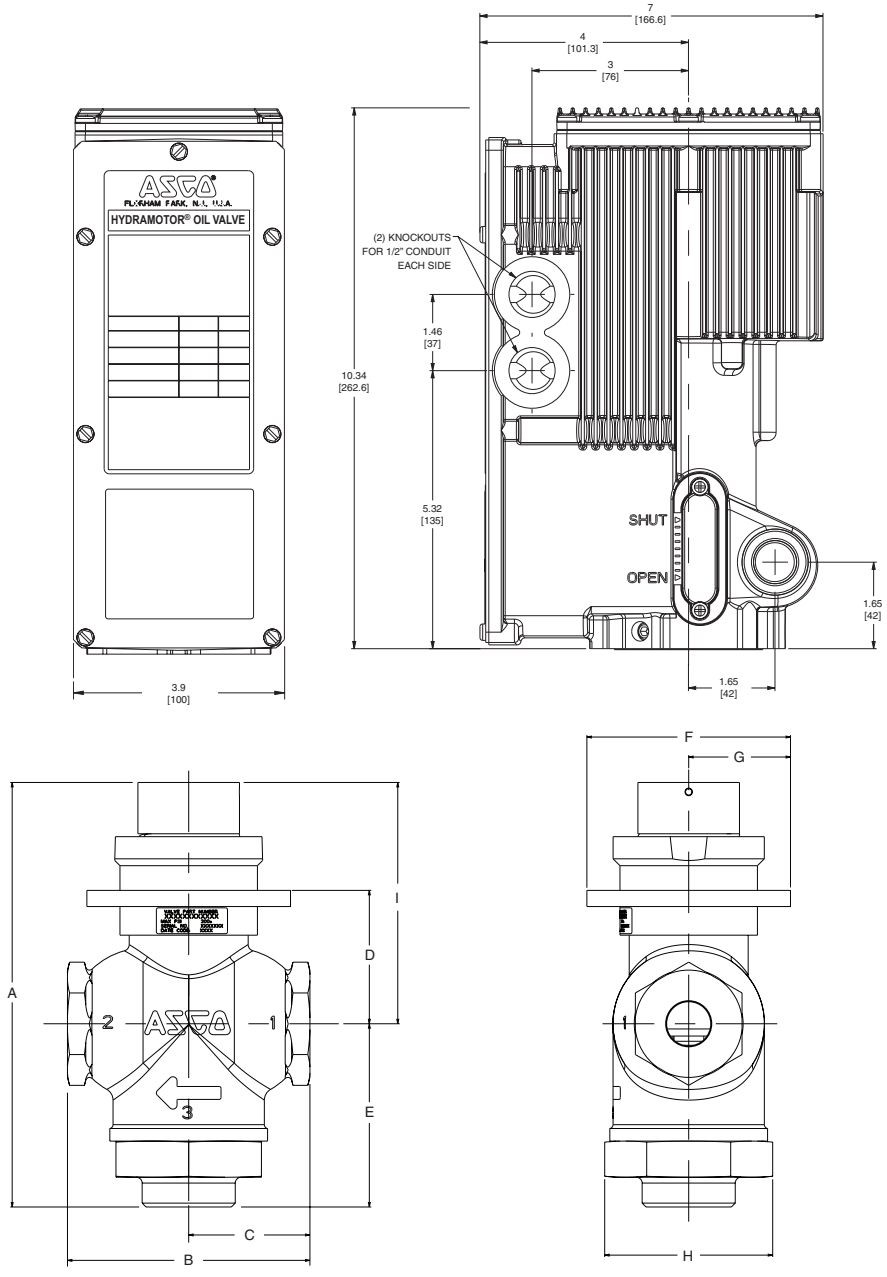
① For 24V/60Hz, change 7th digit to "1" (EX: HO1B25**1**A170); For 240V/60Hz (or 220V/50Hz), change 7th digit to "4" (EX: HO1B25**4**A170)
② For 24V/60Hz, change 9th digit, for 1/2" to "1", for 3/4" to "6" (EX: HOV13B16**1**T170, HOV13B16**6**T170)
For 240V/60Hz (or 220V/50Hz), change 9th digit, for 1/2" to "3", for 3/4" to "8" (EX: HOV13B16**3**T170, HOV13B16**8**T170)

Dimensions inches (mm)

3-Way Valve Body Dimensions Table									
Const. Ref.		A	B	C	D	E	F	G	H
1	in	6.57	3.75	1.87	2.06	2.83	3.15	1.57	2.60
	mm	166.8	95.3	47.6	52.4	72	80	40	66

Approx. Shipping Weight (lbs)		
Actuator	Valve Body	HOV13B Assembly
10.4	6.4	16.8

Const. Ref. 1



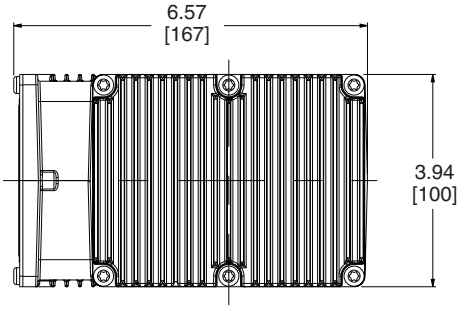
COMBUSTION

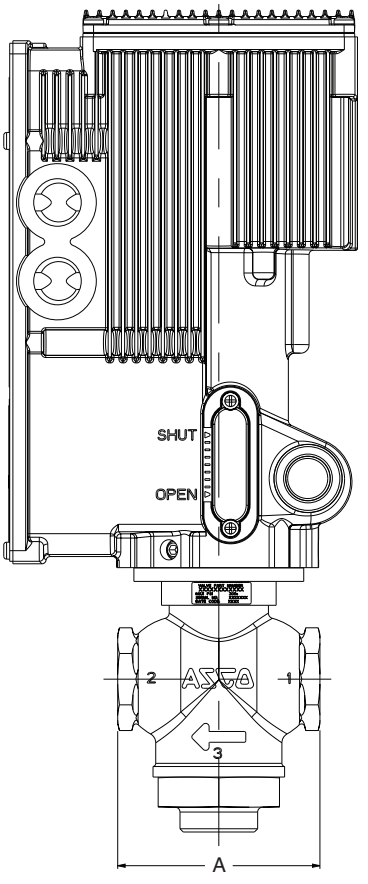
Dimensions inches (mm)

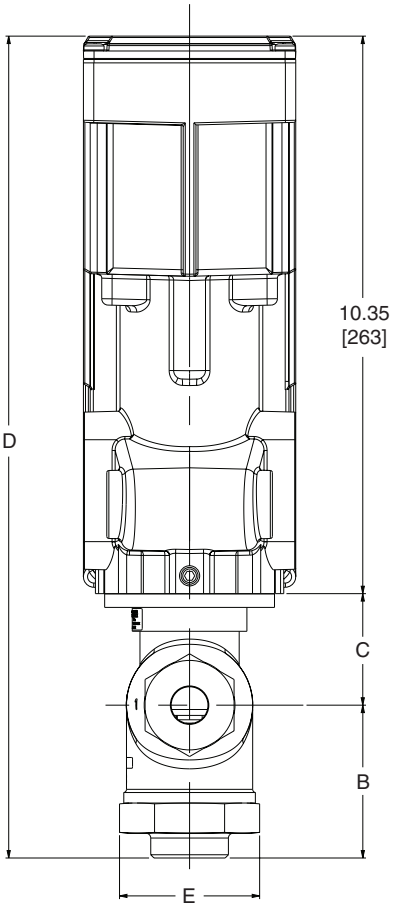
3-Way Assembly Dimensions Table						
Const. Ref.		A	B	C	D	E
1	in	3.75	2.83	2.06	15.24	2.60
	mm	95.3	72	52.4	387	66

Actuator Rebuild Kit	Part Number
Auxiliary Switch Kit	296804
Proof of Closure Switch Kit	296806
Limit Switch Kit	296807

Const. Ref. 1







COMBUSTION

Accessories

ASCO offers a wide variety of accessories and optional features to meet your specific application requirements.

Index

Accessories Description	Page
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Features

- Compact design
- In-line mounted
- Quiet operation
- Instantaneous shutoff against reverse flow, low forward pressure opening
- Disc seats before reverse flow to avoid fluid shock on reverse pressure differential

Construction

Valve Parts in Contact with Fluids		
Body	Brass	316L Stainless Steel
Valve Seat	NBR and EPDM seat at zero pressure in spring-loaded valves.	NBR
	Metal seated - leakage on air up to 65 SCFH.	Bubble Tight

Nominal Ambient Temp. Ranges

8800 Series: -4°F to 221°F (-20°C to 105°C)
V012 Series: 32°F to 125°F (0°C to 52°C)
Refer to Engineering Section for details.

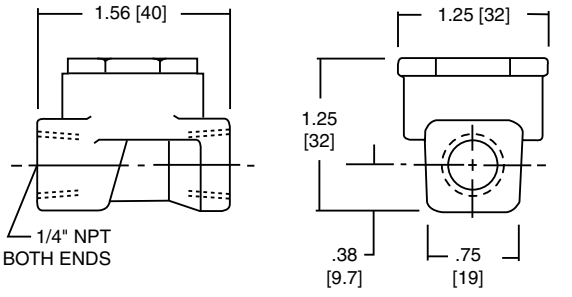
Specifications (English units)

Pipe Size (in)	Orifice Size in (mm)	Flow Cv (Kv)	Operating Pressure (psi)	Maximum Operating Pressure Differential psi (bar) Air-Inert Gas, Water, and Light Oil	Max. Fluid Temp. °F (°C)	Catalog Number	Const. Ref.
FORGED BRASS BODY with NBR Disc							
1/4	9/32 (7)	.70 (.60)	1 (0.07)	150 (10)	200 (92)	V012 001	1
3/8	3/8 (10)	1.2 (1.03)	1 (0.07)	150 (10)	200 (92)	V012 002	2B
1/2	7/16 (11)	2.5 (2.14)	1 (0.07)	150 (10)	200 (92)	V012 003	2C
3/4	1/2 (13)	3.6 (3.09)	1 (0.07)	150 (10)	200 (92)	V012 004	2D
STAINLESS STEEL BODY with NBR Disc							
1/4	9/32 (7)	1.1 (0.95)	0 (0)	232 (16) ①	221 (105)	8800A90000N0000	3
1/2	1/2 (13)	5.3 (4.58)	0 (0)	232 (16) ①	221 (105)	8800A90200N0000	4
FORGED BRASS BODY with EPDM Disc for Low-Pressure Steam							
1/4	3/8 (10)	1.2 (1.03)	1 (0.07)	50 (3)	300 (147)	V012 010	2A
3/8	3/8 (10)	1.2 (1.03)	1 (0.07)	50 (3)	300 (147)	V012 011	2B
1/2	7/16 (11)	2.5 (2.14)	1 (0.07)	50 (3)	300 (147)	V012 012	2C
3/4	1/2 (13)	3.6 (3.09)	1 (0.07)	50 (3)	300 (147)	V012 013	2D
FORGED BRASS BODY with Metal Seating for High-Pressure Steam							
1/4	3/8 (10)	.70 (.60)	8 (0.55)	200 (14)	388 (196)	V012 014	2E
3/8	3/8 (10)	.70 (.60)	8 (0.55)	200 (14)	388 (196)	V012 015	2E
1/2	1/2 (13)	3.4 (2.91)	4 (0.28)	200 (14)	388 (196)	V012 016	2F
3/4	1/2 (13)	5.1 (4.37)	4 (0.28)	200 (14)	388 (196)	V012 017	2F

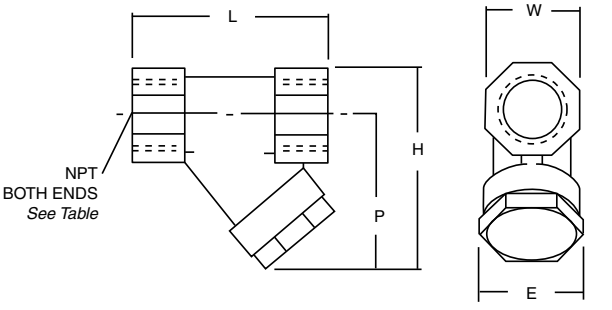
① Only for use with air or inert gas

Dimensions inches (mm)

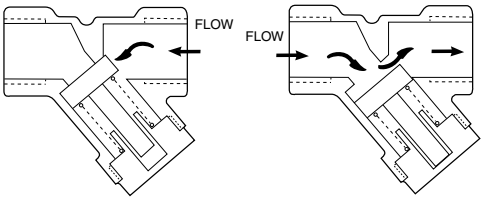
Const. Ref. 1



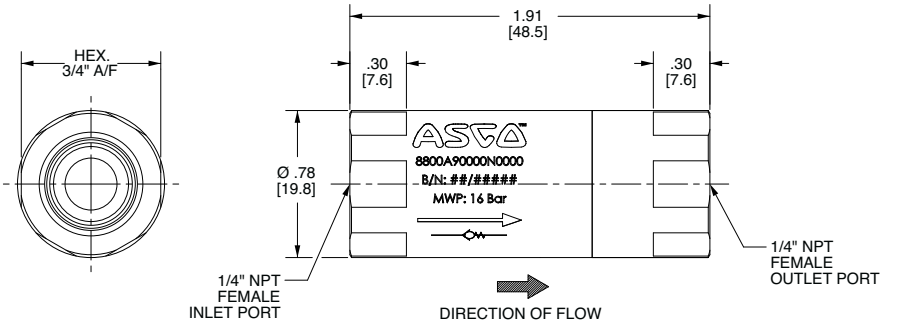
Const. Ref. 2



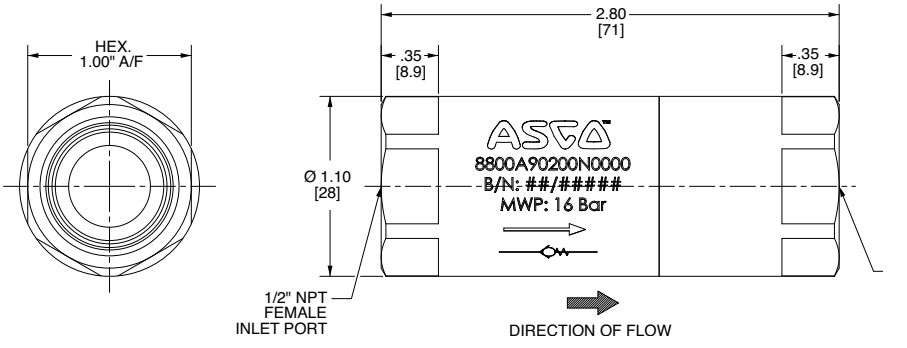
Const. Ref.	E	H	L	P	W
2A	1.16 [30]	2.03 [52]	1.91 [49]	1.56 [40]	0.88 [22]
2B	1.16 [30]	2.09 [53]	1.91 [49]	1.66 [42]	0.88 [22]
2C	1.16 [30]	2.38 [61]	2.28 [58]	1.84 [47]	1.09 [28]
2D	1.31 [33]	2.62 [67]	2.75 [70]	1.84 [47]	1.31 [33]
2E	1.16 [30]	2.38 [61]	2.28 [58]	1.84 [47]	1.09 [28]
2F	1.38 [35]	2.94 [75]	2.75 [70]	2.16 [55]	1.31 [33]



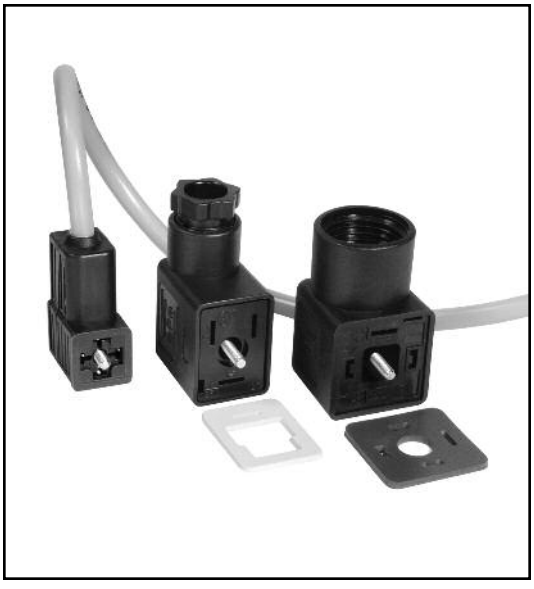
Const. Ref. 3



Const. Ref. 4



ASCO's electrical connection devices are designed using the DIN 43650/ISO 4400 or DIN 46244 (Pg 9P) form standards consistent with our solenoid valve coil designs and permitting industry interchangeability. Each size is available for user wiring or factory prewired installations. Other options include 1/2" conduits, and LED/VDR models.



Features

- Glass fiber reinforced polyamide housing and lid
- IP65 protection against moisture entry and washdown when properly installed with gaskets
- **LED:** Light Emitting Diode. A solid-state diode that emits light to indicate power to the connector
- **VDR:** Varistor absorbing the self-inductance of the coil. The VDR is there to protect the coil or controller against supply over-voltage or peak
- Maximum voltage 240 Volts

Size 11 mm, Form B

Part Number	Description	Rotatable	Figure
290413-001	1/2" conduit	180°	A
289281-001	1/2" conduit with LED/VDR	180°	A
290414-001*	PG 9 cable gland	180°	B
290415-120	PG 9 cable gland with LED/VDR 120/AC-DC	180°	B
290415-240	PG 9 cable gland with LED/VDR 240/AC-DC	180°	B
290415-024	PG 9 cable gland with LED/VDR 24/AC-DC	180°	B
285483-015**	4.5' leads with LED 120/AC-DC PVC	No	B
285482-015**	4.5' leads with LED 24/AC-DC PVC	No	B
285481-018**	6' leads with stripped ends	180°	B

Available in 10 pack; part number 226061-001-
**Also available in 9', 16', and 33' lengths. *Consult factory.*

Figure A

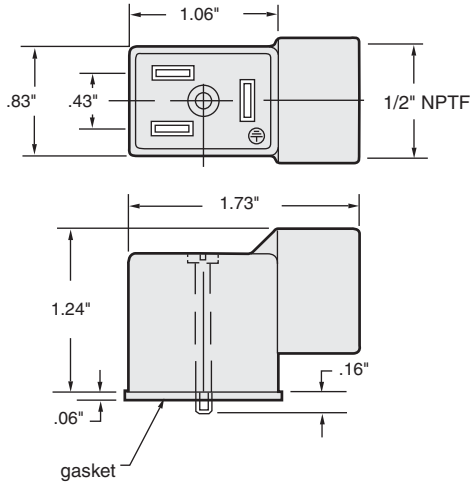
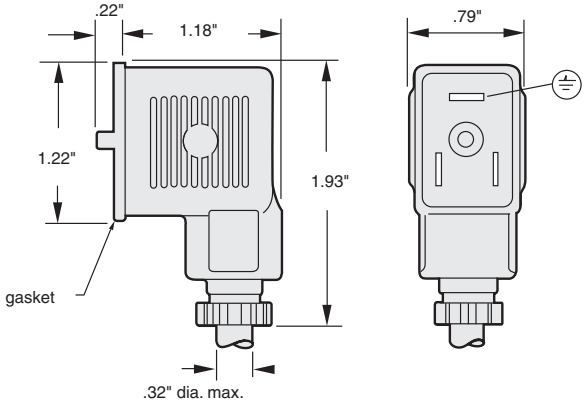


Figure B



Size 18 mm, Form A

Part Number	Description	Rotatable	Figure
290410-001	1/2" conduit	90°	C
289280-001	1/2" conduit with LED	90°	C
290411-001*	PG 11 cable gland	90°	D
290412-120	PG 11 cable gland with LED/VDR 120/AC-DC	90°	D
290412-240	PG 11 cable gland with LED/VDR 240/AC-DC	90°	D
290412-024	PG 11 cable gland with LED/VDR 24/AC-DC	90°	D
290412-048	PG 11 cable gland with LED/VDR 48/AC-DC	90°	D
285480-015**	4.5' leads with LED 120/AC-DC PVC	No	D
290409-015**	4.5' leads with LED 240/AC-DC PVC	No	D
285479-015**	4.5' leads with LED 24/AC-DC PVC	No	D
272852	6' leads with North American outlet plug	No	D
285478-015**	4.5' leads with stripped ends	No	D

*Available in 50 pack; part number 266615.
**Also available in 9', 16', and 33' lengths. *Consult factory.*

Figure C

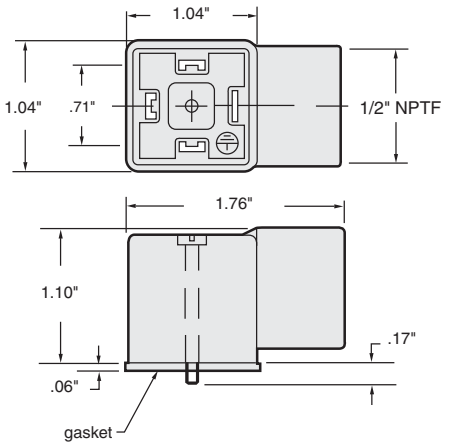
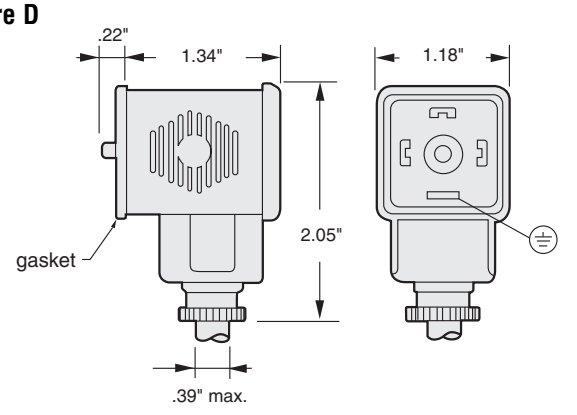


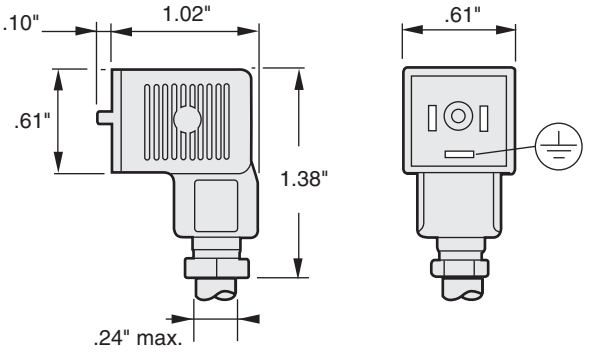
Figure D



Size 9.4 mm, Form C

Part Number	Description	Rotatable
290417-001	PG 7 cable gland	180°
289278-001	PG 7 cable gland LED/VDR 48-120/AC 50/60	180°
289282-001	PG 7 cable gland LED/VDR 48-120/DC	180°
272852-004**	6' leads	No

**Also available in 9', 16', and 33' lengths. *Consult factory.*



Features

- Adjustable flow control design provides greater capacity than most constructions
- Spring-loaded disc allows free flow in one direction and an adjustable flow in the other
- Tapered brass stem controls flow through the cross-hole in the disc
- Unique locking device in adjusting knob
- Scribed graduations provide position indication for the stem
- 316L Stainless Steel constructions available with integrated check valve
- Mountable in any position

Construction

Valve Parts in Contact with Fluids		
	V022 Series	8800 Series
Body and Stem	Brass	316L Stainless Steel
Seals	NBR	
Disc	CA	-
Spring	302 Stainless Steel	-
Retainer	17-7PH Stainless Steel	-

Nominal Ambient Temp. Ranges

8800 series: -4°F to 221°F (-20°C to 105°C)
V022 series: 32°F to 125°F (-0°C to 52°C)
Refer to Engineering Section for details.

Operation (V022 Series)

When the pawl is in the up position, it creates a friction lock on the knurled bonnet and the knob cannot rotate. When the pawl is at 90˚ to the knob, the knob can be rotated.
Refer to Engineering Section for details.

Specifications (English units)

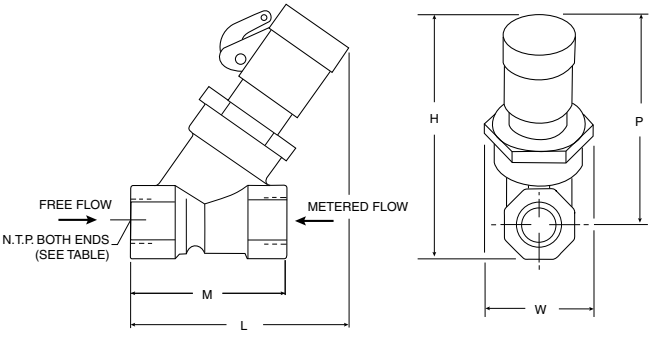
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor ① (KV) Meter Flow	Cv Flow Factor ① (KV) Free Flow	Opening Pressure psi (bar)	Maximum Operating Pressure Differential psi (bar) Air-Inert Gas, Water, and Light Oil	Max. Fluid Temp. ˚F (˚C)	Catalog Number	Body Material	Const. Ref.
Flow control valves									
1/4	3/8	0.22 (0.2)	1.2 (1)	1 (0.07)	125 (8.6)	180 (82)	V022A001	Brass	1
1/4	5/23	0.01 (0.008)	0.74 (0.64)	0 (0)	232 (16) ②	221 (105)	8800A50000N0000	Stainless Steel	5
3/8	3/8	0.9 (0.8)	1.4 (1.2)	1 (0.07)	125 (8.6)	180 (82)	V022 002	Brass	2
1/2	7/16	1.2 (1)	2.6 (2.2)	1 (0.07)	150 (10.3)	180 (82)	V022 003	Brass	3
1/2	1/2	0.01 (0.008)	3.9 (3.4)	0 (0)	232 (16) ②	221 (105)	8800A50200N0000	Stainless Steel	6
3/4	17/32	1.6 (1.4)	4 (3.4)	2.5 (0.17)	175 (12)	180 (82)	V022 004	Brass	4
Flow control valves with integrated check valves									
1/4	5/23	0.02 (0.017)	0.75 (0.65)	0 (0)	232 (16) ②	221 (105)	8800A30000N0000	Stainless Steel	7
1/2	1/2	0.02 (0.017)	3.6 (3.1)	0 (0)	232 (16) ②	221 (105)	8800A30200N0000	Stainless Steel	8

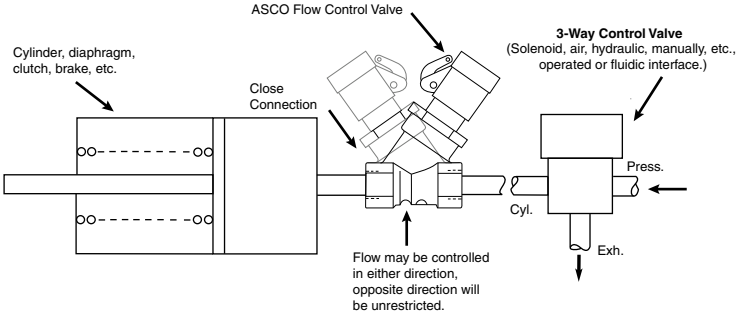
① Refer to Metering Stem Turns chart on next page.
② Only suitable for use with clean dry air or dry inert gas.

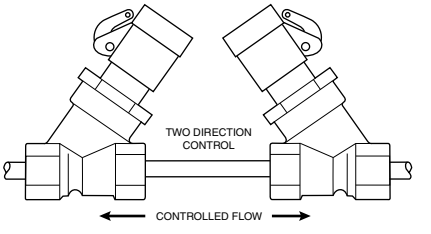
Dimensions inches (mm)

Catalog Number		H	L	M	P	W
V022A001	in	3.12	2.69	1.91	2.62	1.31
	mm	79	68	49	67	33
V022 002	in	3.12	2.69	1.91	2.69	1.31
	mm	79	68	49	68	33
V022 003	in	3.34	3.22	2.28	2.81	1.31
	mm	85	82	58	71	33
V022 004	in	3.75	3.69	2.75	3.09	1.47
	mm	95	94	70	79	37

Const. Ref. 1-4







FLOW DIAGRAMS

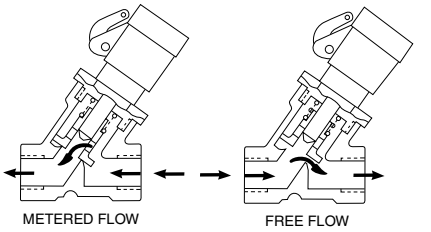


CHART A

Example I: A 1/2" N.P.T. flow control valve is required to pass 3 GPM of water at a Δp of 16 psi. Determine the position of the metering stem.

$$Cv = \frac{GPM}{\sqrt{\Delta p}} \qquad Cv = \frac{3}{\sqrt{16}} = 0.75$$

From the graph for the 1/2" N.P.T. flow control valve with a Cv of .75, the stem should be positioned three turns out from fully closed.

Example II: To determine the flow using the same data of 16 psi, Δp and METERED Cv of .75, the solution will be:

$$GPM = Cv\sqrt{\Delta p} = .75\sqrt{16} = 3$$

Example III: The flow through this valve in the FREE FLOW position is:

$$GPM = Cv^{*}\sqrt{\Delta p} = 2.6\sqrt{16} = 10.4$$

*Cv is obtained from free flow data table.

P_1 - Inlet Pressure (PSIA)
P_2 - Outlet Pressure (PSIA)
Δp - Pressure Drop (P_1 - P_2) psi
G - Specific Gravity of Gas @ 14.7 PSIA and 60˚F.
T - Absolute Temperature of Flowing Medium (˚F + 460)

SIZING EQUATIONS

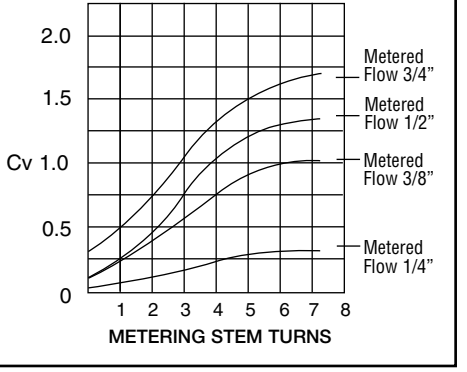
$$\text{WATER } Cv = \frac{GPM}{\sqrt{\Delta p}} \qquad GPM = Cv\sqrt{\Delta p}$$

$$\text{AIR } Cv = \frac{SCFH}{960\sqrt{\frac{\Delta p(P_1 + P_2)}{GT}}}$$

$$SCFH = Cv \; 960\sqrt{\frac{\Delta p(P_1 + P_2)}{GT}}$$

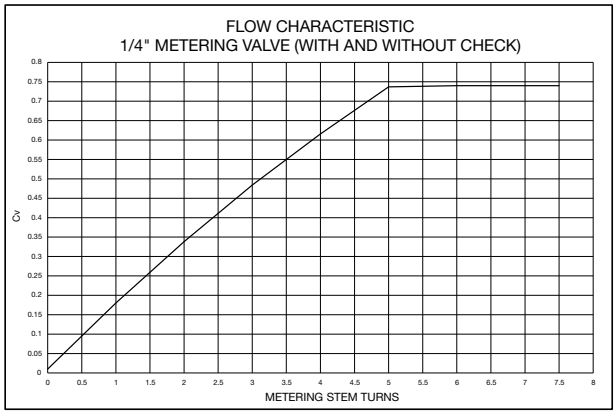
Free Flow Data	
Pipe Size	Cv
1/4	1.2
3/8	1.4
1/2	2.6
3/4	4.0

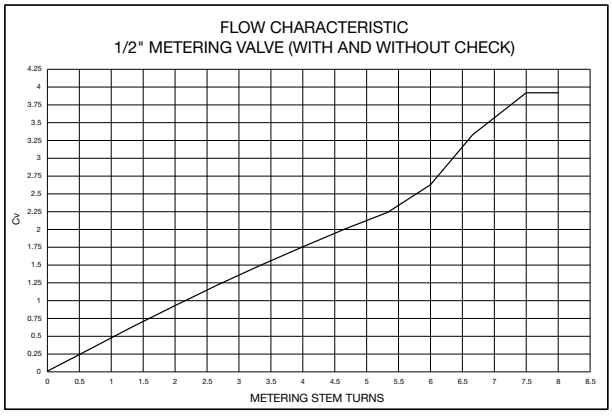
FLOW CHARACTERISTICS FOR V022 SERIES FLOW CONTROL VALVES



ACCESSORIES

Dimensions inches (mm)





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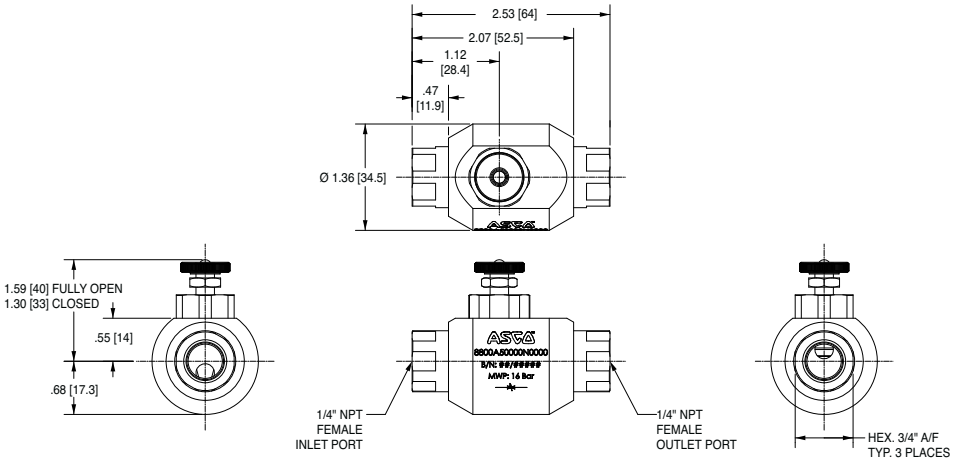

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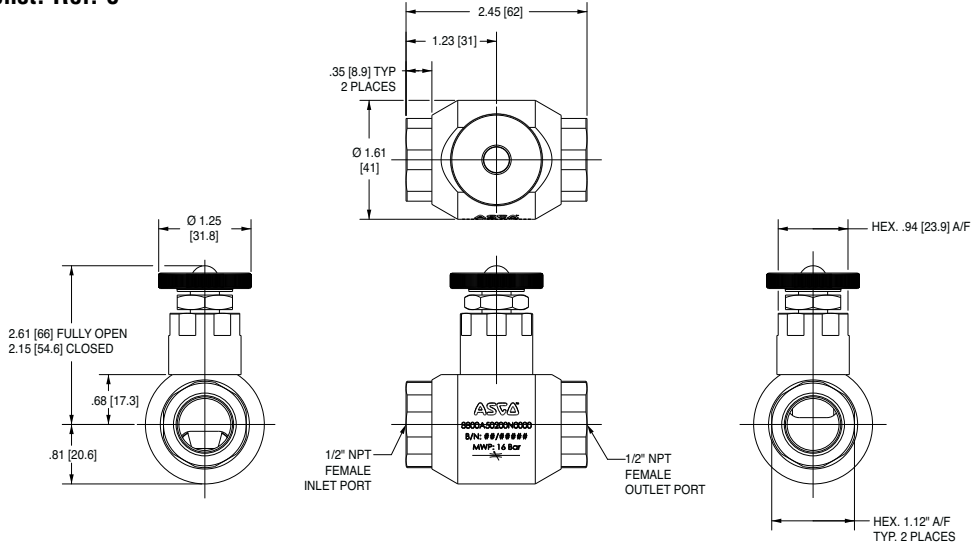
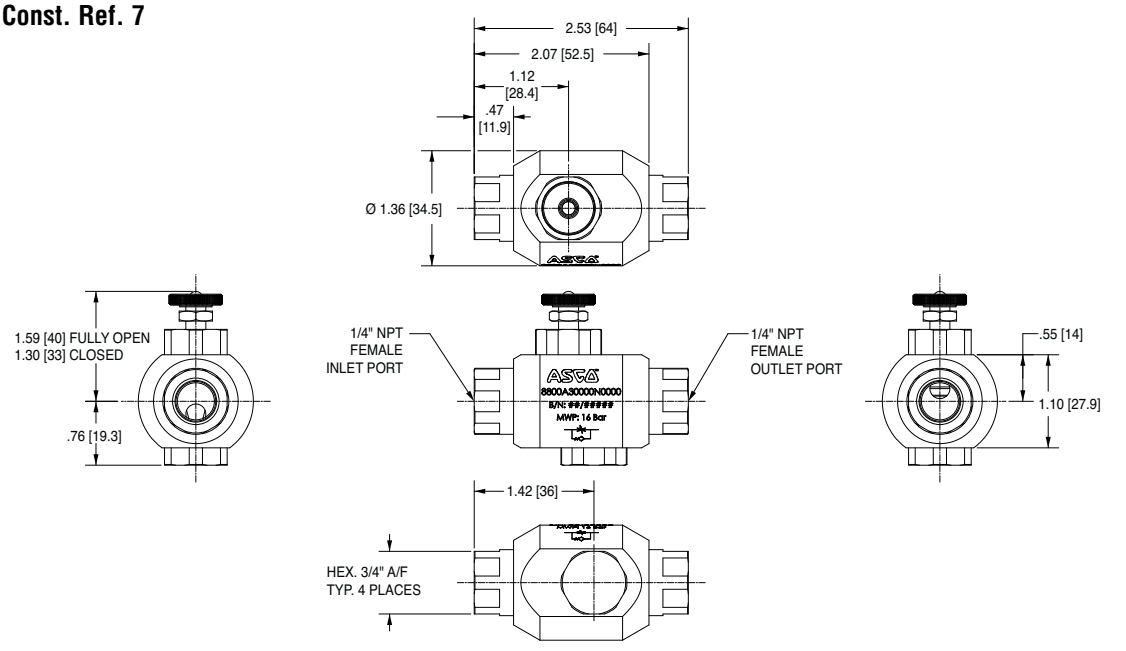


Dimensions inches (mm)

Const. Ref. 7



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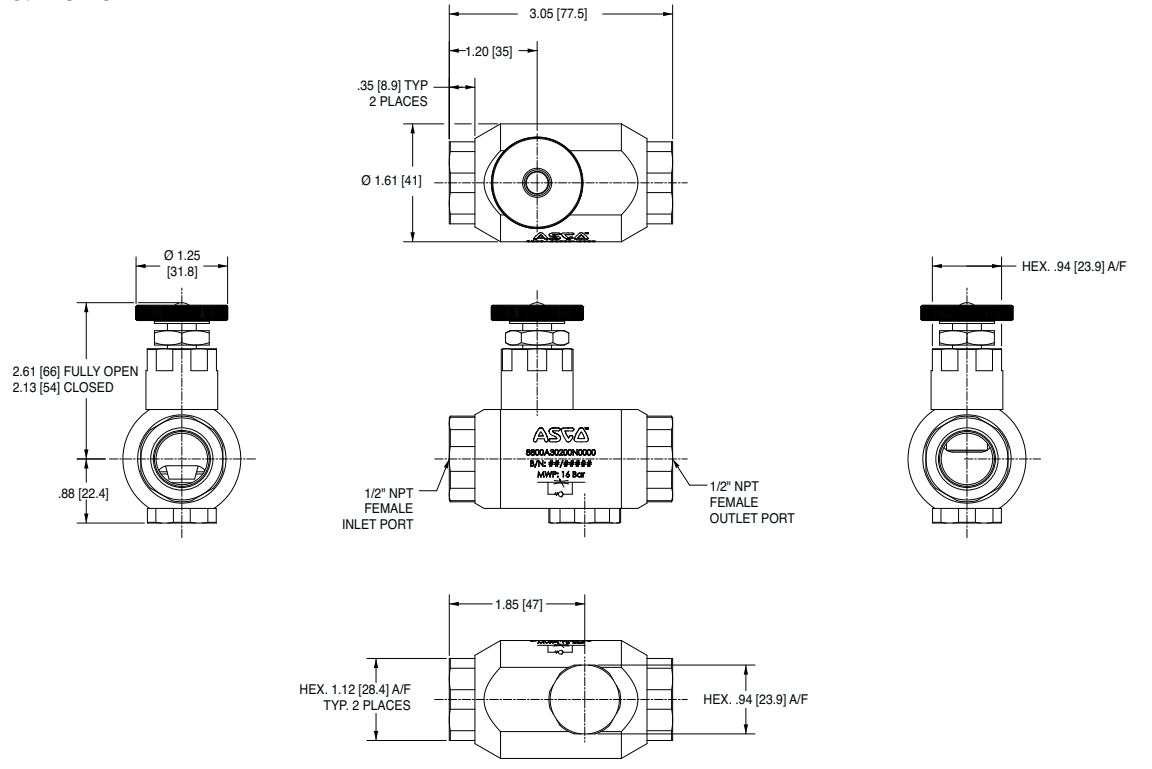


Features

- Compact, 3-ported valves have oversized orifice for quick exhaust of cylinders, brakes, actuators, clutches, etc.
- Allow use of smaller pipe lines and control components
- When used as a shuttle valve, high pressure from the two inlets exits through the common outlet
- 316L Stainless Steel constructions for corrosive environments
- Mountable in any position

Construction

Valve Parts in Contact with Fluids		
	8800	**V043**
Body and Bonnet	316L Stainless Steel	Die-Cast Zinc
Seat	NBR/LT-NBR	NBR

Nominal Ambient Temp. Ranges

8800A10000N0000 and 8800A10200N0000:
-4°F to 221°F (-20°C to 105°C)

8800A10500N0000, 8800A10700N0000:
-4°F to 200°F (-20°C to 93°)

8800A1080040000, 8800A1090040000:
-40°F to 200°F (-40°C to 93°C)

V043001 and V043002:
-4°F to 125°F (-20°C to 52°C)

Refer to Engineering Section for details.

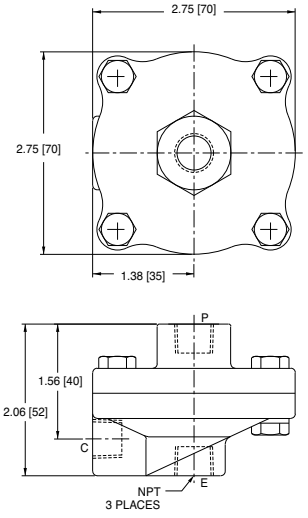
Specifications English (Metric)

Pipe Size (in)	Flow Cv (Kv) Pressure to Cylinder	Flow Cv (Kv) Cylinder to Exhaust	Opening Pressure psi (bar)	Maximum Operating Pressure Differential psi (bar)	Max. Temp. °F (°C)	Catalog Number	Body Material	Const. Ref.
1/4	2 (1.7)	2 (1.7)	5 (0.35)	125 (8.6)	125 (52) ①	V043 001	Zinc	1
1/4	1.2 (1.1)	3.9 (3.4)	0 (0)	232 (16)	221 (105) ②	8800A10000N0000	Stainless Steel	2
1/4	2.4 (2)	5 (4.3)	5 (0.35)	150 (10.3)	200 (93) ③	8800A10500N0000	Stainless Steel	3
3/8	3.5 (3)	4.5 (3.9)	5 (0.35)	125 (8.6)	125 (52) ①	V043 002	Zinc	1
1/2	3.5 (3)	4 (3.4)	0 (0)	232 (16)	221 (105) ②	8800A10200N0000	Stainless Steel	4
1/2	6 (5.2)	15 (13)	5 (0.35)	150 (10.3)	200 (93) ③	8800A10700N0000	Stainless Steel	5
3/4	12 (10.4)	26 (22.5)	15 (1)	175 (12)	200 (93) ③	8800A1080040000	Stainless Steel	6
1	14 (12.1)	26 (22.5)	15 (1)	175 (12)	200 (93) ③	8800A1090040000	Stainless Steel	6

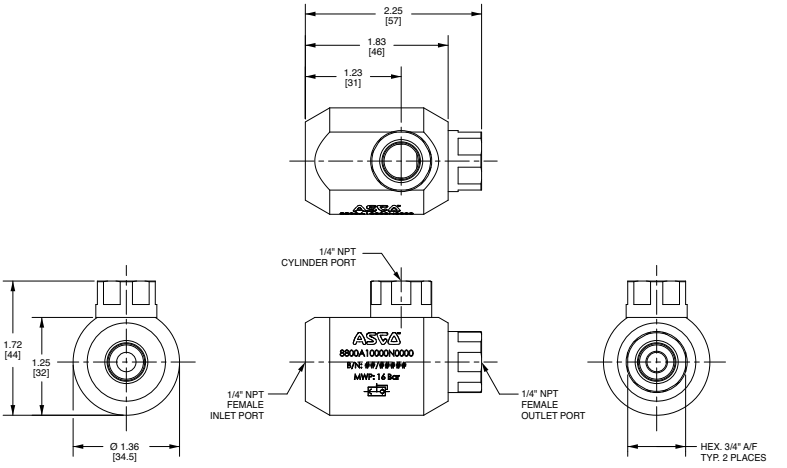
① Air only
② Air and inert gas only
③ Air, inert gas and sweet dry natural gas

Dimensions inches (mm)

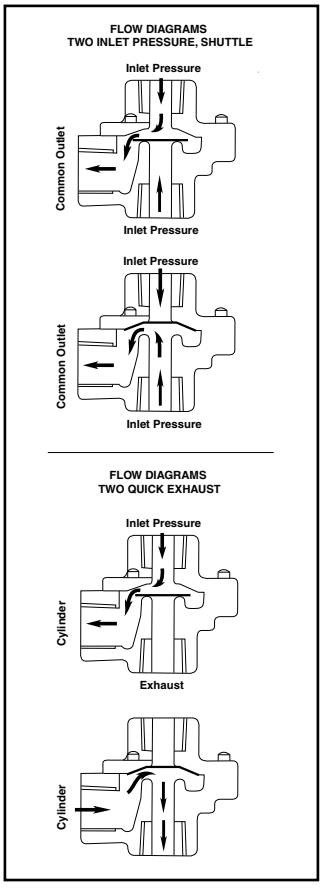
Const. Ref. 1



Const. Ref. 2



Flow Diagrams (V043 Series)



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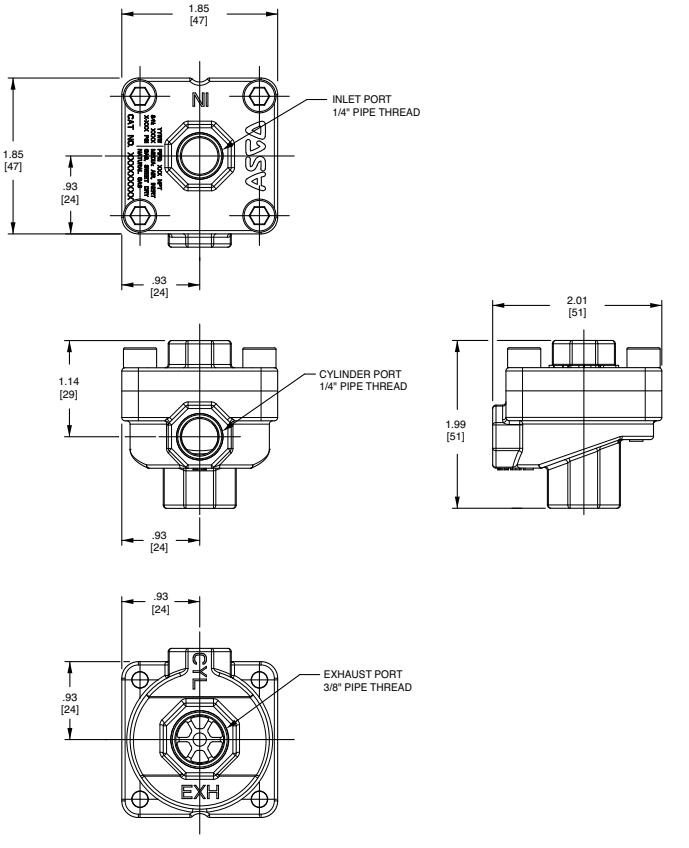
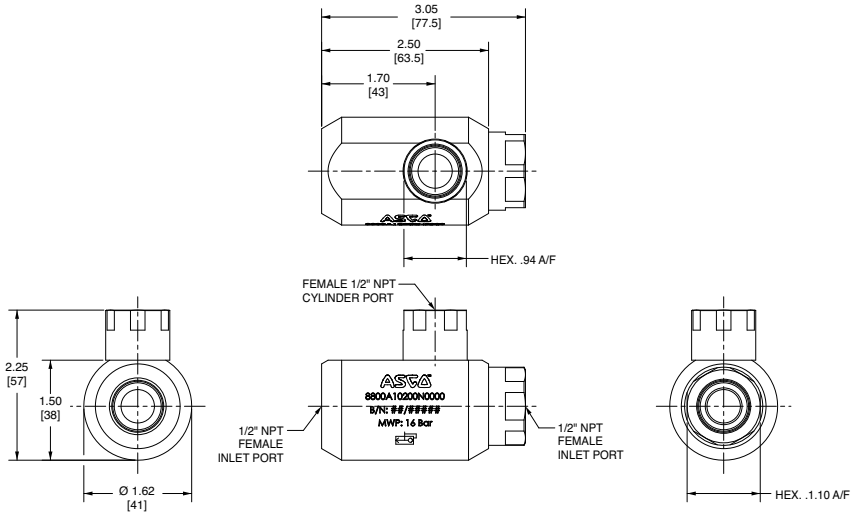


ACCESSORIES

Dimensions inches (mm)

Const. Ref. 4



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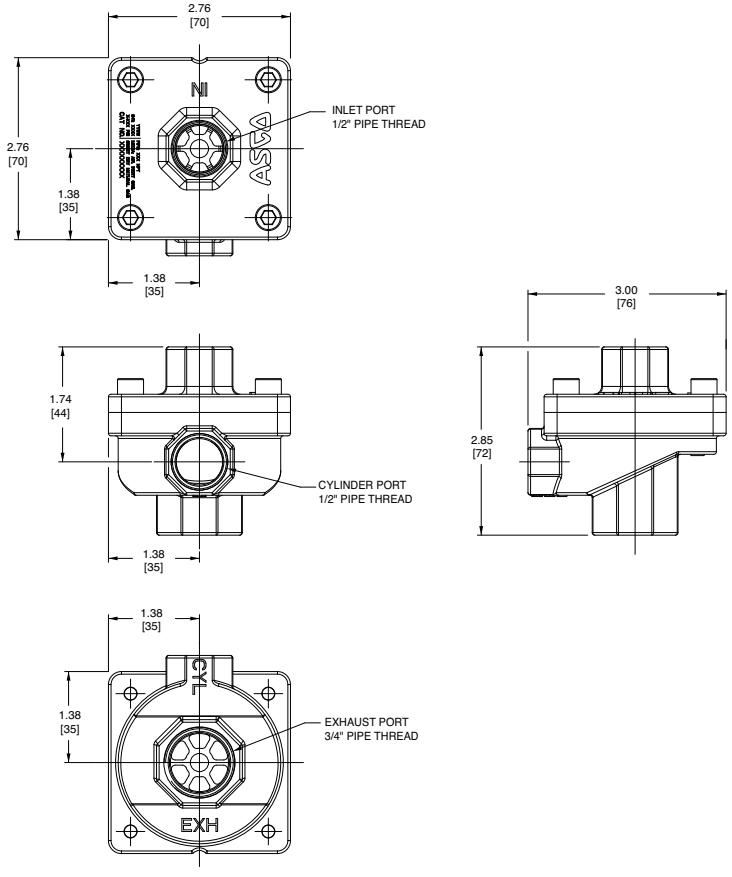
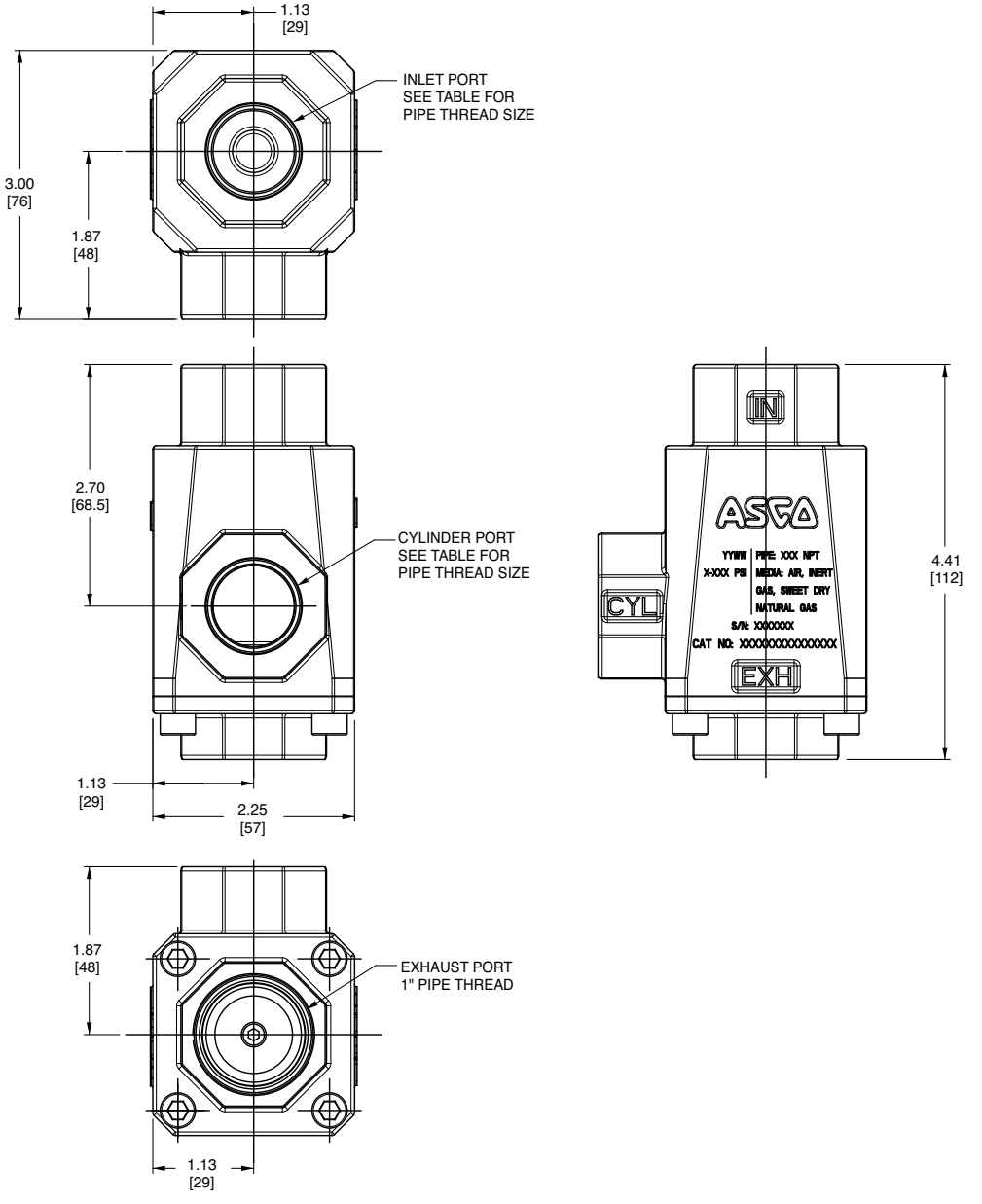


Dimensions inches (mm)

Const. Ref. 6



Features

- Limits pressure in the system to help prevent process upset and equipment failure

Construction

Valve Parts in Contact with Fluids	
Body	316L Stainless Steel
Seals	NBR

Media

Air or inert gas

Nominal Ambient Temp. Ranges

-4˚F to 221˚F (-20˚C to 105˚C)

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (in)	Maximum Operating Pressure Differential psi (bar)	Max. Fluid Temp. °F (˚C)	Base Catalog Number	Const. Ref.
1/4	200 (14)	221 (105)	U800A700 ①	1
1/2	200 (14)	221 (105)	U800A702 ①	2

① See How to Order section to complete part number

How to Order

U | 800 | A | 700 | 01 | N00 | L4

Connection Type
U = External NPT

Product Series
800

Revision
A

Pipe Size / Body Material
700 1/4 316 SS Pressure Relief Valve
702 1/2 316L SS Pressure Relief Valve

Pressure Range Type*
01 1/4" Pressure Relief Valve Setting 146 to 217 psi (10.1 to 15 bar)
02 1/4" Pressure Relief Valve Setting 29 to 145 psi (2 to 10 bar)
03 1/2" Pressure Relief Valve Setting 102 to 174 psi (7.1 to 12 bar)
04 1/2" Pressure Relief Valve Setting 29 to 101 psi (2 to 7 bar)

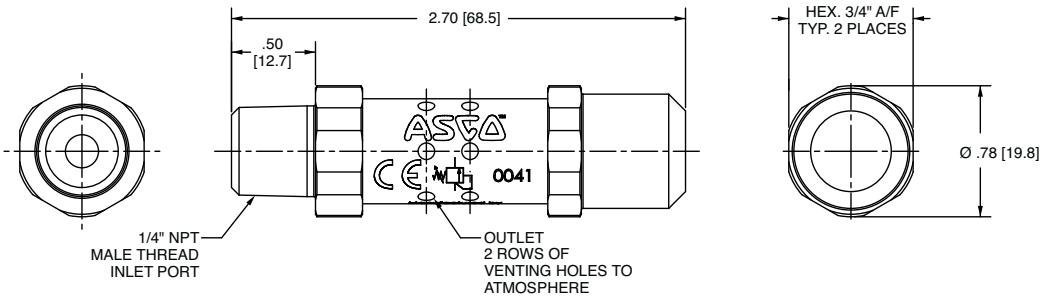
Elastomer
N00 = NBR

Pressure Settings

C0 = 29 psi / 2.0 bar	F4 = 78 psi / 5.4 bar	J8 = 127 psi / 8.8 bar	M9 = 172 psi / 11.9 bar
C1 = 30 psi / 2.1 bar	F5 = 80 psi / 5.5 bar	J9 = 129 psi / 8.9 bar	N0 = 174 psi / 12.0 bar
C2 = 32 psi / 2.2 bar	F6 = 81 psi / 5.6 bar	K0 = 130 psi / 9.0 bar	N1 = 175 psi / 12.1 bar
C3 = 33 psi / 2.3 bar	F7 = 82 psi / 5.7 bar	K1 = 132 psi / 9.1 bar	N2 = 177 psi / 12.2 bar
C4 = 35 psi / 2.4 bar	F8 = 84 psi / 5.8 bar	K2 = 133 psi / 9.2 bar	N3 = 178 psi / 12.3 bar
C5 = 36 psi / 2.5 bar	F9 = 85 psi / 5.9 bar	K3 = 135 psi / 9.3 bar	N4 = 180 psi / 12.4 bar
C6 = 37 psi / 2.6 bar	G0 = 87 psi / 6.0 bar	K4 = 136 psi / 9.4 bar	N5 = 181 psi / 12.5 bar
C7 = 39 psi / 2.7 bar	G1 = 88 psi / 6.1 bar	K5 = 137 psi / 9.5 bar	N6 = 183 psi / 12.6 bar
C8 = 40 psi / 2.8 bar	G2 = 90 psi / 6.2 bar	K6 = 139 psi / 9.6 bar	N7 = 184 psi / 12.7 bar
C9 = 42 psi / 2.9 bar	G3 = 91 psi / 6.3 bar	K7 = 140 psi / 9.7 bar	N8 = 185 psi / 12.8 bar
D0 = 43 psi / 3.0 bar	G4 = 93 psi / 6.4 bar	K8 = 142 psi / 9.8 bar	N9 = 187 psi / 12.9 bar
D1 = 45 psi / 3.1 bar	G5 = 94 psi / 6.5 bar	K9 = 143 psi / 9.9 bar	P0 = 188 psi / 13.0 bar
D2 = 46 psi / 3.2 bar	G6 = 95 psi / 6.6 bar	L0 = 145 psi / 10.0 bar	P1 = 190 psi / 13.1 bar
D3 = 48 psi / 3.3 bar	G7 = 97 psi / 6.7 bar	L1 = 146 psi / 10.1 bar	P2 = 191 psi / 13.2 bar
D4 = 49 psi / 3.4 bar	G8 = 98 psi / 6.8 bar	L2 = 148 psi / 10.2 bar	P3 = 193 psi / 13.3 bar
D5 = 50 psi / 3.5 bar	G9 = 100 psi / 6.9 bar	L3 = 149 psi / 10.3 bar	P4 = 194 psi / 13.4 bar
D6 = 52 psi / 3.6 bar	H0 = 101 psi / 7.0 bar	L4 = 151 psi / 10.4 bar	P5 = 196 psi / 13.5 bar
D7 = 53 psi / 3.7 bar	H1 = 103 psi / 7.1 bar	L5 = 152 psi / 10.5 bar	P6 = 197 psi / 13.6 bar
D8 = 55 psi / 3.8 bar	H2 = 104 psi / 7.2 bar	L6 = 153 psi / 10.6 bar	P7 = 199 psi / 13.7 bar
D9 = 56 psi / 3.9 bar	H3 = 106 psi / 7.3 bar	L7 = 155 psi / 10.7 bar	P8 = 200 psi / 13.8 bar
E0 = 58 psi / 4.0 bar	H4 = 107 psi / 7.4 bar	L8 = 156 psi / 10.8 bar	P9 = 201 psi / 13.9 bar
E1 = 59 psi / 4.1 bar	H5 = 108 psi / 7.5 bar	L9 = 158 psi / 10.9 bar	Q0 = 203 psi / 14.0 bar
E2 = 61 psi / 4.2 bar	H6 = 110 psi / 7.6 bar	M0 = 160 psi / 11.0 bar	Q1 = 204 psi / 14.1 bar
E3 = 62 psi / 4.3 bar	H7 = 111 psi / 7.7 bar	L8 = 156 psi / 10.8 bar	Q2 = 206 psi / 14.2 bar
E4 = 64 psi / 4.4 bar	H8 = 113 psi / 7.8 bar	L9 = 158 psi / 10.9 bar	Q3 = 207 psi / 14.3 bar
E5 = 65 psi / 4.5 bar	H9 = 114 psi / 7.9 bar	M0 = 160 psi / 11.0 bar	Q4 = 209 psi / 14.4 bar
E6 = 66 psi / 4.6 bar	J0 = 116 psi / 8.0 bar	M1 = 161 psi / 11.1 bar	Q5 = 210 psi / 14.5 bar
E7 = 68 psi / 4.7 bar	J1 = 117 psi / 8.1 bar	M2 = 162 psi / 11.2 bar	Q6 = 211 psi / 14.6 bar
E8 = 69 psi / 4.8 bar	J2 = 119 psi / 8.2 bar	M3 = 164 psi / 11.3 bar	Q7 = 213 psi / 14.7 bar
E9 = 71 psi / 4.9 bar	J3 = 120 psi / 8.3 bar	M4 = 165 psi / 11.4 bar	Q8 = 215 psi / 14.8 bar
F0 = 72 psi / 5.0 bar	J4 = 122 psi / 8.4 bar	M5 = 166 psi / 11.5 bar	Q9 = 216 psi / 14.9 bar
F1 = 74 psi / 5.1 bar	J5 = 123 psi / 8.5 bar	M6 = 168 psi / 11.6 bar	R0 = 217 psi / 15.0 bar
F2 = 75 psi / 5.2 bar	J6 = 124 psi / 8.6 bar	M7 = 170 psi / 11.7 bar	
F3 = 76 psi / 5.3 bar	J7 = 126 psi / 8.7 bar	M8 = 171 psi / 11.8 bar	

Dimensions inches (mm)

Const. Ref. 1



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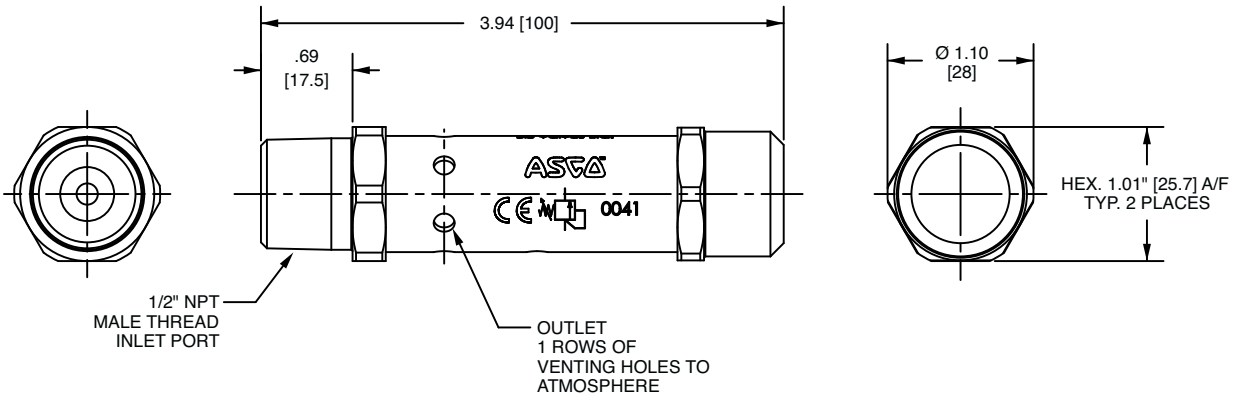


General Service Solenoid Operators

Normally Open or Normally Closed

Features

- Same RedHat II molded epoxy solenoid operators used on General Purpose ASCO valves
- Available in 4 standard wattages, AC or DC
- Mountable in any position

Construction

Valve Parts in Contact with Fluids	
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Seal	NBR
Shading Coil	Copper (AC only)
Additional Parts	
Disc	NBR and PA (3-way upper disc)
Spring	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
		AC			General Purpose		Explosionproof	
	DC Watts	Watts	VA Holding	VA Inrush ①	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	-	9.1	25	40	238210	-	238214	-
F	11.6	10.1	25	50	238610	238710	238614	238714
F	-	17.1	40	70	238610	-	238614	-
F	-	15.4	27	70	99257	-	99257	-
F	-	20	43	90	99257	-	99257	-

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 available when required.

Note: ① Core Stroke 1/16".

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X. RedHat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.)

See Optional Features Section for further details on Open Frame Solenoids, Junction Box Enclosures, and Panel Mount Constructions.

Nominal Ambient Temp. Ranges

AC: 32˚F to 125˚F (0˚C to 52˚C)
DC: 32˚F to 104˚F (0˚C to 40˚C)

Refer to Engineering Section for details.

Approvals

CSA certified.

Refer to Engineering Section for details.

Specifications (English units)

Orifice Size (in)	Cv Flow Factor ④	Operating Pressure Differential (psi)						Max. Fluid Temp. °F		Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation ⑥		Optional Inserted Seat
		Maximum AC			Maximum DC									
		Air-Inert Gas	Water ⑦	Lt. Oil @ 300 SSU ⑤	Air-Inert Gas	Water ⑦	Lt. Oil @ 300 SSU ⑤	AC	DC			AC	DC	Part Number
2-WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
3/64	.06	750	600	400	325	225	300	180	120	8200G001	4	6.1/F	10.6/F	096-429-4 ②
3/32	.17	275	200	130	110	100	100	180	120	8200G001	4	6.1/F	10.6/F	180-222-5D ③
1/8	.35	135	115	90	50	50	50	180	120	8200G001	4	6.1/F	10.6/F	180-222-1D ③
3-WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
3/64	.04	230	230	230	120	140	125	200	150	8329G001	5	10.1/F	11.6/F	096-429-4 ②
3/32	.15	125	100	100	60	70	30	200	150	8329G002	5	10.1/F	11.6/F	096-429-3 ②
1/8	.25	75	60	60	30	40	25	200	150	8329G003	5	10.1/F	11.6/F	180-222-1D ③
3-WAY SOLENOID OPERATORS, ① NORMALLY OPEN (Open when de-energized)														
3/64	.04	300	300	300	200	300	120	200	150	8329G007	5	10.1/F	11.6/F	096-429-4 ②
3/32	.15	175	175	175	70	90	45	200	150	8329G008	5	10.1/F	11.6/F	096-429-3 ②
1/8	.25	90	90	90	40	40	25	200	150	8329G009	5	10.1/F	11.6/F	180-222-1D ③

① Larger operators, orifice sizes, and higher pressure ratings are available. *Consult your local ASCO sales office.*
② Inserted seat has 1/4-32 thread for threading.
③ Inserted seat has 3/8-32 thread for threading.
④ Cv will depend upon size and location of connecting passages.
⑤ Maximum viscosity for 3-way solenoid operator is 45 SSU.
⑥ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
⑦ Water rating, CSA certified up to 232 psi.

Specifications (Metric units)

Orifice Size (mm)	Kv Flow Factor (m^3/h) ④	Operating Pressure Differential (bar)						Max. Fluid Temp. °C		Catalog Number	Const. Ref.	Watt Rating/ Class of Coil Insulation ⑥		Optional Inserted Seat
		Maximum AC			Maximum DC									
		Air-Inert Gas	Water ⑦	Lt. Oil @ 300 SSU ⑤	Air-Inert Gas	Water ⑦	Lt. Oil @ 300 SSU ⑤	AC	DC			AC	DC	Part Number
2-WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
1.2	.05	52	41.4	34.5	22.4	15.5	20.7	82	49	8200G001	4	6.1/F	10.6/F	096-429-4 ②
2.4	.15	19	13.8	9.0	7.6	6.9	6.9	82	49	8200G001	4	6.1/F	10.6/F	180-222-5D ③
3.2	.30	9	7.9	6.2	3.4	3.4	3.4	82	49	8200G001	4	6.1/F	10.6/F	180-222-1D ③
3-WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
1.2	.03	16	15.9	15.9	8.3	9.7	8.6	93	66	8329G001	5	10.1/F	11.6/F	096-429-4 ②
2.4	.13	9	6.9	6.9	4.1	4.8	2.1	93	66	8329G002	5	10.1/F	11.6/F	096-429-3 ②
3.2	.21	5	4.1	4.1	2.1	2.8	1.7	93	66	8329G003	5	10.1/F	11.6/F	180-222-1D ③
3-WAY SOLENOID OPERATORS, ① NORMALLY OPEN (Open when de-energized)														
1.2	.03	21	20.7	20.7	13.8	20.7	8.3	93	66	8329G007	5	10.1/F	11.6/F	096-429-4 ②
2.4	.13	12	12.1	12.1	4.8	6.2	3.1	93	66	8329G008	5	10.1/F	11.6/F	096-429-3 ②
3.2	.21	6	6.2	6.2	2.8	2.8	1.7	93	66	8329G009	5	10.1/F	11.6/F	180-222-1D ③

① Larger operators, orifice sizes, and higher pressure ratings are available. *Consult your local ASCO sales office.*
② Inserted seat has 1/4-32 thread for threading.
③ Inserted seat has 3/8-32 thread for threading.
④ Kv will depend upon size and location of connecting passages.
⑤ Maximum viscosity for 3-way solenoid operator is 45 SSU.
⑥ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.
⑦ Water rating, CSA certified up to 16 bar.

Specifications (Solenoids)

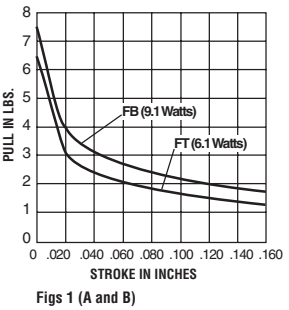
Catalog Number	8016G001	8016G002	8003G001	8003G002	8017 001	8017 002
Const. Ref. and Fig. No.	1A	1B	2A	2B	3A	3B
Watt Rating/ ③ Class of Coil Insulation	6.1/F	9.1/F	10.1/F	17.1/F	15.4/F	20/F
VA Holding	16	25	25	40	27	43
VA Inrush ①	30	40	50	70	70	90
Min. Return Spring Force or Load Value ②	11 oz.	11 oz.	1.3 lb.	1.3 lb.	1.75 lb.	1.75 lb.

① Core Stroke 1/16". ② Customer to supply return spring, required in solenoid sealed position for proper operation, in accordance with value given.
③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.

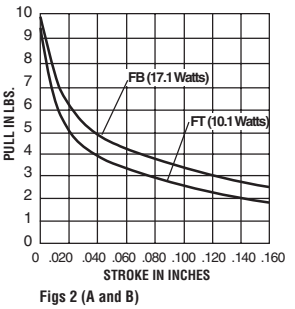
Dimensions inches (mm)

Const. Ref.		A	B	C
1A &1B	in	2.76	1.82	0.30
	mm	70	46	8
2A & 2B	in	3.03	2.00	1.13
	mm	77	51	29
3A & 3B	in	2.67	2.28	0.23
	mm	68	58	6
4	in	2.76	1.82	0.32
	mm	70	46	8
5	in	3.03	3.03	0.30
	mm	77	77	8

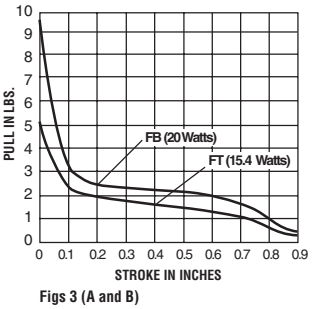
Pull Curves (AC Only)



Figs 1 (A and B)

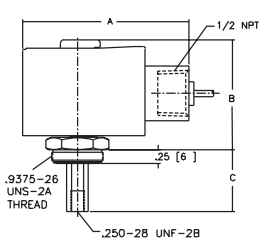


Figs 2 (A and B)

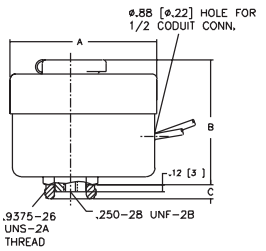


Figs 3 (A and B)

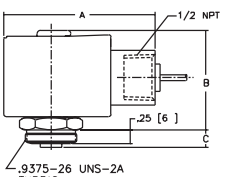
Const. Ref. 1A, 1B, 2A, 2B



Const. Ref. 3A, 3B



Const. Ref. 4



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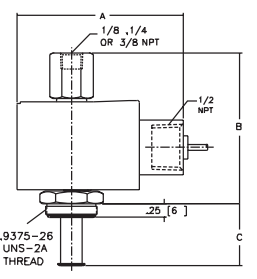


Pipe Line Strainers

Forged Brass, Stainless Steel, and Plastic Bodies
1/8" to 3/4" NPT

Features

- Should be used whenever it is essential that fluid be free of foreign solid matter
- Assure proper flow and prevent damage to valves, controls, and other equipment

Construction

Forged Brass and Stainless Steel Bodies
Rugged, self-cleaning "Y body" strainers have easily removed strainer of perforated stainless steel or wire mesh. Free hole area shown in table is total of all openings. Suitable for air, water, oil, and steam.

Plastic Body (Acetal)
Straight-through flow with large area orifice. Strainers can be easily removed and back flushed. Suitable for air and water.

Installation

May be mounted in any position, but should be located on the inlet side of the valve, as close to it as possible.

Specifications (English units)

Pipe Size (in)	Cv Flow Factor	Screen Mesh Size ③	Total Free Hole Area ($in.^2$)	Particle Retention Size ③		Blow-Off Pipe Size (in)	Max. Fluid Temp. °F ⑤	Safe Working Pressure (psi) ⑤	Catalog Number	Const. Ref.	Dimensions (in)	
				Microns	Inches						A	B
PLASTIC BODY (CA) with Stainless Steel Strainer Element and NBR Seals												
①	.50	80x80	.116	178	.007	--	130	50	8604 004	1	②	②
① ④	.50	80x80	.116	178	.007	--	130	175	8604 002	1	②	②
FORGED BRASS BODY with Stainless Steel Strainer Element and PTFE or FPM Seals ⑧												
1/8	1	60x60	.325	155	.0061	--	400	750	8600A001 ⑥ ⑦	2	1 11/32	2
1/4	1.7	60x60	.325	155	.0061	--	400	750	8600A002 ⑥ ⑦	2	1 11/32	2
3/8	1.9	100x100	.35	140	.0055	--	400	750	8600A013 ⑥	2	1 5/8	1 29/32
1/2	2.6	100x100	.50	140	.0055	--	400	750	8600A014 ⑥	2	1 13/16	2 9/32
3/4	4.7	100x100	.75	140	.0055	--	400	750	8600A015 ⑥	2	2 3/32	2 3/4
STAINLESS STEEL BODY with Stainless Steel Strainer Element and PTFE Seals												
3/8	2.1	60x60	.23	250	.0098	1/4	450	1500	8601 004	2	1 27/32	1 29/32
1/2	3	60x60	.35	250	.0098	1/4	450	1500	8601 005	2	2	2 9/32

① 1/4" O.D. compression connection. Fittings are not supplied. To order, refer to List Price Schedule.
② See dimensions.
③ Other mesh sizes may be available; *consult ASCO.*
④ Where pressure exceeds 50 psi, it is advisable to use hose or tubing clamps.
⑤ Metal body strainers are rated for steam at 250 psi maximum pressure and 406°F maximum temperature.
⑥ UL recognized component.
⑦ Strainer supplied with FKM seal.

Features

- Solid state electronic timer used to automatically control ASCO solenoid valves
- Typically used with ASCO Solenoid Valves for automatic draining of condensate in compressed air systems
- Selectable timing ranges (2-40 seconds "on"; 30 seconds to 45 minutes "off")
- Manual override for test/reset
- LED lights to indicate timing phase

Technical Specifications

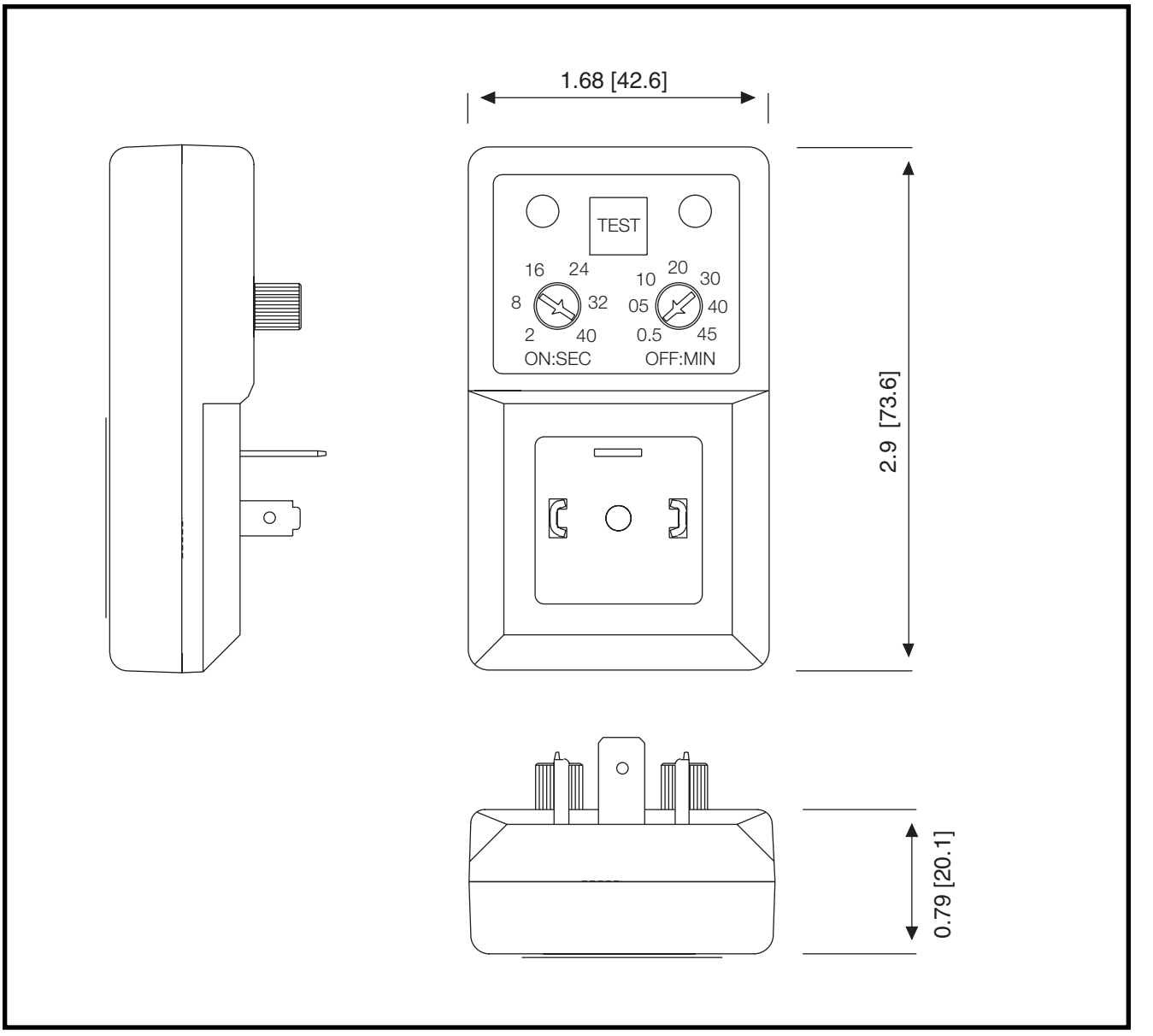
Supply Voltage	24 - 240V AC/DC 50/60 Hz
Current Consumption	4 mA max.
Operating Temperature	14°F - 122°F
Environmental Protection	Type 4
Switch Capacity	1 Amp
Inrush Current Capacity	10 Amps for 10 mSec
Duty Cycle	100%
Repeat Accuracy	± 0.1%
Scale Accuracy	± 10%
Reset/Test	Manual Touch Switch
Printed Circuit Board	UL 94V0
Connection	DIN 43650 ISO-4400/6952
Indicators	LEDs to indicate phases
On Time	Adjustable from 2 to 40 sec.
Off Time	Adjustable from 30 sec to 45 min.

Timer and Accessories Kit Numbers

Timer Catalog Number:	272839-001 272839-009**
Power Cord* Kit Number:	272852
DIN Connector Kit Number:	272873

* 6' power cord has DIN connector and 3-prong plug for wall outlet.
** For use with DIN 11 CDV Assemblies.

Dimensions inches (mm)



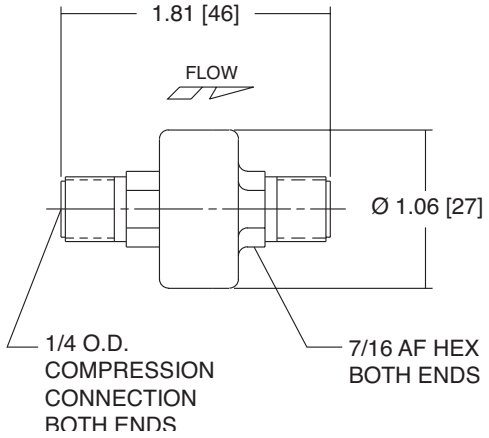
Specifications (Metric units)

Pipe Size (in)	Kv Flow Factor (m^3/h)	Screen Mesh Size ③	Total Free Hole Area (mm^2)	Particle Retention Size ③		Blow-Off Pipe Size (in)	Max. Fluid Temp. °C ⑤	Safe Working Pressure (bar) ⑤	Catalog Number	Const. Ref.	Dimensions (mm)	
				Microns	Inches						A	B
PLASTIC BODY (CA) with Stainless Steel Strainer Element and NBR Seals												
①	.43	80x80	75	178	.007	-	54	3	8604 004	1	②	②
① ④	.43	80x80	75	178	.007	-	54	12	8604 002	1	②	②
FORGED BRASS BODY with Stainless Steel Strainer Element and PTFE or FPM Seals ⑧												
1/8	.86	60x60	210	155	.0061	-	204	52	8600A001 ⑥ ⑦	2	34	51
1/4	1.5	60x60	210	155	.0061	-	204	52	8600A002 ⑥ ⑦	2	34	51
3/8	1.6	100x100	226	140	.0055	-	204	52	8600A013 ⑥	2	41	48
1/2	2.2	100x100	323	140	.0055	-	204	52	8600A014 ⑥	2	46	58
3/4	4.0	100x100	484	140	.0055	-	204	52	8600A015 ⑥	2	53	70
STAINLESS STEEL BODY with Stainless Steel Strainer Element and PTFE Seals												
3/8	1.8	60x60	148	250	.0098	1/4	232	103	8601 004	2	47	48
1/2	2.6	60x60	226	250	.0098	1/4	232	103	8601 005	2	51	58

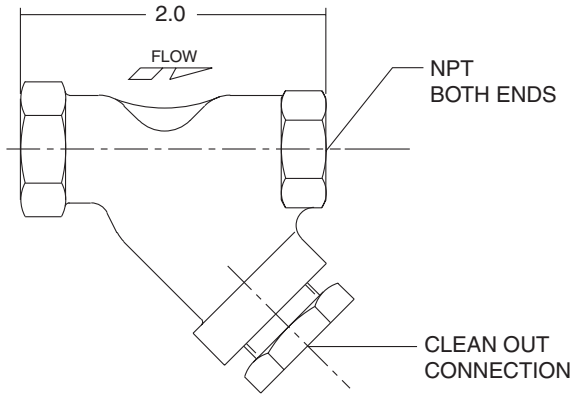
① 1/4" O.D. compression connection. Fittings are not supplied. To order, refer to List Price Schedule.
② See dimensions.
③ Other mesh sizes may be available; *consult ASCO*.
④ Where pressure exceeds 3.4 bar, it is advisable to use hose or tubing clamps.
⑤ Metal body strainers are rated for steam at 17 bar maximum pressure and 208°C maximum temperature.
⑥ UL recognized component.
⑦ Strainer supplied with FKM seal.

Dimensions inches (mm)

Const. Ref. 1



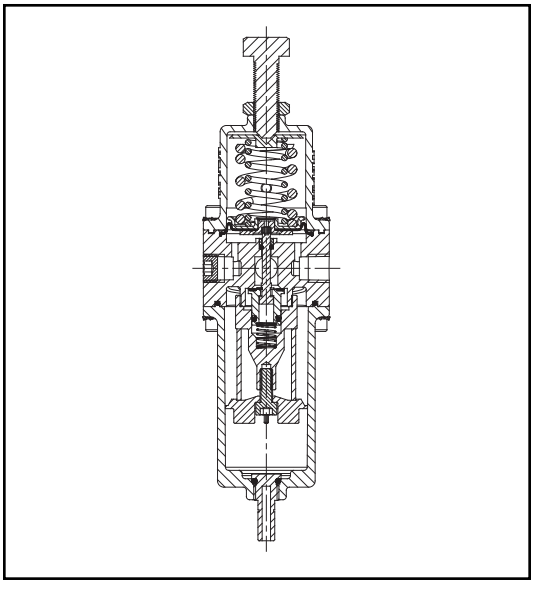
Const. Ref. 2



ACCESSORIES

Features

- Heavy duty 316L stainless steel construction, internal and external, for use in corrosive environments
- Suitable for use in potentially explosive atmospheres per ATEX directive 94/9/EC
- SIL 2 Certified per IEC 61508
- Compliant with NACE MR 0175 requirements
- High flow design and better control on regulation
- Built-in overpressure relieving function
- Manual and auto-drain constructions available



General

Media	Compressed Air, Sour Gas
Inlet/Outlet Port	1/4" NPT - 1/2" NPT
Gauge Port	1/4" NPT
Pressure Relief Port	1/8" NPT
Maximum Supply Pressure	290 PSI
Adjustable Pressure	7 - 145 PSI
Hysteresis	< 2.9 PSI

Construction

	Standard	**Nace**
Body	316L Stainless Steel	
Bowl	316L Stainless Steel	
Filtering Element	316L Stainless Steel	
Diaphragm and Seal	FKM	
Springs	17-7 PH Stainless Steel	Inconel

Spare Parts Kits

25 Microns - 1/4" & 1/2"	C325305*
5 Microns - 1/4" & 1/2"	C325307*
Stainless Steel Gauge	C325316
Mounting Bracket	C117813

*Spare parts kits include: o-rings, seal, diaphragm assembly, and filter element.

Options

Auto drain with 1/8" NPT connection (AN)
Low Ambient Temperature: - 58˚F (- 50˚C) (Suffix LT)
Stainless Steel Gauge: 0 – 160 PSI (0 – 11 Bar) (Suffix G)
Stainless Steel Gauge for 58˚F (-50˚C) service (Suffix LTG)
Mounting Bracket (Suffix MB)

Nominal Ambient Temp. Ranges

Standard: - 40˚F to 176˚F (- 40˚C to 80˚C)
Optional (Suffix LT): - 58˚F to 176˚F (- 50˚C to 80˚C)

Ordering

Standard Ambient Version: 342A8401GMB
Low Temperature Version: 342A8401LTGMB
Auto Drain: 342A8401ANGMB

Approvals

ATEX II 2G/D c IIC X T100˚C (T5)
ZONE 1-21
Explosion group IIC
SIL 2 certified per EIC 61508

Air Service Equipment

Filter and Regulator

316L Stainless Steel
1/4" and 1/2" NPT

Specifications (English Units)

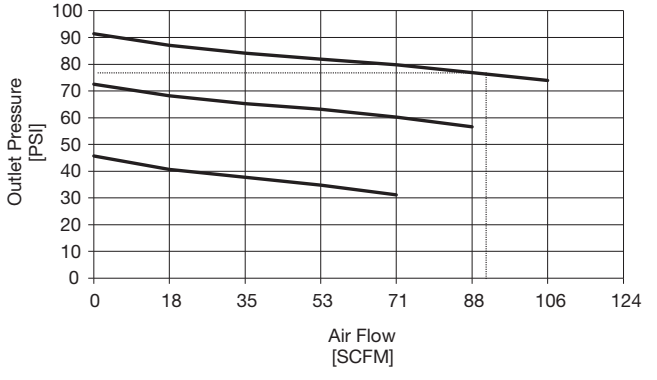
Pipe Size (in)	Bowl Capacity (oz)	Filter Capacity (µm)	Max. Flow @ 90 psi and 14 psi Drop (SCFM)	Adjustable Pressure (psi)	Min. Ambient Temp (°F)	Max. Ambient Temp (°F)	Manual Drain	
							STD	NACE
25 Micron - Self-Relieving								
1/4	3.3	25	90	7-145	- 40	176	342A8401	342A8421
1/2	3.3	25	156	7-145	- 40	176	342A8403	342A8423
5 Micron - Self-Relieving								
1/4	3.3	5	84	7-145	- 40	176	342A8405	342A8425
1/2	3.3	5	116	7-145	- 40	176	342A8407	342A8427
25 Micron - Non-Relieving								
1/4	3.3	25	90	7-145	- 40	176	342A8001	342A8021
1/2	3.3	25	156	7-145	- 40	176	342A8003	342A8023
5 Micron - Non-Relieving								
1/4	3.3	5	84	7-145	- 40	176	342A8005	342A8025
1/2	3.3	5	116	7-145	- 40	176	342A8007	342A8027

Specifications (Metric Units)

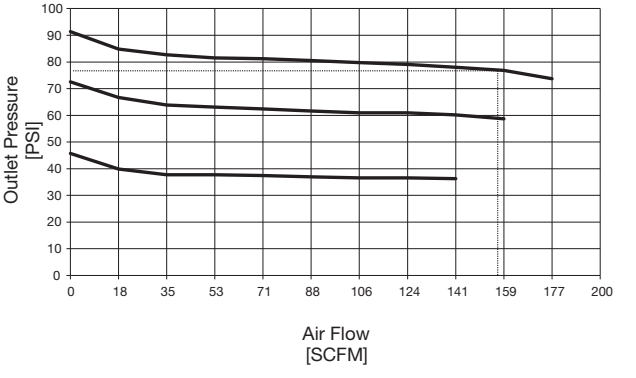
Pipe Size (in)	Bowl Capacity (cm^3)	Filter Capacity (µm)	Max. Flow @ 6 bar and 1 bar Drop (l/m)	Adjustable Pressure (bar)	Min. Ambient Temp (°C)	Max. Ambient Temp (°C)	Manual Drain	
							STD	NACE
25 Micron - Self-Relieving								
1/4	98	25	2540	0.5-10	- 40	80	342A8401	342A8421
1/2	98	25	4430	0.5-10	- 40	80	342A8403	342A8423
5 Micron - Self-Relieving								
1/4	98	5	2380	0.5-10	- 40	80	342A8405	342A8425
1/2	98	5	3290	0.5-10	- 40	80	342A8407	342A8427
25 Micron - Non-Relieving								
1/4	98	25	2540	0.5-10	- 40	80	342A8001	342A8021
1/2	98	25	4430	0.5-10	- 40	80	342A8003	342A8023
5 Micron - Non-Relieving								
1/4	98	5	2380	0.5-10	- 40	80	342A8005	342A8025
1/2	98	5	3290	0.5-10	- 40	80	342A8007	342A8027

Flow Charts

1/4" NPT

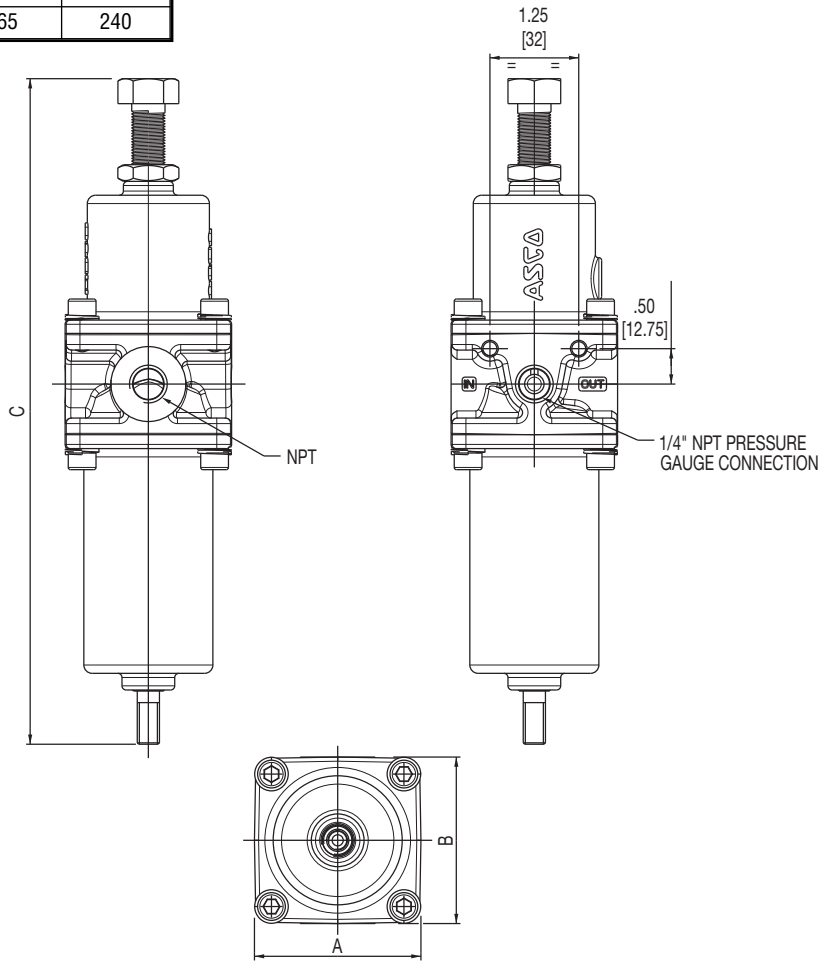


1/2" NPT

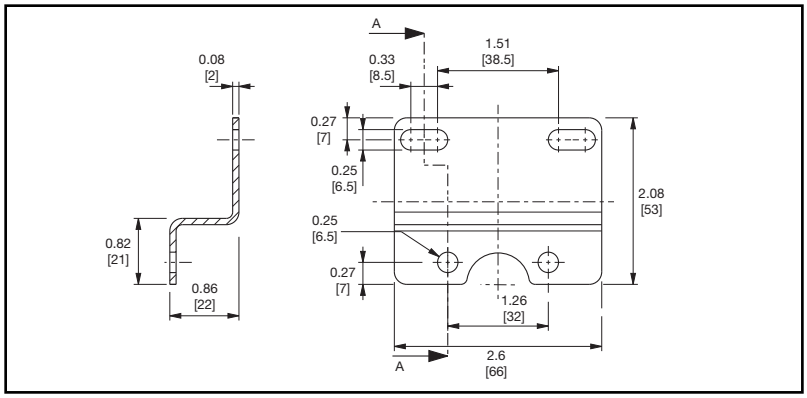


Dimensions English (Metric)

NPT		A	B	C
1/4	in	2.36	2.36	9.4
	mm	60	60	240
1/2	in	2.36	2.6	9.4
	mm	60	65	240



Mounting Bracket



ACCESSORIES

Solenoid Valve Terminology

Bleed-orifice or Bleed Hole
Small orifice or channel, most often located in the diaphragm or piston of pilot-operated valves, to allow the inlet flow to pressurize the top side of the diaphragm or piston.

Bonnet
Screwed plug or bolted cover on the valve body, on which the core tube with inner parts is fitted.

Coil
Electrical part of the valve consisting of a spool wound with insulated copper wire which creates a magnetic flux when energized.

Core
The soft-magnetic stainless steel part of the solenoid which is moved by magnetic forces (flux generated by the coil).

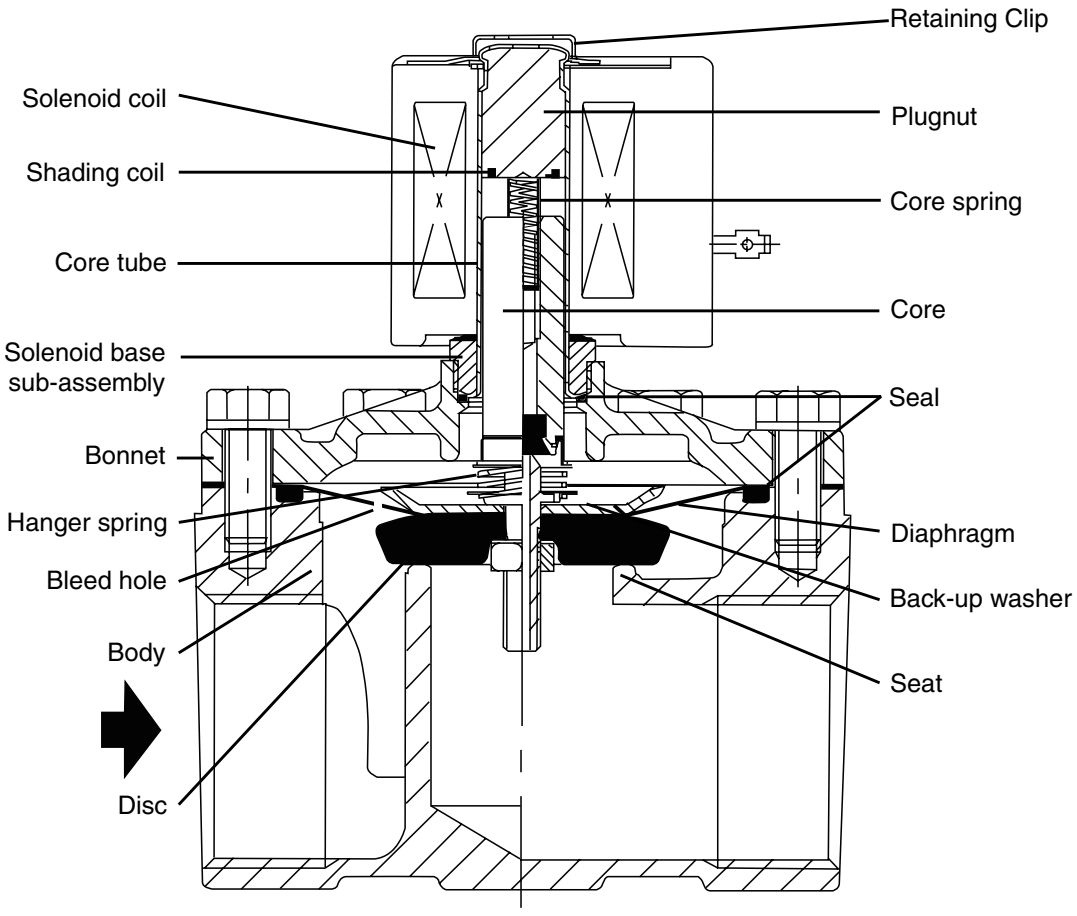
Core Spring
Spring which returns the core to the original position when the coil is de-energized.

Core Tube
Stainless steel tube, closed at one end, which isolates the media in the valve from the external solenoid parts.

Disc, Valve Disc
Sealing material on the core or disc-holder, which shuts off the seat orifice.

Disc-holder
Valve part, actuated by the core, in which a sealing disc is inserted.

Main Orifice
Principle passage between inlet and outlet of the valve.



Maximum Ambient Temperature

The nominal maximum ambient temperatures listed are based primarily on test conditions in determining safe limits for coil insulation. They are energized conditions, with maximum fluid temperatures existing in the valve.

Maximum Operating Pressure Differential (M.O.P.D.)

The maximum operating pressure differential refers to the difference in pressure between the inlet and the outlet sides of the valve, against which the solenoid can safely operate. If the pressure at the valve outlet is not known, the conservative approach is to regard the supply pressure as the M.O.P.D.

Minimum Ambient Temperature

The nominal limitation of 32°F (0°C) is advisable for any valve that might contain moisture (water vapor). Where freezing water is not a factor, minimum ambients as low as -4°F (-20°C) can be tolerated. In addition, special constructions are available for ambient temperatures down to -40˚F (-40˚C). *Consult your local ASCO sales office with your specific needs.*

Minimum Operating Pressure Differential

The minimum operating pressure differential is that which is required to open the valve and keep it open. For 2-way valves with floating piston or diaphragm, the valve will start to close below the minimum differential pressure.

Note: Direct acting hung diaphragm or hung piston valves do not require a minimum operating pressure.

For 3- and 4-way pilot valves, the minimum operating pressure is measured between the pressure and exhaust ports and must be maintained throughout the operation cycle to ensure complete transfer from one position to the other.

Pilot Orifice

Orifice located in the center of a diaphragm or piston, or in the pilot area of pilot-operated valves, opened or closed by the core.

Plugnut

Stationary soft magnetic stainless part, pressed in the closed end of the core tube, installed to improve the magnetic flux of the solenoid coil when energized.

Response Time

This is the time lapse after energizing (or de-energizing) a solenoid valve until the outlet pressure reaches a specific percentage of its maximum steady value, the outlet being connected to a circuit having specified flow parameters. Response time depends on five factors:

1. Electrical supply: AC or DC.
2. Fluid handled by the valve, viscosity and pressure level.
3. Type of operation: direct or pilot operated.
4. Size of the moving parts of the valve mechanism.
5. Circuit in which the time is measured.

Seating or Valve Seat

Geometry within valve that creates internal seal.

Shading Coil

Ring (typically copper) inserted in the core-side surface of the plugnut to limit core vibration in AC-powered solenoids.

Solenoid Base Sub-assembly

Assembly of core tube, plugnut, and bonnet.

Solenoid

Electromagnetic part of a valve, comprised of a coil, core tube, core, and enclosure.

Solenoid Construction

Internal parts in contact with the fluid are made of non-magnetic 300 and magnetic 400 Series stainless steel. In AC constructions, the shading coil is copper, except for valves in which silver is used. Other materials are available, when required. Generally, no shading coil is used in DC valves. The core tube in ASCO valves is 300 Series stainless steel and formed by deep drawing.

Solenoid Enclosure

Housing around the coil for electrical and mechanical protection, as well as protection against environmental hazards.

Valve Body

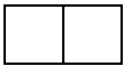
Main part of the valve, in which ports and main seats are located.

The function of a valve is shown by two figures. The first shows the number of ports, the second shows the number of valve positions (pilot ports do not count).

Example: 4/2 = 4 ports, 2 positions (open or closed).

The symbol for a valve has the same number of squares as the valve has positions.

Example: 2 positions =



Arrows in the squares show the flow direction of the fluid.

Examples: One flow path =

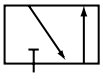
Two flow paths =

T-lines in the squares show the number of closed ports.

Example:

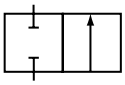
Two flow paths and one closed port.

Example:

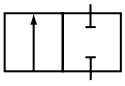


In this catalog, the vast majority of valves listed have only two positions, in which the right-hand square shows the valve unoperated and the left-hand square shows the valve operated.

Normally Open (NO)
Example:



Normally Closed (NC)
Example:



Normally, the pipework is shown connected to the square representing the valve unoperated.

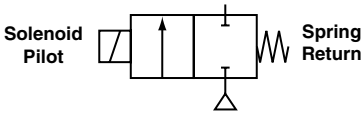
Symbols Showing Connections to Ports:
Exhaust that cannot be piped:

Exhaust that can be piped:

Connected to pressure source:

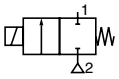
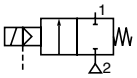
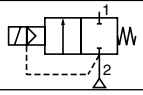
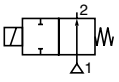
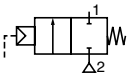
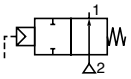
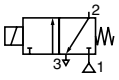
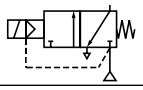
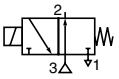
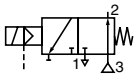
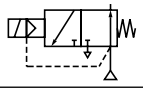
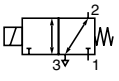
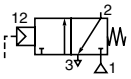
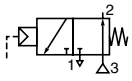
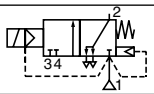
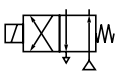
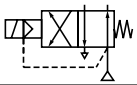
The methods of controlling the valve are shown as an addition to the squares. The left-hand side control shows the pilot (i.e. solenoid) and the right-hand side control shows the return pilot method (i.e. spring).

Example:



ISO Symbols
According to ISO-1219

ISO Symbols for Valves Included in This Catalog:

Ports/Positions	Function	Pilot	Return Pilot	Symbol
2/2	NC	Solenoid	Spring	
2/2	NC	Solenoid/Ext. Pressure	Spring	
2/2	NC	Solenoid/Int. Pressure	Spring	
2/2	NO	Solenoid	Spring	
2/2	NC	Ext. Pressure	Spring	
2/2	NO	Ext. Pressure	Spring	
3/2	NC	Solenoid	Spring	
3/2	NC	Solenoid/Int. Pressure	Spring	
3/2	NO	Solenoid	Spring	
3/2	NO	Solenoid/Ext. Pressure	Spring	
3/2	NO	Solenoid/Int. Pressure	Spring	
3/2	U	Solenoid	Spring	
3/2	NC	Ext. Pressure	Spring	
3/2	NO	Ext. Pressure	Spring	
3/2 – (4/2)	NC	Solenoid/Int. Pressure	Spring	
4/2	-	Solenoid	Spring	
4/2	-	Solenoid/Int. Pressure	Spring	

Selecting and Ordering the Right Valve

This catalog is designed to make it easier to select and order the right valve for your application from the world's leading manufacturer of solenoid and air operated valves.

To assist in selecting the proper valve for your application, we recommend two approaches. First, if you know the valve series that meets your needs, you can go directly to the appropriate page as listed in the Numerical Listing, or the Main Index. If you do not know the proper valve Series, please refer to the Condensed Listing, which provides an overview of key specifications for all General Service valves included in this catalog. This listing is organized by valve type and operation, then indexed by pipe size, flow factor, and other vital specifications.

If you are unable to locate the desired valve in the Condensed Listing, refer to the individual valve series in the main catalog for a more complete listing.

In order to select a valve, you will need the following application information:

Valve Type	2-Way, 3-Way, 4-Way
Operation	Normally Open, Normally Closed, Universal
Pipe Size	Pipe size or flow requirement
Media	Fluid to be controlled
Pressure	Minimum and maximum operating pressure
Temperature	Minimum and maximum fluid and ambient temperature (if unusual, contact technical support)
Voltage	Voltage and frequency to be used
Extras	Special seals, special seats, brackets, etc.

Once you have determined the above application information, the next steps can navigate you to the appropriate valve in this catalog:

Turn to the Condensed Listing section relevant to the **VALVE TYPE** and **OPERATION** you are looking for (Example: 2-Way, Normally Closed).

Locate the family of valves corresponding to the **PIPE SIZE** of the valve desired (Example: 1/8").

Select the applicable **MEDIA** and relevant **PRESSURE** rating in the "Operating Pressure Differential" column for AC or DC, respectively (Example: 300 psi for water, maximum AC).

If the field of possible valves has not been narrowed to one valve at this point, the Cv Flow Factor, Orifice Size, Maximum Fluid Temperature, or Watt Rating (power consumption) may then be used as additional deciding factors.

After the proper valve Catalog Number has been identified, refer to the "Page No." column to find more specifications on any given valve Series (Example: 8210 Series).

After you have made your selection, order by catalog number with its appropriate prefix or suffix, voltage and frequency. If necessary, include fluid handled, and the operating pressure of your application. We strongly recommend ordering strainers for your valves.

Example:

For an 8210G002 valve with an Explosionproof enclosure to control 100 psi air in a hazardous area, order:

Option Prefix and Catalog Number: EF8210G002

Voltage and Frequency: 120/60

Fluid: Air

Pressure: 100 psi

Note that Type 7 Explosionproof enclosures do not require a different catalog number. Simply add the prefix "EF."

ASCO TODAY 5DAY

Guaranteed Same Day Shipment Program

Over 2000 of today's most popular products are now available for same day shipment and over 40,000 products can be shipped within five business days. These valves are manufactured in facilities certified to meet ISO international quality standards and are 100% tested.

World Class Support

ASCO's sales and service organization is staffed by factory-trained sales engineers. They are highly qualified to verify that your selection is best for your application or to help with your selection. They can also help customize an ASCO valve to meet unique application requirements or help you contact your local Authorized Valve Distributor.

For additional technical assistance, contact technical support by calling **(973) 966-2082** or email **Techsales@asco.com**. The Technical Support Group is available to assist in all aspects of your application or product related matters.

*Visit us online at **www.ascovalve.com** to see our comprehensive product portfolio, online product configurators, and our complete listing of ASCO Today and 5Day products.*

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2-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
				Maximum AC			Maximum DC								
			Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
NORMALLY CLOSED (Closed when de-energized)															
1/8	3/64	0.05	0	500	500	400	360	360	330	180	180	U8256A001V	BRASS	6.3/F	6.9/F
1/8	3/64	0.05	0	500	500	400	360	360	330	180	180	U8256A013V	SS	6.3/F	6.9/F
1/8	3/64	0.06	0	750	750	530	650	640	550	180	120	**8262G001***	BRASS	6.1/F	10.6/F
1/8	3/64	0.06	0	750	750	530	650	640	550	180	120	8262G012	SS	6.1/F	10.6/F
1/8	1/16	0.08	0	400	390	230	220	220	220	180	180	**U8256A002V***	BRASS	6.3/F	6.9/F
1/8	1/16	0.08	0	400	390	230	220	220	220	180	180	U8256A014V	SS	6.3/F	6.9/F
1/8	3/32	0.15	0	180	180	105	90	90	90	180	180	U8256A004V	BRASS	6.3/F	6.9/F
1/8	3/32	0.15	0	180	180	105	90	90	90	180	180	U8256A016V	SS	6.3/F	6.9/F
1/8	3/32	0.2	0	275	290	130	150	140	145	180	120	**8262G014***	BRASS	6.1/F	10.6/F
1/8	3/32	0.2	0	275	290	130	150	140	145	180	120	8262G015	SS	6.1/F	10.6/F
1/8	7/64	0.19	0	135	126	80	63	63	63	180	180	**U8256B045V***	BRASS	6.3/F	6.9/F
1/8	7/64	0.19	0	135	126	80	63	63	63	180	180	**U8256B046V***	SS	6.3/F	6.9/F
1/8	1/8	0.34	0	155	180	140	80	80	80	180	120	**8262G002***	BRASS	6.1/F	10.6/F
1/8	1/8	0.34	0	155	180	140	80	80	80	180	120	**8262G006***	SS	6.1/F	10.6/F
1/8	5/16	1	0	15	-	-	-	-	-	125	-	**8040H006***	ALUM	6.1/F	-
1/4	3/64	0.06	0	750	750	500	500	500	500	180	120	**8262G019***	BRASS	6.1/F	10.6/F
1/4	3/64	0.06	0	750	750	500	500	500	500	180	120	**8262G080***	SS	6.1/F	10.6/F
1/4	3/64	0.06	0	1500	1500	1100	475	475	450	140	140	**8262G200***	BRASS	10.1/F	11.6/F
1/4	3/64	0.06	0	2200	2000	1100	-	-	-	140	140	**8262G214***	SS	10.1/F	-
1/4	3/32	0.17	0	360	340	160	150	125	125	180	120	**8262G020***	BRASS	6.1/F	10.6/F
1/4	3/32	0.17	0	360	340	160	150	125	125	180	120	**8262G086***	SS	6.1/F	10.6/F
1/4	1/8	0.35	0	140	165	90	65	60	60	180	120	**8262G022***	BRASS	6.1/F	10.6/F
1/4	1/8	0.35	0	140	165	90	65	60	60	180	120	**8262G007***	SS	6.1/F	10.6/F
1/4	1/8	0.35	0	300	300	200	75	70	70	180	150	**8262G232***	BRASS	10.1/F	11.6/F
1/4	9/64	0.35	0	120	120	-	50	50	-	130	120	**8260G071***	PLAST	6.1/F	10.6/F
1/4	9/64	0.35	0	120	120	-	50	50	-	130	120	**8260G054***	PLAST	6.1/F	10.6/F
1/4	9/64	0.35	0	120	120	-	50	50	-	130	120	8260G042	PLAST	6.1/F	10.6/F
1/4	5/32	0.5	0	180	200	145	40	40	45	180	150	**8262G202***	BRASS	10.1/F	11.6/F
1/4	5/32	0.5	0	180	200	145	40	40	45	180	150	**8262G220***	SS	10.1/F	11.6/F
1/4	7/32	0.72	0	90	100	100	25	25	25	180	150	**8262G208***	BRASS	10.1/F	11.6/F
1/4	7/32	0.72	0	90	100	100	25	25	25	180	150	**8262G226***	SS	10.1/F	11.6/F
1/4	7/32	0.85	0	40	50	40	17	20	21	180	120	**8262G013***	BRASS	6.1/F	10.6/F
1/4	7/32	0.85	0	40	50	40	17	20	21	180	120	**8262G036***	SS	6.1/F	10.6/F
1/4	9/32	0.88	0	60	75	60	18	15	18	180	150	**8262G210***	BRASS	10.1/F	11.6/F
1/4	9/32	0.88	0	90	100	90	25	20	22	180	150	**8262G212***	BRASS	17.1/F	22.6/F
1/4	9/32	0.88	0	90	100	90	25	20	22	180	150	**8262G230***	SS	17.1/F	22.6/F
1/4	9/32	0.96	0	27	36	28	15	16	16	180	120	**8262G090***	BRASS	6.1/F	10.6/F
1/4	9/32	0.96	0	27	36	28	15	16	16	180	120	**8262G038***	SS	6.1/F	10.6/F
1/4	5/16	1.5	10	750	750	750	-	-	-	200	-	**8223G021***	BRASS	10.1/F	-
1/4	5/16	1.5	10	1500	1500	1500	500	500	500	200	150	**8223G025***	BRASS	17.1/F	22.6/F
1/4	5/16	1.1	0	15	-	-	-	-	-	125	-	**8040H007***	ALUM	6.1/F	-
3/8	1/8	0.35	0	160	150	90	65	60	60	180	120	**8263G002***	BRASS	6.1/F	10.6/F
3/8	1/8	0.35	0	160	150	90	65	60	60	180	120	**8263G330***	SS	6.1/F	10.6/F
3/8	5/32	0.52	0	100	100	100	35	35	35	180	150	**8263G200***	BRASS	10.1/F	11.6/F
3/8	5/32	0.52	0	100	100	100	35	35	35	180	150	**8263G331***	SS	10.1/F	11.6/F
3/8	7/32	0.72	0	100	100	100	25	25	25	180	150	**8263G206***	BRASS	17.1/F	11.6/F
3/8	7/32	0.72	0	100	100	100	25	25	25	180	150	8263G332	SS	17.1/F	11.6/F
3/8	9/32	0.85	0	100	100	70	-	-	-	180	-	**8263G210***	BRASS	17.1/F	-
3/8	9/32	0.85	0	100	100	70	-	-	-	180	-	**8263G333***	SS	17.1/F	-
3/8	5/16	1.5	10	750	750	750	400	400	400	200	150	**8223G023***	BRASS	10.1/F	22.6/F
3/8	5/16	1.5	10	1500	1500	1500	500	500	500	200	150	**8223G027***	BRASS	17.1/F	22.6/F
3/8	5/16	1.2	0	15	-	-	-	-	-	125	-	**8040H008***	ALUM	6.1/F	-
3/8	3/8	1.5	②	150	125	-	40	40	-	180	150	**8210G073***	BRASS	6.1/F	11.6/F
3/8	3/8	1.5	②	150	125	-	40	40	-	180	150	**8210G036***	SS	6.1/F	11.6/F
3/8	3/8	1.8	0	7	5	-	3	3	-	180	120	**8030G010***	BRASS	6.1/F	10.6/F
3/8	3/8	1.8	0	7	5	-	3	3	-	180	120	8030G064	SS	6.1/F	10.6/F
3/8	3/8	1.8	0	15	15	-	3.5	3.5	-	180	150	**8030G013***	BRASS	10.1/F	11.6/F
3/8	3/8	1.8	0	15	15	-	3.5	3.5	-	180	150	**8030G065***	SS	10.1/F	11.6/F
3/8	9/16	3	5	-	150	-	-	125	-	180	150	**8221G001***	BRASS	6.1/F	11.6/F
3/8	5/8	3	0	150	150	-	40	40	-	180	150	**8210G093***	BRASS	10.1/F	11.6/F
3/8	5/8	3	5	200	150	135	125	100	100	180	150	**8210G001***	BRASS	6.1/F	11.6/F
3/8	5/8	3	5	300	300	300	-	-	-	175	-	**8210G006***	BRASS	17.1/F	-
3/8	3/4	3.4	0	50	-	-	25	-	-	125	104	**8215G010***	ALUM	10.1/F	11.6/F

① See specific valve series for detailed specifications. ② 5 psi on air, 1 psi on water. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

2-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
				Maximum AC			Maximum DC								
			Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
3/8	3/4	3.5	5	125	-	-	125	-	-	125	104	**8215G001***	ALUM	6.1/F	11.6/F
1/2	3/8	3.2	25	1500	1500	1500	500	500	500	200	150	**8223G003***	BRASS	17.1/F	22.6/F
1/2	3/8	3.2	25	1500	1500	1500	500	500	500	200	150	**8223G010***	SS	17.1/F	22.6/F
1/2	7/16	2.2	②	150	125	-	40	40	-	180	150	**8210G015***	BRASS	6.1/F	11.6/F
1/2	7/16	2.2	②	150	125	-	40	40	-	180	150	**8210G037***	SS	6.1/F	11.6/F
1/2	7/16	2.8	0	4	6	-	-	-	-	180	-	**8030G016***	BRASS	6.1/F	-
1/2	7/16	2.8	0	4	6	-	-	-	-	180	-	**8030G066***	SS	6.1/F	-
1/2	7/16	2.8	0	15	15	-	-	-	-	200	-	**8030G017***	BRASS	16.1/F	-
1/2	7/16	2.8	0	15	15	-	-	-	-	200	-	8030G067	SS	16.1/F	-
1/2	9/16	3.5	5	-	150	-	-	125	-	180	150	**8221G003***	BRASS	6.1/F	11.6/F
1/2	5/8	4	0	150	150	-	40	40	-	180	150	**8210G094***	BRASS	10.1/F	11.6/F
1/2	5/8	4	0	150	150	125	40	40	-	175	150	**8210G087***	SS	17.1/F	11.6/F
1/2	5/8	4	5	200	150	135	125	100	100	180	150	**8210G002***	BRASS	6.1/F	11.6/F
1/2	5/8	4	5	300	300	300	-	-	-	175	-	**8210G007***	BRASS	17.1/F	-
1/2	3/4	4	5	-	300	-	-	300	-	180	125	**8210G227***	BRASS	17.1/F	40.6/H
1/2	3/4	4.4	0	50	-	-	25	-	-	125	104	**8215G020***	ALUM	10.1/F	11.6/F
1/2	3/4	4.8	5	125	-	-	125	-	-	125	104	**8215G002***	ALUM	6.1/F	11.6/F
1/2	3/4	5.4	0	2	-	-	-	-	-	125	-	**8040G022***	ALUM	10.1/F	-
3/4	5/8	4.5	0	150	150	125	40	40	-	175	150	**8210G088***	SS	17.1/F	11.6/F
3/4	5/8	5.4	0	2.5	2.5	-	-	-	-	180	-	8030G063	SS	10./F	-
3/4	3/4	5	0	2	2	-	1	1	-	180	150	**8030G003***	BRASS	10.1/F	11.6/F
3/4	3/4	5	0	4	4	-	-	-	-	180	-	**8030G043***	BRASS	17.1/F	-
3/4	3/4	5	0	150	150	-	40	40	-	180	150	**8210G095***	BRASS	10.1/F	11.6/F
3/4	3/4	5	5	125	125	125	100	90	75	180	150	**8210G009***	BRASS	6.1/F	11.6/F
3/4	3/4	5.1	0	50	-	-	25	-	-	125	104	**8215G030***	ALUM	10.1/F	11.6/F
3/4	3/4	5.1	5	125	-	-	125	-	-	125	104	**8215G003***	ALUM	6.1/F	11.6/F
3/4	3/4	5.5	5	-	150	-	-	125	-	180	150	**8221G005***	BRASS	6.1/F	11.6/F
3/4	3/4	6	0	-	-	-	200	180	180	-	77	**8210B026***	BRASS	-	30.6/H
3/4	3/4	6	0	350	300	200	-	-	-	200	77	**8210G026***	BRASS	16.1/F	-
3/4	3/4	6.5	5	250	150	100	125	125	125	180	150	**8210G003***	BRASS	6.1/F	11.6/F
3/4	3/4	7.8	25	750	750	750	450	450	450	200	150	**8223G005***	BRASS	17.1/F	22.6/F
3/4	3/4	7.8	25	750	750	750	450	450	450	200	150	8223G012	SS	17.1/F	22.6/F
3/4	3/4	9.5	0	2	-	-	-	-	-	125	-	**8040G023***	ALUM	10.1/F	-
1	1	11.5	5	-	150	-	-	125	-	180	150	**8221G007***	BRASS	6.1/F	11.6/F
1	1	13	0	-	-	-	100	100	80	-	77	**8210B054***	BRASS	-	30.6/H
1	1	13	0	-	-	-	100	100	80	-	77	**8210D089***	SS	-	30.6/H
1	1	13	0	150	125	125	-	-	-	180	-	**8210G054***	BRASS	16.1/F	-
1	1	13	0	150	125	125	-	-	-	180	-	**8210G089***	SS	16.1/F	-
1	1	13	5	150	150	100	125	125	125	180	150	**8210G004***	BRASS	6.1/F	11.6/F
1	1	13.5	0	300	225	115	-	-	-	200	-	**8210G027***	BRASS	20.1/F	-
1	1	13.5	10	300	300	300	-	-	-	175	-	**8210G078***	BRASS	17.1/F	-
1	1 5/8	21	0	25	-	-	25	-	-	125	77	**8215B050***	ALUM	15.4/F	14.9/B
1 1/4	1 1/8	13	5	-	150	-	-	125	-	180	150	**8221G009***	BRASS	6.1/F	11.6/F
1 1/4	1 1/8	15	0	-	-	-	100	100	80	-	77	**8210B055***	BRASS	-	30.6/F
1 1/4	1 1/8	15	0	150	125	125	-	-	-	180	77	**8210G055***	BRASS	16.1/F	-
1 1/4	1 1/8	15	5	150	150	100	125	125	125	180	150	**8210G008***	BRASS	6.1/F	11.6/F
1 1/4	1 5/8	32	0	25	-	-	25	-	-	125	77	**8215B060***	ALUM	15.4/F	14.9/B
1 1/2	1 1/4	22.5	0	-	-	-	100	100	80	-	77	**8210B056***	BRASS	-	30.6/F
1 1/2	1 1/4	22.5	0	150	125	125	-	-	-	180	-	**8210G056***	BRASS	16.1/F	-
1 1/2	1 1/4	22.5	5	150	150	100	125	125	125	180	150	**8210G022***	BRASS	6.1/F	11.6/F
1 1/2	1 1/4	24	5	-	150	-	-	125	-	180	150	**8221G011***	BRASS	6.1/F	11.6/F
1 1/2	1 5/8	35	0	25	-	-	25	-	-	125	77	8215B070	ALUM	15.4/F	14.9/B
2	1 3/4	36	5	-	150	-	-	125	-	180	150	**8221G013***	BRASS	6.1/F	22.6/F
2	1 3/4	43	5	150	125	90	50	50	50	180	150	**8210G100***	BRASS	6.1/F	11.6/F
2	2 3/32	60	0	25	-	-	15	-	-	125	77	**8215B080***	ALUM	15.4/F	14.9/B
2 1/2	1 3/4	38	5	-	150	-	-	125	-	180	150	**8221G015***	BRASS	6.1/F	22.6/F
2 1/2	1 3/4	45	5	150	125	90	50	50	50	180	150	**8210G101***	BRASS	6.1/F	11.6/F
2 1/2	3	117	0	5	-	-	-	-	-	125	-	**8215A090***	ALUM	28.2/F	-
3	3	138	0	5	-	-	-	-	-	125	-	**8215A040***	ALUM	28.2/F	-
NORMALLY OPEN (Open when de-energized)															
1/8	1/16	.09	0	500	300	225	400	250	150	180	120	**8262G091***	BRASS	6.1/F	10.6/F
1/8	1/16	.09	0	500	300	225	400	250	150	180	120	8262G092	SS	6.1/F	10.6/F
1/8	3/32	.15	0	275	200	150	190	110	110	180	120	8262G093	BRASS	6.1/F	10.6/F
1/8	3/32	.15	0	275	200	150	190	110	110	180	120	8262G094	SS	6.1/F	10.6/F
1/8	1/8	.21	0	125	100	85	80	60	50	180	120	**8262G031***	BRASS	6.1/F	10.6/F

① See specific valve series for detailed specifications. ② 5 psi on air, 1 psi on water. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

2-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
				Maximum AC			Maximum DC								
			Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
1/8	1/8	0.21	0	125	100	85	80	60	50	180	120	**8262G035***	SS	6.1/F	10.6/F
1/4	3/64	0.06	0	750	700	700	500	500	500	140	140	**8262G260***	BRASS	10.1/F	11.6/F
1/4	3/64	0.06	0	750	700	700	500	500	500	140	140	**8262G130***	SS	10.1/F	11.6/F
1/4	3/32	0.17	0	300	250	230	200	150	125	140	140	**8262G261***	BRASS	10.1/F	11.6/F
1/4	3/32	0.17	0	300	250	230	200	150	125	140	140	**8262G134***	SS	10.1/F	11.6/F
1/4	1/8	0.35	0	130	110	100	80	60	60	180	150	**8262G262***	BRASS	10.1/F	11.6/F
1/4	1/8	0.35	0	130	110	100	80	60	60	180	150	**8262G138***	SS	10.1/F	11.6/F
1/4	5/32	0.49	0	85	75	60	45	30	30	180	150	**8262G263***	BRASS	10.1/F	11.6/F
1/4	5/32	0.49	0	85	75	60	45	30	30	180	150	8262G142	SS	10.1/F	11.6/F
1/4	7/32	0.83	0	45	45	40	25	20	20	180	150	**8262G264***	BRASS	10.1/F	11.6/F
1/4	7/32	0.83	0	45	45	40	25	20	20	180	150	**8262G148***	SS	10.1/F	11.6/F
1/4	9/32	0.96	0	30	25	20	15	15	15	180	150	**8262G265***	BRASS	10.1/F	11.6/F
1/4	9/32	0.96	0	30	25	20	15	15	15	180	150	**8262G152***	SS	10.1/F	11.6/F
3/8	3/8	1.6	0	15	15	-	-	-	-	200	-	8030G070	BRASS	16.1/F	-
3/8	9/16	3	5	-	-	-	-	125	-	-	150	8221 021	BRASS	-	16.8/F
3/8	9/16	3	5	-	150	-	-	-	-	180	-	8221G021	BRASS	16.1/F	-
3/8	5/8	3	0	150	150	125	125	125	80	180	150	**8210G033***	BRASS	10.1/F	11.6/F
3/8	5/8	3	5	250	200	200	250	200	200	180	180	**8210G011***	BRASS	10.1/F	11.6/F
3/8	3/4	3.2	0	125	-	-	125	-	-	125	104	8215G013	ALUM	10.1/F	11.6/F
1/2	7/16	2.2	0	15	15	-	-	-	-	200	-	**8030G071***	BRASS	20.1/F	-
1/2	9/16	3.5	5	-	-	-	-	125	-	-	150	8221 023	BRASS	-	16.8/F
1/2	9/16	3.5	5	-	150	-	-	-	-	180	-	8221G023	BRASS	16.1/F	-
1/2	5/8	3	0	150	150	100	125	125	80	180	150	**8210G030***	SS	10.1/F	11.6/F
1/2	5/8	4	0	150	150	125	125	125	80	180	150	**8210G034***	BRASS	10.1/F	11.6/F
1/2	5/8	4	5	250	200	200	250	200	200	180	180	**8210G012***	BRASS	10.1/F	11.6/F
1/2	3/4	4	0	125	-	-	125	-	-	125	104	**8215G023***	ALUM	10.1/F	11.6/F
1/2	3/4	5	0	2	2	-	-	-	-	180	-	8030G082	BRASS	10.1/F	-
3/4	5/8	3	0	150	150	100	125	125	80	180	150	**8210G038***	SS	10.1/F	11.6/F
3/4	3/4	4.6	0	125	-	-	125	-	-	125	104	**8215G033***	ALUM	10.1/F	11.6/F
3/4	3/4	5.5	5	-	-	-	-	125	-	-	150	8221 025	BRASS	-	16.8/F
3/4	3/4	5.5	5	-	150	-	-	-	-	180	-	8221G025	BRASS	16.1/F	-
3/4	3/4	5.5	0	2	2	-	-	-	-	180	-	**8030G083***	BRASS	10.1/F	-
3/4	3/4	5.5	0	150	150	125	125	125	80	180	150	**8210G035***	BRASS	10.1/F	11.6/F
3/4	3/4	6.5	5	-	-	-	250	200	200	-	180	8210C013	BRASS	-	16.8/F
3/4	3/4	6.5	5	250	200	200	-	-	-	180	-	**8210G013***	BRASS	16.1/F	-
1	1	11.5	5	-	-	-	-	125	-	-	150	8221 027	BRASS	-	16.8/F
1	1	11.5	5	-	150	-	-	-	-	180	-	**8221G027***	BRASS	16.1/F	-
1	1	13	0	125	125	125	-	-	-	180	-	**8210B057***	BRASS	20/F	-
1	1	13	5	-	-	-	125	125	125	-	180	**8210D014***	BRASS	-	16.8/F
1	1	13	5	150	150	125	-	-	-	180	-	**8210G014***	BRASS	16.1/F	-
1	1 5/8	22	0	25	-	-	15	-	-	125	77	**8215C053***	ALUM	15.4/F	14.9/B
1 1/4	1 1/8	13	5	-	-	-	-	125	-	-	150	8221 029	BRASS	-	16.8/F
1 1/4	1 1/8	13	5	-	150	-	-	-	-	180	-	8221G029	BRASS	16.1/F	-
1 1/4	1 1/8	15	0	125	125	125	-	-	-	180	-	8210B058	BRASS	20/F	-
1 1/4	1 1/8	15	5	-	-	-	125	125	125	-	180	8210D018	BRASS	-	16.8/F
1 1/4	1 1/8	15	5	150	150	125	-	-	-	180	-	**8210G018***	BRASS	16.1/F	-
1 1/4	1 5/8	33	0	25	-	-	15	-	-	125	77	**8215C063***	ALUM	15.4/F	14.9/B
1 1/2	1 1/4	22.5	0	125	125	125	-	-	-	180	-	**8210B059***	BRASS	20/F	-
1 1/2	1 1/4	22.5	5	-	-	-	125	125	125	-	180	**8210D032***	BRASS	-	16.8/F
1 1/2	1 1/4	22.5	5	150	150	125	-	-	-	180	-	**8210G032***	BRASS	16.1/F	-
1 1/2	1 1/4	24	5	-	-	-	-	125	-	-	150	8221 031	BRASS	-	16.8/F
1 1/2	1 1/4	24	5	-	150	-	-	-	-	180	-	**8221G031***	BRASS	16.1/F	-
1 1/2	1 5/8	37	0	25	-	-	15	-	-	125	77	**8215C073***	ALUM	15.4/F	14.9/B
2	1 3/4	36	5	-	-	-	-	125	-	-	150	8221 033	BRASS	-	16.8/F
2	1 3/4	36	5	-	150	-	-	-	-	180	-	8221G033	BRASS	16.1/F	-
2	1 3/4	43	5	-	-	-	125	125	125	-	150	**8210 103***	BRASS	-	16.8/F
2	1 3/4	43	5	125	125	125	-	-	-	180	-	**8210G103***	BRASS	16.1/F	-
2	2 3/32	58	0	25	-	-	15	-	-	125	77	**8215C083***	ALUM	15.4/F	14.9/B
2 1/2	1 3/4	38	5	-	-	-	-	125	-	-	150	8221 035	BRASS	-	16.8/F
2 1/2	1 3/4	38	5	-	150	-	-	-	-	180	-	8221G035	BRASS	16.1/F	-
2 1/2	1 3/4	45	5	-	-	-	125	125	125	-	150	8210 104	BRASS	-	16.8/F
2 1/2	1 3/4	45	5	125	125	125	-	-	-	180	-	**8210G104***	BRASS	16.1/F	-
2 1/2	3	117	0	5	-	-	-	-	-	125	-	8215B093	ALUM	28.2/F	-

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

3-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
NORMALLY CLOSED (Closed when de-energized)																	
1/8	3/64	-	0.04	-	0	230	230	230	120	140	135	200	104	8314G031	BRASS	10.1/F	11.6/F
1/8	3/64	-	0.06	-	0	200	200	200	200	200	200	180	120	**8320G132***	BRASS	6.1/F	10.6/F
1/8	3/64	-	0.06	-	0	200	200	200	200	200	200	180	120	8320G142	SS	6.1/F	10.6/F
1/8	3/64	-	0.06	0.06	0	230	235	245	230	235	245	180	180	U8356A001V	BRASS	6.3/F	6.9/F
1/8	3/64	-	0.06	0.06	0	230	235	245	230	235	245	180	180	U8356A013V	SS	6.3/F	6.9/F
1/8	1/16	-	0.09	0.06	0	140	140	150	140	140	150	180	180	U8356A002V	BRASS	6.3/F	6.9/F
1/8	1/16	-	0.09	0.06	0	140	140	150	140	140	150	180	180	U8356A014V	SS	6.3/F	6.9/F
1/8	1/16	-	0.09	-	0	150	125	125	125	125	125	180	120	**8320G013***	BRASS	6.1/F	10.6/F
1/8	1/16	-	0.09	-	0	150	125	125	125	125	125	180	120	8320G045	SS	6.1/F	10.6/F
1/8	3/32	-	0.13	0.06	0	75	72	77	75	72	77	180	180	U8356A004V	BRASS	6.3/F	6.9/F
1/8	3/32	-	0.13	0.06	0	75	72	77	75	72	77	180	180	U8356A016V	SS	6.3/F	6.9/F
1/8	3/32	-	0.12	-	0	100	100	100	100	100	100	180	120	**8320G015***	BRASS	6.1/F	10.6/F
1/8	3/32	-	0.12	-	0	100	100	100	100	100	100	180	120	8320G047	SS	6.1/F	10.6/F
1/8	7/64	-	0.15	0.06	0	70	61	72	70	61	72	180	180	**U8356B045V***	BRASS	6.3/F	6.9/F
1/8	7/64	-	0.15	0.06	0	70	61	72	70	61	72	180	180	U8356B046V	SS	6.3/F	6.9/F
1/8	1/8	-	0.13	-	0	-	-	-	250	250	250	-	180	8300D055F	BRASS	-	36.2/H
1/8	1/8	-	0.13	-	0	550	550	550	-	-	-	200	-	8300G055F	BRASS	20.1/F	-
1/8	1/8	-	0.21	-	0	40	40	40	40	40	40	180	120	**8320G017***	BRASS	6.1/F	10.6/F
1/8	1/8	-	0.21	-	0	40	40	40	40	40	40	180	120	8320G049	SS	6.1/F	10.6/F
1/8	3/16	-	0.35	-	0	-	-	-	125	125	125	-	180	8300D003F	BRASS	-	36.2/H
1/8	3/16	-	0.35	-	0	250	250	250	-	-	-	200	-	8300G003F	BRASS	20.1/F	-
1/4	3/64	-	0.04	-	0	230	-	-	120	-	-	200	104	**8314G022***	BRASS	10.1/F	11.6/F
1/4	3/64	-	0.04	-	0	230	230	230	120	140	135	200	104	**8314G034***	BRASS	10.1/F	11.6/F
1/4	1/16	-	0.09	-	0	210	225	225	160	160	160	200	150	**8320G182***	BRASS	17.1/F	11.6/F
1/4	1/16	-	0.07	-	0	125	125	-	125	125	-	130	120	**8360G075***	PLAST	6.1/F	10.6/F
1/4	3/32	1/4	0.2	0.73	5	150	-	-	-	-	-	180	-	**8317G023***	BRASS	10.1/F	-
1/4	3/32	1/4	0.2	0.73	5	150	-	-	-	-	-	180	-	**8317G024***	SS	10.1/F	-
1/4	3/32	1/4	0.2	0.73	5	150	150	95	75	55	30	180	104	**8317G035***	BRASS	10.1/F	11.6/F
1/4	3/32	1/4	0.2	0.73	5	150	150	95	75	55	30	180	104	**8317G036***	SS	10.1/F	11.6/F
1/4	3/32	-	0.15	-	0	150	-	-	60	-	-	200	104	**8314G023***	BRASS	10.1/F	11.6/F
1/4	3/32	-	0.15	-	0	150	100	100	60	70	30	200	104	**8314G035***	BRASS	10.1/F	11.6/F
1/4	3/32	-	0.15	-	0	150	100	100	60	70	30	200	104	**8314G121***	SS	10.1/F	11.6/F
1/4	3/32	-	0.12	-	0	150	150	150	115	115	115	200	150	**8320G184***	BRASS	10.1/F	11.6/F
1/4	3/32	-	0.12	-	0	150	150	150	115	115	115	200	150	**8320G202***	SS	10.1/F	11.6/F
1/4	3/32	-	0.11	-	0	100	100	-	100	100	-	130	120	**8360G077***	PLAST	6.1/F	10.6/F
1/4	1/8	-	0.25	-	0	75	60	60	30	40	25	200	104	**8314G036***	BRASS	10.1/F	11.6/F
1/4	1/8	-	0.25	-	0	85	85	85	60	60	60	200	150	**8320G186***	BRASS	10.1/F	11.6/F
1/4	1/8	-	0.25	-	0	85	85	85	60	60	60	200	150	**8320G203***	SS	10.1/F	11.6/F
1/4	1/8	-	0.16	-	0	40	40	-	40	40	-	130	120	**8360G078***	PLAST	6.1/F	10.6/F
1/4	11/64	-	0.35	-	0	45	45	45	25	25	25	200	150	**8320G188***	BRASS	10.1/F	11.6/F
1/4	3/16	-	0.35	-	0	-	-	-	125	125	125	-	180	8300D058F	BRASS	-	36.2/H
1/4	3/16	-	0.25	-	0	-	-	-	125	125	125	-	180	**8300D058RF***	BRASS	-	36.2/H
1/4	3/16	-	0.35	-	0	250	250	250	-	-	-	200	-	8300G058F	BRASS	20.1/F	-
1/4	3/16	-	0.25	-	0	250	250	250	-	-	-	180	-	8300G058RF	BRASS	20.1/F	-
1/4	1/4	-	0.45	-	0	250	250	250	-	-	-	200	-	**8300D061F***	BRASS	28/H	-
1/4	1/4	-	0.39	-	0	-	-	-	75	75	75	-	180	8300A081RF	BRASS	-	36.2/H
1/4	1/4	-	0.45	-	0	-	-	-	75	75	75	-	180	8300A081F	BRASS	-	36.2/H
1/4	1/4	-	0.45	-	0	190	190	190	-	-	-	200	-	**8300G081F***	BRASS	20.1/F	-
1/4	1/4	-	0.39	-	0	150	150	150	-	-	-	180	-	**8300G081RF***	BRASS	20.1/F	-

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

3-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G405	ALUM	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G406	ALUM	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	150	-	-	140	140	SC8551A005MS	ALUM	2.5	3
1/4	1/4	1/4	.86	-	30	150	-	-	150	-	-	140	140	SC8551A006MS	ALUM	2.5	3
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	EF8551G407	Brass	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	EF8551G408	Brass	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	EV8551G413	SS	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	EV8551G414	SS	10.1	11.6
1/4	9/32	11/32	0.8	1.2	10	200	200	200	200	200	200	180	120	**8321G001***	BRASS	6.1/F	10.6/F
1/4	5/16	-	1.5	-	0	150	-	-	120	-	-	180	120	8316G001	BRASS	10.1	11.6
1/4	5/16	-	1.5	-	0	150	-	-	120	-	-	180	120	EV8316G081V	SS	10.1	11.6
3/8	1/4	-	0.45	-	0	250	250	250	-	-	-	200	-	**8300D009F***	BRASS	28/H	-
3/8	1/4	-	0.45	-	0	-	-	-	75	75	75	-	180	8300A082F	BRASS	-	36.2/H
3/8	1/4	-	0.39	-	0	-	-	-	75	75	75	-	180	8300A082RF	BRASS	-	36.2/H
3/8	1/4	-	0.45	-	0	190	190	190	-	-	-	200	-	8300G082F	BRASS	20.1/F	-
3/8	1/4	-	0.39	-	0	150	150	150	-	-	-	180	-	8300G082RF	BRASS	20.1/F	-
3/8	1/4	-	0.45	-	0	-	-	-	50	50	50	-	180	8300B410F	SS	-	36.2/H
3/8	1/4	-	0.45	-	0	150	150	150	-	-	-	200	-	8300G410F	SS	20.1/F	-
3/8	1/4	-	0.45	-	0	175	175	175	-	-	-	200	-	8300B411F	SS	28/H	-
3/8	9/32	11/32	0.8	1.2	10	200	200	200	200	200	200	180	120	**8321G002***	BRASS	6.1/F	10.6/F
3/8	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300D064F	BRASS	-	36.2/H
3/8	5/16	-	0.53	-	0	-	-	-	40	40	40	-	180	8300D064RF	BRASS	-	36.2/H
3/8	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G064F	BRASS	20.1/F	-
3/8	5/16	-	0.53	-	0	120	120	120	-	-	-	180	-	8300G064RF	BRASS	20.1/F	-
3/8	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300B412F	SS	-	36.2/H
3/8	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G412F	SS	20.1/F	-
3/8	5/16	-	1.8	-	0	150	-	-	120	-	-	180	120	8316G002	BRASS	10.1	11.6
3/8	5/16	-	1.8	-	0	150	-	-	120	-	-	180	120	EV8316G082V	SS	10.1	11.6
3/8	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300D072F	BRASS	-	36.2/H
3/8	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G072F	BRASS	20.1/F	-
3/8	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300B413F	SS	-	36.2/H
3/8	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G413F	SS	20.1/F	-
3/8	5/8	-	4	-	-	150	-	-	120	-	-	180	120	8316G003	BRASS	10.1	11.6
3/8	5/8	-	2.5	-	10	250	250	-	250	250	-	180	120	**8316G014***	BRASS	17.1/F	22.6/F
3/8	5/8	-	3	-	10	150	125	-	125	125	-	180	120	**8316G054***	BRASS	6.1/F	10.6/F
1/2	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300D068F	BRASS	-	36.2/H
1/2	5/16	-	0.53	-	0	-	-	-	40	40	40	-	180	8300D068RF	BRASS	-	36.2/H
1/2	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	**8300G068F***	BRASS	20.1/F	-
1/2	5/16	-	0.53	-	0	120	120	120	-	-	-	180	-	8300G068RF	BRASS	20.1/F	-
1/2	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300B403F	SS	-	36.2/H
1/2	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G403F	SS	20.1/F	-
1/2	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300D076F	BRASS	-	36.2/H
1/2	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G076F	BRASS	20.1/F	-
1/2	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300B404F	SS	-	36.2/H
1/2	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G404F	SS	20.1/F	-
1/2	1/2	1/2	3.7	-	30	150	-	-	120	-	-	140	120	8553G405	ALUM	10.1	11.6
1/2	1/2	1/2	3.7	-	30	150	-	-	120	-	-	140	120	8553G406	ALUM	10.1	11.6
1/2	1/2	1/2	3.7	-	30	150	-	-	150	-	-	140	140	SC8553A005MS	ALUM	5	6.9
1/2	1/2	1/2	3.7	-	30	150	-	-	150	-	-	140	140	SC8553A006MS	ALUM	5	6.9
1/2	5/8	-	4	-	0	150	-	-	120	-	-	180	120	8316G004	BRASS	10.1	11.6
1/2	5/8	-	3.2	-	10	250	250	-	250	250	-	180	120	**8316G024***	BRASS	17.1/F	22.6/F
1/2	5/8	-	3.2	-	10	150	125	-	125	125	-	180	120	**8316G064***	BRASS	6.1/F	10.6/F
1/2	5/8	-	4	-	0	150	-	-	120	-	-	180	120	EV8316G084V	SS	10.1	11.6
3/4	11/16	-	4.8	-	10	150	125	-	125	125	-	180	120	**8316G074***	BRASS	6.1/F	10.6/F
3/4	11/16	-	4.8	-	10	250	250	-	250	250	-	180	120	**8316G044***	BRASS	17.1/F	22.6/F
1	1	-	12.5	-	10	150	125	-	125	125	-	180	120	**8316G034***	BRASS	6.1/F	10.6/F

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

3-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
NORMALLY OPEN (Open when de-energized)																	
1/8	3/64	-	.04	-	0	300	300	300	200	200	120	200	104	8314G049	BRASS	10.1/F	11.6/F
1/8	3/64	-	.06	-	0	200	200	200	200	200	200	180	120	**8320G136***	BRASS	6.1/F	10.6/F
1/8	3/64	-	.06	-	0	200	200	200	200	200	200	180	120	8320G146	SS	6.1/F	10.6/F
1/8	3/64	-	0.06	0.06	0	175	180	175	150	122	90	180	180	U8356A005V	BRASS	6.3/F	6.9/F
1/8	3/64	-	0.06	0.06	0	175	180	175	150	122	90	180	180	U8356A017V	SS	6.3/F	6.9/F
1/8	1/16	-	.09	-	0	150	125	125	125	125	125	180	120	**8320G027***	BRASS	6.1/F	10.6/F
1/8	1/16	-	.09	-	0	150	125	125	125	125	125	180	120	8320G051	SS	6.1/F	10.6/F
1/8	1/16	-	0.09	0.06	0	165	180	175	75	72	70	180	180	U8356A006V	BRASS	6.3/F	6.9/F
1/8	1/16	-	0.09	0.06	0	165	180	175	75	72	70	180	180	U8356A018V	SS	6.3/F	6.9/F
1/8	3/32	-	.12	-	0	100	100	100	100	100	100	180	120	**8320G029***	BRASS	6.1/F	10.6/F
1/8	3/32	-	.12	-	0	100	100	100	100	100	100	180	120	8320G053	SS	6.1/F	10.6/F
1/8	3/32	-	0.13	0.06	0	160	175	120	86	66	40	180	180	U8356A008V	BRASS	6.3/F	6.9/F
1/8	3/32	-	0.13	0.06	0	160	175	120	86	66	40	180	180	U8356A020V	SS	6.3/F	6.9/F
1/8	7/64	-	0.15	0.06	0	148	180	99	148	157	72	180	180	U8356B054V	BRASS	6.3/F	6.9/F
1/8	7/64	-	0.15	0.06	0	148	180	99	148	157	72	180	180	U8356B055V	SS	6.3/F	6.9/F
1/8	1/8	-	.13	-	0	-	-	-	250	250	250	-	180	8300D055G	BRASS	-	36.2/H
1/8	1/8	-	.13	-	0	550	550	550	-	-	-	200	-	8300G055G	BRASS	20.1/F	-
1/8	1/8	-	.21	-	0	40	40	40	40	40	40	180	120	**8320G031***	BRASS	6.1/F	10.6/F
1/8	1/8	-	.21	-	0	40	40	40	40	40	40	180	120	**8320G055***	SS	6.1/F	10.6/F
1/8	3/16	-	.35	-	0	-	-	-	125	125	125	-	180	8300D003G	BRASS	-	36.2/H
1/8	3/16	-	.35	-	0	250	250	250	-	-	-	200	-	**8300G003G***	BRASS	20.1/F	-
1/4	1/16	-	.09	-	0	250	250	250	160	160	160	200	150	**8320G192***	BRASS	17.1/F	11.6/F
1/4	1/16	-	.07	-	0	125	125	-	125	125	-	130	120	8360G067	PLAST	6.1/F	10.6/F
1/4	3/32	1/4	.15	.73	5	160	160	95	75	45	25	180	104	8317G053	BRASS	10.1/F	11.6/F
1/4	3/32	1/4	.15	.73	5	160	160	95	75	45	25	180	104	8317G054	SS	10.1/F	11.6/F
1/4	3/32	-	.15	-	0	175	175	175	70	90	45	200	104	**8314G053***	BRASS	10.1/F	11.6/F
1/4	3/32	-	.15	-	0	175	175	175	70	90	45	200	104	8314G122	SS	10.1/F	11.6/F
1/4	3/32	-	.12	-	0	150	140	140	100	100	100	200	150	**8320G194***	BRASS	10.1/F	11.6/F
1/4	3/32	-	.12	-	0	150	140	140	100	100	100	200	150	8320G204	SS	10.1/F	11.6/F
1/4	3/32	-	.11	-	0	100	100	-	100	100	-	130	120	**8360G069***	PLAST	6.1/F	10.6/F
1/4	1/8	-	.25	-	0	90	90	90	40	40	25	200	104	8314G054	BRASS	10.1/F	11.6/F
1/4	1/8	-	.25	-	0	70	70	70	55	55	55	200	150	**8320G196***	BRASS	10.1/F	11.6/F
1/4	1/8	-	.25	-	0	70	70	70	55	55	55	200	150	8320G205	SS	10.1/F	11.6/F
1/4	1/8	-	.16	-	0	40	40	-	40	40	-	130	120	8360G070	PLAST	6.1/F	10.6/F
1/4	11/64	-	.35	-	0	40	40	40	30	30	30	200	150	8320G198	BRASS	10.1/F	11.6/F
1/4	3/16	-	.35	-	0	-	-	-	125	125	125	-	180	8300D058G	BRASS	-	36.2/H
1/4	3/16	-	.25	-	0	-	-	-	125	125	125	-	180	8300D058RG	BRASS	-	36.2/H
1/4	3/16	-	.35	-	0	250	250	250	-	-	-	200	-	8300G058G	BRASS	20.1/F	-
1/4	3/16	-	.25	-	0	250	250	250	-	-	-	180	-	8300G058RG	BRASS	20.1/F	-
1/4	1/4	-	.45	-	0	250	250	250	-	-	-	200	-	8300D061G	BRASS	28/H	-
1/4	1/4	-	.45	-	0	-	-	-	75	75	75	-	180	8300A081G	BRASS	-	36.2/H
1/4	1/4	-	.39	-	0	-	-	-	75	75	75	-	180	8300A081RG	BRASS	-	36.2/H
1/4	1/4	-	.45	-	0	190	190	190	-	-	-	200	-	8300G081G	BRASS	20.1/F	-
1/4	1/4	-	.39	-	0	150	150	150	-	-	-	180	-	8300G081RG	BRASS	20.1/F	-
1/4	9/32	11/32	.80	1.20	10	200	200	200	200	200	200	180	120	**8321G003***	BRASS	6.1/F	10.6/F
3/8	1/4	-	.45	-	0	250	250	250	-	-	-	200	-	8300D009G	BRASS	28/H	-
3/8	1/4	-	.45	-	0	-	-	-	75	75	75	-	180	8300A082G	BRASS	-	36.2/H
3/8	1/4	-	.39	-	0	-	-	-	75	75	75	-	180	8300A8082RG	BRASS	-	36.2/H

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

3-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
3/8	1/4	-	0.45	-	0	190	190	190	-	-	-	200	-	8300G082G	BRASS	20.1/F	-
3/8	1/4	-	0.39	-	0	150	150	150	-	-	-	180	-	8300G082RG	BRASS	20.1/F	-
3/8	1/4	-	0.45	-	0	-	-	-	50	50	50	-	180	8300B410G	SS	-	36.2/H
3/8	1/4	-	0.45	-	0	150	150	150	-	-	-	200	-	8300G410G	SS	20.1/F	-
3/8	1/4	-	0.45	-	0	175	175	175	-	-	-	200	-	8300B411G	SS	28/H	-
3/8	9/32	11/32	0.8	1.2	10	200	200	200	200	200	200	180	120	**8321G004***	BRASS	6.1/F	10.6/F
3/8	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300D064G	BRASS	-	36.2/H
3/8	5/16	-	0.53	-	0	-	-	-	40	40	40	-	180	8300D064RG	BRASS	-	36.2/H
3/8	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G064G	BRASS	20.1/F	-
3/8	5/16	-	0.53	-	0	120	120	120	-	-	-	180	-	8300G064RG	BRASS	20.1/F	-
3/8	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300B412G	SS	-	36.2/H
3/8	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G412G	SS	20.1/F	-
3/8	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300D072G	BRASS	-	36.2/H
3/8	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G072G	BRASS	20.1/F	-
3/8	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300B413G	SS	-	36.2/H
3/8	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G413G	SS	20.1/F	-
3/8	5/8	-	2.5	-	10	250	250	-	250	250	-	180	120	**8316G016***	BRASS	17.1/F	22.6/F
3/8	5/8	-	2.5	-	10	150	125	-	125	125	-	180	120	**8316G056***	BRASS	6.1/F	10.6/F
1/2	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300D068G	BRASS	-	36.2/H
1/2	5/16	-	0.53	-	0	-	-	-	40	40	40	-	180	8300D068RG	BRASS	-	36.2/H
1/2	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G068G	BRASS	20.1/F	-
1/2	5/16	-	0.53	-	0	120	120	120	-	-	-	180	-	8300G068RG	BRASS	20.1/F	-
1/2	5/16	-	0.75	-	0	-	-	-	40	40	40	-	180	8300B403G	SS	-	36.2/H
1/2	5/16	-	0.75	-	0	120	120	120	-	-	-	200	-	8300G403G	SS	20.1/F	-
1/2	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300D076G	BRASS	-	36.2/H
1/2	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G076G	BRASS	20.1/F	-
1/2	3/8	-	1	-	0	-	-	-	30	30	30	-	180	8300B404G	SS	-	36.2/H
1/2	3/8	-	1	-	0	75	75	75	-	-	-	200	-	8300G404G	SS	20.1/F	-
1/2	5/8	-	3.2	-	10	250	250	-	250	250	-	180	120	**8316G026***	BRASS	17.1/F	22.6/F
1/2	5/8	-	3.2	-	10	150	125	-	125	125	-	180	120	**8316G066***	BRASS	6.1/F	10.6/F
3/4	11/16	-	4.8	-	10	250	250	-	250	250	-	180	120	**8316G046***	BRASS	17.1/F	22.6/F
3/4	11/16	-	4.8	-	10	150	125	-	125	125	-	180	120	**8316G076***	BRASS	6.1/F	10.6/F
1	1	-	12.5	-	10	150	125	-	125	125	-	180	120	8316G036	BRASS	6.1/F	10.6/F
UNIVERSAL OPERATION																	
1/8	3/64	-	0.04	-	0	160	160	160	70	65	65	200	104	**8314G041***	BRASS	10.1/F	11.6/F
1/8	3/64	-	0.06	0.06	0	135	135	135	135	135	100	180	180	U8356A009V	BRASS	6.3/F	6.9/F
1/8	3/64	-	0.06	0.06	0	135	135	135	135	135	100	180	180	U8356A021V	SS	6.3/F	6.9/F
1/8	3/64	-	0.06	-	0	175	175	175	125	125	125	140	120	**8320G130***	BRASS	9.1/F	10.6/F
1/8	3/64	-	0.06	-	0	175	175	175	125	125	125	140	120	**8320G140***	SS	9.1/F	10.6/F
1/8	1/16	-	0.09	-	0	100	100	100	65	65	65	180	120	**8320G001***	BRASS	9.1/F	10.6/F
1/8	1/16	-	0.09	-	0	100	100	100	65	65	65	180	120	8320G041	SS	9.1/F	10.6/F
1/8	1/16	-	0.09	0.06	0	72	72	72	72	72	72	180	180	U8356A010V	BRASS	6.3/F	6.9/F
1/8	1/16	-	0.09	0.06	0	72	72	72	72	72	72	180	180	U8356A022V	SS	6.3/F	6.9/F
1/8	3/32	-	0.12	-	0	50	50	50	50	50	50	180	120	**8320G083***	BRASS	6.1/F	10.6/F
1/8	3/32	-	0.12	-	0	50	50	50	50	50	50	180	120	8320G087	SS	6.1/F	10.6/F
1/8	3/32	-	0.13	0.06	0	36	33	40	32	28	40	180	180	U8356A012V	BRASS	6.3/F	6.9/F
1/8	3/32	-	0.13	0.06	0	36	33	40	32	28	40	180	180	U8356A024V	SS	6.3/F	6.9/F
1/8	7/64	-	0.15	0.06	0	45	32	27	25	32	27	180	180	U8356B047V	BRASS	6.3/F	6.9/F
1/8	7/64	-	0.15	0.06	0	45	32	27	25	32	27	180	180	U8356B048V	SS	6.3/F	6.9/F

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

3-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
1/8	1/8	-	0.13	-	0	-	-	-	125	125	125	-	180	8300D055U	BRASS	-	36.2/H
1/8	1/8	-	0.13	-	0	300	300	300	-	-	-	200	-	8300G055U	BRASS	20.1/F	-
1/8	1/8	-	0.21	-	0	30	30	30	20	20	20	180	120	**8320G003***	BRASS	9.1/F	10.6/F
1/8	1/8	-	0.21	-	0	30	30	30	20	20	20	180	120	**8320G043***	SS	9.1/F	10.6/F
1/8	3/16	-	0.35	-	0	-	-	-	60	60	60	-	180	8300D003U	BRASS	-	36.2/H
1/8	3/16	-	0.35	-	0	150	150	150	-	-	-	200	-	8300G003U	BRASS	20.1/F	-
1/4	3/64	-	0.04	-	0	160	160	160	70	65	65	200	104	**8314G006***	BRASS	10.1/F	11.6/F
1/4	1/16	-	0.07	-	0	100	100	-	65	65	-	130	120	**8360G071***	PLAST	9.1/F	10.6/F
1/4	1/16	-	0.09	-	0	125	130	130	75	75	75	200	150	**8320G172***	BRASS	10.1/F	11.6/F
1/4	3/32	1/4	0.2	0.73	5	80	50	50	40	30	15	180	104	**8317G007***	BRASS	10.1/F	11.6/F
1/4	3/32	1/4	0.2	0.73	5	80	50	50	40	30	15	180	104	**8317G008***	SS	10.1/F	11.6/F
1/4	3/32	-	0.12	-	0	100	100	100	60	60	60	200	150	**8320G174***	BRASS	17.1/F	11.6/F
1/4	3/32	-	0.12	-	0	100	100	100	60	60	60	200	150	**8320G200***	SS	17.1/F	11.6/F
1/4	3/32	-	0.11	-	0	50	50	-	50	50	-	130	120	8360G073	PLAST	6.1/F	10.6/F
1/4	3/32	-	0.15	-	0	80	40	40	35	35	15	200	104	**8314G007***	BRASS	10.1/F	11.6/F
1/4	3/32	-	0.15	-	0	80	40	40	35	35	15	200	104	**8314G120***	SS	10.1/F	11.6/F
1/4	1/8	-	0.16	-	0	30	30	-	20	20	-	130	120	**8360G074***	PLAST	9.1/F	10.6/F
1/4	1/8	-	0.25	-	0	45	25	25	20	15	15	200	104	**8314G008***	BRASS	10.1/F	11.6/F
1/4	1/8	-	0.25	-	0	50	50	50	25	25	25	200	150	**8320G176***	BRASS	17.1/F	11.6/F
1/4	1/8	-	0.25	-	0	50	50	50	25	25	25	200	150	**8320G201***	SS	17.1/F	11.6/F
1/4	11/64	-	0.35	-	0	20	20	20	12	12	12	200	150	**8320G178***	BRASS	10.1/F	11.6/F
1/4	3/16	-	0.35	-	0	-	-	-	60	60	60	-	180	8300D058U	BRASS	-	36.2/H
1/4	3/16	-	0.25	-	0	-	-	-	60	60	60	-	180	**8300D058RU***	BRASS	-	36.2/H
1/4	3/16	-	0.35	-	0	150	150	150	-	-	-	200	-	8300G058U	BRASS	20.1/F	-
1/4	3/16	-	0.25	-	0	150	150	150	-	-	-	180	-	**8300G058RU***	BRASS	20.1/F	-
1/4	1/4	-	0.45	-	0	-	-	-	35	35	35	-	180	8300A081U	BRASS	-	36.2/H
1/4	1/4	-	0.39	-	0	-	-	-	35	35	35	-	180	8300A081RU	BRASS	-	36.2/H
1/4	1/4	-	0.45	-	0	120	120	120	-	-	-	200	-	**8300D061U***	BRASS	28/H	-
1/4	1/4	-	0.45	-	0	90	90	90	-	-	-	200	-	8300G081U	BRASS	20.1/F	-
1/4	1/4	-	0.39	-	0	75	75	75	-	-	-	180	-	8300G081RU	BRASS	20.1/F	-
1/4	1/4	-	0.49	0.56	0	150	150	150	150	150	150	176	176	**8327G041***	BRASS	12.0/F	11.6/F
1/4	1/4	-	0.49	0.56	0	150	-	-	-	-	-	131	131	8327G051	BRASS	12.0/F	11.6/F
1/4	1/4	-	0.49	0.56	0	150	150	150	150	150	150	248	248	EV8327G042	SS	12.0/F	11.6/F
1/4	1/4	-	0.49	0.56	0	150	-	-	-	-	-	131	131	EV8327G052	SS	12.0/F	11.6/F
3/8	1/4	-	0.45	-	0	-	-	-	35	35	35	-	180	8300A082U	BRASS	-	36.2/H
3/8	1/4	-	0.39	-	0	-	-	-	35	35	35	-	180	8300A082RU	BRASS	-	36.2/H
3/8	1/4	-	0.45	-	0	120	120	120	-	-	-	200	-	**8300D009U***	BRASS	28/H	-
3/8	1/4	-	0.45	-	0	90	90	90	-	-	-	200	-	8300G082U	BRASS	20.1/F	-
3/8	1/4	-	0.39	-	0	75	75	75	-	-	-	180	-	8300G082RU	BRASS	20.1/F	-
3/8	1/4	-	0.45	-	0	-	-	-	25	25	25	-	180	8300B410U	SS	-	36.2/H
3/8	1/4	-	0.45	-	0	75	75	75	-	-	-	200	-	8300G410U	SS	20.1/F	-
3/8	1/4	-	0.45	-	0	85	85	85	-	-	-	200	-	8300B411U	SS	28/H	-
3/8	5/16	-	0.75	-	0	-	-	-	20	20	20	-	180	8300D064U	BRASS	-	36.2/H
3/8	5/16	-	0.53	-	0	-	-	-	20	20	20	-	180	8300D064RU	BRASS	-	36.2/H
3/8	5/16	-	0.75	-	0	60	60	60	-	-	-	200	-	8300G064U	BRASS	20.1/F	-

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

3-Way/2 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
3/8	5/16	-	0.53	-	0	60	60	60	-	-	-	180	-	8300G064RU	BRASS	20.1/F	-
3/8	5/16	-	0.75	-	0	-	-	-	20	20	20	-	180	8300B412U	SS	-	36.2/H
3/8	5/16	-	0.75	-	0	60	60	60	-	-	-	200	-	8300G412U	SS	20.1/F	-
3/8	3/8	-	1	-	0	-	-	-	15	15	15	-	180	8300D072U	BRASS	-	36.2/H
3/8	3/8	-	1	-	0	35	35	35	-	-	-	200	-	8300G072U	BRASS	20.1/F	-
3/8	3/8	-	1	-	0	-	-	-	15	15	15	-	180	8300B413U	SS	-	36.2/H
3/8	3/8	-	1	-	0	35	35	35	-	-	-	200	-	8300G413U	SS	20.1/F	-
1/2	5/16	-	0.75	-	0	-	-	-	20	20	20	-	180	8300D068U	BRASS	-	36.2/H
1/2	5/16	-	0.53	-	0	-	-	-	20	20	20	-	180	8300D068RU	BRASS	-	36.2/H
1/2	5/16	-	0.75	-	0	60	60	60	-	-	-	200	-	8300G068U	BRASS	20.1/F	-
1/2	5/16	-	0.53	-	0	60	60	60	-	-	-	180	-	8300G068RU	BRASS	20.1/F	-
1/2	5/16	-	0.75	-	0	-	-	-	20	20	20	-	180	8300B403U	SS	-	36.2/H
1/2	5/16	-	0.75	-	0	60	60	60	-	-	-	200	-	8300G403U	SS	20.1/F	-
1/2	3/8	-	1	-	0	-	-	-	15	15	15	-	180	8300D076U	BRASS	-	36.2/H
1/2	3/8	-	1	-	0	35	35	35	-	-	-	200	-	**8300G076U***	BRASS	20.1/F	-
1/2	3/8	-	1	-	0	-	-	-	15	15	15	-	180	8300B404U	SS	-	36.2/H
1/2	3/8	-	1	-	0	35	35	35	-	-	-	200	-	8300G404U	SS	20.1/F	-

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

4-Way/2 or 3 Position Valves

Pipe Size (ins.)	Orifice Size (ins.)		Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp.°F		Catalog Number	Body Material	Watt Rating / Class of Coil Insulation	
						Maximum AC			Maximum DC								
	Press.	Exh.	Press.	Exh.	Min	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU	AC	DC			AC	DC
1/4	1/16	3/32	0.09	0.09	10	150	150	150	100	100	100	180	104	**8345G001***	BRASS	10.1/F	11.6/F
1/4	1/16	3/32	0.09	0.09	10	150	150	150	100	100	100	180	104	EV8345G081	SS	10.1/F	11.6/F
1/4	1/16	3/32	0.09	0.09	10	150	-	-	100	-	-	180	104	**8345H003***	BRASS	10.1/F	11.6/F
1/4	5/64	-	0.1	-	0	150	-	-	100	-	-	104	95	**8340A003***	ALUM	16.7/F	19.7/F
1/4	5/64	-	0.08	-	0	150	-	-	100	-	-	104	95	8340A004	ALUM	16.7/F	19.7/F
1/4	5/64	-	0.08	-	0	150	-	-	150	-	-	104	95	8340A005	ALUM	10.5/F	19.7/F
1/4	5/64	-	0.1	-	0	150	-	-	100	-	-	104	95	8340A008	ALUM	10.5/F	19.7/F
1/4	5/64	-	0.1	-	0	150	-	-	100	-	-	130	95	**8340G001***	ALUM	17.1/F	22.6/F
1/4	5/64	-	0.1	-	0	150	-	-	100	-	-	104	95	8340G002	ALUM	10.1/F	22.6/F
1/4	3/16	-	0.7	-	0	125	100	100	-	-	-	160	-	8342G001	BRASS	20.1/F	-
1/4	3/16	-	0.7	-	0	125	125	125	-	-	-	160	-	**8342G020***	BRASS	16.1/F	-
1/4	3/16	-	0.7	-	0	125	100	100	-	-	-	160	-	**8342G701***	SS	20.1/F	-
1/4	3/16	-	0.7	-	0	125	125	125	-	-	-	160	-	8342G720	SS	16.1/F	-
1/4	1/4	-	0.8	1	10	250	250	250	250	250	250	180	180	**8344G000***	BRASS	17.1/F	22.6/F
1/4	1/4	-	0.8	1	10	250	200	125	125	125	100	180	120	**8344G044***	BRASS	6.1/F	10.6/F
1/4	1/4	-	0.8	1	10	150	125	125	125	125	125	180	150	**8344G070***	BRASS	10.1/F	11.6/F
1/4	1/4	-	0.8	-	20	150	-	-	150	-	-	135	77	U8401B101	ALUM	6.3/F	6.9/F
1/4	1/4	-	0.8	-	20	150	-	-	150	-	-	135	77	U8401B103	ALUM	6.3/F	6.9/F
1/4	1/4	-	0.8	-	20	150	-	-	150	-	-	135	77	U8401B105	ALUM	6.3/F	6.9/F
1/4	1/4	-	0.8	-	20	150	-	-	150	-	-	135	77	U8401B107	ALUM	6.3/F	6.9/F
1/4	1/4	-	0.8	-	20	150	-	-	150	-	-	135	135	8402A101	ALUM	-	-
1/4	1/4	-	0.8	-	20	150	-	-	150	-	-	135	135	8402A103	ALUM	-	-
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G417	ALUM	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G418	ALUM	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	150	-	-	140	140	**SC8551A017MS***	ALUM	2.5	3
1/4	1/4	1/4	.86	-	30	150	-	-	150	-	-	140	140	**SC8551A018MS***	ALUM	2.5	3
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G419	BRASS	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G420	BRASS	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	EV8551G421	SS	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	EV8551G422	SS	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G467	ALUM	10.1	11.6
1/4	1/4	1/4	.86	-	30	150	-	-	120	-	-	140	120	8551G468	ALUM	10.1	11.6
3/8	3/16	-	0.7	-	0	125	100	100	-	-	-	160	-	8342G003	BRASS	20.1/F	-
3/8	3/16	-	0.7	-	0	125	125	125	-	-	-	160	-	**8342G022***	BRASS	16.1/F	-
3/8	3/16	-	0.7	-	0	125	100	100	-	-	-	160	-	**8342G703***	SS	20.1/F	-
3/8	3/16	-	0.7	-	0	125	125	125	-	-	-	160	-	8342G722	SS	16.1/F	-
3/8	1/4	-	0.8	1	10	250	250	250	250	250	250	180	180	8344G001	BRASS	17.1/F	22.6/F
3/8	3/8	-	1.4	2.2	10	300	300	200	-	-	-	180	-	**8344G050***	BRASS	10.1/F	-
3/8	3/8	-	1.4	2.2	10	150	125	125	125	125	125	180	150	**8344G072***	BRASS	10.1/F	11.6/F
3/8	3/8	-	1.4	2.2	10	250	200	125	125	125	100	180	120	**8344G080***	BRASS	6.1/F	10.6/F
1/2	3/8	-	1.4	2.2	10	250	250	250	250	250	250	180	180	**8344G027***	BRASS	17.1/F	22.6/F
1/2	3/8	-	1.4	2.2	10	150	125	125	125	125	125	180	150	**8344G074***	BRASS	10.1/F	11.6/F
1/2	3/8	-	1.4	2.2	10	250	200	125	125	125	100	180	120	**8344G082***	BRASS	6.1/F	10.6/F
1/2	1/2	1/2	3.7	-	30	150	-	-	120	-	-	140	120	8553G417	ALUM	10.1	11.6
1/2	1/2	1/2	3.7	-	30	150	-	-	120	-	-	140	120	8553G418	ALUM	10.1	11.6
1/2	1/2	1/2	3.7	-	30	150	-	-	150	-	-	140	140	SC8553A017MS	ALUM	5	6.9
1/2	1/2	1/2	3.7	-	30	150	-	-	150	-	-	140	140	SC8553A018MS	ALUM	5	6.9
3/4	3/4	-	5.2	5.6	10	250	250	250	250	250	250	180	180	**8344G029***	BRASS	17.1/F	22.6/F
3/4	3/4	-	5.2	5.6	10	300	300	200	125	125	100	180	120	8344G054	BRASS	10.1/F	10.6/F
3/4	3/4	-	5.2	5.6	10	150	125	125	125	125	125	180	150	**8344G076***	BRASS	10.1/F	11.6/F
1	3/4	-	5.2	5.6	10	250	250	250	250	250	250	180	180	8344G031	BRASS	17.1/F	22.6/F
1	3/4	-	5.2	5.6	10	300	300	200	125	125	100	180	120	8344G056	BRASS	10.1/F	10.6/F
1	3/4	-	5.2	5.6	10	150	125	125	125	125	125	180	150	8344G078	BRASS	10.1/F	11.6/F

① See specific valve series for detailed specifications. * Qualify for **ASCO TODAY** and/or **5DAY Program** based on voltage required.

Solenoid Valves

Principles of Operation

A solenoid valve is a combination of two basic functional units:

- A solenoid (electromagnet) with its core
- A valve body containing one or more orifices

Flow through an orifice is shut off or allowed by the movement of the core when the solenoid is energized or de-energized. ASCO valves have a solenoid mounted directly on the valve body. The core is enclosed in a sealed tube, providing a compact, leaktight assembly.

Direct Acting Valves (Figures 1A, 1B)

When the solenoid is energized in a direct acting valve, the core directly opens the orifice of a Normally Closed valve or closes the orifice of a Normally Open valve. When de-energized, a spring returns the valve to its original position. The valve will operate at pressures from 0 psi to its rated maximum.

The force needed to open the valve is proportional to the orifice size and fluid pressure. As the orifice size increases, so does the force required. To open large orifices while keeping solenoid size small, a Pilot Operated construction is used.

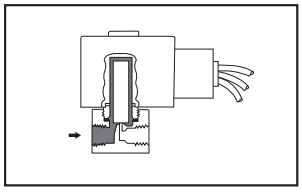


Figure 1A:
Direct Acting, Normally Closed Valve, De-Energized

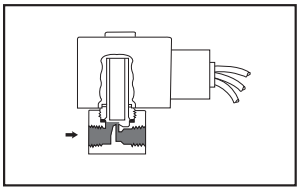


Figure 1B:
Direct Acting, Normally Closed Valve, Energized

Internal Pilot Operated Valves (Figures 2A, 2B)

Normally, these valves have a pilot and bleed orifice which enable them to use line pressure for operation.

When the solenoid is de-energized, the pilot orifice is closed and full line pressure is applied to the top of the piston or diaphragm through the bleed orifice, providing seating force for tight closure.

When the solenoid is energized, the core opens the pilot orifice, relieving pressure from the top of the piston or diaphragm via the outlet side of the valve. The line pressure then opens the valve by lifting the diaphragm or piston off the main orifice.

Two constructions are available for 2-way valves:

- Floating diaphragm or piston which requires a minimum pressure drop across the valve to remain in the open position (Figures 2A, 2B).
- Hung-type diaphragm or piston held open mechanically by the solenoid core. The valve opens and remains open with zero pressure drop (Figures 3A, 3B).

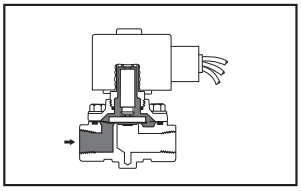


Figure 2A:
Pilot Operated, Normally Closed Valve, De-Energized

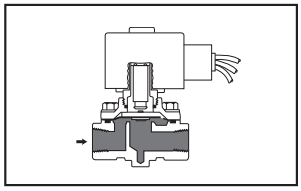


Figure 2B:
Pilot Operated, Normally Closed Valve, Energized

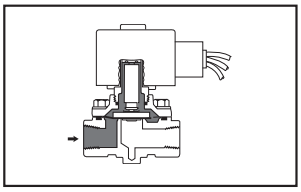


Figure 3A:
Pilot Operated, Normally Closed Valve, De-Energized

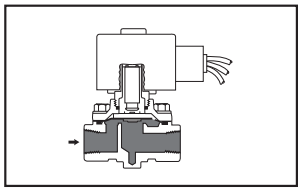


Figure 3B:
Pilot Operated, Normally Closed Valve, Energized

Manual Reset Valves (Figures 4A, 4B)

Manual reset valves must be manually latched into position and will return to their original position only when the solenoid has been energized or de-energized, depending on construction

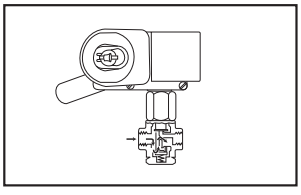


Figure 4A:
No Voltage Release Manual Reset Valve, Un-Latched, De-Energized

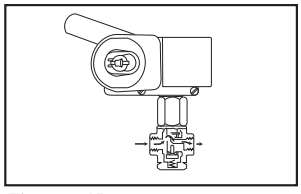


Figure 4B:
No Voltage Release Manual Reset Valve, Latched, Energized

Types of Solenoid Valves

2-Way Valves (Figures 1A, 1B, 2A, 2B, 3A, 3B)

Two-way valves have one inlet and one outlet pipe connection. They are used to allow or shut off fluid flow, and are available in either:

Normally Closed – closed when de-energized and open when energized.

Normally Open – open when de-energized and closed when energized.

3-Way Valves (Figures 5A, 5B)

Three-way valves have three pipe connections and two orifices (when one is open, the other is closed, and vice versa). They are commonly used to alternately apply pressure to and exhaust pressure from the diaphragm operator of a control valve, single-acting cylinder, or rotary actuator.

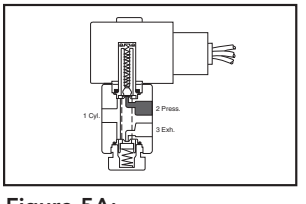


Figure 5A:
Three-Way
Normally Closed Valve,
De-Energized

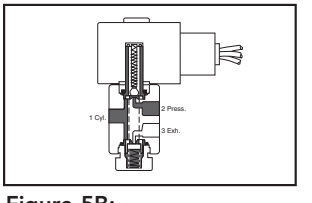


Figure 5B:
Three-Way
Normally Closed Valve,
Energized

Three modes of operation are available:

Normally Closed – when the valve is de-energized, the pressure port is closed and the cylinder port is connected to the exhaust port. When the valve is energized, the pressure port is connected to the cylinder port and the exhaust port is closed.

Normally Open – when the valve is de-energized, the pressure port is connected to the cylinder port and the exhaust port is closed. When the valve is energized, the pressure port is closed and the cylinder port is connected to the exhaust port.

Universal – allows the valve to be connected in either the Normally Closed or Normally Open position to select one of two fluids or to divert flow from one port to another.

4-Way Valves (Figures 6A, 6B)

Four-way valves are generally used to operate double-acting cylinders or actuators. They have four or five pipe connections: one pressure, two cylinder, and one or two exhausts. In Position A, pressure is connected to one cylinder port, the other is connected to exhaust. In Position B, pressure and exhaust are reversed at the cylinder ports.

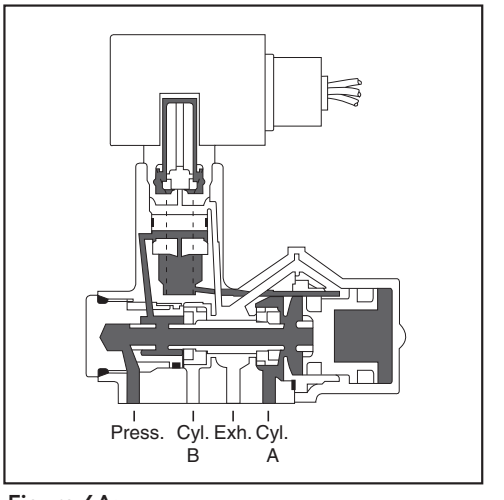


Figure 6A:
Four-Way Valve, De-Energized

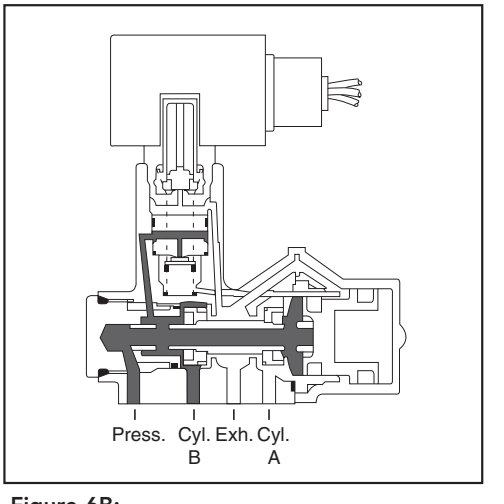


Figure 6B:
Four-Way Valve, Energized

Solenoid

Solenoid Coils (Non-Electronic*)

Except where noted, all ASCO valves are equipped with coils which can be energized continuously without danger of overheating or failure. Standard coils have 18" leads which can be connected to any controlling device. Spade, screw terminal, and DIN-type spade connector coils are also available. For three phase power systems, the two leads can be connected to any two of the three phases.

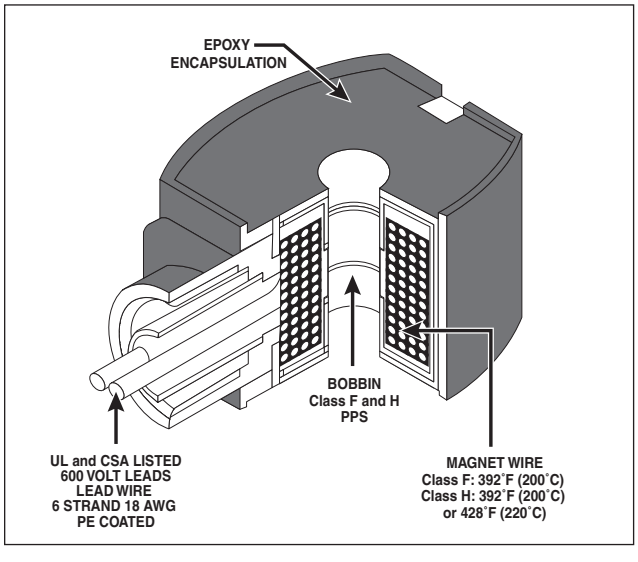
All coils are constructed in accordance with Underwriters Laboratories Inc., NEMA, IEEE, and other industrial standards ASCO Class B, F, and H insulation systems are UL listed in the Recognized Component Index (yellow book) under Guide No. OBJY2.

For AC ambient capabilities, see chart to the right. DC ambient capabilities are 104°F (40°C), or 131˚F (55˚C) for RedHat II depending on construction. These ambients are based on a minimum available voltage of 85% of nominal. If minimum available voltage is greater, a higher ambient limitation may be possible. *Consult factory for details.*

** See Pages 469-472 for RedHat Next Generation Electronic coils.*

Coil Insulation Systems and Temperature Limitations

RedHat II Solenoid Class F 311°F (155°C) and Class H 356°F (180°C)



AC Ambient Capabilities

Industrial Temperature Limitations ① ⑤ and Thermal Characteristics of ASCO RedHat II Solenoids and Coils

The typical watt ratings given show the relationship between different classes of coil insulation and the watt ratings to achieve higher temperature capabilites. The information contained in these tables applies only to Non-Explosionproof, AC constructions.④

② **Excess margin for higher fluid or ambient temperature**

Temperature rise due to power input

Listed ambient

Notes:

① As measured by the "Resistance Method."

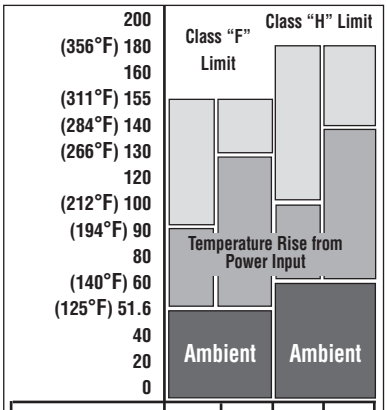
② Ambient temperatures are directly additive to coil rise — fluid temperature is not.

③ For M-6, 50 Hz wattage values, add 2 watts to the indicated values.

④ Because of explosionproof codes and surface temperature limitations, the maximum listed ambients for specific valves should not be exceeded. *Consult factory concerning explosionproof applications where higher-than-listed ambients are encountered.*

⑤ Maximum temperatures shown are industrial limits. For UL limits, subtract 27°F (15°C) for Class F coils and 36°F (20°C) for Class H coils.

Final Temperature °C (°F)



Coil Class		FT	FB	HT	HB
Typical AC Wattage Rating	M6 ③	6.1	9.1	6.1	9.1
	MXX	10.1	17.1	10.1	17.1
	M12	16.1	20.1	16.1	20.1

Coil Operating Voltage Ranges

All coils are designed for industrial operating voltages and can be used on the following voltage ranges:

AC		DC	
Nominal Voltage Rating	Normal Operating Range	Nominal Voltage Rating	Normal Operating Range
24	20-24	6	5.1-6.3
120	102-120	12	10.2-12.6
—	—	24	20-25
240	204-240	120	102-126
480	408-480	240	204-252

Note: Special coils are required for battery charging circuits where wider voltage ranges are typically encountered. For these applications, special continuous duty Class H coils are available that will accommodate a voltage range equivalent to 12% over nominal, 28% under nominal, and a 140°F (60°C) ambient. Standard nominal voltages are 125 and 250 DC, which translate to a voltage range of 90-140 and 180-280, respectively. Add prefix "HC" to the catalog number. "HC" prefix is only applicable to valves with coil classes FT and HT. *Consult factory for other constructions.*

Most ASCO valves, depending upon construction, will operate at 15% under nominal voltage and maximum operating pressure differential, and are capable of operating for short periods at 10% over nominal voltage. For coil classes other than FT and HT, over voltage is not recommended. *For wider voltage ranges than shown here or for operating voltage ranges for specific catalog numbers, please consult your local ASCO sales office.*

Power Consumption

Power consumption can be determined from the ratings shown on individual Series pages. For AC valves, the watts, volt-ampere "inrush" (the high momentary surge occurring at coil energization), and volt-ampere "holding" (the continuous draw following inrush) are given.

The current rating for inrush and holding may be determined by dividing the voltage into the volt-amp rating:

$$\text{Inrush Amps} = \frac{\text{volt-amp inrush}}{\text{voltage}}$$

$$\text{Holding Amps} = \frac{\text{volt-amp holding}}{\text{voltage}}$$

DC valves have no inrush current. The amp rating can be determined by dividing the voltage into the DC watt rating:

$$\text{Amps} = \frac{\text{watts (DC)}}{\text{voltage}}$$

Notes:

1. When a valve has been energized for a long period, the solenoid becomes hot and can be touched by hand for only an instant. This is a perfectly safe operating temperature. Any excessive heating will be indicated by smoke and the odor of burning coil insulation.

2. Valves for AC service can be converted to other AC voltages simply by changing the coil. Similarly, DC valves can be converted to other DC voltages. *When converting from AC to DC, or vice versa, consult your local ASCO sales office for instructions.*

Solenoid Constructions

Internal parts in contact with fluids are of non-magnetic 300 and magnetic 400 series stainless steel. In AC constructions, the shading coil is normally copper, except that silver is mostly used in valves with stainless steel bodies. Other materials are available, when required. In DC constructions, no shading coil is required. Typically, the core tubes are of 300 series stainless steel.

Solenoid Enclosures

ASCO offers two types of enclosures, each for a variety of applications: a one-piece molded epoxy construction called the RedHat II solenoid and a conventional RedHat metallic construction. Both meet ICS-6 ANSI/NEMA, and UL Standards 429, 508, and/or 1002. These standards define enclosure protection levels and the tests passed to earn each Type designation. (*See Page 469 for RedHat Next Generation Solenoid Enclosures).*

RedHat II

RedHat II solenoid enclosures are of one-piece molded epoxy construction, with an integral 1/2" NPT conduit hub. This epoxy encapsulation serves as the enclosure. The magnetic frame is molded into the coil.

RedHat II solenoids are offered as Type 1 General Purpose or Type 7 (A, B, C, and D) Explosionproof.

Type 1 – Solenoids are green and come equipped with three 18" long leads (the green lead is a ground wire). Also available as options are 1/4" spade connectors, screw terminals, and DIN-type terminals meeting ISO 4400 and DIN Standard 43650.

An optional junction box/terminal coil construction is also available for use with spade and screw terminal constructions. *Refer to the "Optional Features" Section for details.*

Type 7 – Solenoids are black and are available only in the leaded construction.

All RedHat II solenoids also meet the requirements for Types 2 Dripproof, 3 and 3S Raintight, and 4 and 4X Watertight-Corrosion Resistant.

The Following wattages carry Type 7 and Type 9 approvals as shown; for

Wattage	Type 7 Class I, Div. 1 & 2 Gas Groups	Type 9 Class II, Div. 1 Dust Groups
6.1, 10.1, 17.1	A, B, C, D	E, F, G
16.1, 20.1	A, B, C, D	E, F
10.6, 11,6	A, B, C, D	E, F, G

Enclosure Classifications and Types

Type 1	General Purpose	Intended for indoor use, primarily to provide protection for enclosed parts in locations without unusual service conditions.
Type 2	Dripproof	Intended for indoor use, primarily to provide protection against limited amounts of falling water or dirt.
Type 3	Raintight, Dusttight, and Sleet (Ice) Resistant	Intended for outdoor use, primarily to provide protection against wind-blown dust, rain, and sleet; undamaged by the formation of ice on the enclosure.
Type 3S	Raintight, Dusttight, and Sleet (Ice) Resistant	Intended for outdoor use, primarily to provide protection against wind-blown dust, rain, and sleet; external mechanism remains operable when ice laden.
Type 3R	Rainproof, Sleet (Ice) Resistant	Intended for outdoor use, primarily to provide protection against falling rain and sleet; undamaged by the formation of ice on the enclosure.
Type 4	Watertight and Dusttight	Intended for indoor or outdoor use to provide protection against splashing water, water seepage, falling or hose-directed water, and severe external condensation; undamaged by the formation of ice on the enclosure.
Type 4X	Watertight, Dusttight, and Corrosion Resistant	Same as Type 4, but provides additional protection to resist corrosion.
Type 6	Submersible	Intended for indoor or outdoor use to provide protection against entry of water during submersion at a limited depth. (Tested to 6' for 30 minutes.)
Type 6P	Submersible	Same as Type 6 Enclosure, but provides prolonged submersion protection at a limited depth. (Tested to 6' for 24 hours.)
Type 7 & Type 9	Refer to charts on next page.	

Type 7 (A, B, C, and D)

Explosionproof enclosures are designed to contain an internal explosion, without causing an external hazard, when installed in the following atmospheres or locations:

Class 1
Gasses or Vapors

Division 1

Ignitable concentrations of flammable gases, vapors, or liquids which:

- Can exist under normal operating conditions.
- May exist frequently due to repair, maintenance operations, or leakage.
- May exist due to equipment breakdown that simultaneously causes it to become a source of ignition.

Division 2

Volatile flammable liquids, gases, or vapors exist, but are normally contained within closed containers.

Ignitable concentrations of liquids, gases, or vapors are normally prevented by positive mechanical ventilation.

Location is adjacent to Class 1, Division 1, from which ignitable concentrations might occasionally migrate.

Group A
Atmospheres containing Acetylene.

Group B
Atmospheres containing Hydrogen.

Group C
Atmospheres containing Ethyl, Ethylene, Cyclopropane.

Group D
Atmospheres containing Acetone, Gasoline, Hexane, Naphtha, Benzene, Butane, Alcohol, Propane, Lacquer.

Type 9 (E, F, and G)

Dust-ignitionproof enclosures are designed to prevent the entrance of dust, and the enclosed devices do not produce sufficient heat to cause external surface temperatures capable of igniting dust on the enclosure or in the surrounding atmosphere.

Class II
Dust

Division 1
Combustible dust is or may be present under normal conditions.

Division 2
Combustible dust is present only under abnormal conditions.

Group E
Atmospheres containing Metal Dust (Aluminum, Magnesium, their alloys, or those with similarly hazardous characteristics).

Group F
Atmospheres containing Carbon Black, Coal, or Coke

Group G
Atmospheres containing Flour, Starch, or Grain Dust.

RedHat Metallic Enclosures

Conventional metallic enclosures are offered to meet Type I General Purpose enclosure applications and Type 7 (C and D) Explosionproof enclosure applications.

Type 1 — General Purpose metallic enclosures are epoxy-painted, zinc-coated steel with a 7/8" diameter hole to accept standard conduit hubs or connectors.

Type 7 (C and D) — Explosionproof metallic enclosures are epoxy-painted, zinc-plated steel or die-cast aluminum with a 1/2" threaded conduit hub.

Type 7 enclosures also meet Type 3 (Raintight) requirements as well as some also meet Type 7 (C and D) Explosionproof and Type 9 (E, F, and G) Dust-Ignitionproof requirements for Class I, Division 1, Groups C and D; Class I, Division 2, Groups C and D; and Class II, Division 1, Groups E, F, and G. *Please contact your local ASCO sales office for details.*

Also available as options are: Type 3R (Rainproof), Type 4 and 4X (Watertight), Type 6 (Submersible), Type 7B (Explosionproof for Hydrogen Atmospheres, Class I, Division 1, Group B), as well as Splice Box enclosures. *Please contact your local ASCO sales office for details on these options.*

Note: Metallic solenoid enclosures provide part of the magnetic circuit for the solenoid. Removal will affect valve operation.

Hazardous Location Solenoid Temperature Range Codes

Hazardous location solenoids are marked to indicate the maximum exposed surface temperature or temperature indicating code. This temperature is based on the maximum obtained in the temperature or burnout (blocked core) tests, whichever is higher, at a minimum ambient of 104°F (40°C) or at the rated maximum ambient temperature.

To prevent ignition of hazardous atmospheres, do not install in areas where vapors or gases having ignition temperatures lower than the marked temperatures are present.

The operating temperatures for each indicating code are shown in the following chart:

Operating Temp. Range Indicating Code No.

Maximum Temperature		
Degrees in C	Degrees in F	Code Number
450	842	T1
300	572	T2
280	536	T2A
260	500	T2B
230	446	T2C
215	419	T2D
200	392	T3
180	356	T3A
165	329	T3B
160	320	T3C
135	275	T4
120	248	T4A
100	212	T5
85	185	T6

Note: Except where otherwise noted in specific Series, all RedHat metallic enclosure solenoids have temperature range Code T3C.

Most RedHat II solenoids and/or solenoid valves are marked:

"To prevent fire or explosion, do not install where ignition temperature of hazardous atmosphere is less than 329°F (165°C). Open circuit before disassembly." This corresponds to code number T3B.

Valves with Class H solenoids and valves used on steam service are marked:

"To prevent fire or explosion, do not install where ignition temperature of hazardous atmosphere is less than 356°F (180°C). Open circuit before disassembly." This corresponds to code number T3A.

The Class II, Group F, Dust Location designation is not applicable for solenoids and/or solenoid valves used for steam service, or when a Class H solenoid is used.

RedHat II Explosionproof solenoids include an internal, non-resettable thermal fuse to limit solenoid temperature in the event that extraordinary conditions occur which could cause excessive temperatures. These conditions include high input voltage, a jammed valve, excessive ambient temperature, shorted coil, etc. This unique feature is standard only in RedHat II solenoids.

When used on valves having fluid temperature ratings exceeding 250°F (121°C), consult ASCO for applicable enclosure class, groups and temperature range codes. For temperature range codes of optional solenoids and features, or if a better temperature range code is desired, consult your local ASCO sales office.

Operating Pressures

Maximum Operating Pressure Differential (M.O.P.D.)

The maximum operating pressure differential refers to the maximum difference in pressure between the inlet and outlet, against which the solenoid can safely operate the valve. If the pressure at the valve outlet is not known, it is safest to regard supply pressure as the M.O.P.D.

Minimum Operating Pressure Differential

The minimum operating pressure differential is that which is required to open the valve and keep it open. For 2-way valves with a floating piston or diaphragm, the valve will start to close below the minimum operating differential pressure. For 3 and 4-way pilot valves, the minimum operating pressure is measured between the pressure and exhaust ports, and must be maintained throughout the operating cycle to ensure complete transfer from one position to the other.

Note: Direct acting, hung diaphragm or hung piston valves do not require a minimum pressure, but may not yield maximum flow on low pressure differentials.

Safe Working Pressure

Safe working pressure is the line or system pressure to which the valve may be subjected without being damaged. *Contact the factory or your local ASCO sales office if you require this value.*

Proof Pressure

Proof pressure is five times the safe working pressure. *Contact the factory or your local ASCO sales office if you require this value.*

Ambient Temperatures*

Minimum Ambient Temperature

The nominal limitation of 32°F (0°C) is advisable for any valve that might contain moisture (water vapor). Where freezing water is not a factor, minimum ambience as low as 0°F (-18°C) can be tolerated. In addition, special constructions are available for ambient temperatures down to -40°F (-40°C).

Consult your local sales office with your specific needs.

Maximum Ambient Temperature

The nominal maximum ambient temperatures listed are based primarily on test conditions used by Underwriters Laboratories, Inc. for setting safe limits for coil insulation. They are determined under continuously energized conditions and with maximum fluid temperatures in the valves. Actual conditions, in many applications, will permit use at considerably higher ambient temperatures. In addition, modifications to standard constructions are available to extend maximum ambient temperature limitations. *Consult your local ASCO sales office with your specific needs.*

Response Times*

Response time from fully closed to fully open or vice versa depends on the valve size and operating mode, electrical service, fluids, temperature, inlet pressure, and pressure drop. The response time for AC valves on air service, under average conditions, can be generalized as follows:

- Small direct acting valves: 5 to 10 milliseconds.
- Large direct acting valves: 20 to 40 milliseconds.
- Internal pilot operated valves:
    1. Small diaphragm types: 15 to 50 milliseconds.
    2. Large diaphragm types: 50 to 75 milliseconds.
    3. Small piston types: 75 to 100 milliseconds.
    4. Large piston types: 100 to 150 milliseconds

Generally speaking, operation on liquids has relatively little effect on small direct acting valves; however, response time of large direct acting and internally piloted valves will slow by 50% to 100%.

Response time of DC valves will be 50% slower than equivalent AC valves. For specific response time on any critical-timing applications, response time can be reduced to meet specific requirements.

**See Page 469 for RedHat Next Generation Solenoid Valves).*

Air Operated Valves

Principles of Operation

An air operated valve has two basic functional units:

- An operator with a diaphragm or piston assembly which, when pressurized, develops a force to operate
- A valve containing an orifice in which a disc or plug is positioned via air pressure to stop or allow flow

Operators

Two operators are offered in this catalog, each having a pressure range to suit various industrial requirements: instrument air range 3 to 30 psi (0.2 to 2.1 bar) and pneumatic range 30 to 125 psi (2.1 to 8.6 bar).

Control air for the operator is completely isolated from the main line fluid by a unique seal arrangement (see Figure 7). This permits a wide range of main line fluids to be handled.

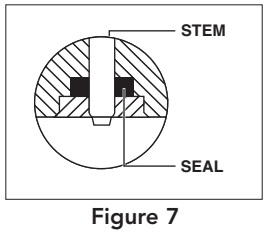


Figure 7

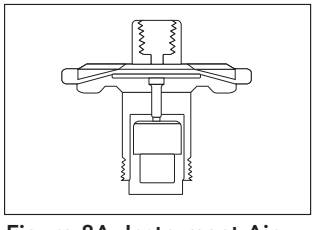


Figure 8A: Instrument Air Pressure Range Operator

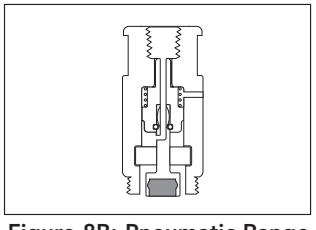


Figure 8B: Pneumatic Range Operator

When a particular valve is selected, any pressure within its pressure range will operate the valve, regardless of variations in the main line pressure.

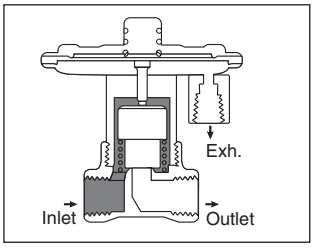


Figure 9A: Normally Closed, Direct Acting, Air Operated Valve with Operator Exhausted

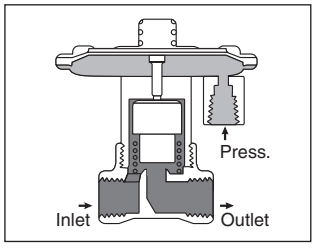


Figure 9B: Normally Closed, Direct Acting, Air Operated Valve with Operator Pressurized

The instrument air pressure range operator utilizes a diaphragm (see Figure 8A) for operation, while the pneumatic range operator has a piston (see Figure 8B). By applying pressure to and exhausting pressure from the operator, the main valve will open or close.

Direct Acting Valves (Figures 9A, 9B)

In a direct acting valve, the operator stem is moved by the diaphragm or piston and directly opens or closes the orifice, depending on whether the operator is pressurized or exhausted. The valve will operate from zero psi to its maximum rated pressure.

Internal Pilot Operated Valves (Figure 10A, 10B)

This valve is equipped with a pilot and bleed orifice and uses the line pressure for operation. When the operator is pressurized, it opens the pilot orifice and releases pressure from the top of the valve piston or diaphragm to the outlet side of the valve. This results in unbalanced pressure, which causes the line pressure to lift the piston or diaphragm off the main orifice, thereby opening the valve. When the operator is exhausted, the pilot orifice is closed and full line pressure is applied to the top of the valve piston or diaphragm through the bleed orifice, providing a seating force for tight closure.

Two types of construction are available:

- Floating diaphragm or piston, which requires a minimum pressure drop to hold it in the open position.
- Hung type diaphragm or piston, which is mechanically held open and operates from zero to the maximum pressure rating.

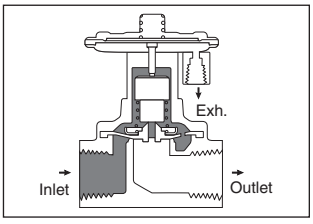


Figure 10A: Normally Closed, Internal, Pilot Operated Valve with Operator Exhausted

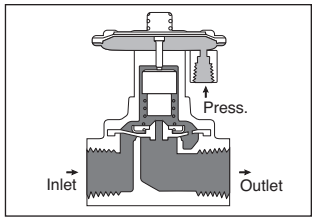


Figure 10B: Normally Closed, Internal, Pilot Operated Valve with Operator Pressurized

Types of Air Operated Valves

2-Way Valves:

Normally closed and normally open operation. Figures 9A, 9B, 10A, 10B, 11A, 11B.

3-Way Valves:

Normally closed, normally open and universal operation. Figures 12A-D, 13A-D.

4-Way Valves:

Figures 14A-D

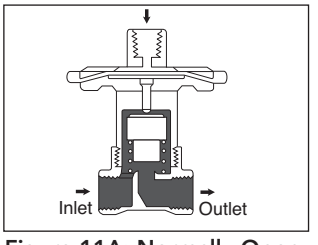


Figure 11A: Normally Open, Operator Exhausted

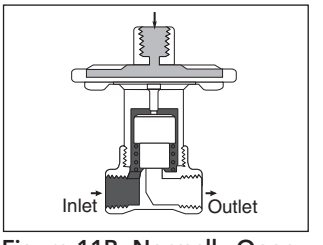


Figure 11B: Normally Open, Operator Pressurized

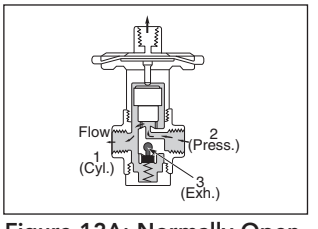


Figure 12A: Normally Open, Operator Exhausted

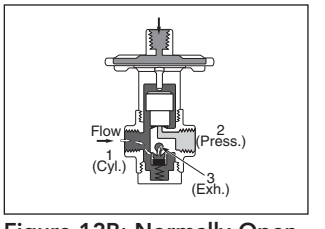


Figure 12B: Normally Open, Operator Pressurized

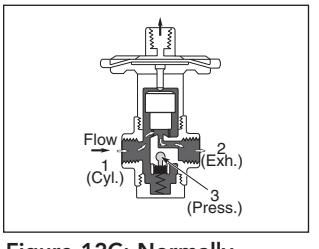


Figure 12C: Normally Closed, Operator Exhausted

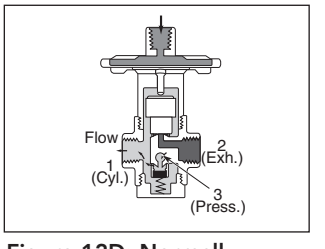


Figure 12D: Normally Closed, Operator Pressurized

Operating Pressures

Minimum Operating Pressure Differential

The minimum operating pressure differential is that which is required to open the valve and to keep it open. Two way valves with floating piston or diaphragm will start to close below the minimum differential pressure. Three and four way pilot valves must maintain the minimum operating pressure throughout the operating cycle to ensure complete transfer from one position to the other.

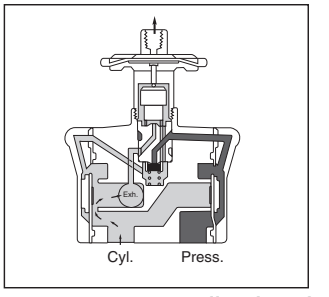


Figure 13A: Normally Closed, Operator Exhausted

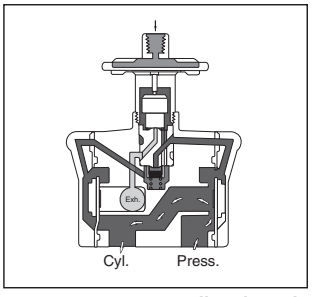


Figure 13B: Normally Closed, Operator Pressurized

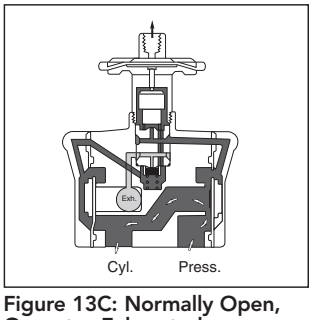


Figure 13C: Normally Open, Operator Exhausted

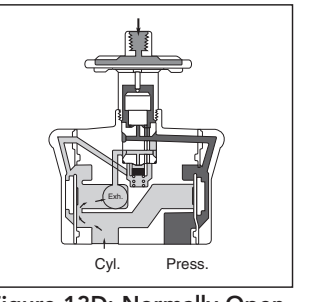


Figure 13D: Normally Open, Operator Pressurized

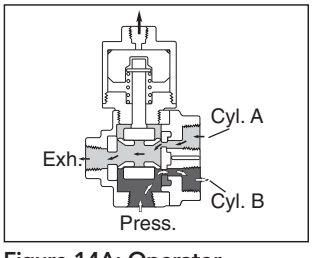


Figure 14A: Operator Exhausted

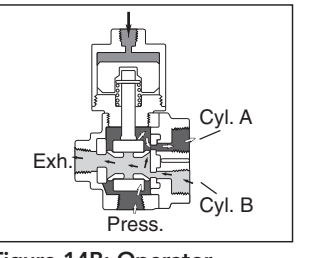


Figure 14B: Operator Pressurized

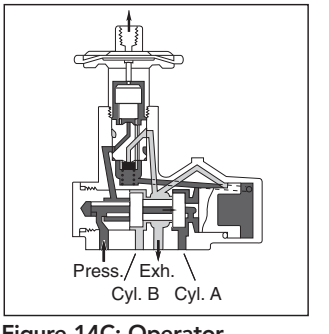


Figure 14C: Operator Exhausted

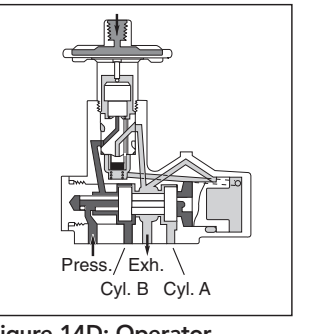


Figure 14D: Operator Pressurized

Maximum Operating Pressure

Maximum operating pressure is the highest pressure at the inlet side of the valve, against which the operator can operate the valve. This pressure may be much less than the maximum safety rating of the valve body.

Note: Direct acting valves do not require a minimum pressure.

Approvals

Approval Listing Code and Information

UL, FM, CSA listings and compliance to applicable CE directives have been indicated for each Series in this catalog. Listing codes and other information follow in this section.

In addition to approvals with the standard features and for the standard voltages listed in each Series, many valves with optional features and other voltages have also been approved. *Consult your local ASCO sales office for details.*

Agency Valve Classifications and Code Reference

General Purpose Valve – a Normally Open or Normally Closed valve intended to control the fluid flow, but not to be depended upon to act as a safety valve. This is a UL and CSA classification, and is not intended to indicate valve service or application.

Safety Shutoff Valve – a Normally Closed valve of the "on" and "off" type, intended to be actuated by a safety control or emergency device, to prevent unsafe fluid delivery. It may also be used as a General Purpose valve. A multiple port valve may be designated as a Safety Shutoff valve only with respect to its Normally Closed port. This is a UL, FM, and CSA valve classification. Safety shutoff valves are listed in UL index under Guide YIOZ or YIOZ2 for ordinary locations and YTSX or YTSX2 for hazardous locations.

Process Control Valve – an FM approved valve to control flammable gases, not to be relied upon as a Safety Shutoff valve. Refer to note under individual valve listing. Unless otherwise stated under the individual Series numbers, valves are listed as General Purpose valves.

Underwriters Laboratories, Inc.

UL standards governing solenoid valves are:

UL429, "Electrically Operated Valves,"

UL1002, "Electrically Operated Valves for Use in Hazardous Locations."

UL1604, "Electrical Equipment for use in Class I and II, Division 2 and Class III Hazardous Classified Locations."

UL provides two "Listing" categories for solenoid valves:

General Use. Valves authorized for general use are complete in their requirements; therefore, they may be installed in the field. They are identified by the UL symbol, followed by the word "Listed" and the valve classification. UL Listings for ASCO "General Use" valves and solenoids can be found in the "UL Gas and Oil Equipment Directory" under Electrically Operated Valves, Guide No. YIOZ or YI0Z2 (File MP-618), and in the "UL Hazardous Location Equipment List" under Electric Valves, Guide No. YTSX or YTSX2 (File E25549) or under Solenoids, Guide No. VAPT (File E12264).

Component. Valves in this category are intended for use as factory-installed components of equipment where final acceptability must be determined by UL. They are not intended for installation in the field.

Component valves are termed "UL Recognized" and use UL's special Recognized Component mark. UL Listings of ASCO Component Valves can be found in the "UL Recognized Component Index" under Electrically Operated Valves, Guide No. YIOZ2 and YSY12 (File MP-618).

Canadian Standards Association

Standard C22.2 No. 139, "Electrically Operated Valves," covers the standards governing solenoid valves.

Standard C22.2 No. 213, "Electrical equipment for use in Class I, Division 2 hazardous locations."

CSA certified valves and solenoids are listed in the "CSA Certified Electrical Equipment Book" under Valves, Guide No. 440-A-0 (File 10381) and Guide No. 440-A-0.8 (File 13976).

Factory Mutual Research Corporation

FM "approves" and lists in the "Factory Mutual Approval Guide" fuel oil and fuel gas safety shutoff valves, process control valves, explosionproof/dust-ignitionproof, and intrinsically safe valves for hazardous locations. Valves designated for other fluids and operational characteristics, although not subject to FM approval, are usually "accepted" by FM on specific equipment installations.

Industrial Risk Insurers (Formerly FIA)

Industrial Risk Insurers does not approve equipment. It established "recommended good practices" in such areas as combustion safeguards on single-burner boiler-furnaces, and safeguarding Class B and Class C furnaces and ovens. Conforming to these practices results in either insurability for fire protection or in more advantageous rates for their protection.

To meet the standards of good practice, safety controls must be either listed by Underwriters Laboratories, accepted by Industrial Risk Insurers or other nationally recognized testing laboratories (NRTL). The National Fire Protection Association (NFPA) maintains similar requirements and recommendations for safety shutoff and vent valves in oil and gas burner boiler systems.

European Directives – CE

The Council of the European Communities, under the treaty establishing the European Community (EC), adopted into law a series of directives to harmonize technical standards.

Solenoid valves are controlled by:

EMC (Electomagnetic Capability) 2014/30/EU
Low Voltage 2014/35/EU

ASCO valves complying to these directives, through third-party or self-certification, display the CE mark on the nameplate or coil and on the Instruction and Maintenance sheet packaged with each valve. On request, ASCO will issue a Declaration of Incorporation and/or Declaration of Conformity for the valve supplied.

Agency Approvals – Worldwide

ASCO's Quality Assurance Program meets all the requirements of ISO-9001:2008. We are also certified to IQ Net, providing customers with the products from 17 ISO-certified facilities around the world. The US, Canada, UK, France, the Netherlands, Germany, and Japan are included.

When desired, ASCO solenoid valves can be supplied to meet the additional requirements of a variety of approval agencies around the world. The following can be requested. *Consult your local ASCO sales office for details.*

United States of America

AGA	American Gas Association
ANSI	American National Standards Institute, Inc.
CSA	Canadian Standards Association (Certified to US Standards)
EIA	Electronic Industries Association
ETL	Electronic Testing Laboratory
FM	Factory Mutual Research Corporation
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IRI	Industrial Risk Insurers (formerly Factory Insurance Association)
JIC	Joint Industrial Council
MIL	Military Standards
MSHA	Mine Safety and Health Administration
NACE	National Association of Corrosion Engineers
NAVSEA	Naval Sea Systems Command
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFPA	National Fluid Power Association, Inc.
NSF	National Sanitation Foundation
UL	Underwriters Laboratories, Inc.
USCG	United States Coast Guard

European Economic Community
- CE European Directives
- CEE International Commission on Rules for the Approval of Electrical Equipment
- ATEX Directive 2014/34/EU Apparatus for Potentially Explosive Atmospheres (**AT**mospheres **EX**plosibles)
- IEC International Electrotechnical Commission
- ISO International Organization for Standardization

Austria
- TÜV-A Technischer Überwachungs-Verein Österreich
- BVFA Bunderversuchs-und Forschungsanstalt Arsenal
- ETI Elektrotechnisches Institut

Australia
- AGA Australian Gas Association
- SAA Standards Association of Australia

Belgium
- CEB Comite Electrotechnique Belge
- IBN Institut Belge de Normalisation
- ISSEP Institut Scientifique de Service Public (anciennement INIEX)
- K.V.B.G. Koninklijke Vereniging der Belgische Gasvaklieden
- VERGAS Technische Vereniging van de Gasindustrie in Belgie V.Z.W.D.

Brazil
- INMETRO Instituto Nacional de Metrologia

Canada
- CGA Canadian Gas Association
- CSA Canadian Standards Association
- EEMAC Electrical and Electronic Manufacturers Association of Canada
- ULC Underwriters Laboratories of Canada

China
- NEPSI National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation
- CCC China Compulsory Certification

Denmark
- DEMKO Danmarks Elektriske Materielkontrol

Finland
- SL Sähkötarkastuslaitos Laboratoria
- VTT Technical Research Centre of Finland

France
- AFNOR Association Française de Normalisation
- INERIS Institut National de l'Environnement Industriel et des Risques (anciennement CERCHAR)
- Bureau Veritas
- LCIE Laboratoire Central des Industries Electriques
- MDIS Ministère du Développement Industrial et Scientifique

Germany
- BVS Bergbau-Versuchsstrecke
- DIN Deutsches Institut für Normung
- DVGW Deutscher Verein des Gas – Und Wasserfaches e.V.
- Germanischer Lloyd
- PTB Physikalisch – Technische Bundesanstalt
- VDE Verband Deutscher Electrotechniker

Italy
- CEI Comitato Elettrotecnico Italiano

Japan
- JEM Japan Electrical Manufacturers Association
- JIS Japanese Industrial Standards
- MIL Ministry of Labor
- NK Japan Maritime Association
- RIIS Research Institute of Industrial Safety, Department of Labor

South Korea
- KISCO Korea Industrial Safety Corp.
- KGSG Korea Gas Safety Corp.

Luxembourg
- Service de l'énergie de l'état

Northern Ireland
- Industrial Science Centre, Department of Economic Development

Norway
- Det Norske Veritas
- NEMKO Norges Elektriske Materiellkontroll

Russia
- USSR Register of Shipping

South Africa
- SABS South African Bureau of Standards

Spain
- CESI Centro Elettrotecnico Sperimentale Italiano
- LOM Laboratorio Oficial José Maria Madariaga

Sweden
- SEMKO Svenska Elektriska Material Kontrollanstalen
- SP Swedish National Testing and Research Institute

Switzerland
- ASE Association Suisse des Electriciens
- SEV Schweizerischer Electrotechnischer Verein

The Netherlands
- DGA Direktoraat – Generaal van de Arbeid
- KEMA Koningklijk Instituut voor het Testen van Elektrische Materialen N.V.
- NEC Nederlands Elektrotechnisch Comité
- NNI Nederlands Normalisatie – Instituut
- REGO Richtlijnen Voor de Samenstelling van Elektrisch Material In Verband Met Gasontploffinsgevaar
- VEG VEG-Gasistituut N.V.
- VGN Veriniging van Gasfabrikanten In Nederland

United Kingdom
- BASEEFA British Approvals Service for Electrical Equipment in Flammable Atmospheres
- BGC British Gas Corporation
- BSI British Standard Institution
- EECS Electrical Equipment Certification Service (BASEEFA)
- Lloyds Register of Shipping
- MRS Midlands Research Station
- NWC National Water Council
- SCS Sira Certification Service
- SFA Special Flammable Atmospheres
- WH Watson House

Flow Data

Importance of Valve Sizing

Improper sizing of a solenoid valve results in below-standard performance and can involve unnecessary cost.

The basic factors in valve sizing include:

- Maximum and minimum flows to be controlled
- Maximum and minimum pressure differential across the valve
- Specific gravity, temperature, and viscosity of fluids being controlled

The Cv method of valve sizing reduces all variables to a common denominator called the Flow Coefficient. After existing or projected conditions have been converted to this coefficient (the Cv), the proper valve size can be found in the catalog pages.

This section provides the complete procedure and reference data for accurate sizing of ASCO solenoid valves in liquid, gas services, and steam. The graphs provide the simplest means of finding the required Cv factor, and are based on the formula:

$$Cv = \frac{\text{Flow Required}}{\text{Graph Factor}}$$

The graph factor can be determined by aligning known pressure conditions on the graphs.

Estimating Cv or Orifice Size:

The table below can be used to estimate a Cv if the orifice size is known or, conversely, to relate the approximate orifice size if the Cv is known. The chart is based on the ASCO designs of inline globe type valves.

The flow charts must be used for precise sizing and converting Cv factors to actual flow terms, and the catalog must be consulted for the actual Cv of a particular valve.

Approximate Orifice Size (ins.)	Approximate Cv	Approximate Orifice Size (ins.)	Approximate Cv
1/32	.02	1/2	3.5
3/64	.06	5/8	4.5
1/16	.09	11/16	5
3/32	.20	3/4	7.5
1/8	.30	1	13
9/64	.36	1 1/4	17
3/16	.53	1 1/2	25
1/4	.70	2	48
5/16	1.7	2 1/2	60
3/8	2	3	100

Sample Problems

Liquids: ①

To find Cv: What Cv is required to pass 20 GPM of oil, with a specific gravity of 0.9 and a pressure drop of 25 psi? The viscosity is less than 300 SSUs.②

Solution: Formula is:

$$Cv = \frac{GPM}{Fg \times Fsg}$$

To find Fg (Graph Factor), use Liquid Flow Graph on page 11.16. The Fg factor is that corresponding to 25 psi pressure drop and equals 5. The Fsg factor (Specific Gravity Factor) can be obtained from the Fsg Chart, and is that corresponding to .9 specific gravity and equals 1.05.

Therefore:

$$Cv = \frac{20}{5 \times 1.05} = 3.81$$

Air and Gases:

To find Cv: A valve is required to pass 500 SCFH at an inlet pressure of 60 psig and a Δp③ of 10 psi. Find Cv if the fluid is carbon dioxide at room temperature.

Solution: Refer to 10-100 psig graph on page 11.17. The formula to be used is:

$$Cv = \frac{SCFH}{Fg \times Fsg \times Ft}$$

Locate Fg at the intersection of 60 psig inlet pressure and 10 psi Δp③ (curved lines). Read down to Fg. Fg=1560.

Locate Fsg corresponding to specific gravity of carbon dioxide (S.G.=1.5). Fsg=0.81. (Refer to next page.) Since the gas is at room temperature, the Ft factor can be ignored.

Insert values into formula:

Steam:

To find Cv: A valve is required to pass 25 lb/hr of saturated steam at an inlet pressure of 7 psig and a Δp③ of 3 psi. What is the Cv?

Solution: Refer to the Steam Graph on page 11.18. Use formula:

$$Cv = \frac{lb / hr}{Fg}$$

Locate Fg on graph corresponding to 7 psig inlet pressure and 3 psi Δp③ (curved lines). Fg = 23.5.

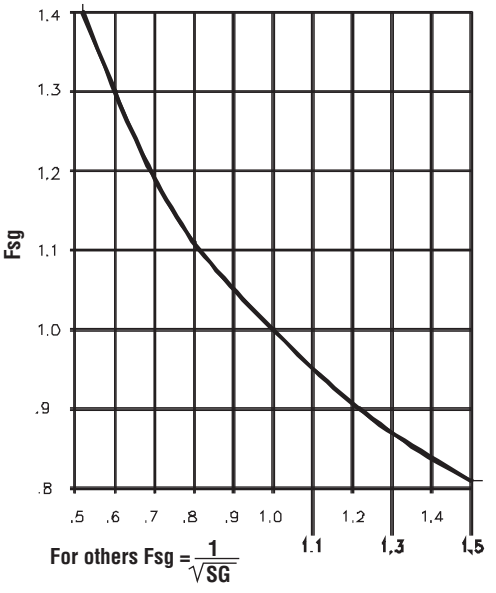
Insert values into formula:

$$Cv = \frac{25}{23.5} = 1.06$$

For further information, consult your local ASCO sales office.

Notes:
① Liquid formulas and flow graphs are based on US gallons.
② If viscosity is less than 300 SSU, correction factors are not necessary.
③ Δp stands for pressure drop.

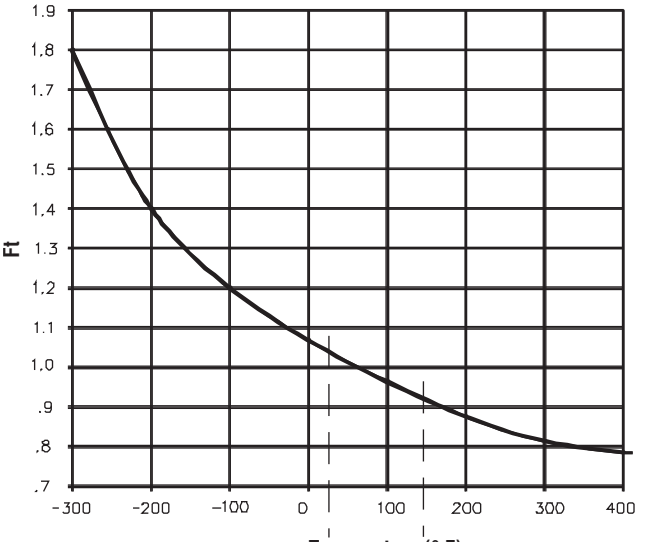
Fsg Chart



For others $Fsg = \frac{1}{\sqrt{SG}}$

Specific Gravity @ 14.7 PSIA and 60°F.

Ft Chart

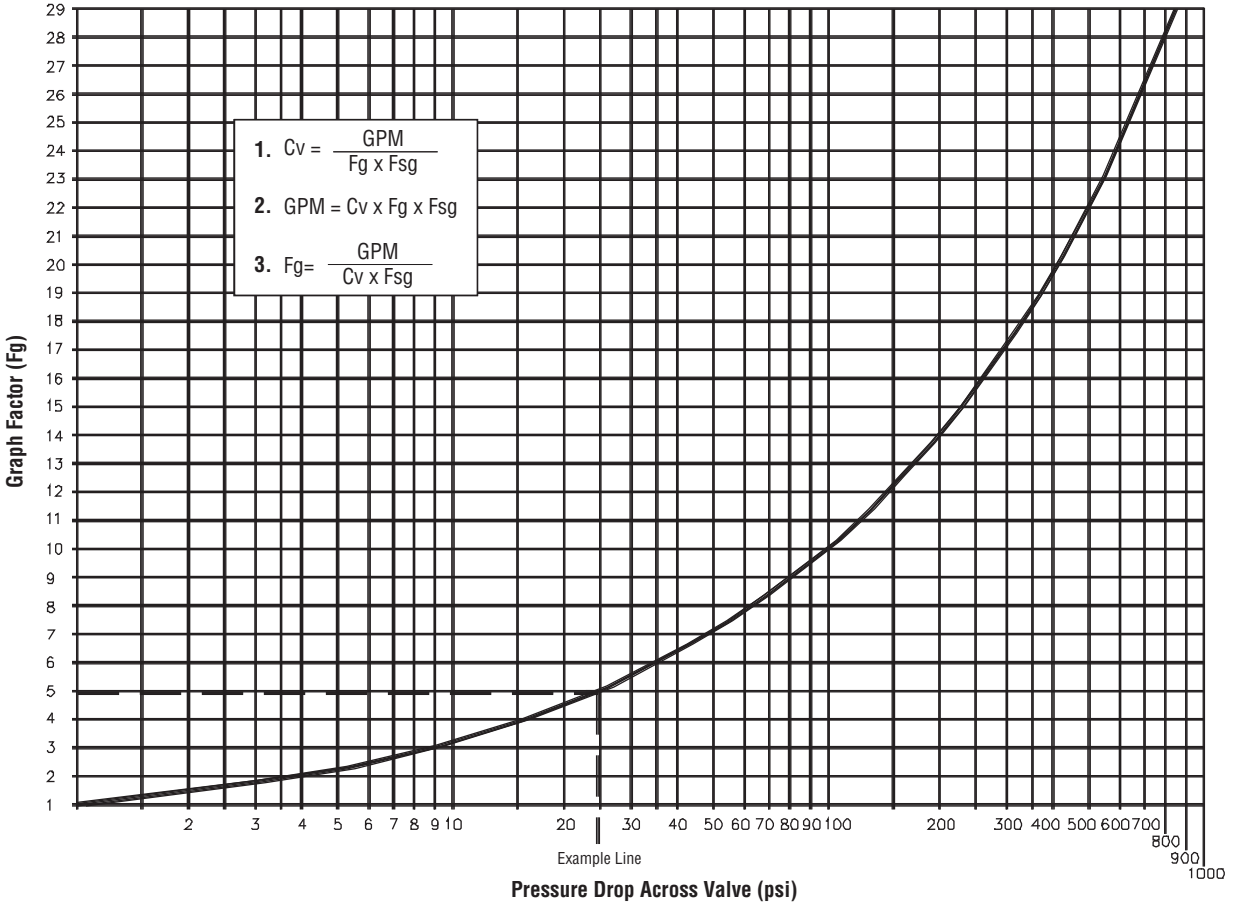


For others

$Ft = \sqrt{\frac{530}{(460^{\circ} + °F.)}}$

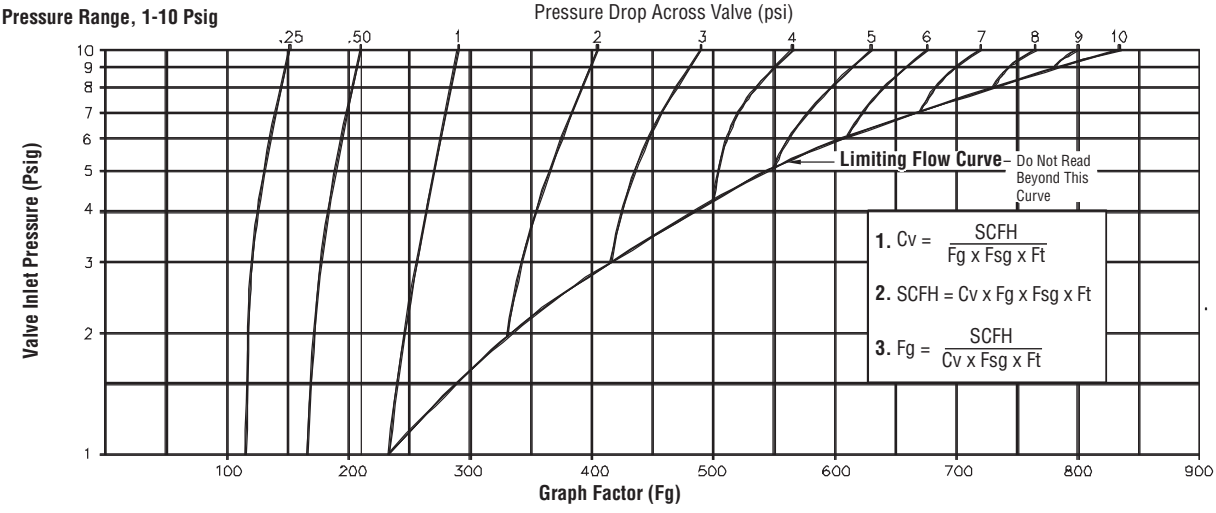
The correction for temperature in the range of 20°F to 150°F is very small and, therefore, can be ignored in ordinary applications.

Liquid Flow Graph

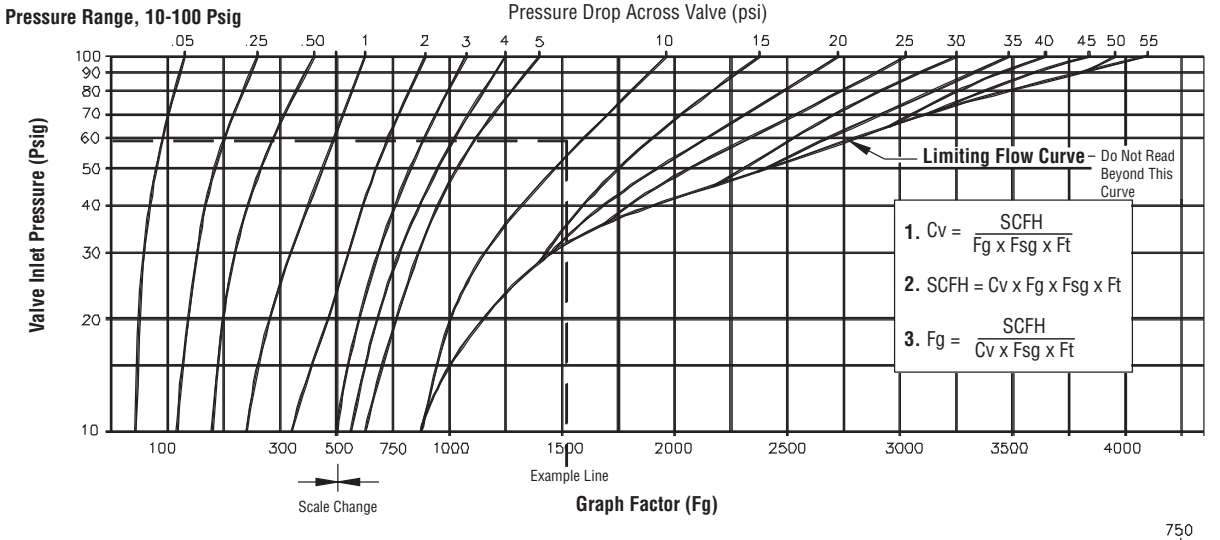


Air and Gas Flow Graphs

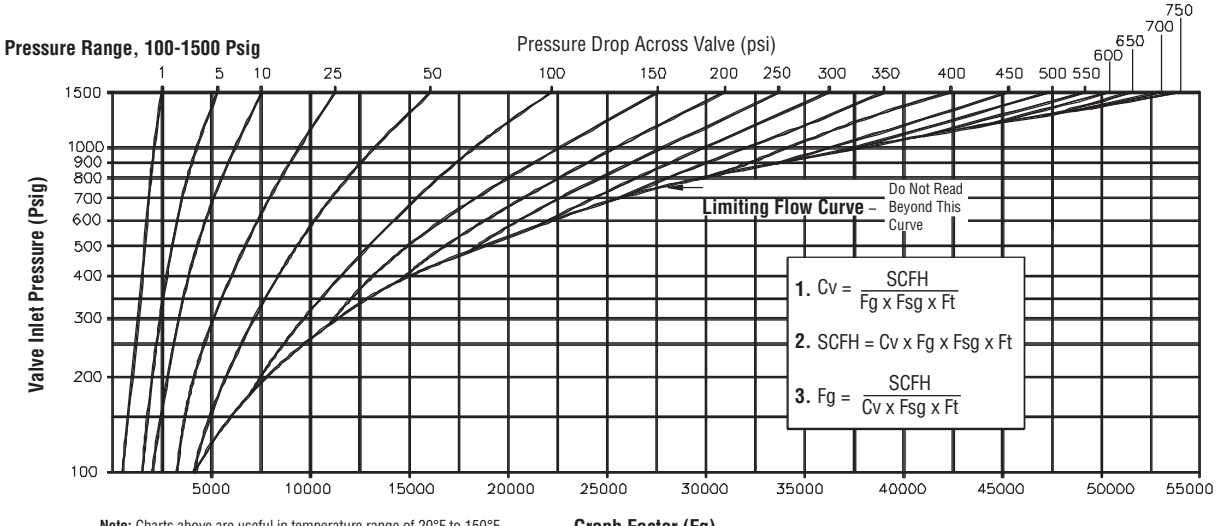
Pressure Range, 1-10 Psig



Pressure Range, 10-100 Psig



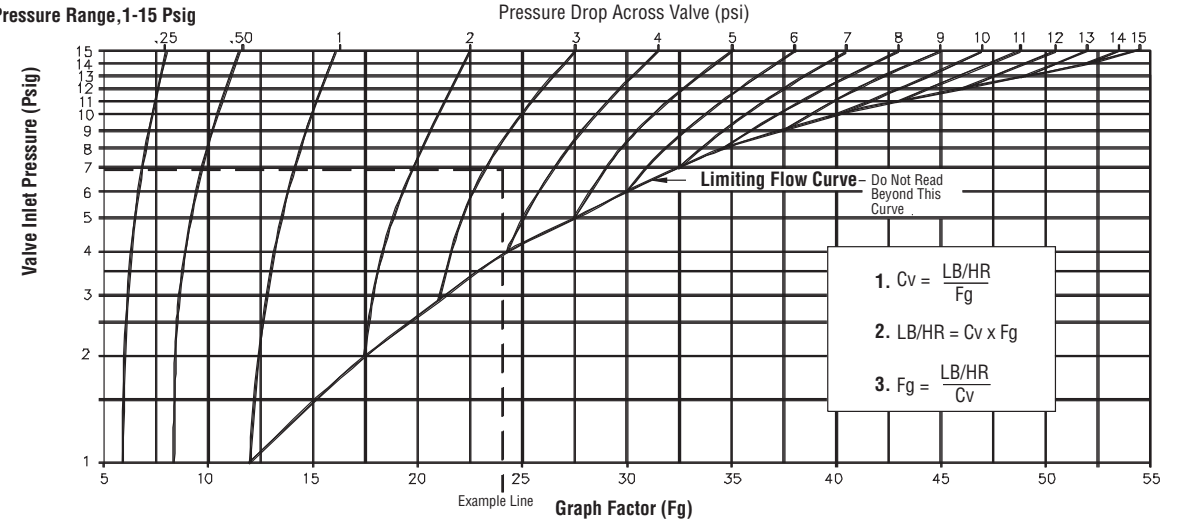
Pressure Range, 100-1500 Psig



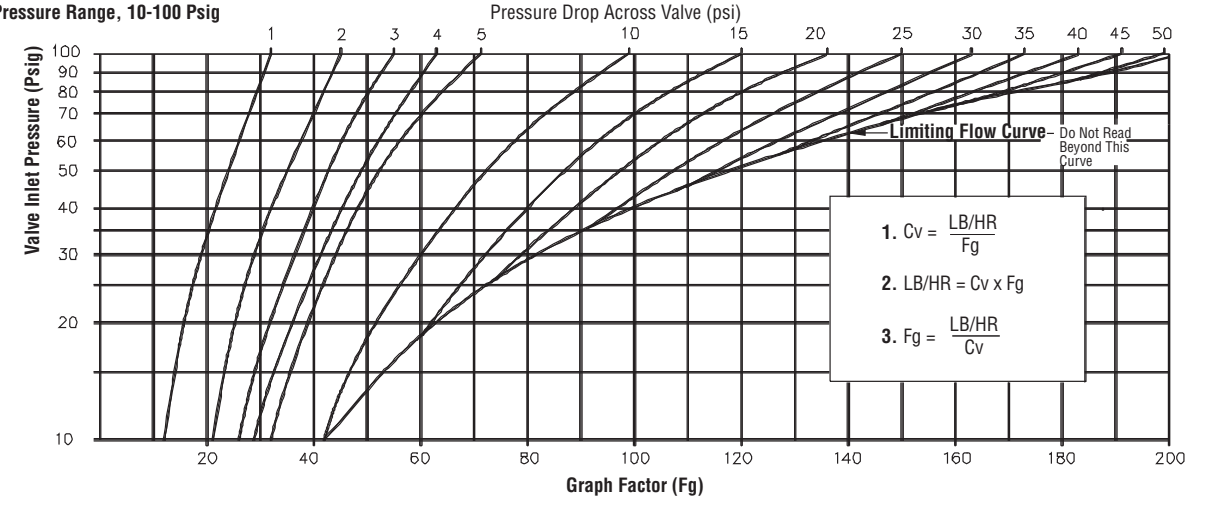
Note: Charts above are useful in temperature range of 20°F to 150°F. Refer to Ft chart on previous page.

Steam Flow Graphs

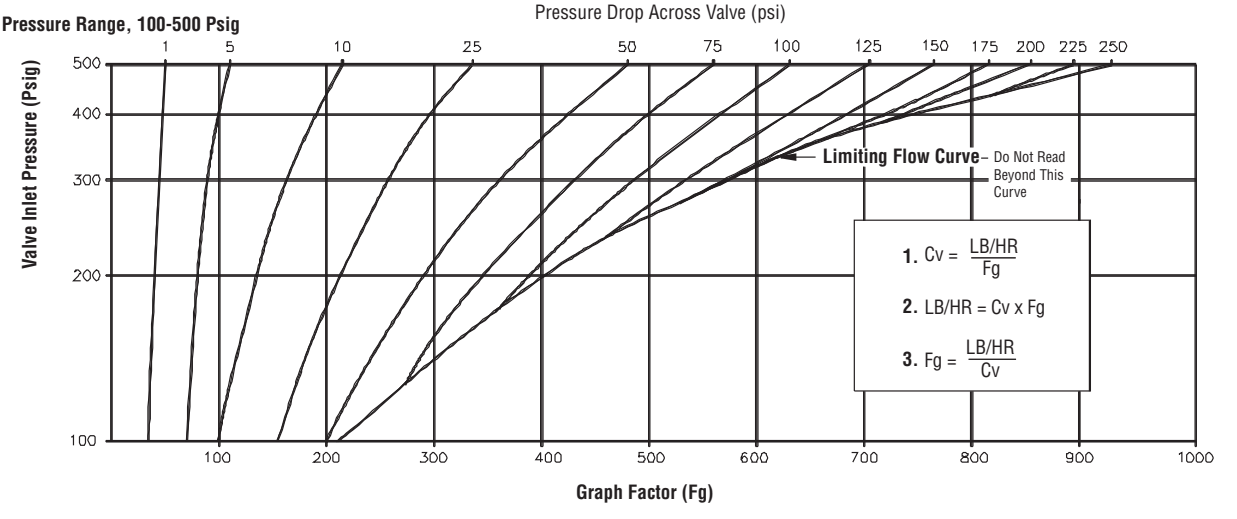
Pressure Range,1-15 Psig



Pressure Range, 10-100 Psig



Pressure Range, 100-500 Psig



Material Selection Guide for Commonly Used Fluids

All orders entered using this guide must state actual fluid, fluid pressure, fluid concentration, and fluid temperature of the application. Actual fluid is extremely important when elastomer options are specified because other substitutions may be required.

ASCO valves are available to control many acids, alcohols, bases, solvents, and corrosive gases and liquids. Modified or special designs are sometimes required, depending upon the application.

Corrosion occurs either as a chemical or electrochemical reaction. Therefore, consideration must be given to both the galvanic and electromotive force series, as well as to pressure, temperature, and other factors that might be involved in the application.

This guide provides information on types of valves that are available for most common corrosive and non-corrosive gases and liquids. *For applications in which abnormal conditions exist and for other fluids, consult your local ASCO office, giving full details on operating conditions.*

This guide is not intended as a specific recommendation; factors beyond our control could affect valve operation or materials.

General Information on Elastomer Materials Frequently Used in ASCO Valves

NBR (Buna 'N', Nitrile)

NBR is commonly referred to as a nitrile rubber and is the standard synthetic elastomer for accomplishing resilient-type seating or sealing in ASCO valves. It has excellent compatibility for most air, water, and light oil applications. It has a useful temperature range of 0°F to 180°F (-18°C to 82°C).

CR (Chloroprene, Neoprene)

CR is principally used as an external seal in refrigeration applications. It is also utilized for oxygen service. It has a useful temperature range of 0°F to 180°F (-18°C to 82°C).

EPDM (Ethylene Propylene)

EPDM is selected for applications above the NBR temperature range, such as handling hot water and steam. Ethylene propylene has an extremely wide range of fluid compatibility, but has the distinct disadvantage that it cannot be used with petroleum-based fluids or contaminated fluids (such as lubricated air). It has a useful temperature range of -10°F to 300°F (-23°C to 149°C).

FKM

FKM is a fluorocarbon elastomer primarily developed for handling such hydrocarbons as jet fuels, gasolines, solvents, etc., which normally cause detrimental swelling to NBR. FKM has a high temperature range similar to EPDM, but with the advantage of being somewhat more resistant to "dry heat." FKM has a wide range of chemical compatibility. It has a useful temperature range of 0°F to 350°F (-18°C to 177°C).

PTFE

PTFE and PTFE with fillers are considered more a plastic than a resilient-type material. They are virtually unattacked by any fluid. Their temperature usage has ranged from discs for cryogenic valves to discs for steam valves. They are not easily fabricated and are known to have "cold flow" characteristics which may contribute to objectionable leakage, particularly on gases.

Other materials referred to in this catalog

CA/POM	(Polyoxymethylene, Acetal)
FFKM	(Perfluoroelastomers)
FMQ	(Fluorosilicone)
HYT	(Hytrel)
MTBE	(Methyl tertiary-butyl ether)
PA	(Nylon, Zytel)
PA + FV	(Polyamide)
PE	(Polyethylene)
PP	(Polypropylene)
PPS	(Polyphenelyne Sulfide, Ryton)
PUR	(Polyurethane)
UR	(Urethane)
VMQ	(Silicone)

Material Selection Guide for Commonly Used Fluids

Fluids	Qualifying Service Information	Materials of Construction and Ordering Information (Refer to List Price Schedule for availability and prices of Special Features)
Acetic Acid	Standard strengths of water solution are: 28, 56, 70, 80, 85, 98%.	For solutions of 40% or less, use stainless steel Type 316 Normally Closed valve with EPDM elastomers. Add suffix "E" to catalog number.
Acetic Acid, Glacial	99.9% solid.	Use appropriate ball valve with ASCO 3 or 4-way auxiliary air pilot valve.
Acetone	Colorless, flammable liquid with mint-like odor. Soluble in water and ether.	Standard catalog valves with EPDM elastomers. Add suffix "E" to catalog number. PTFE or metal seated valves also used.
Acetylene	A colorless, highly flammable gas used for welding and flame cutting of metals, and for producing other chemicals. If moisture is present, copper, silver, and alloys containing more than 66% copper are not suitable.	Standard catalog aluminum, brass, or stainless steel valves. Specify aluminum shading coil. Do not use bar stock brass valves.
Air, Lubricated (Shop Air)	Most sources of air carry lubrication from pumps and other equipment. Others are directly lubricated in lines.	Standard resilient seated catalog valves. For synthetic diester lubricating oils, FKM seals may be required. *Consult local ASCO office.*
Air (or Gas), Dry, Unlubricated	Used in instrument air applications and telephone lines where moisture and oil cannot be tolerated.	Special constructions required. Refer to Long-Life Solenoid Valve Constructions.
Alcohol, Ethyl (Denatured Alcohol)	A grain alcohol commonly used as solvent. Also used as a radiator antifreeze and rocket fuel.	Standard resilient seated catalog valves
Alcohol, Methyl (Methanol)	A flammable wood alcohol used in automotive antifreeze, general solvent, aviation, and rocket fuel.	Standard catalog constructions; however, where high purity of liquid is essential, use stainless steel designs.
Ammonia (Anhydrous or Dissociated)	Used in refrigeration. Other uses include: for cleaning and bleaching, for etching aluminum, and in chemical processing. Presence of slight trace of water moisture can be harmful to brass.	Stainless Steel construction with aluminum shading coil and CR elastomers are required. Specify aluminum shading coil. Add prefix "X" and suffix "J" to catalog number.
Argon	The valves must be free of contaminants when filling incandescent lamps, luminescent tubes, gas thermometers, etc. Also used as an inert shielding gas in welding equipment.	Standard catalog aluminum and brass valves used in connection with welding equipment. Most other applications require stainless steel valves, specially cleaned to avoid contamination. Specify AP-1-005.
Benzene, (Benzol)	Solvent used for waxes, resins, rubber, and other organic materials. Also employed as a fuel or for blending with gasoline or other fuels.	Standard catalog valves with FKM, or PTFE disc and gasket.
Butane	One of the principal LP gases. Used as fuel for household and other industrial purposes. Also a refrigerant and a propellant in aerosol cans.	Special construction required. Refer to Combustion Section.
Carbon Dioxide (Gas or Liquid) (CO_2)	Also known as carbonic anhydride. Used in industrial refrigeration and refrigeration of foods and carbonated beverages. Also, as a fire extinguisher and inert atmosphere in welding equipment.	For gas pressures below 100 psi, use standard valves with NBR discs. Above 100 psi, use Series 8264, especially designed for this service.
Carbon Tetrachloride ("Carbona")	Also known as tetrachloromethane. Mainly used as a metal degreasing agent. Also used in fire extinguishers. It is a general solvent and dry-cleaning medium. Its fumes are highly toxic and should be handled in well-ventilated areas.	Standard catalog brass valves with PTFE or FKM discs. Add suffix "T" or "V" to catalog number. Diaphragm valves must be equiped with FKM parts. Add suffix "V" to catalog number. Metal seated valves also used.
Caustic Soda	See "Sodium Hydroxide."	
Cellulube	One of the phosphate ester lubricating fluids which are fire resistant.	Standard catalog designs with EPDM elastomers. Add suffix "E" to catalog number. PTFE or metal seated valves also used.
Chlorine	Chlorine has a powerful suffocating odor and is strongly corrosive to organic tissues and to metals. Uses include: for bleaching textiles and paper pulp, but it is also used for the manufacture of many chemicals.	Use appropriate ball valve with ASCO 3 or 4 way auxiliary air pilot valve.
City Gas	See "Natural" and "Manufactured Gas."	
Coffee	Automatic or semiautomatic dispensing equipment.	Stainless steel or plastic valves.For FDA approved elastomers, consult your local ASCO office.
Coke Oven Gas (Bench Gas; Coal Gas)	Flammable gas used in domestic and industrial heating.	Standard steel or stainless steel valves with FKM elastomers.
Coolant Oil	Oil used in automatic screw machines and related equipment as cutting oils or coolants. Usually contain suspended solids.	Consult your local ASCO office.
Diesel Fuel	Petroleum oil used as fuel for diesel engines.	Standard resilient seated catalog valves with FKM seating.
Ethylene Glycol (Ethylene Alchohol) "Prestone"	Also known as glycol. Used in permanent antifreeze solutions, brake fluids, and as a dye solvent.	Standard resilient seated catalog valves.
"Freon®" Solvents "MF," "TF," and "BF"	Trademark for a solvent which is commonly used in ultrasonic degreasers for removing oil, common grease, and dirt on metal or plastic parts.	Standard catalog items with metal-to-metal seating, or NBR elastomers only.

Fluids	Qualifying Service Information	Materials of Construction and Ordering Information (Refer to List Price Schedule for availability and prices of Special Features)
Fuel Oil (Light) Nos. 1, 2, 3	"Distillate" petroleum oil used in combustion applications without preheating.	Refer to Combustion Section.
Fuel Oil (Heavy) Nos. 4, 5, 6	Heavy "Bunker" fuel oil. Usually preheated to 135°F or more for combustion.	Refer to Combustion Section.
Gasoline	Special or high-test gasolines have additives or aromatics that affect synthetic rubber by excessive swell, or extraction of plasticizers.	Standard catalog valve constructions with FKM elastomers. Add suffix "V" to catalog number. If MTBE additive is present in gasoline, then use FFKM elastomers. Metal seated valves also used.
Helium	An inert gas used in heat treating, purging, and welding.	Standard resilient seated catalog valves.
Hydraulic Oil	Petroleum base only — viscosity usually 50 SSU or 300 SSU. For fire-resistant hydraulic oils, see "Cellulube," "Pydraul," and "Skydrol."	Standard resilient seated catalog valves.
Hydrochloric Acid	Also known as muriatic acid. Corrosive chemical.	Use an appropriate ball valve with ASCO 3 or 4 way auxiliary air pilot valve. For low pressure, small flow, and a maximum concentration of 20%, refer to Shielded Core valves.
Hydrogen	A highly flammable gas when exposed to air.	Standard resilient seated catalog valves with soft seats.
Jet Fuels (JP1 through 8). *For others, consult your local ASCO office.*	These fuels are used in jet engines and are petroleum products, similar to kerosene. Some jet fuels contain substantial quantities of aromatics which affect most synthetic rubbers.	Standard catalog valves with FKM elastomers. Add suffix "V" to catalog number. PTFE and metal seated valves also used.
Kerosene	Generally used as a solvent for cleaning purpose and as a heating fuel.	Standard catalog valve with FKM elastomers. Add suffix "V" to catalog number.
LP Gas	See "Propane."	Refer to Combustion Section.
Liquid Natural Gas, Nitrogen, and Oxygen		Refer to Cryogenic Valves.
Manufactured Gas	Refine coke oven gas used in city applications.	Refer to Combustion Section.
Mercury	Uses: mercury cells and other electrical apparatus; mercury vapor boilers, lamps, barometers, thermometers, etc.	Use stainless steel body. Valve must be mounted upside down. Special construction required. *Consult your local ASCO office with application details.*
Methyl Ethyl Ketone (MEK)	Used in lacquers, paint removers, cements and adhesives. It is a flammable liquid.	Standard catalog valves with EPDM elastomers. Add suffix "E" to catalog number. PTFE or metal seated valves also used.
Naphtha	A coal-tar solvent.	Use NBR or FKM elastomers. For FKM elastomer, add suffix "V" to catalog number.
Natural Gas	Common heating fuel.	Refer to Combustion Section.

Fluids	Qualifying Service Information	Materials of Construction and Ordering Information (Refer to List Price Schedule for availability and prices of Special Features)
Nitric Acid (aqua fortis or azotic acid)	Normally, concentrations are 60% nitric and 40% water.	Stainless steel valves with aluminum shading coil and PTFE disc. Add suffix "T" tocatalog number. Metal seated valves also used. Maximum temperature at which we can offer valve is 100°F.
Nitric Acid-Red Fuming	Red fuming is more than 86% nitric acid. These can be handled with all stainless steel valves.	
Nitric Acid-White Fuming	White fuming, which is pure to 97.5% acid, and nitric acid vapors are very difficult to handle.	For white fuming acid, use appropriate ball valve with ASCO pilot.
Nitrogen	An inert gas used in heat treating, purging, and welding.	Standard resilient seated catalog valves.
Oils, Lubricating or Motor	Common motor oils known as SAE oils and synthetic lube oils, etc.	Standard catalog valves for 300 SSU maximum. For higher SSU, consult your local ASCO office. *For compressor service involving refrigerants, consult your local ASCO office for elastomer selection.*
Oxygen, Gas	Used in conjunction with various fuels in furnaces, ovens, cutting torches, welding, and heat treating. A nonflammable gas. Contact with hydrocarbons will result in spontaneous combustion.	Metal body valves with FKM or CR elastomers, specially cleaned to avoid contamination with hydrocarbons. Add suffix "N" to catalog number.
Perchloroethylene (Tetrachloroethylene) "Perk"	Used as a dry-cleaning solvent and in vapor degreasing equipment.	Standard catalog items with FKM elastomers. Add suffix "V" to catalog number. Special piston valves available. Do not use diaphragm valves. *Consult your local ASCO office.*
Phosphoric Acid	Also known as orthophosphoric acid. Used in pickling and rust-proofing metals, soft drinks and flavoring syrups, as well as pharmaceuticals.	For concentration of up to 20% and temperatures of 100°F, use 300 series stainless steel with ethylene propylene, FKM, or NBR elastomers.
Photographic Solutions	Also known as sodium thiosulfate or hypo. Most metals corrode sufficiently to cause solution contamination.	For low pressure, small flow, and low concentrations (20% max.), refer to Shielded Core Valves.
Potassium Sulfate	Used in fertilizers. Also in aluminum and glass manufacturing.	Standard stainless steel catalog valves.
Propane Gas	One of the principal LP gases commonly used in grain dryer applications, and a bottled gas for heating and cooking.	Special construction required. Refer to Combustion Section.

Fluids	Qualifying Service Information	Materials of Construction and Ordering Information (Refer to List Price Schedule for availability and prices of Special Features)
"Pydraul" (Monsanto)	A trademark for a series of fire-resistant hydraulic fluids. Used in automatic welding machines, hydraulic presses, and air compressors. Also used in die-casting machines, forging, and extrusion presses.	Standard catalog items with FKM elastomers. Add suffix "V" to catalog number. PTFE or metal seated valves also used.
Refrigerants, CFC (chlorofluorocarbon) "Freon®"	CFCs are used as refrigerants; as blowing agents in the manufacture of insulation, packaging, and cushioning foams; as cleaning agents for metal and electronic components; and in many other applications. CFCs contain chlorine and have been targeted by the EPA to be phased out.	Refrigerants require special selection of elastomers. Consult your local ASCO office.
Refrigerants, HFC (hydrofluorocarbon) "Suva®"	Environmentally acceptable alternative to CFC. Contains no chlorine.	Refrigerants require special selection of elastomers. *Consult your local ASCO office.*
"Skydrol"	Trademark for fire-resistant jet aircraft hydraulic fluid.	Standard catalog items with EPDM elastomer. Add suffix "E" to catalog number. PTFE or metal seated valves also used.
Sodium Hydroxide (Caustic Soda)	Used in pulp and paper industry. Included in detergents and soap, also in textile processing. Solutions range between 50% and 73% commercial.	Stainless steel valves with EPDM elastomers. Add suffix "E" to catalog number. Stainless steel or PTFE seated valves also used.
Sour Gas	See "Coke Oven Gas."	
Steam Condensate	This is return condensate from steam boilers, which has various degrees of dissolved carbon dioxide or oxygen. Temperature is normally high to boiling point.	Brass valves suitable with EPDM elastomers. See Series 8210 and 8222 Hot Water Service Listings. Use suffix "E" on all others.
Stoddard Solvent	This is a dry-cleaning solvent of usually high-purity naphtha, clear and free of undissolved water. A coal-tar solvent.	Standard catalog items.
Sulfuric Acid	An oily, highly corrosive liquid oxidizing organic materials and most metals. It is used for pickling and cleaning metals in electric batteries and in plating baths, for making explosives and fertilizers.	Use an appropriate ball valves with ASCO 3 or 4 way auxiliary air pilot valve. For low pressure, small flow, and a concentration of up to 60%, refer to Shielded Core Valves.
Toluene (Toluol)	Also called methyl benzene or methyl benzol. One of the coal-tar solvents. Used in aviation and high octane gasolines. Also a solvent for paints, coatings, resins, etc. It is a flammable liquid.	Standard catalog valves with FKM disc and gasket. Add suffix "V" to catalog number.
Trichloroethylene ("Carbona" or "TRIAD")	Common degreasing solvent, noncombustible, but very toxic. Adequate ventilation required.	Standard brass catalog valves, if dry, use FKM elastomers (add suffix "V" to catalog number). If moisture is present, use stainless steel. Metal and PTFE seated valves also used.
Turpentine	Solvent or thinner for paints, varnishes, and lacquers. Also, a rubber solvent and reclaiming agent. The liquid is volatile.	Standard catalog valves with FKM elastomers. Add suffix "V" to catalog number.
Vacuum		Refer to Vacuum Valves.
Vegetable Oils	Edible oils extracted from seeds, fruits, or plants, such as peanut oils, cottonseed oils, etc.	Standard resilient seated catalog valves. *For FDA approved elastomers, consult your local ASCO office.*
Vinegar	A diluted impure solution of acetic acid.	Stainless steel valves with EPDM elastomers (FKM elastomers may also be used). Add suffix "E" to catalog number. *For FDA approved elastomers, consult your local ASCO office.*
Water, Boiler Feed	Commonly treated water with inhibitors to avoid corrosion of boiler tubes.	Standard stainless steel catalog valves with FKM elastomers. Add suffix "V" to catalog
Water, Distilled or Deionized	A purified water, sometimes called deionized water, neutral and free from contaminants.	Stainless steel valves with EPDM elastomers. Add suffix "E" to catalog number. Stainless steel or PTFE seated valves also used.
Water, Fresh		Standard resilient seated catalog valves. Aerated water, which is slightly acidic, will cause seat erosion by process known as dezincification. Stainless steel or plastic valves should then be selected.
Water, High Pressure	When handling water above 500 psi, erosion and water hammer must be considered.	Special designs for car wash applications, etc. *Consult your local ASCO office.*
Water, Hot	Water above 200°F: Often flashes to steam due to regulators or other line restrictions. Below 200°F, this change of state is unlikely.	Standard catalog designs suitable to temperatures listed in catalog. Also see Series 8210 and 8222 Hot Water Service listings. *For temperatures exceeding those listed, consult your local ASCO office.*
Water, Sea, Brine, Brackish	Difficult to handle due to galvanic corrosion.	Use appropriate ball valve with ASCO air pilot valve.

Electronically Enhanced Solenoids
(Next Generation)

All RedHat Next Generation solenoid valves are rated for continuous duty under the operating conditions outlined within this section.

Coil Operating Voltage Ranges

All coils are designed for industrial operating voltages and can be used on the following voltage ranges:

Voltage Range	Minimum Voltage	Maximum Voltage
100-240V/50 or 60Hz/DC	85	264
24-120V/50 or 60Hz/DC	20.4	132
12-24/DC only	10.4	26.4

The coils with voltage ranges of 100-240 and 24-120 have three lead wires, 24 inches long (2 red for power input, and one green lead for grounding where necessary). These two versions are not polarity sensitive.

The coil with a voltage range of 12-24/DC has 3 lead wires, one red, one black, and one green. This coil is polarity sensitive. The red lead is the positive, black is the negative, and green is the ground wire. This solenoid is also polarity protected. Reversing the polarity will not damage the coil, but the coil will not function until the correct polarity is applied.

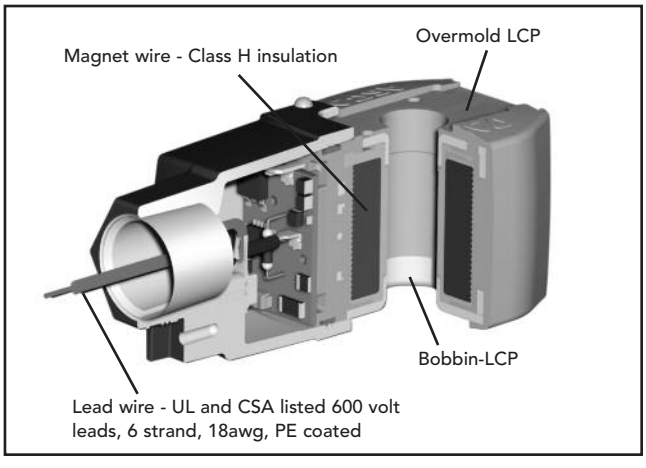
Note: The 100-240 voltage range is also suitable for battery charging circuits designed around a 125/DC nominal voltage range.

Electrical Specifications

2 Watt Electronic Coils	Type
Maximum Ambient Temperature	140˚F
Maximum Cycle Rate	1 Operation/ Second
Standard Coil Class of Insulation	H

Power Consumption

The Next Generation solenoid power rating is 1.2 watt of power for 12-24V DC and 1.5 watts for 24-120V AC/DC, and 100-240V AC/DC.



The advanced technology used in the Next Generation coil includes electronic circuitry which may limit the compatibility with certain control system components. The following issues need to be considered when specifying an output card or device to operate the Next Generation coil. An initial inrush current spike is drawn by the Next Generation coil. This inrush spike is 72 msec in duration, which is sufficient time for the core to reach the plugnut. The electrical requirement then drops to the holding value.

Inrush Current: The power source, wiring, and output device used need to have surge ratings equal to or greater than the inrush current value (appropriate to the voltage range) specified in the table below.

Inrush Current Rating	
Coil Version	**Peak Inrush Current (Amps)**
12-24/DC	3.2
24-120/50-60Hz/DC	1.4
100-240/50-60Hz/DC	0.32
Maximum Duration = 72 ms	

Holding Current: The power source, wiring, and output device used need to have continuous current ratings equal to or greater than the holding current value (appropriate to the voltage range) specified in the table below.

Holding Current Rating			
Coil Version	**Input Voltage**	**Average Holding Current (Amps)**	**Average Holding Volt-Amps (VA)**
12-24/DC	12	0.230	2.8
	24	0.190	4.5
24-120/50-60Hz/DC	24	0.140	3.4
	120	0.070	8.8
100-240/50-60Hz/DC	100	0.044	4.4
	240	0.032	7.8

Supervisory/Leakage Currents:
The leakage current is defined as a current that is supplied from an output device when the device is in its off or de-activated state.

The Next Generation coil is suitable for systems using supervisory currents that do not exceed the drop-out currents noted in the table below.

Supervisory/Leakage Current Rating	
Coil Version	**Drop-out Current (mA)**
12-24/DC	20
24-120/50-60Hz/DC	15
100-240/50-60Hz/DC	7
Important: Supervisory and leakage currents above the drop-out current listed with cause improper operation. Consult your local ASCO Sales office for additional assistance.	

Solenoid Enclosures

The Next Generation solenoid coil is fully encapsulated using Dupont™ Zenite® Liquid Crystal Polymer resin (LCP). Zenite (LCP) is a thermoplastic polyester resin which exhibits several advantages over other thermoplastics. The advantages include excellent resistance to a wide range of organic solvents and automotive fluids*, resistance to impact, and long term retention of properties at continuous-use temperatures.

*Chemical resistance of Zenite LCP may not be suitable for all applications. Zenite LCP is not suitable for caustic solution. *Please consult ASCO for appropriate product solutions.*

Zenite is a registered Trademark of Dupont Co.

RedHat Next Generation Solenoids are available as:

General Purpose/Watertight – Intended for indoor and outdoor use and provides protection classifications from NEMA Types 1 through 4X.

Class I, Division 2 for Hazardous Locations/Watertight – Meets Types 1 through 4X and is UL listed and CSA certified for Class I, Division 2, Groups A, B, C, and D and Class II, Division 2, Groups F and G. Operating temperature code T4A (120˚C).

Valve Specifications

Maximum Ambient Temperature

The maximum ambient temperature is 140˚F (60˚C). This limit is based on continuous energization with the maximum fluid temperatures as shown on each catalog page.

Response Time

Response time from fully closed to fully open or vice versa depends on valve size, operating mode, fluids, temperature, inlet pressure, and pressure drop. The response times for Next Generation are defined as:

Small direct acting valves – 10 to 60 msec
Large direct acting valves – 25 to 90 msec

Internally pilot operated valves:

- Small diaphragm types – 20 to 100 msec
- Large diaphragm types – 80 to 150 msec
- Small piston types – 80 to 150 msec
- Large piston types – 105 to 200 msec

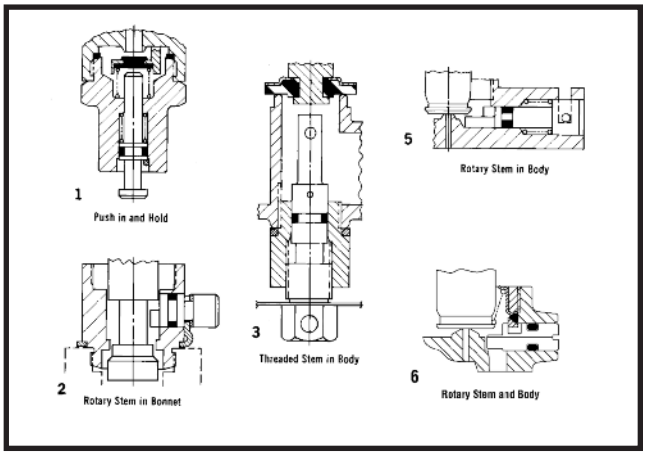
Operation on liquids has relatively little effect on small direct acting valves, however, response times of large direct acting and internally piloted valves may be lengthened by 50% to 100%.

Manual Operators

Manual operators are provided to operate the valves manually when electric actuation is not provided. There are two basic types of manual operators, momentary and maintained. To determine which type of manual operator is available for your valves, please see the Optional Features Chart on the relevant valve catalog page. Once it is determined that the subject valve can accommodate a manual operator, the chart below will tell you the type of manual operator. The chart also references the relevant cutaway illustration.

Series Number	Const. Ref.	Manual Operator Suffix	Manual Operator Type	Illustration Number
8030	8	MO	Maintained	3
8210	4, 7, 10, 11, 12	MO	Maintained	2
8262	1	MS	Maintained	6
8263	1	MS	Maintained	6
8314	1	MS	Maintained	6
8316	5, 6	MO	Maintained	2
8320	2	MO	Momentary	1
8320	2	MS	Maintained	6
8321	4	MO	Momentary	1
8321	4	MS	Maintained	3
8344	1, 3, 4	MO	Maintained	2
8345	2	MO	Maintained	5

Cutaway Illustrations



Valve Parts in Contact with Fluids						
Series	**Body**	**Seals and Discs**	**Disc Holder**	**Core Guide**	**Springs**	**Shading Coil**
8030	Brass	NBR	-	-	302 Stainless Steel	Copper
8210	304 Stainless Steel	NBR	-	-	302 Stainless Steel	Silver
	Brass	NBR	①	-	302 Stainless Steel	Copper
8223	304 Stainless Steel	PTFE, NBR	-	-	302 Stainless Steel	Silver
	Brass	NBR, PA, PTFE	-	-	302 Stainless Steel	Copper
8262	304 Stainless Steel	NBR	-	-	302 Stainless Steel	Silver
8262P261	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262R099	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262R107	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262R175	304 Stainless Steel	UR		-	302 Stainless Steel	Silver
8262R178	304 Stainless Steel	UR	-	-	302 Stainless Steel	Silver
8262	Brass	NBR	-	-	302 Stainless Steel	Copper
8262R077	Brass	LT NBR	-	-	Inconel	Copper
8262R078	Brass	LT NBR	-	POM	Inconel	Copper
8263	304 Stainless Steel	NBR	-	-	302 Stainless Steel	Silver
8263	Brass	NBR	-	-	302 Stainless Steel	Copper
8314	304 Stainless Steel	NBR, FKM	-	POM	302 Stainless Steel	Silver
8314	Brass	NBR, FKM	-	POM	302 Stainless Steel	Copper
8316	Brass	NBR	POM	POM	302, 17-7PH Stainless Steels	Copper
8317	Brass	NBR, FKM, CR	-	POM	302, 17-7PH Stainless Steels	Copper
8320	303 Stainless Steel	NBR	POM	POM	302 Stainless Steel	Silver
8320	Brass	NBR	POM	POM	302 Stainless Steel	Copper
8321	Brass	NBR	POM	POM	302 Stainless Steel	Copper
8344	Brass	NBR	POM	POM	302, 17-7PH Stainless Steels	Copper
8345	Brass	NBR, PA	-	POM	302 Stainless Steel	Copper
8551	316 Stainless Steel	NBR, PA	-	POM	302 Stainless Steel	Copper
8551	Anodized Aluminum	NBR, PA	-	POM	302 Stainless Steel	Copper

Note: All core tubes are 305 stainless steel and all cores and plugnuts are 430F stainless steel. ① 8210P033, 8210P034, and 8210P035 with PA Disc Holder

Optional Features

Standard ASCO solenoid valves will meet the needs of most applications. However, there are times when fluids must be handled at higher temperatures, in less than ideal ambient locations, when the fluids themselves are hostile, etc.

For this reason, ASCO offers a wide range of options which can help tailor new valves to your precise applications. Specifying these options when you order is easy. Simply attach the proper prefix (electrical options) or suffix (construction options) to the basic catalog number.

Optional Electrical Features

- Coils for high-temperature applications
- Spade and screw terminations in place of leads
- Battery service coils
- Open frame solenoids
- Variety of solenoid enclosures, from Rainproof to Explosionproof, for hydrogen atmospheres

Optional Construction Features

- Special materials for handling a wide variety of fluids
- Manual operators
- Metering devices
- Special cleaning procedures

Index

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How to Select and Specify

Not all optional features are appropriate or available for all valves.

Table 1 lists the optional electrical feature prefixes available for each RedHat II solenoid and coil. Specify these features by adding the indicated prefixes to the valve catalog number.

For those prefixes marked with a "●" or for optional RedHat electrical features not covered here, contact your local ASCO sales office.

Table 2 lists the suffixes for optional construction features available for each valve Series. Specify these features by adding the indicated suffixes to the valve catalog number.

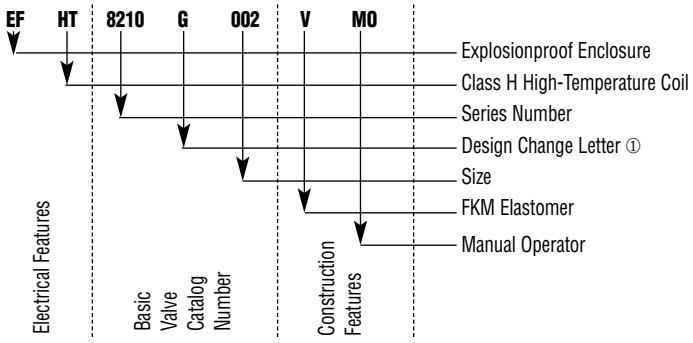
Table 2: Suffixes for Optional Construction Features

SUFFIX I		SUFFIX II		SUFFIX III	
Code	**Seat/Disc/Etc. Material**	**Code**	**Form of Flow**	**Code**	**Feature**
E	EPDM (Ethylene Propylene)	**F** ①	Normally Closed	**HW** ①	Hot Water Construction
J	CR (Chloroprene, Neoprene)	**G** ①	Normally Open	**LT** ①	Low Temperature
K ①	Air Operated, 3-30 psi	**U** ①	Universal	**M**	Metering Device
N	Oxygen			**MB** ①	Mounting Bracket
Q ①	Long-Life Construction			**MO**	Manual Operator
R ①	Resilient			**MS**	Screw Type Manual Operator
T	PTFE			**VH** ①	High Vacuum
V	FKM			**VM** ①	Medium Vacuum
① Covered on the pages of the Series in which it is used.					

Table 1: Optional RedHat II Electrical Feature Prefixes (For RedHat optional electrical features, contact your local sales office.)

Code	Solenoid
EF	Class I, Division 1 Explosionproof
EV	Class I, Division 1 Explosionproof with 316 Stainless Steel Hub and Stainless Steel Base Plate
EE	Class I, Division 2 General Purpose
GP	Panel Mount Type 1 General Purpose Solenoid
J	Junction Box
JP	Panel Mount Junction Box
OF	Open Frame Spade and Screw Terminal Solenoids
OP	Panel Mount Spade, Screw and DIN Terminal Solenoids
Code	**Coil**
HB	Class H - Intermediate Power
● HC	Class H - Battery Charging Coil
HT	Class H - High Temperature
KB	Class H - Intermediate Power - Screw Terminals
● KC	Class H - Battery Charging Circuit - Screw Terminals
KF	Class F - High Temperature - Screw Terminals
KH	Class H - High Temperature - Screw Terminals
KP	Class F - Intermediate Power - Screw Terminals
SC	Class F - High Temperature - DIN Connection
SD	Class F - Intermediate Power - DIN Connection
SF	Class F - High Temperature - Spade Terminals
SP	Class F - Intermediate Power - Spade Terminals
SS	Class H - Intermediate Power - Spade Terminals
ST	Class H - High Temperature - Spade Terminals
SU	Class H - High Temperature - DIN Connection
SV	Class H - Intermediate Power - DIN Connection
● SW	Class H - Battery Charging Circuit - Spade Terminals
VT	Class F - High Temperature - Micro 4 Pin Connector
VB	Class F - Intermediate Power - Micro 4 Pin Connector
ZT	Class F - High Temperature - Mini 3 Pin Connector
ZB	Class F - Intermediate Power - Mini 3 Pin Connector
Code	**Feature**
● L	72" continuous leads
● X	Other special constructions
Note: See chart on next page for specific power and temperature ratings.	

An example of an ASCO valve catalog number with prefixes and suffixes:



① The Design Change Letter indicates a major design change affecting spare parts kits, rebuild kits, and coils. The correct replacement parts for each change letter are shown in ASCO's Rebuild Kits and Coils Catalog.

Optional Electrical Features

Most optional electrical features shown here can be included on ASCO valves approved by UL, FM, and CSA.

Identify the options you want by adding the appropriate prefix to the catalog number of the valve you are specifying.

To determine the proper prefix, use the Valve Series Specification Table for the valve you are ordering to determine its watt rating/class of coil insulation.

RedHat II Solenoid Options

Using Table 3, find the desired solenoid option in the left column and the watt rating/class of coil insulation in the next column. The choice of prefixes is shown in the next two columns on that line. The first column indicates the prefix if Class F temperature protection is sufficient for your requirements. The second column provides the desired solenoid option, plus the higher temperature protection of a Class H coil.

For example, to select an 8262H002 valve with a Class H Open Frame Spade Terminal Solenoid, assuming the voltage to be 120 volts AC, 60 Hz:

- In the Specification Table for Series 8262, the Watt Rating/Class of Coil Insulation is 6.1/F for Catalog Number 8262H002.
- Using Table 3, find the listing for "Open Frame Solenoid with Spade Terminal Coil" in the left column. Then, find 6.1/F under AC coils in the next column. Reading across the column headed "Class H Coil," you'll find the prefix "OFST." To order, specify Catalog Number OFST8262H002, 120/60.

(**Note:** Always include the voltage and frequency.)

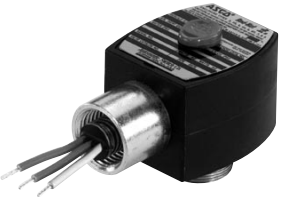
Table 3: Solenoid Options for RedHat II Valves

Solenoid Option Required	Watt Rating/ Class of Insulation		Class F Coil Prefix	Class H Coil Prefix
	AC	DC		
General Purpose Solenoid (Standard Valve Construction)	6.1/F 10.1/F 16.1/F	1.4/F 10.6/F 11.6/F	-	- HT HT
	9.1/F 17.1/F 20.1/F	22.6/F	-	HB
Panel Mount Type 1 General Purpose Solenoid	6.1/F 10.1/F	10.6/F 11.6/F	GP	GPHT
	9.1/F 17.1/F	22.6/F	GP	GPHB
Type 7 Explosionproof Solenoid	6.1/F 10.1/F 16.1/F	10.6/F 11.6/F	EF	EFHT
	9.1/F 17.1/F 20.1/F	22.6/F	EF	EFHB
	10.1/F 15.1/F 17.1/F	1.4/F 11.6/F 22.6/F	EV	- EVHT EVHB
Open Frame Solenoid with Spade Terminal Coil	6.1/F 10.1/F	10.6/F 11.6/F	OFSF	OFST
	9.1/F 17.1/F	22.6/F	OFSP	OFSS
Panel Mount Solenoid with Spade Terminal Coil	6.1/F 10.1/F 16.1/F	10.6/F 11.6/F	OPSF	OPST
	9.1/F 17.1/F 20.1/F	22.6/F	OPSP	OPSS
Open Frame Solenoid with Screw Terminal Coil	6.1/F 10.1/F	10.6/F 11.6/F	OFKF	OFKH
	9.1/F 17.1/F	22.6/F	OFKP	OFKB
Panel Mount Solenoid with Screw Terminal Coil	6.1/F 10.1/F	10.6/F 11.6/F	OPKF	OPKH
	9.1/F 17.1/F	22.6/F	OPKP	OPKH
Junction Box with Spade Terminal Coil	6.1/F 10.1/F	10.6/F 11.6/F	JSF	JST
	9.1/F 17.1/F	22.6/F	JSP	JSS
Panel Mount Junction Box with Spade Terminal Coil	6.1/F 10.1/F	10.6/F 11.6/F	JPSF	JPST
	9.1/F 17.1/F	22.6/F	JPSP	JPSS
Junction Box with Screw Terminal Coil	6.1/F 10.1/F 16.1/F	10.6/F 11.6/F	JKF	JKH
	9.1/F 17.1/F 20.1/F	22.6/F	JKP	JKB
Panel Mount Junction Box with Screw Terminal Coil	6.1/F 10.1/F	10.6/F 11.6/F	JPKF	JPKH
	9.1/F 17.1/F	22.6/F	JPKP	JPKB
DIN Connection Solenoid	6.1/F 10.1/F 16.1/F	10.6/F 11.6/F	SC	SU
	9.1/F 17.1/F 20.1/F	22.6/F	SD	SV
Panel Mount DIN Connection Solenoid	6.1/F 10.1/F	10.6/F 11.6/F	OPSC	OPSU
	9.1/F 17.1/F	22.6/F	OPSD	OPSV
Micro 4 Pin Connector Solenoid	10.1/F	11.6/F	VT	-
	17.1/F	22.6/F	VB	-
Mini 3 Pin Connector Solenoid	10.1/F	11.6/F	ZT	-
	17.1/F	22.6/F	ZB	-

Important Note: One-piece molded epoxy RedHat II solenoids are a unique combination of coil and enclosure. When ordering some RedHat II options, it may be necessary to specify the appropriate catalog number prefixes for both the enclosure and the coil.

Type 1 **General Purpose Solenoids with Class F High-Temperature Coils**	**Enclosures:** • Also meet Type 2 Dripproof, Types 3 and 3S Raintight, and Types 4 and 4X Watertight requirements. • Supplied standard with 1/2" threaded conduit hub and built-in strain relief for leads. **Coils:** • Insulation system for coil temperatures up to 311°F (155°C). ① • *For ambient temperature requirement, refer to specific Series and charts in Engineering Information Section.* • Suitable for 50 and 60 Hz. ②	**Ordering Information:** Supplied standard on all RedHat II valves.	
Type 1 **General Purpose Solenoids with Class H High-Temperature Coils**	**Enclosures:** • Same as Class F. **Coils:** • Insulation system suitable for coil temperatures up to 356°F (180°C).① • *For ambient temperature requirements, refer to specific Series and charts in Engineering Information Section.* • Suitable for 50 and 60 Hz. ②	**Ordering Information:** Depending on wattage, use catalog number prefix "HT" or "HB" (e.g., HT8210H002).	
Panel Mount Type 1 **General Purpose Solenoids with Class F or H High-Temperature Coils**	**Enclosures:** • Same as above, but with provision for mounting on a panel (panel not included). **Coils:** • Same as Class F or H above.	**Ordering Information:** For Class F coil, use catalog number prefix "GP" (e.g., GP8210G2) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "GPHT" or "GPHB" (e.g., GPHT8210G002) and specify voltage.	
Type 7 (A, B, C, and D) **Explosionproof Solenoids with Class F High-Temperature Coils**	**Enclosures:** • Also meets Types 3 and 3S Raintight, Types 4 and 4X Watertight, Types 6 and 6P Submersible, and Type 9 (E, F, and G) Dust Ignitionproof requirements. *Refer to Engineering Information Section.* **Coils:** • Insulation systems suitable for coil temperatures up to 311°F (155°C). ① • *For ambient temperature requirements, refer to specific Series charts in Engineering Information Section.* • Suitable for 50 and 60 Hz. ②	**Approvals:** UL listed; CSA certified. **Ordering Information:** Use catalog number prefix "EF" (e.g., EF8210G002) and specify voltage.	

① UL limitations are 284°F (140°C) for Class F insulation systems and 320°F (160°C) for Class H insulation systems.
② Can be supplied for 50 Hz at a reduced voltage, which is standard throughout the world; i.e., 120/60, 110/50.

Type 7 (A, B, C, and D) Explosionproof Solenoids with Class H High-Temperature Coils	**Enclosure:** • Same as Class F Explosionproof Coil: Insulation system suitable for coil temperatures up to 356°F (180°C). ① • *For ambient temperature requirements, refer to specific Series and charts in Engineering Information Section.* • Suitable for 50 and 60 Hz. ②	**Approvals:** UL listed; CSA certified.Ordering **Information:** Depending on wattage, use catalog number prefix "EFHT" or "EFHB" (e.g., EFHT8210G002) and specify voltage.	
Type 7 (A,B, C, and D) Explosionproof Solenoids with Class F or H High-Temperature Coils	**Enclosure:** • Same as above, but with 316 stainless steel conduit hub and stainless steel base plate. **Coils:** • Same as Class F or H Coil	**ATEX Approved for:** II 2G Ex d mb IIC T* Gb under SIRA 14ATEX1192X II 2D Ex mb tb IIIC t* Db IP67 under SIRA 14ATEX1192X **IECEx Approved for:** Ex d mb IIC T* Gb under IECEx SIR 14.0064X Ex mb tb IIIC T* Db IP67 under IECEx SIR 14.0064X *T-codes and temperature ratings will vary based on coil wattages **Ordering Information:** For Class F Coil, use catalog number prefix "EV" (e.g., EV8262H220) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "EVHT" or "EVHB" (e.g., EVHT8327G002) and specify voltage.	
Type 7 (A,B, C, and D) Low Power Solenoids with Class F DC Surge Suppression Coils	**Enclosure:** • Same as Class F Explosionproof coil. **Coils:** • Built-in surge suppression diodes. • Low power – 1.7 Watts. • Class F insulation only.	**Ordering Information:** For Surge Suppression coils, use catalog number prefix "EFMF" or "EVMF" (e.g., EFMF8314H300), and specify voltage. **Note:** Surge Suppression coils are only available for Explosionproof Low Power coils.	
Open Frame Solenoids with Class F or H High-Temperature Spade Terminal Coils	• Valves with Open Frame solenoid construction are intended for use when a solenoid enclosure is not needed; e.g., mounting in a control cabinet. • Same as Class F or H above, but with 1/4" spade terminals. • Suitable for 50 and 60 Hz. ②	**Ordering Information:** For Class F coil, depending on wattage, use catalog number prefix "OFSF" or "OFSP" (e.g., OFSF8210G002) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "OFSS" or "OFST" (e.g., OFST8210G002) and specify voltage. **Note:** Spade Terminal Coils are not available above 250 volts AC or DC.	
Panel Mount Solenoids with Class F or H High-Temperature Spade Terminal Coils	Same as above, but with provision for mounting on a panel (panel not included).	**Ordering Information:** For Class F coil, use catalog number prefix "OPSF" or "OPSP" (e.g., OPSF8210G002) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "OPSS" or "OPST" (e.g., OPST8210G002) and specify voltage. **Note:** Spade Terminal Coils are not available above 250 volts AC or DC.	

① UL limitations are 284°F (140°C) for Class F insulation systems and 320°F (160°C) for Class H insulation systems.
② Can be supplied for 50 Hz at a reduced voltage, which is standard throughout the world; i.e., 120/60, 110/50.

Open Frame Solenoids with Class F or H High-Temperature Screw Terminal Coils	• Valves with Open Frame solenoid construction are intended for use when a solenoid enclosure is not needed; e.g., mounting in a control cabinet. ① • Same as Class F or H above, but with #8 screws terminals. • Suitable for 50 and 60 Hz. ②	**Ordering Information:** For Class F coil, depending on wattage, use catalog number prefix "OFKF" or "OFKP"(e.g., OFKF8210G002) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "OFKH" or "OFKB" (e.g., OFKH8210G002) and specify voltage. **Note:** Screw Terminal Coils are not available above 250 volts AC or DC. **Note:** For replacement screw terminal connector kit, order 256104-*	
Panel Mount Solenoids with Class F or H High-Temperature Screw Terminal Coils	**Coils:** • Same as above, but with provision for mounting on a panel (panel not included).	**Ordering Information:** For Class F coil, depending on wattage, use catalog number prefix "OPKF" or "OPKP" (e.g., OPKP8210G002) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "OPKH" or "OPKB" (e.g., OPKH8210G002) and specify voltage. **Note**: Screw Terminal Coils are not available above 250 volts AC or DC. **Note:** For replacement screw terminal connector kit, order 256104-*	
Junction Box Solenoids with Class F or H High-Temperature Spade or Screw Terminal Coils	• Enclosures meet Type 1 General Purpose, Type 2 Dripproof, Types 3 and 3S Raintight, and Types 4 and 4X Watertight requirements. • Supplied standard with 1/2" threaded conduit hub and grounding provision. • Must be ordered with spade or screw terminals.	**Ordering Information:** For Class F coil, depending on wattage, use catalog number prefix "JSF," "JSP," "JKF," or "JKP" (e.g., JSF8210G2) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "JSS," "JST," "JKH," or "JKB" (e.g., JKH8210G002) and specify voltage. **Note:** Junction Box Options are not available above 250 volts AC or DC.	
Class F General Purpose Only with Quick Disconnect Pin Connectors	• Available for wattages 10.1, 17.1, 11.6, and 22.6. • VT, VB: Micro 4 pin anodized aluminum electrical termination. Electrical connection size: - Dual keyway 1/2-20 UNF (AC) - Single keyway M12 x 1 (DC) • ZT, ZB: Mini 3 pin epoxy coated zinc electrical termination. Electrical connection size: - 7/8-16 UNS-2A (AC & DC)	**Ordering Information:** For Class F coil, depending on wattage, use catalog number prefix VT, VB, ZT, or ZB. (e.g. VT8262H232) and specify voltage.	

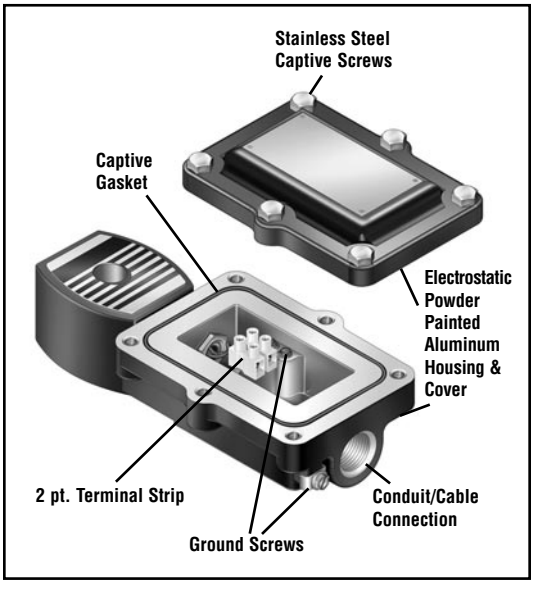
① UL limitations are 284°F (140°C) for Class F insulation systems and 320°F (160°C) for Class H insulation systems.
② Can be supplied for 50 Hz at a reduced voltage, which is standard throughout the world; i.e., 120/60, 110/50.

Class F or H High-Temperature Coils with DIN Connections	• Meets ISO 4400/DIN 43650 requirements. • Class F insulation system suitable for coil temperatures up to 311°F (155°C). ① *For ambient temperature requirements, refer to specific Series and charts in Engineering Information Section.* • Class H insulation system suitable for coil temperatures up to 356°F (180°C). ① *For ambient temperature requirements, refer to specific Series and charts in Engineering Information Section.* • Enclosure protection with DIN connector equivalent to Types 1 and 4. • Suitable for 50 and 60 Hz. ②	**Ordering Information:** For Class F Coil, depending on wattage, use catalog number prefix "SC" or "SD" (e.g., SC8210G002) and specify voltage. For Class H coil, depending on wattage, use catalog number prefix "SU" or "SV" (e.g., SU8210G002) and specify voltage. **Note:** DIN Connection Coils are not available above 250 volts AC or DC. **Note:** For replacement DIN terminal connector kit, order 276983 **Note:** Optional Female DIN connector kits are listed in the "Accessories" section under "Electrical Connectors".	
Junction Box for Class F or H Coils	Junction box (shown installed on RedHat II solenoid) is a zinc coated steel housing with two 7/8" knock-outs for through wiring. UL listed when ordered factory assembled. Also available, without UL listing, as a kit with grounding screw for field installation.	**Ordering Information:** For factory assembly, add prefix "JB" to Valve Catalog Number. For kit, use number 272140-001*.	
Sub-Miniature Coils for Series 8256, 8356, 8380, 8401, and 8551 Class F High-Temperature Molded Coils with DIN Connection	These sub-miniature coils meet 3 x DIN 46244 requirements. • Insulation system suitable for coil temperatures up to 311°F (155°C). ① *For ambient temperature requirements,refer to specific Series and charts in Engineering Information Section.* • Suitable for 50 and 60 Hz. ② • "Enclosure Protection" with DIN connector equivalent to Types 1 and 4.	**Ordering Information:** Use catalog prefix "SC" (e.g., SC8256A001V) and specify voltage. **Note:** Optional Female DIN connector kits are listed in the "Accessories" section under "Electrical Connectors".	
1/2" Threaded Conduit Hubs for Series 8256, 8356, 8380, 8401, and 8551	These conventional threaded hubs allow connection with 1/2" BX cable. Can be supplied with leaded coil only. Kit includes gasket and attaching screw.	**Ordering Information:** Order separate Kit No. 224735-001*.	
1/2" NPT threaded Conduit - Dual Approved Stainless Steel Encapsulated Coil – Class F	ATEX/IECEx: Ex d IIB+H2 T4 Gb / Ex tb IIIC T135C Db IP66 – IP67 UL/CSA: CLI, Div 1, Gp A, B, C, D / CLII, Div 1, Gp E, F, G Nominal ambiant temperature range: - Standard FKM : -10˚F to 194˚F (-23˚C to 90˚C) Wattage: 1.8W	**Ordering Information:** For complete 362, 562 or 364 valve, see corresponding pages for exact part number. - spare part 505434	

① UL limitations are 284°F (140°C) for Class F insulation systems and 320°F (160°C) for Class H insulation systems.
② Can be supplied for 50 Hz at a reduced voltage, which is standard throughout the world; i.e., 120/60, 110/50.

Features

- Junction Box Enclosures for the wiring of ASCO solenoids are Raintight Type 3 and 3S, Watertight Type 4 and 4X, Submersible Type 6 and 6P, Explosion-proof Type 7, Class I, Groups B, C, and D Dust-Ignition proof Type 9, Class II, Div. 1, Groups E, F and G, Nonincendive Class I, Div. 2 (1.4 watts only)
- Approvals: UL, CSA
- Electrostatic powder paint, stainless steel screws, and molded epoxy coils provide excellent protection in corrosion environments
- Factory pre-wired and assembled to any explosionproof ASCO RedHat II solenoid valve
- Reduces installation costs by eliminating the need to use a separate explosionproof splice box to terminate the solenoid valve's wiring



Materials of Construction

Housing and Cover	Epoxy painted die-cast aluminum
Gasket	NBR
Cover Screws	Stainless Steel
Coil	Epoxy Molded
Ground Screws	Steel
Terminal Block	Plastic
Lock Nut	Zinc

Electrical

Standard Voltages
AC: 24, 120, 240, 480 volts, 60 Hz or (110, 220 volts, 50 Hz)
DC: 6, 12, 24, 120, 240

Note: Valves with JBEF housing maintain wattage and current ratings as shown on individual catalog sheets.

Conduit Sizes
1/2" NPT JBEF Prefix
3/4" NPT JCEF Prefix

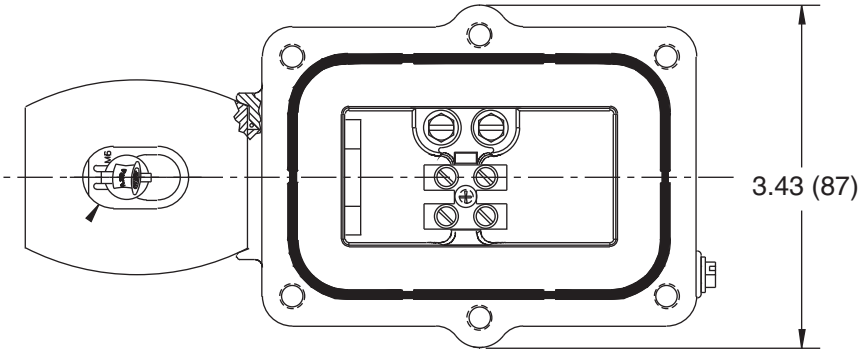
Approvals

Explosionproof Junction Box Agency Approvals					
	Min. Temperature				
	JBEF		JCEF		Gas
Agency	˚F	˚C	˚F	˚C	Groups
UL	-40	-40	-13	-25	Class I, Groups B, C, & D
CSA	-40	-40	-13	-25	Class I, Groups B, C, & D
	-40	-40	-40	-40	Class I, Groups C & D

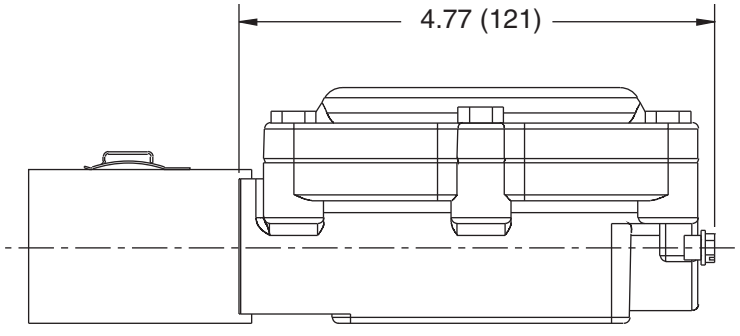
Ordering Information

Add prefix corresponding to specific conduit size required to any RedHat II valve catalog numbers & specify the voltage.
Example: JBEF8210G095, 120/60.

Dimensions: inches (mm)

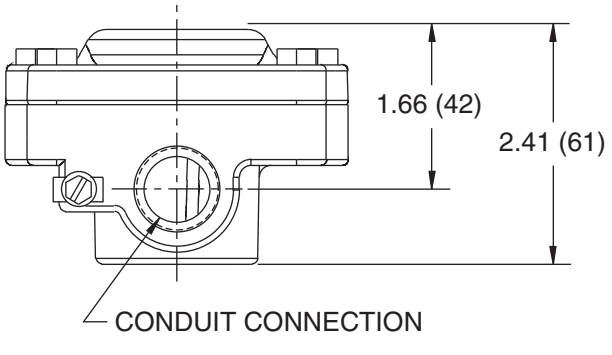


SHOWN WITH SCREWS AND COVER REMOVED



Replacement Coil Kits

Kit Number	Size (watts)	Voltage	Prefix
278000-032	6.1	120/60	JBEF
278000-132	9.1	120/60	
278001-006	10.6	24DC	
278012-032	10.1	120/60	
278012-132	17.1	120/60	
278013-006	11.6	24DC	
278024-032	16.1	120/60	
278024-132	20.1	120/60	
278013-903	1.4	12DC	
278013-902	1.4	24DC	



Optional Construction Features

Standard valve construction materials for standard valves are shown on the Series pages. If handling fluids other than those listed in the Specifications section, you may require special constructions, however. The most frequently used elastomers are listed in Table 4 along with the Valve Series in which they are available. Other considerations for a variety of liquids and gases are included in the Valve Material Selection Guide located in the Engineering Section. A solenoid valve must use certain construction material for proper electrical function. *If you cannot find the specific fluid in the guide, please consult your local ASCO office.*

Certain fluids may also require that we change the solenoid shading coil. The standard valves use a copper shading coil. Aluminum and silver are also available and, due to their different magnetic properties, additional electrical changes may be necessary. *When a change in shading coil material is indicated in the guide, please consult your local ASCO office.*

Table 4: Optional Construction Features for ASCO Solenoid Valves Handling Liquids and Gases other than Air, Inert Gas, Water, and Light Oil. Orders entered using this table MUST state actual fluid and pressure of application.

Pipe Size (in)	Series Number or Valve Type	Valve Construction Number	Special Construction Features ③ ELASTOMERS				
			EPDM	Oxygen Service	PTFE	FKM	CR
			Use Suffix "E"	Use Suffix "N" ①	Use Suffix "T" ②	Use Suffix "V"	Use Suffix "J"
Solenoid Operated Valves							
3/8 - 3/4	8030, 8040	1-10, 13	Available	Available	Not Available	Available	Available
3/8 - 1 1/2	8210	1, 2, 5, 6, 7, 8, 9, 11, 12, 16, 18, 23, 24, 25, 26, 28, 29, 31-51			Not Available	Available	
3/4 - 2 1/2	8210	10, 20, 21, 27, 30			Available	Available	
3/8 - 3	8215	All	Not Available		Not Available	Available	
All	8260	1, 2, 3	Available		Not Available	Available	
All	8260	4, 5, 6			Not Available	Not Available	
1/8 - 3/8	8262, 8263	1-6			Available	Available	
1/8 & 1/4	8262	1-4			Available	Available	
3/8 & 1/2	8316	1, 2			Not Available	Available	
3/4 & 1	8316	3, 4, 5			Not Available	Available	
All	8320, 8360	All			Available	Available	
Air Operated Valves							
1/4	2 Ports	1, 2, 22	Available	Available	Available	Available	Available
3/8 - 3/4	2 Ports	8			Not Available		
3/8 - 3/4	2 Ports	3, 4			Not Available		
3/8 - 3/4	2 Ports	6, 7, 16, 17			Not Available		
1 & 1 1/4	2 Ports	10, 12, 18, 19			Not Available		
1 1/2	2 Ports	14, 20			Not Available		
1/4	3 Ports	1			Available		
3/8 & 1/2	3 Ports	2			Not Available		
3/4 & 1	3 Ports	3, 4			Not Available		

① For valves requiring special cleaning and/or testing procedures, such as for oxygen, freon, & sanitary service, refer to Table 6.
② Pressure ratings must be reduced by 25%.
③ Unless otherwise indicated in the Series Specification Tables, all soft seating valves are supplied with NBR discs, diaphragms, or gaskets.

Manual Operators

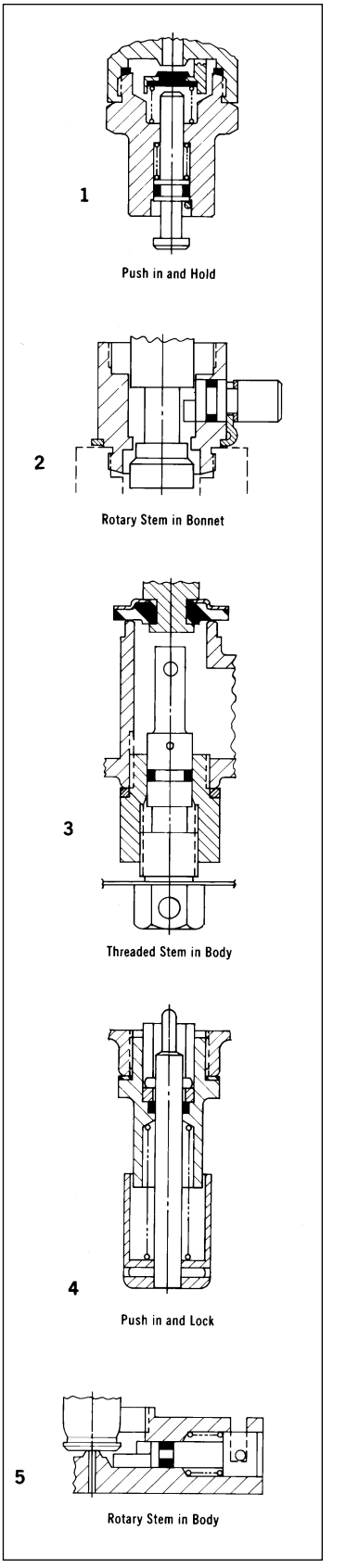
Manual operators are provided to operate the valve manually when electric power is off. There are basically two types of manual operators: momentary and maintained. Series 8320, 8321, and 8342 can be fitted with either type.

To determine which type is available for your valves, check the Construction Reference Numbers in their Series Specification Tables against the Table below. Schematics of the manual operators and how they are fitted to the valves are shown on the right. *If no manual operator is listed or a different type is required, consult your local ASCO office. Add suffix "MO" or "MS" to the catalog number.*

Table 5: Manual Operators

Series Number	Pipe Size (in)	Valve Construction Reference Number	Valve Body Materials	Manual Operator Suffix	Type of Manual Operator	Illustration Number
MANUAL OPERATORS ④ FOR 2-WAY SOLENOID VALVES						
8030	3/8, 1/2	1, 2, 3, 11	Brass	MO	Maintained	5
8030	3/4	9	Brass	MO	Maintained	3
8030	3/8, 1/2	1, 2, 3, 11	Stainless Steel	MO	Maintained	5
8030	3/4	10	Stainless Steel	MO	Maintained	3
8210	3/8, 1/2	1, 2	Stainless Steel	MO	Maintained	5
8210	3/8, 1/2	1, 2	Brass	MO	Maintained	5
8210	3/8 to 2 1/2	3, 5, 6, 8, 9, 11, 12, 16, 18, 20, 21	Brass	MO	Maintained	2
8210	3/4 to 1 1/2	10, 31, 32, 33	Brass	MO	Maintained	3
8210	1	42	Brass	MO	Maintained	4
8210	3/4	7	Stainless Steel	MO	Maintained	2
8221	3/8 to 2 1/2	1, 2, 5, 6 ,7, 11, 12	Brass	MO	Maintained	2
8262	1/8	1	Brass	MO	Maintained	3
8262	1/8	1	Stainless Steel	MO	Maintained	3
8262	1/8	8	Brass	MS MO	Maintained Momentary	3 1
8262	1/8	8	Stainless Steel	MS MO	Maintained Momentary	3 1
8262	1/4	2, 4, 6, 16, 17	Brass	MO	Maintained	2
8262	1/4	11, 12 ,13	Stainless Steel	MO ⑥	Maintained	2
8263	3/8	3, 5, 7	Brass	MO	Maintained	2
MANUAL OPERATORS ④ FOR 3-WAY SOLENOID VALVES						
8300	All	All	Brass	MO	Maintained	4
8300	All	All	Stainless Steel	MO	Maintained	4
8316	All	All	Brass	MO	Maintained	2
8320	1/8, 1/4	All	Brass/SS	MS ⑤ MO ①	Maintained Momentary	3 1
8321	All	All	Brass	MS MO	Maintained Momentary	3 1
MANUAL OPERATORS ④ FOR 4-WAY SOLENOID VALVES						
8340	1/4	8340A001, A003, A004	Aluminum	MO	Momentary	1
8342	1/4, 3/8	Single Solenoid Only	Brass/SS	MS MO	Maintained Momentary	4 1
8344 ③	All	All	Brass	MO	Maintained	2
8345	1/4	1	Brass	MO	Maintained	5
8401	1/8, 1/4	All	Aluminum	②	Momentary Maintained	- -
MANUAL OPERATORS ARE ALSO AVAILABLE FOR ALL LOW POWER AND INTRINSICALLY SAFE VALVES (MANUAL OR MOMENTARY). USE SUFFIX "MO."						

① Limited to 100 psi (7 bar) maximum on Normally Open and Universal operation.
② Supplied as standard, no suffix required.
③ Two manual operators required for Dual Solenoid construction.
④ Limited to 250 psi (17 bar) pressure, except where noted otherwise.
⑤ Valves with MS suffix maintain full catalog ratings.
⑥ Manual operator not available for this series with steam application.



Metering Devices

Metering Devices are used for obtaining an exact flow from solenoid valves for dispensing or for moving an air operator in a given time period. Valves which can be fitted with metering devices are 8260, 8401, 8402, and 8342. Add suffix "M" to catalog numbers.

Special Cleaning and Testing Procedures:

If special cleaning and testing procedures are required, they must be specified when ordered. *These procedures cannot be done after the valve is built.*

Table 6: ASCO Special Cleaning and Testing Procedures

Fluid	Description of Cleaning or Testing Procedure	Order by Specifying
Freon	All valve parts inspected for oil, grease, metal dust, and other foreign matter and degreased, if necessary. Assembled in clean, dry area and helium mass spectrometer tested for external leakage. Pipe connections sealed with plugs.	Clean and test per ASCO AP-1-005 Procedure.
Oxygen	All valve parts degreased and blacklight inspected for cleanliness. Assembled and tested in clean area using oil-free air or nitrogen. Helium mass spectrometer tested for external leakage. Pipe connections sealed with plugs. Each valve tagged covering certification of tests and put in a sealed bag.	Clean and test per ASCO AP-1-004 Procedure. Add Suffix "N" to catalog Number.
Sanitary distilled water and other clean systems	All valve parts inspected for oil, grease, metal dust, and other foreign matter and degreased, if necessary. Valves assembled in clean area and tested with clean, dry air or nitrogen. Pipe connections sealed with plugs.	Clean and test per ASCO AP-1-008 Procedure.

Features

- UL, CSA, ATEX and IECEx approvals
- 316 SS enclosure and stainless steel screws provide excellent protection in corrosive environments
- Factory assembled to a wide range of ASCO RedHat II solenoid valves for Division 2 applications

Materials of Construction

Housing and Cover	316L Stainless Steel
Gasket	NBR
Cover Screws	316 Stainless Steel
Ground Screws	Stainless Steel
Terminal Block	PPS

Enclosure Ratings

Catalog Prefix	Description	Enclosure Type Rating	Enclosure IP Rating
JS2D	316L Stainless Steel Junction Box with 1/2" NPT Conduit	3, 3S	IP65
		4, 4X	

Ordering Information

For 362, 381 and 562 series, please consult online configurators for part numbering or contact your local ASCO sales office for details.

http://www.asco.com/en-us/pages/product-configurators.aspx
Example: 8362A1018A01CF1

For all other valve series, add prefix JS2D to catalog number.
Example: JS2D8316G001

Please consult factory for valid constructions.

Min. Ambient Temperature

UL/CSA: -40˚F (-40˚C)

ATEX/IECEx: -13˚F (-25˚C)

Approvals

UL and CSA approved solenoid for Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G (250V or less)

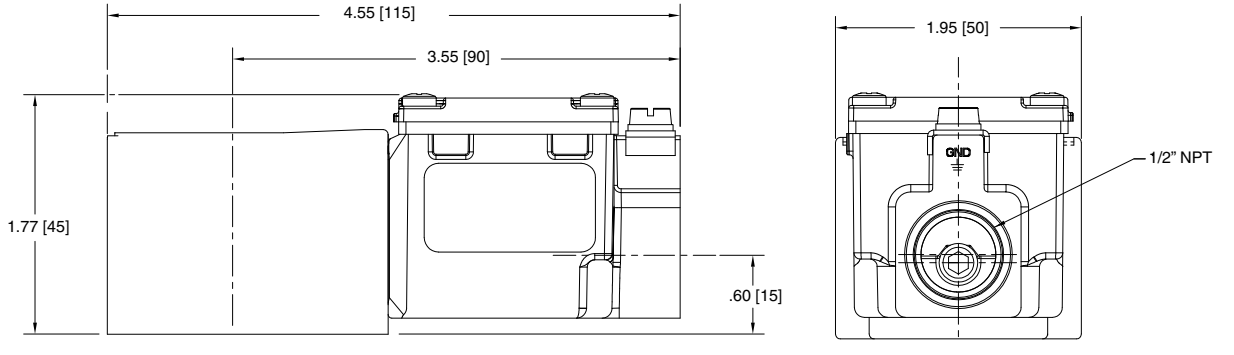
ATEX approved for:*
II2G Ex eb mb IIC Tx Gb
II2D Ex mb tb IIIC Txx Db

IECEx approved for:*
Ex eb mb IIC Tx Gb
Ex mb tb IIIC Txx Db

***Note:** 200V or less

Electrical

	Watts	Insulation class/power	Approvals	UL Max. Ambient/Fluid ˚F(˚C) ②	UL T Codes	ATEX/IECEx Max. Ambient/Fluid ˚F(˚C) ②	ATEX/IECEx T Codes
AC	10.1	FT	UL, CSA, ATEX, IECEx	125 (52)	T3B/165˚C	125 (52)	T4/T135˚C
	10.1	HT	UL, CSA, ATEX, IECEx	140 (60)	T3A/180˚C	140 (60)	T4/T135˚C
	15.1	FT	UL, CSA Only	104 (40)	T3B/165˚C	-	-
	15.1 ①	FT	UL, CSA Only	111 (44)	T3B/165˚C	-	-
	17.1	FB	UL, CSA Only	122 (50)	T3B/165˚C	-	-
	17.1	HB	UL, CSA Only	122 (50)	T3A/180˚C	-	-
DC	11.6	FT	UL, CSA, ATEX, IECEx	104 (40)	T3B/165˚C	104 (40)	T4/T135˚C
	11.6	HT	UL, CSA, ATEX, IECEx	104 (40)	T3A/180˚C	104 (40)	T4/T135˚C
	11.6 ①	FT	UL, CSA, ATEX, IECEx	131 (55)	T3B/165˚C	115 (46)	T4/T135˚C
	11.6 ①	HT	UL, CSA, ATEX, IECEx	131 (55)	T3A/180˚C	115 (46)	T4/T135˚C
	22.6	FB	UL, CSA Only	104 (40)	T3B/165˚C	-	-
	22.6	HB	UL, CSA Only	104 (40)	T3A/180˚C	-	-
	22.6 ①	HB	UL, CSA Only	111 (44)	T3A/180˚C	-	-
	22.6 ①	FB	UL, CSA Only	111 (44)	T3B/165˚C	-	-
	1.4	F	UL, CSA, ATEX, IECEx	140 (60)	T6/85˚C	140 (60)	T6/T85˚C
	1.7	F	UL, CSA, ATEX, IECEx	140 (60)	T6/85˚C	140 (60)	T6/T85˚C
	1.8	F	UL, CSA, ATEX, IECEx	176 (80)	T5/100˚C	165 (74)	T5/T100˚C
	0.55	F	UL, CSA, ATEX, IECEx	149 (65)	T6/85˚C	149 (65)	T6/T85˚C
	0.70	H	UL, CSA, ATEX, IECEx	176 (80)	T6/85˚C	176 (80)	T5/T100˚C
	0.75	F	UL, CSA, ATEX, IECEx	149 (65)	T6/85˚C	149 (65)	T6/T85˚C

① For use with H revision valve series (i.e. 8262**H**001). ② Maximum ambient temperature limited to valve fluid temperature.

Dimensions: inches (mm)