

ASCO[®]

Low Ambient Valves

Constructions Suitable for -40°C to -50°C Ambient

2, 3 and 4 Way Constructions Available

Brass, Aluminum and Stainless Steel Bodies

Air and Inert Gas Service




EMERSON
Industrial Automation

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Air/Inert Gas Quality Statement for Low Ambient Valves

DEWPOINT

To prevent freezing of condensed water vapour in the valve, the air/inert gas must have a dewpoint at least 10°F (8°C) below the minimum temperature to which any point of the system will be exposed.

LUBRICATION

The use of lubricators upstream of valves is NOT recommended. Likewise, air containing compressor carry over lubricants requires cleaning with suitable filters upstream of the valve. Hydrocarbon oil, with its characteristic viscosity increase at low temperatures, may cause the valve to operate erratically or to fail to operate.

Note:

For Engineering/Principle of Operation information refer to Cat. 35.

Features

- Lightweight, low-cost valves for air service
- Ideal for low pressure applications
- Provides high flow, Cv up to 9.5
- Air service

Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals, Diaphragms, Disc	NBR
Core Guide	POM
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 Number	
	AC			General Purpose	Explosionproof
	Watts	VA Holding	VA Inrush	AC	AC
F	6.1	16	40	238210	238214
F	10.1	25	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.

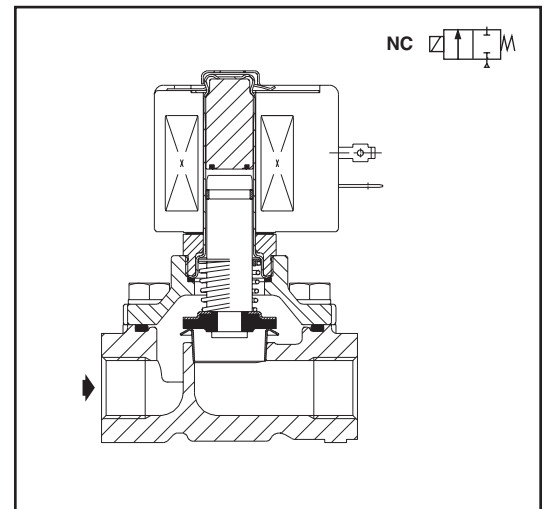
Solenoid Enclosures

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

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

(To order, add prefix "EF" to catalogue number.)

For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

AC: -40°F to 125 °F (-40°C to 52°C)

Approvals

CSA certified, UL listed and FM approved.

Meets applicable CE directives.

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Aluminum Body	Const. Ref.	Watt Rating/ Class of Coil Insulation ①	
			Min.	Max. AC				AC	Catalogue Number
				Air-Inert Gas					
NORMALLY CLOSED (Closed when de-energized)									
1/8	5/16	1.0	0	15	125	8040H006	11	6.1/F	-
1/4	5/16	1.1	0	15	125	8040H007	11	6.1/F	-
3/8	5/16	1.2	0	15	125	8040H008	11	6.1/F	-
1/2	3/4	5.4	0	2	125	8040G022	13A	10.1/F	-
3/4	3/4	9.5	0	2	125	8040G023	13B	10.1/F	-

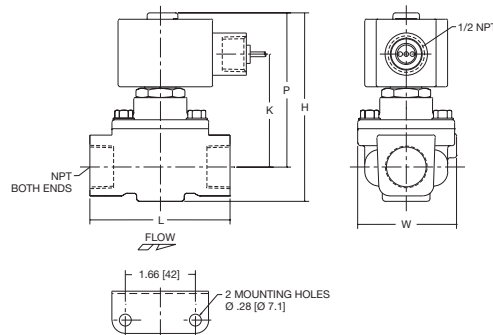
① On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

Dimensions: inches (mm)

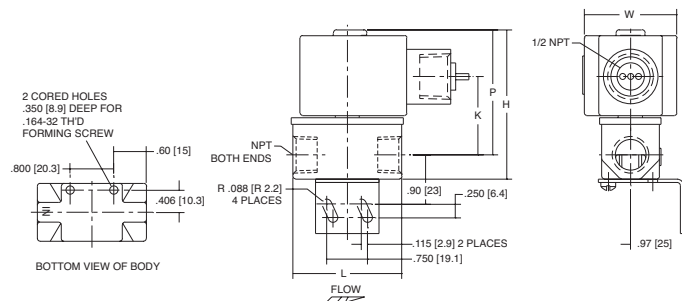
Const. Ref.		H	K	L	P	W
11	ins.	2.74	1.44	2.00	2.30	1.69
	mm	69	36	51	58	43
13A	ins.	4.05	2.46	2.75	3.44	2.42
	mm	103	63	70	87	62
13B	ins.	4.49	2.65	3.31	3.63	2.39
	mm	114	67	84	92	61

IMPORTANT: Valves may be mounted in any position.

Const. Ref. 13A, 13B



Const. Ref. 11



Features

- Rugged piston construction built to withstand pressure ratings to 1500 psi
- Angle body design for high flows
- Ideal for high-pressure applications
- Mountable in any position

Construction

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

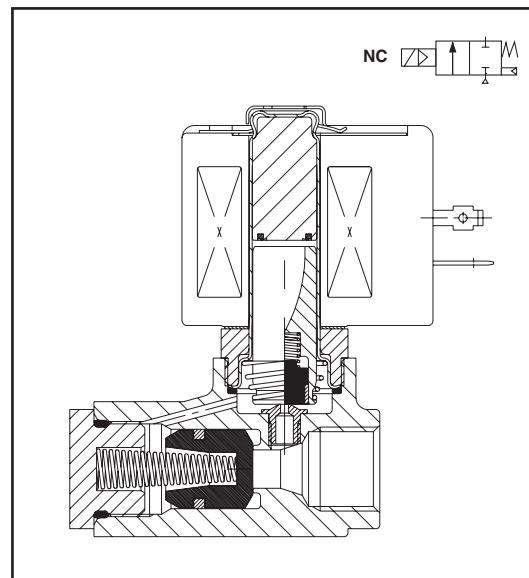
Electrical

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	22.6	17.1	40	70	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: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

AC: -40°F to 125°F (-40°C to 52°C)
 DC: -40°F to 104°F (-40°C to 40°C)

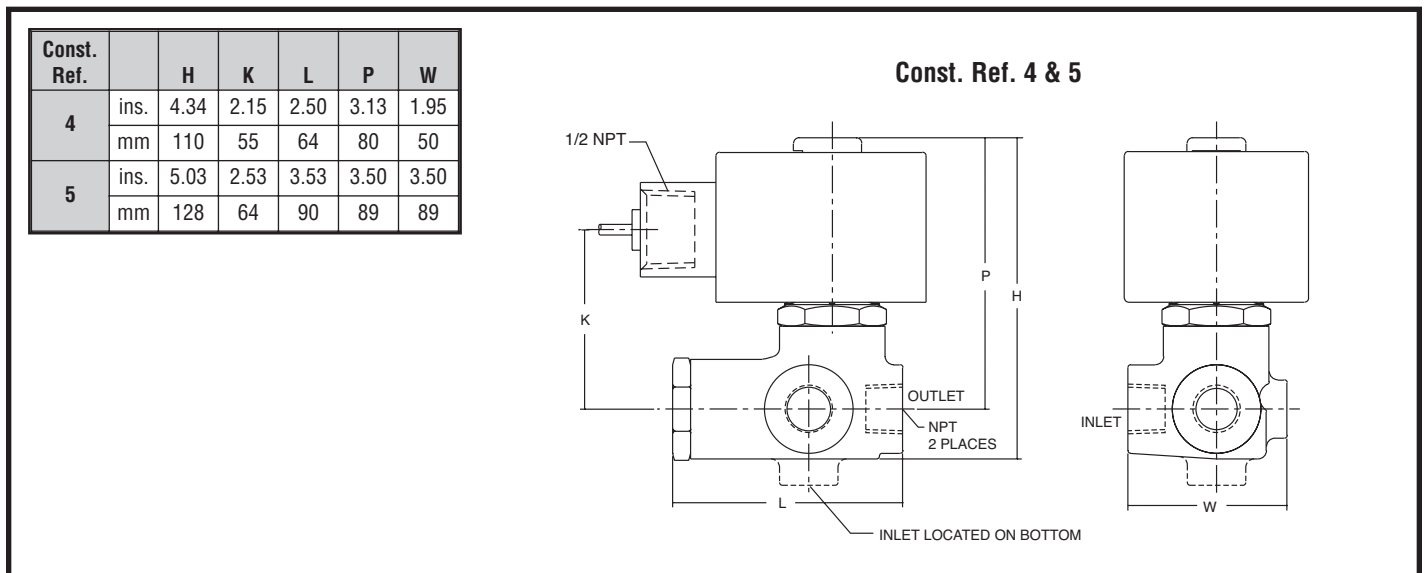
Approvals

CSA certified, UL listed solenoid.
 Meets applicable CE directives.

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. °F		Stainless Steel Body		Watt Rating/ Class of Coil Insulation		
			Min.	Max. AC	Max. DC	AC	DC	Catalogue Number	Const. Ref.	AC	DC
				Air-Inert Gas	Air-Inert Gas					AC	DC
NORMALLY CLOSED (Closed when de-energized)											
1/2	3/8	3.2	25	1500	500	200	150	EFX8223G010MF/26663	4	17.1/F	22.6/F

Dimensions: inches (mm)



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 Number			
DC Watts	AC			General Purpose		Explosionproof	
	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 catalogue number)

See *Optional Features Section* for other available options.

Options

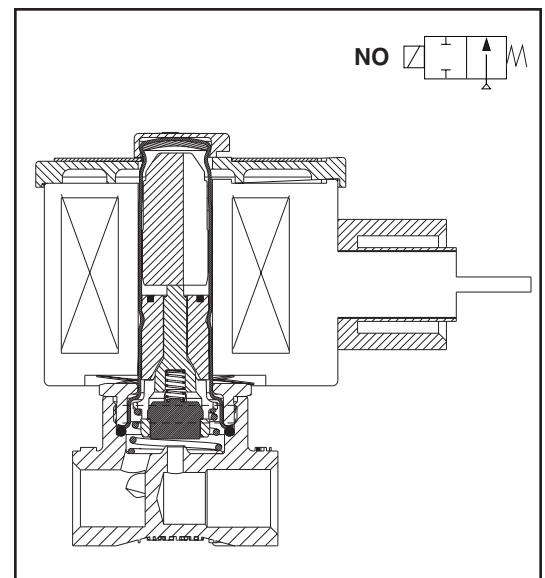
Mounting bracket (suffix MB)

High Vacuum service (suffix VH; see Vacuum Section for more details.)

Oxygen service (suffix N)

Silicone Free (suffix SF)

Elastomers: Low Temp. NBR (suffix A)



Nominal Fluid Temp. Range

AC & DC: -40°F to 167°F (-40°C to 75°C)

Nominal Ambient Temp. Ranges

AC Class F Coil Option: -40°F to 131°F (-40°C to 55°C)

AC Class H Coil Option: -40°F to 140°F (-40°C to 60°C)

DC Class H Coil Option: -40°F to 131°F (-40°C to 55°C)

Refer to *Engineering Section* for fluid and temperature compatibility.

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.

Specifications (English units)

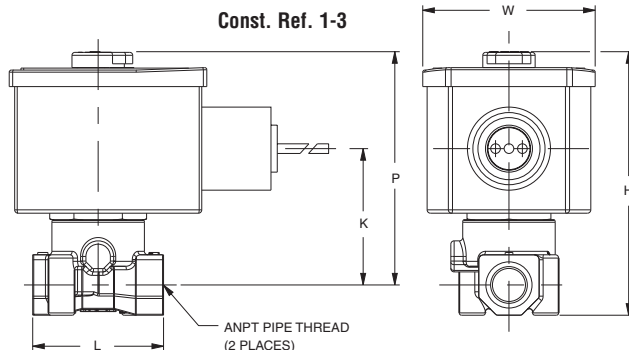
Pipe Size (in)	Orifice Size (mm)	Cv Flow Factor	Operating Pressure Differential (psi)						Max. Fluid Temp °F		Catalogue Number		Const. Ref	UL Listing	Watt Rating/Class of Coil Insulation	
			Max AC@131°F			Max DC@131°F			AC	DC	Brass	Stainless Steel			AC	DC
			Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Air-Inert Gas	Water	Lt. Oil @ 300 SSU								
NORMALLY OPEN (Open when de-energized)																
1/8	3/64	0.06	1500	1375	1125	700	600	510	140	140	8262H154A①	-	1	●	17.1/H	22.6/H
1/8	3/64	0.06	1650	1375	1125	700	600	510	140	140	-	8262H167A①	1	●	17.1/H	22.6/H
1/8	3/64	0.06	1150	900	800	640	490	325	140	140	8262H155A①	8262H168A①	1	●	10.1/F	11.6/H
1/8	3/64	0.06	750	750	750	650	560	400	180	180	8262H156A	8262H169A	1	●	10.1/F	11.6/H
1/8	3/32	0.21	350	305	275	230	190	155	167	180	8262H157A	8262H172A	1	●	17.1/H	22.6/H
1/8	3/32	0.21	275	230	180	160	135	95	180	180	8262H128A	8262H236A	1	●	10.1/F	11.6/H
1/8	1/8	0.35	210	195	175	135	110	100	167	180	8262H158A	8262H173A	1	●	17.1/H	22.6/H
1/8	1/8	0.35	160	145	125	100	100	70	180	180	8262H129A	8262H237A	1	●	10.1/F	11.6/H
1/4	3/64	0.06	1500	1375	1125	940	600	510	140	140	8262H159A①	-	2	●	17.1/H	22.6/H
1/4	3/64	0.06	1650	1375	1125	940	600	510	140	140	-	8262H198A①	2	●	17.1/H	22.6/H
1/4	3/64	0.06	1150	900	800	640	490	325	140	140	8262H161A①	8262H199A①	2	●	10.1/F	11.6/H
1/4	3/64	0.06	750	750	750	650	560	400	180	180	8262H260A	8262H130A	2	●	10.1/F	11.6/H
1/4	3/32	0.21	350	305	275	230	190	155	167	180	8262H162A	8262H205A	2	●	17.1/H	22.6/H
1/4	3/32	0.21	275	230	180	160	135	95	180	180	8262H261A	8262H134A	2	●	10.1/F	11.6/H
1/4	1/8	0.35	210	195	175	135	110	100	167	180	8262H163A	8262H219A	2	●	17.1/H	22.6/H
1/4	1/8	0.35	160	145	125	100	100	70	180	180	8262H262A	8262H138A	2	●	10.1/F	11.6/H
1/4	5/32	0.54	120	110	105	75	65	55	167	180	8262H164A	8262H223A	2	●	17.1/H	22.6/H
1/4	5/32	0.54	90	90	70	60	55	45	180	180	8262H263A	8262H142A	2	●	10.1/F	11.6/H
1/4	7/32	0.83	60	55	55	35	35	30	167	180	8262H165A	8262H224A	2	●	17.1/H	22.6/H
1/4	7/32	0.83	45	45	40	30	25	25	180	180	8262H264A	8262H148A	2	●	10.1/F	11.6/H
1/4	9/32	0.96	38	38	38	25	25	25	167	180	8262H166A	8262H225A	2	●	17.1/H	22.6/H
1/4	9/32	0.96	30	30	30	20	17	17	180	180	8262H265A	8262H152A	2	●	10.1/F	11.6/H
3/8	1/8	0.35	210	195	175	135	110	100	167	180	8263H100A	8263H104A	3	●	17.1/H	22.6/H
3/8	1/8	0.35	160	145	125	100	100	70	180	180	8263H070A	8263H080A	3	●	10.1/F	11.6/H
3/8	5/32	0.54	120	110	105	75	65	55	167	180	8263H101A	8263H105A	3	●	17.1/H	22.6/H
3/8	5/32	0.54	90	90	70	60	55	45	180	180	8263H071A	8263H081A	3	●	10.1/F	11.6/H
3/8	7/32	0.83	60	55	55	35	35	30	167	180	8263H102A	8263H106A	3	●	17.1/H	22.6/H
3/8	7/32	0.83	45	45	40	30	25	25	180	180	8263H072A	8263H082A	3	●	10.1/F	11.6/H
3/8	9/32	0.96	38	38	38	25	25	25	167	180	8263H103A	8263H107A	3	●	17.1/H	22.6/H
3/8	9/32	0.96	30	30	30	20	17	17	180	180	8263H073A	8263H083A	3	●	10.1/F	11.6/H

① Cast UR disc supplied as standard. ● General Purpose Valve.

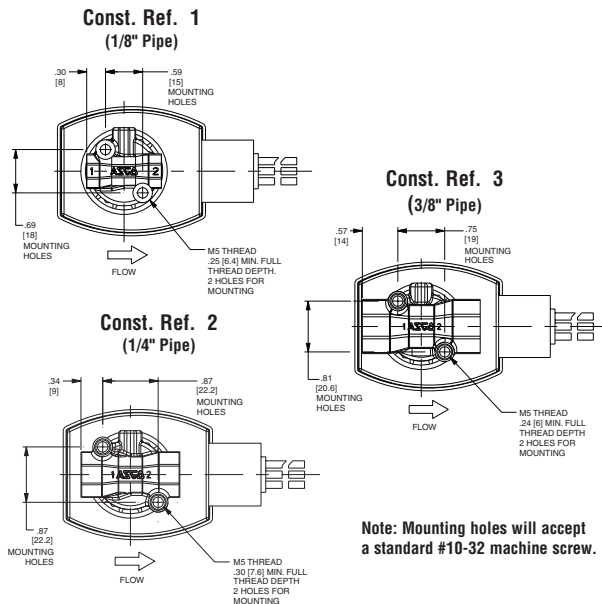
Dimensions: inches (mm)

Const. Ref.		H	K	L	P	W
1	ins.	3.00	1.54	1.19	2.69	2.06
	mm	76	39	30	68	52
2	ins.	3.12	1.62	1.56	2.76	2.06
	mm	79	41	40	70	52
3	ins.	3.20	1.62	1.88	2.77	2.06
	mm	81	41	48	70	52

IMPORTANT: Valves may be mounted in any position.



Mounting Dimensions



Features

- Welded core tube provides higher pressure ratings
- Reliable, proven design with high flows
- Small poppet valves for tight shutoff
- 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	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver

Electrical

Watt Rating and Power Consumption				Spare Coil Part No.			
DC Watts	AC			General Purpose		Explosionproof	
	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	238610	238910	238614	238914

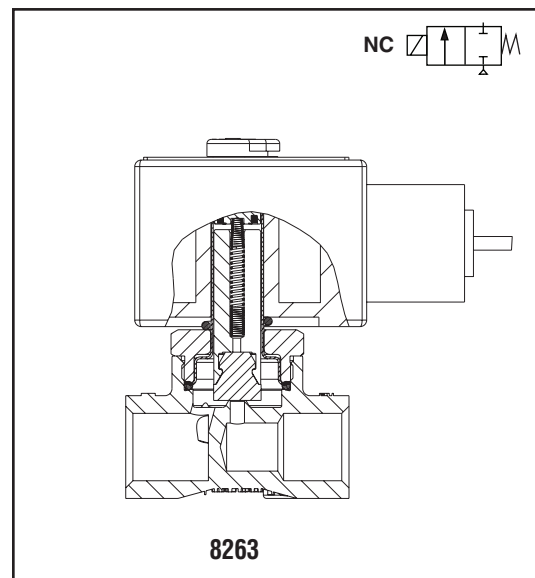
Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
 6, 12, 24, 120, 240 volts DC. Must be specified when ordering.
 Other voltages available when required.

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 catalogue number)

See *Optional Features Section* for other available options.



Nominal Ambient Temp. Ranges

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

AC: -40°F to 131°F (-40°C to 55°C)

DC: -40°F to 104°F (-40°C to 40°C)

-40°F to 131°F (-40°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

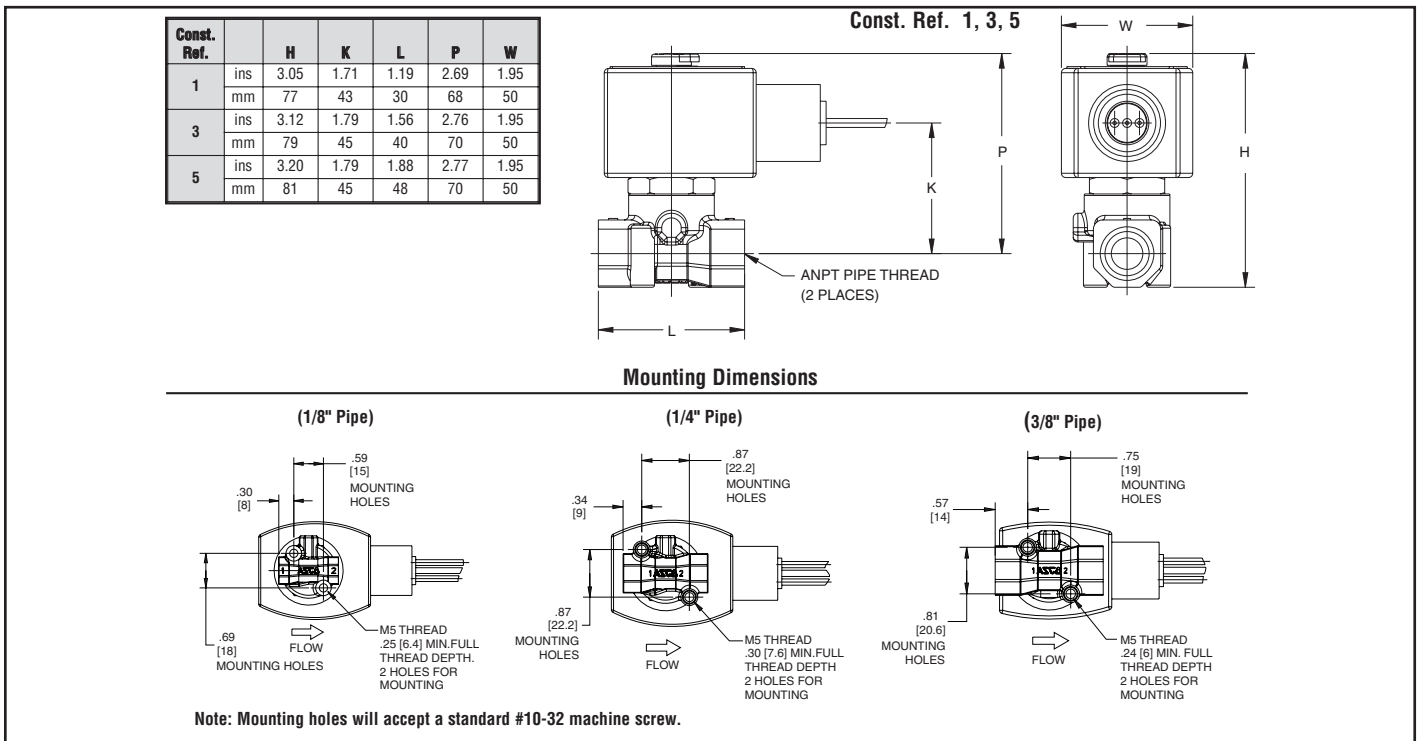
CSA certified. UL listed, as indicated. Meets applicable CE directives.

Specifications

Pipe Size (ins.)	Orifice size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)									Max. Fluid Temp. °F		Catalogue Number		Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Max. AC@131°F			Max. DC@104°F			Max. DC@131°F					Brass	Stainless Steel		AC	DC
			Air-Inert Gas	Water	Lt. Oil @ 300ssu	Air-Inert Gas	Water	Lt. Oil @ 300ssu	Air-Inert Gas	Water	Lt. Oil @ 300ssu	AC	DC					
NORMALLY CLOSED (Closed when de-energized), NBR Disc																		
1/8	3/32	0.21	720	410	410	610	410	410	600	410	400	167	167	8262H277A	8262H178A	1	17.1/F	22.6/H
1/8	3/32	0.21	-	-	-	290	290	270	240	240	255	-	167	-	8262H177A	1	-	11.6/H
1/8	1/8	0.35	500	380	355	275	275	235	250	250	225	167	167	8262H105A	8262H174A	1	17.1/F	22.6/H
1/8	1/8	0.35	340	300	215	-	-	-	-	-	-	167	-	-	8262H179A	1	10.1/F	-
1/4	3/32	0.21	720	410	410	610	410	410	600	410	400	167	167	8262H109A	8262H183A	3	17.1/F	22.6/H
1/4	3/32	0.21	590	410	410	290	290	270	240	240	225	167	167	8262H108A	8262H182A	3	10.1/F	11.6/H
1/4	1/8	0.35	500	380	355	275	275	235	250	250	225	167	167	8262H110A	8262H185A	3	17.1/F	22.6/H
1/4	1/8	0.35	340	300	215	130	125	115	110	105	100	167	167	8262H232A	-	3	10.1/F	11.6/H
1/4	1/8	0.35	340	300	215	-	-	-	-	-	-	167	-	-	8262H184A	3	10.1/F	-
1/4	5/32	0.52	300	210	210	135	135	135	115	115	115	167	167	8262H112A	8262H187A	3	17.1/F	22.6/H
1/4	5/32	0.52	210	200	145	65	63	63	55	54	54	167	167	8262H202A	-	3	10.1/F	11.6/H
1/4	5/32	0.52	210	200	145	-	-	-	-	-	-	167	-	-	8262H220A	3	10.1/F	-
1/4	7/32	0.73	125	125	125	70	70	70	65	65	65	167	167	8262H114A	8262H188A	3	17.1/F	22.6/H
1/4	7/32	0.73	100	100	100	35	35	35	30	30	30	167	167	8262H208A	-	3	10.1/F	11.6/H
1/4	7/32	0.73	100	100	100	-	-	-	-	-	-	167	-	-	8262H226A	3	10.1/F	-
1/4	9/32	0.88	90	90	90	53	50	47	48	46	44	167	167	8262H212A	8262H230A	3	17.1/F	22.6/H
1/4	9/32	0.88	65	75	60	25	25	22	22	22	20	167	167	8262H210A	-	3	10.1/F	11.6/H
1/4	9/32	0.88	65	75	60	-	-	-	-	-	-	167	-	-	8262H189A	3	10.1/F	-
3/8	1/8	0.35	500	380	355	275	275	160	250	250	150	167	167	8263H115A	8263H191A	5	17.1/F	22.6/H
3/8	1/8	0.35	340	300	215	130	125	85	110	105	75	167	167	8263H232A	-	5	10.1/F	11.6/H
3/8	1/8	0.35	340	300	215	-	-	-	-	-	-	167	-	-	8263H190A	5	10.1/F	-
3/8	5/32	0.52	300	210	195	135	135	100	115	115	90	167	167	8263H118A	8263H193A	5	17.1/F	22.6/H
3/8	5/32	0.52	210	185	100	65	63	50	55	54	44	167	167	8263H200A	-	5	10.1/F	11.6/H
3/8	5/32	0.52	210	185	100	-	-	-	-	-	-	167	-	-	8263H331A	5	10.1/F	-
3/8	7/32	0.73	125	100	100	70	70	70	65	65	65	167	167	8263H206A	8263H332A	5	17.1/F	22.6/H
3/8	7/32	0.73	100	86	70	35	35	35	30	30	30	167	167	8263H124A	-	5	10.1/F	11.6/H
3/8	7/32	0.73	100	86	70	-	-	-	-	-	-	167	-	-	8263H195A	5	10.1/F	-
3/8	9/32	0.88	100	85	70	53	50	47	48	46	44	167	167	8263H210A	8263H333A	5	17.1/F	22.6/H
3/8	9/32	0.88	65	63	47	-	-	-	-	-	-	167	-	8263H125A	8263H197A	5	10.1/F	-

① For dimensions, consult factory.

Dimensions: inches (mm)



Features

- Designed for high flow and high pressure service
- Direct acting, requires no minimum operating pressure
- Metal seating materials

Construction

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

Electrical

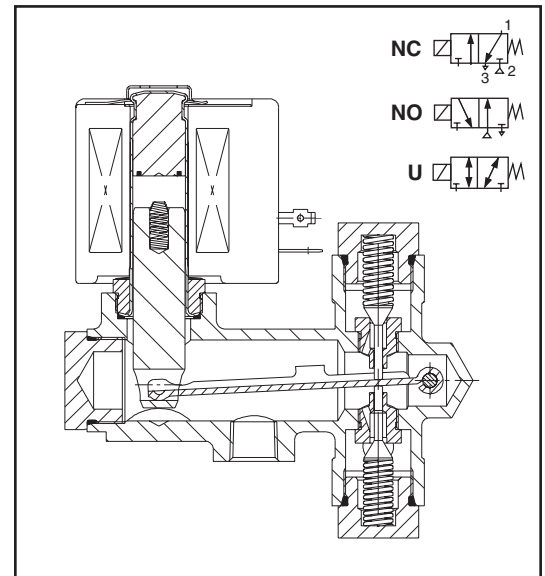
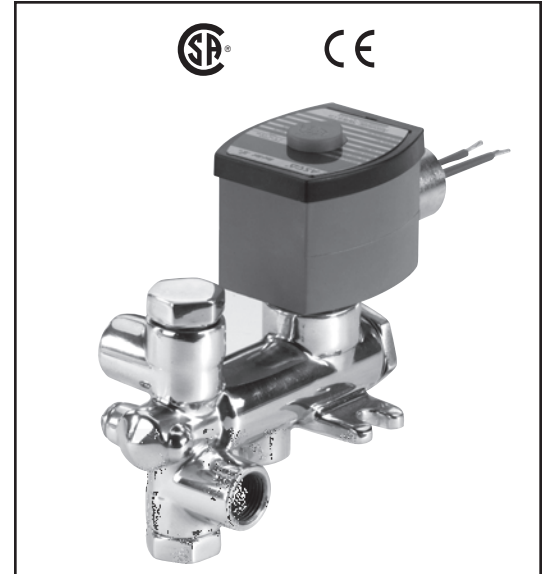
Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number	
	DC Watts	AC			Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC
F	-	20.1	43	240	272614	-
H	36.2	28	60	330	222345	222184

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.

Solenoid Enclosures

Standard: 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.

For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

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

Approvals

CSA certified, UL listed solenoid.
 Meets applicable CE directives.

Specifications

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	
			Air-Inert Gas						Catalogue Number	Const. Ref.	Catalogue Number	Const. Ref.		
			Max. AC		Max. DC		Add Suffix "F" for NC, "G" for NO, "U" for Univ. ①							
			NC/NO	Univ.	NC/NO	Univ.	AC	DC					AC	DC
METAL SEATS AND DISCS														
1/8	1/8	.13	-	-	250	125	-	180	EFX8300D055MF/26662	1	-	-	-	36.2/H
1/8	1/8	.13	550	300	-	-	200	-	EFX8300G055MF/26662	1	-	-	20.1/F	-
1/8	3/16	.35	-	-	125	60	-	180	EFX8300D003MF/26662	1	-	-	-	36.2/H
1/8	3/16	.35	250	150	-	-	200	-	EFX8300G003MF/26662	1	-	-	20.1/F	-
1/4	3/16	.35	-	-	125	60	-	180	EFX8300D058MF/26662	1	-	-	-	36.2/H
1/4	3/16	.35	250	150	-	-	200	-	EFX8300G058MF/26662	1	-	-	20.1/F	-
1/4	1/4	.45	-	-	75	35	-	180	EFX8300A081MF/26662	1	-	-	-	36.2/H
1/4	1/4	.45	190	90	-	-	200	-	EFX8300G081MF/26662	1	-	-	20.1/F	-
1/4	1/4	.45	250	120	-	-	200	-	EFX8300D061MF/26662 ②	1	-	-	28/H	-
3/8	1/4	.45	-	-	50	25	-	180	-	-	EFX8300B410MF/26662	2	-	36.2/H
3/8	1/4	.45	150	75	-	-	200	-	-	-	EFX8300G410MF/26662	2	20.1/F	-
3/8	1/4	.45	-	-	75	35	-	180	EFX8300A082MF/26662	1	-	-	-	36.2/H
3/8	1/4	.45	190	90	-	-	200	-	EFX8300G082MF/26662	1	-	-	20.1/F	-
3/8	1/4	.45	250	120	-	-	200	-	EFX8300D09MF/26662 ②	1	-	-	28/H	-
3/8	1/4	.45	175	85	-	-	200	-	-	-	EFX8300B411MF/26662 ②	2	28/H	-
3/8	5/16	.75	-	-	40	20	-	180	EFX8300D064MF/26662	2	EFX8300B412MF/26662	2	-	36.2/H
3/8	5/16	.75	120	60	-	-	200	-	EFX8300G064MF/26662	2	EFX8300G412MF/26662	2	20.1/F	-
3/8	3/8	1.00	-	-	30	15	-	180	EFX8300D072MF/26662	2	EFX8300B413MF/26662	2	-	36.2/H
3/8	3/8	1.00	75	35	-	-	200	-	EFX8300G072MF/26662	2	EFX8300G413MF/26662	2	20.1/F	-
1/2	5/16	.75	-	-	40	20	-	180	EFX8300D068MF/26662	2	EFX8300B403MF/26662	3	-	36.2/H
1/2	5/16	.75	120	60	-	-	200	-	EFX8300G068MF/26662	2	EFX8300G403MF/26662	3	20.1/F	-
1/2	3/8	1.00	-	-	30	15	-	180	EFX8300D076MF/26662	2	EFX8300B404MF/26662	3	-	36.2/H
1/2	3/8	1.00	75	35	-	-	200	-	EFX8300G076MF/26662	2	EFX8300G404MF/26662	3	20.1/F	-

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.
 ③ For dimensions, consult factory.

Dimensions: inches (mm)

Const. Ref.	H	K	L	P	R	S	W	T
1	ins. 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	ins. 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	ins. 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

IMPORTANT: Valves must be mounted vertical and upright.

Flow Diagrams

Normally Closed (Suffix "F")
 De-energized: SOL (1) to CYL (1), PRESS. (2) to EXH. (3).
 Energized: SOL (1) to EXH. (3), PRESS. (2) to CYL (1).

Normally Open (Suffix "G")
 De-energized: SOL (1) to EXH. (2), PRESS. (3) to CYL (1).
 Energized: SOL (1) to CYL (1), EXH. (2) to PRESS. (3).

Universal (Suffix "U")
 De-energized: SOL (1) to CYL (1), PRESS. (2) to EXH. (3).
 Energized: SOL (1) to EXH. (2), PRESS. (3) to CYL (1).

3-WAY

Features

- Brass body construction for general atmospheres; stainless steel for corrosive atmospheres
- Can be internally piloted, or externally piloted
- 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

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	POM	
Shading Coil	Copper	Silver

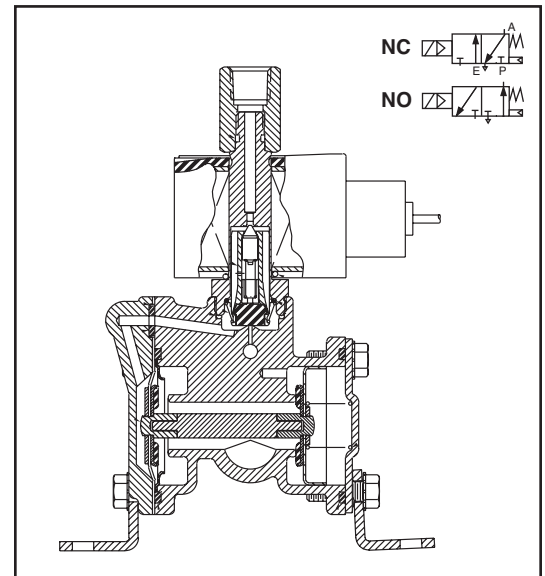
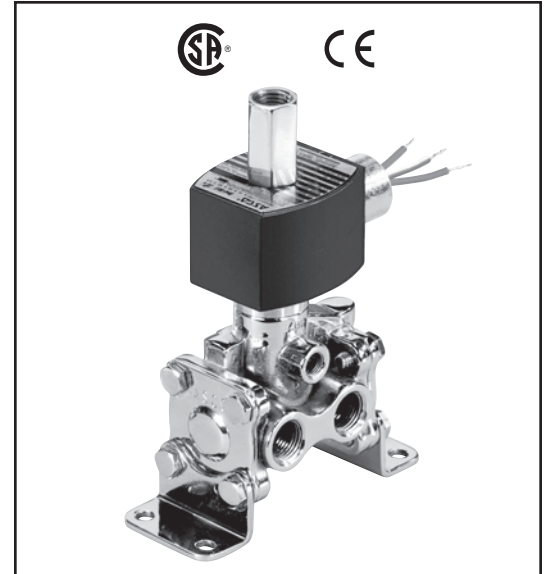
Electrical

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

Standard: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 For *Optional Features*, consult factory.



Nominal Ambient Temp. Ranges

AC: -40°F to 125°F (-40°C to 52°C)
 DC: -40°F to 104°F (-40°C to 40°C)

Approvals

CSA certified, UL listed solenoid.
 Meets applicable GE directives.

Installation

All valves may be mounted in any position.
 316 Stainless Steel mounting brackets available from ASCO. Add suffix "MB".

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	CV Flow Factor	Min.	Max. Air Press. (psi)		Catalogue Number		Const. Ref.	Max. Fluid Temp. °F		Watt Rating/ Class of Coil Insulation	
				AC	DC	Brass Body	Stainless Steel		AC	DC	AC	DC
NORMALLY CLOSED (Closed when de-energized)												
1/4	5/16	1.5	①	150	120	EFX8316G001MF/15444	EVX8316G081MF/15444	1	180	120	10.1/F	11.6/F
3/8	5/16	1.6	①	150	120	EFX8316G002MF/15444	EVX8316G082MF/15444	1	180	120	10.1/F	11.6/F
3/8	5/8	4	②	150	120	EFX8316G003MF/15444	-	3	180	120	10.1/F	11.6/F
1/2	5/8	4	②	150	120	EFX8316G004MF/15444	EVX8316G084MF/15444	3	180	120	10.1/F	11.6/F

① At temperatures below 32°F: 15 psi minimum mainline operating pressure differential when valve selection gasket is in external position and proper auxiliary air pressure is applied. See graph below for pilot line pressure vs. mainline pressure.

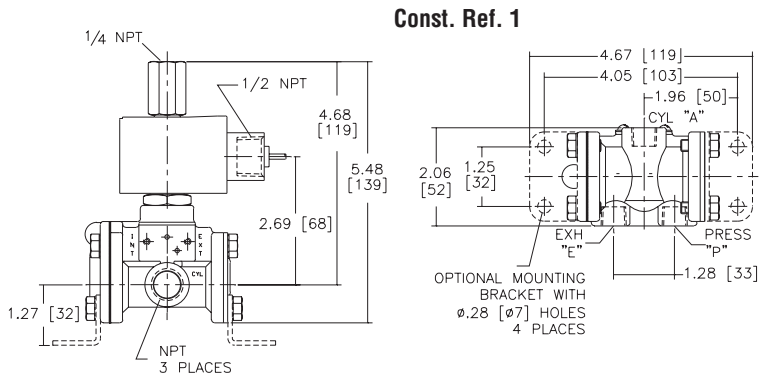
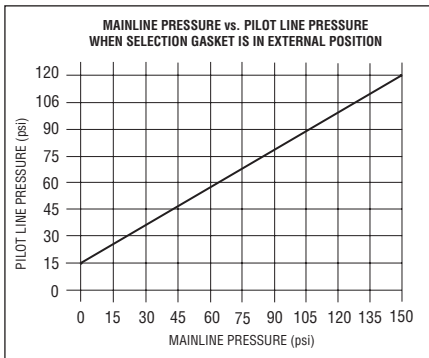
Minimum 40 psi operating pressure differential when selection gasket is in the internal position.

② At temperatures below 32°F: 25 psi minimum mainline operating pressure differential when valve selection gasket is in external position and proper auxiliary air pressure is applied. See graph below for pilot line pressure vs. mainline pressure.

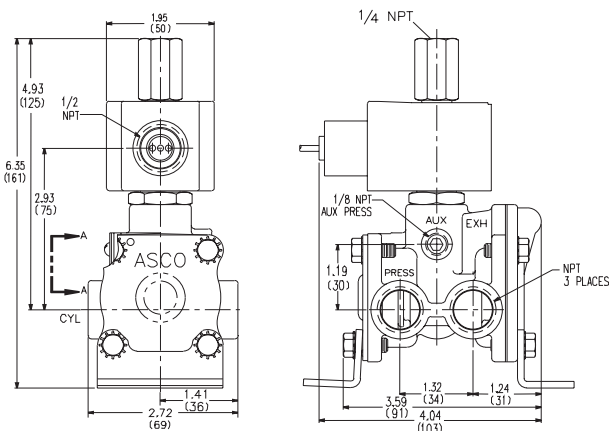
Minimum 50 psi operating pressure differential when selection gasket is in the internal position.

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

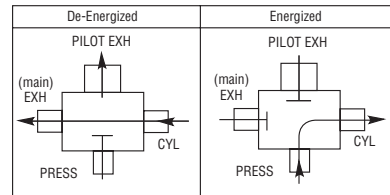
Dimensions: inches (mm)



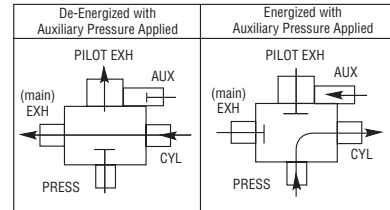
Const. Ref. 3



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)	
Diaphragm	CR	
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

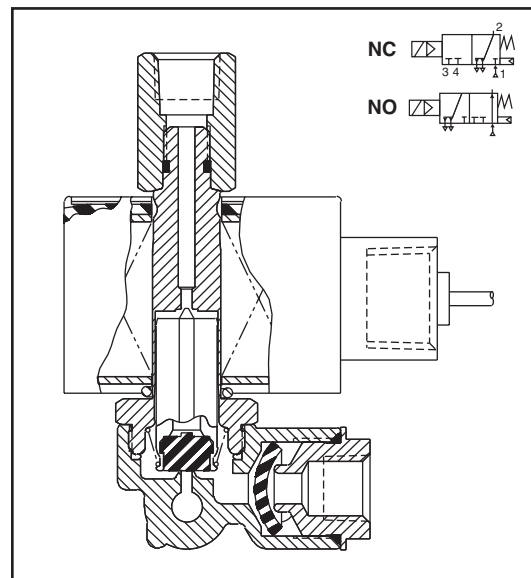
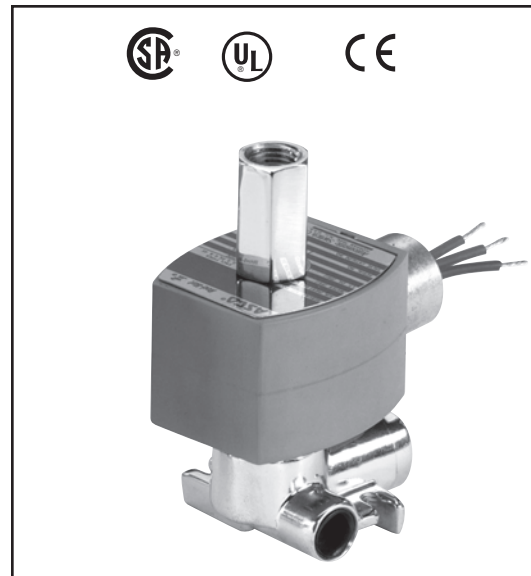
Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption			Spare Coil Part Number
	AC			Explosionproof
	Watts	VA Holding	VA Inrush	AC
F	10.1	25	50	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: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 For *Optional Features*, consult factory.



Nominal Ambient Temp. Ranges

AC: -40°F to 125°F (-40°C to 52°C)

Approvals

CSA certified, UL listed solenoid.
 Meets applicable CE directives.

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.

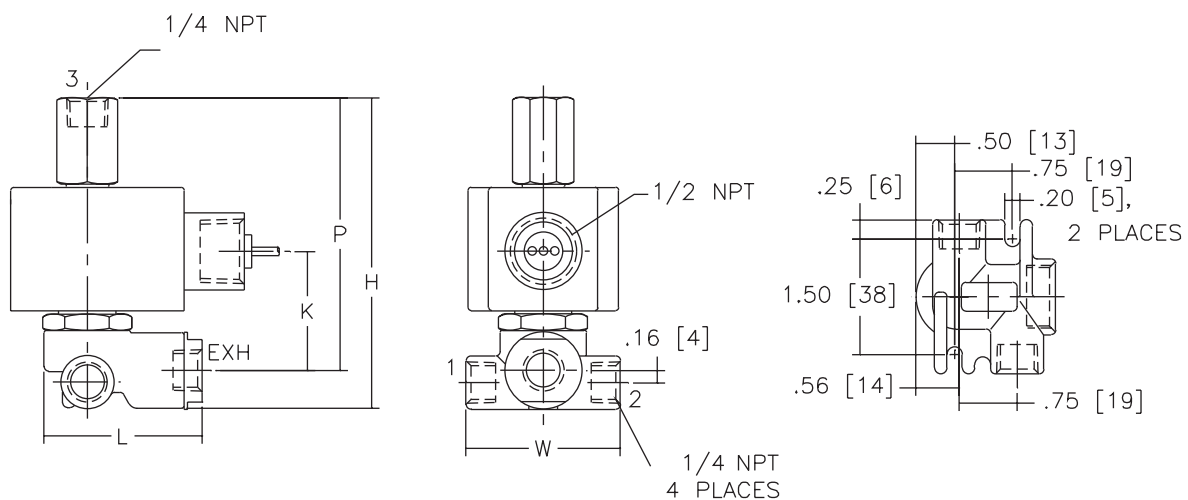
Specifications

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
	Press.	Exh.	Press.	Exh.	Min.	Air-Inert Gas		AC	Catalogue Number	Const. Ref.	Catalogue Number	
							Max. AC					AC
NORMALLY CLOSED (Closed when de-energized)												
1/4	3/32	1/4	.20	.73	5	150	180	EFX8317G035MF/18830	2	EFX8317G036MF/18830	4	10.1/F
NORMALLY OPEN (Open when de-energized)												
1/4	3/32	1/4	.15	.73	5	160	180	EFX8317G053MF/18830	2	-	-	10.1/F

Dimensions: inches (mm)

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

Const. Ref. 2, 4



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	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Disc-Holder	POM	
Core Guide	POM (10.1 and 17.1 Watt only)	

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	DC
F	11.6	10.1	25	50	238610	238710	238614	238714
F	22.6	17.1	40	70	238610	238710	238614	238714

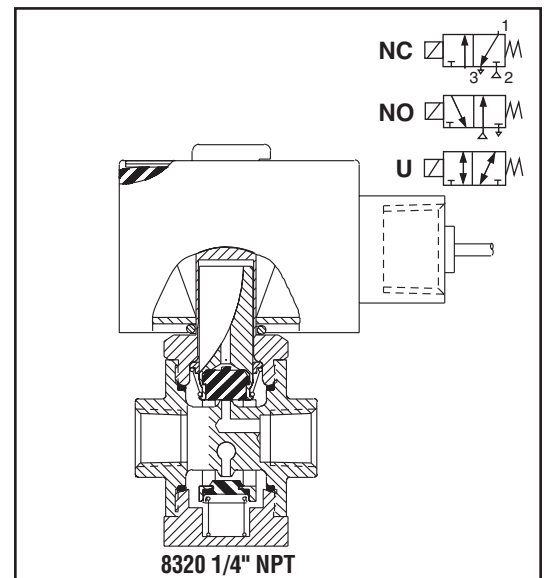
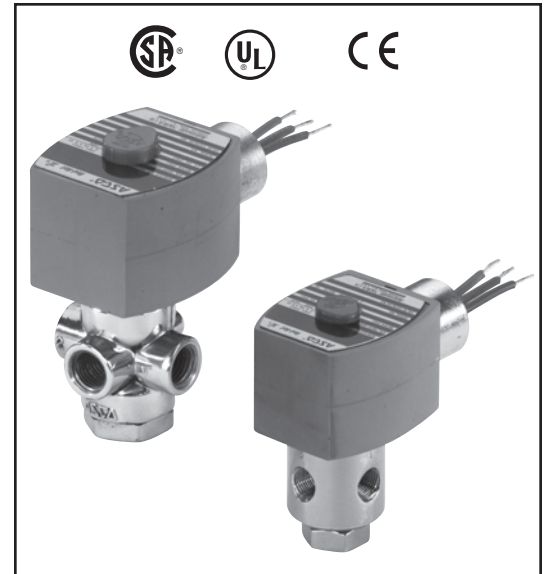
Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz).
6, 12, 24, 120, 240 volts DC. Must be specified when ordering.
Other voltages are available when required.

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 catalogue number.)

For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

AC: -40°F to 125°F (-40°C to 52°C)
DC: -40°F to 104°F (-40°C to 40°C)

Approvals

Brass Body: CSA certified, UL listed solenoid.
Meets applicable GE directives.

Stainless Steel: CSA certified. UL listed General Purpose Valves.
Meets applicable GE directives.

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. °F		Brass Body		Stainless Steel Body ^②		Watt Rating/ Class of Coil Insulation	
			Max. AC	Max. DC			Catalogue Number	① Const. Ref.	Catalogue Number	① Const. Ref.	AC	DC
			Air-Inert Gas	Air-Inert Gas	AC	DC		AC		DC		
UNIVERSAL OPERATION (Pressure at any port)												
1/8	1/16	.09	150	125	180	120	EFX8320G212MF/15444	1	8320G221	1	17.1/F	22.6/F
1/8	3/32	.12	100	60	180	120	EFX8320G213MF/15444	1	8320G222	1	17.1/F	11.6/F
1/8	1/8	.21	50	25	180	120	EFX8320G214MF/15444	1	8320G223	1	17.1/F	11.6/F
1/4	1/16	.09	125	75	200	150	EFX8320G172MF/15444	2	-	-	10.1/F	11.6/F
1/4	1/16	.09	175	125	200	150	-	-	8320G230	3	17.1/F	22.6/F
1/4	3/32	.12	100	60	200	150	EFX8320G174MF/15444	2	8320G200	3	17.1/F	11.6/F
1/4	1/8	.25	50	25	200	150	EFX8320G176MF/15444	2	8320G201	3	17.1/F	11.6/F
1/4	11/64	.35	20	12	200	150	EFX8320G178MF/15444	2	-	-	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized)												
1/8	1/16	.09	210	160	180	120	EFX8320G215MF/15444	1	8320G224	1	17.1/F	11.6/F
1/8	3/32	.12	150	115	180	120	EFX8320G216MF/15444	1	8320G225	1	10.1/F	11.6/F
1/8	1/8	.21	85	60	180	120	EFX8320G217MF/15444	1	8320G226	1	10.1/F	11.6/F
1/4	1/16	.09	210	160	200	150	EFX8320G182MF/15444	2	8320G231	3	17.1/F	11.6/F
1/4	3/32	.12	150	115	200	150	EFX8320G184MF/15444	2	8320G202	3	10.1/F	11.6/F
1/4	1/8	.25	85	60	200	150	EFX8320G186MF/15444	2	8320G203	3	10.1/F	11.6/F
1/4	11/64	.35	45	25	200	150	EFX8320G188MF/15444	2	-	-	10.1/F	11.6/F
NORMALLY OPEN (Open when de-energized)												
1/8	1/16	.09	235	160	180	120	EFX8320G218MF/15444	1	8320G227	1	17.1/F	11.6/F
1/8	3/32	.12	150	100	180	120	EFX8320G219MF/15444	1	8320G228	1	10.1/F	11.6/F
1/8	1/8	.21	70	55	180	120	EFX8320G220MF/15444	1	8320G229	1	10.1/F	11.6/F
1/4	1/16	.09	235	160	200	150	EFX8320G192MF/15444	2	8320G232	3	17.1/F	11.6/F
1/4	3/32	.12	150	100	200	150	EFX8320G194MF/15444	2	8320G204	3	10.1/F	11.6/F
1/4	1/8	.25	70	55	200	150	EFX8320G196MF/15444	2	8320G205	3	10.1/F	11.6/F
1/4	11/64	.35	40	30	200	150	EFX8320G198MF/15444	2	-	-	10.1/F	11.6/F

① For dimensions, consult factory.

② Stainless steel constructions standard rated -40°F (-40°C) ambient temperature. EFX prefix and TPL # not required.

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 contaminants or corrosives
- Variety of flow and pressure ratings
- Mountable in any position

Construction

Valve Parts in Contact with Fluids ①		
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	POM	
Core Guide	POM (10.1 and 17.1 watts only)	

① Consult factory for construction details on catalogue numbers 8320P704 and 8320P714.

Electrical

Standard Coil and Class of Insulation	① Watt Rating and Power Consumption				Spare Coil Part Number			
	DC Watts	AC			General Purpose		Explosionproof	
		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.
 ① Consult factory for electrical information on 2 Watt catalogue numbers 8320P704 and 8320P714.

Solenoid Enclosures

RedHat II

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

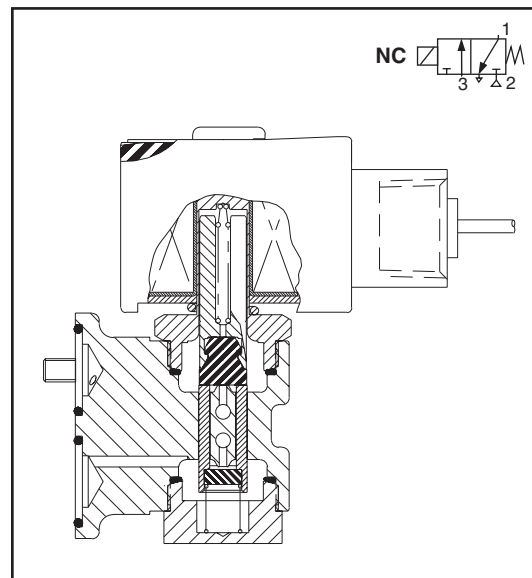
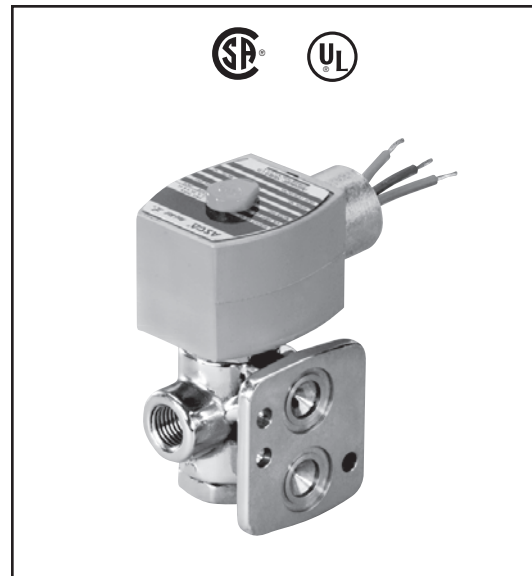
Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 (To order, add prefix "EF" to catalogue number.)

For Optional Features, consult factory.

RedHat Next Generation

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

Optional: Class I, Division 2 for Hazardous Locations/Watertight. Meets Types 1 through 4X and 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. (To order, add prefix "EE" to catalogue number.)



Nominal Ambient Temp. Ranges

RedHat II

AC: -40°F to 125°F (-40°C to 52°C)

DC: -40°F to 104°F (-40°C to 40°C)

RedHat Next Generation

AC/DC: -40°F to 140°F (-40°C to 60°C)

Approvals

8320: UL component and CSA certified.

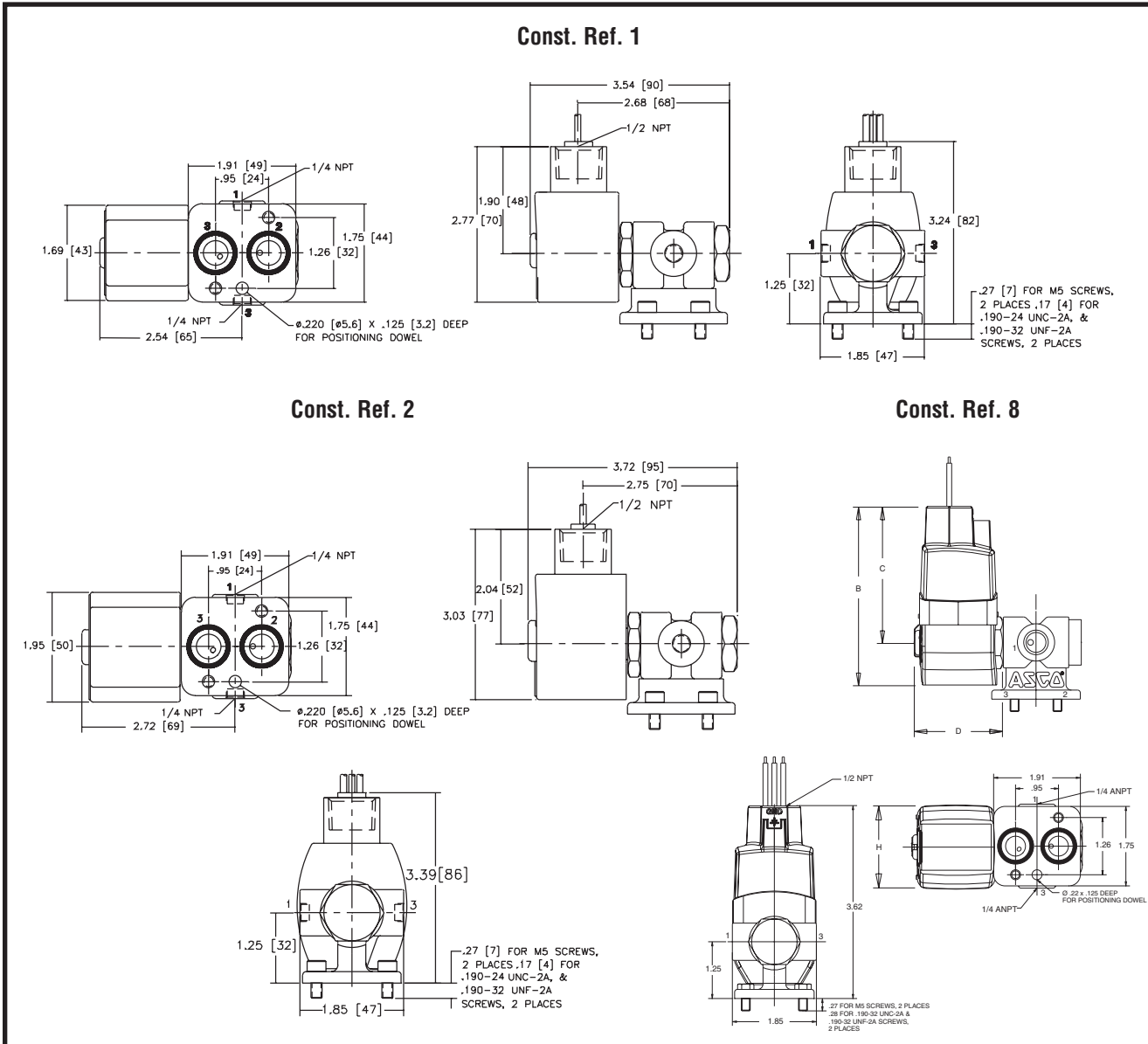
EFX8320: UL component and CSA certified solenoid.

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid Temp. °F		Brass Body Catalogue Number	Stainless Steel Body Catalogue Number	Const. Ref.	Watt Rating/Class of Coil Insulation	
			Air-Inert Gas		AC	DC				AC	DC
			Max. AC	Max. DC	AC	DC	AC	DC			
NORMALLY CLOSED (Closed when de-energized)											
1/4	1/16	.09	150	125	180	120	EFX8320G701MF/15444	EFX8320G711MF/15444	1	6.1/F	10.6/F
1/4	3/32	.12	100	100	180	120	EFX8320G702MF/15444	EFX8320G712MF/15444	1	6.1/F	10.6/F
1/4	1/16	.09	210	160	180	120	EFX8320G703MF/15444	8320G713 ①	2	17.1/F	11.6/F
1/4	3/32	.12	150	150	180	120	EFX8320G704MF/15444	8320G714 ①	2	10.1/F	22.6/F
1/4	3/32	.12	150	150	180	180	8320P704 ②	8320P714 ②	8	2/H	2/H
1/4	1/8	.21	100	-	180	-	EFX8320G705MF/15444	8320G715 ①	2	17.1/F	-

① Standard rated -40°F (-40°C) ambient temperature. EFX prefix and TPL # not required.
 ② RedHat Next Generation Valve.

Dimensions inches (mm)



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
- NAMUR direct mount construction available. See specification chart

Construction

Valve Parts in Contact with Fluids			
Body	Brass	316 Stainless Steel	Aluminum
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		VMQ	
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	
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	11.6	12	12	12	276000	238710	276002	238714
F-NAMUR	11.6	12	24	24	276000	238710	276002	238714

Standard Voltages: 24/50-60, 120/50-60, 240/50-60, and 480/50-60, or 6, 12, 24, 120, and 240 DC.

Solenoid Enclosures

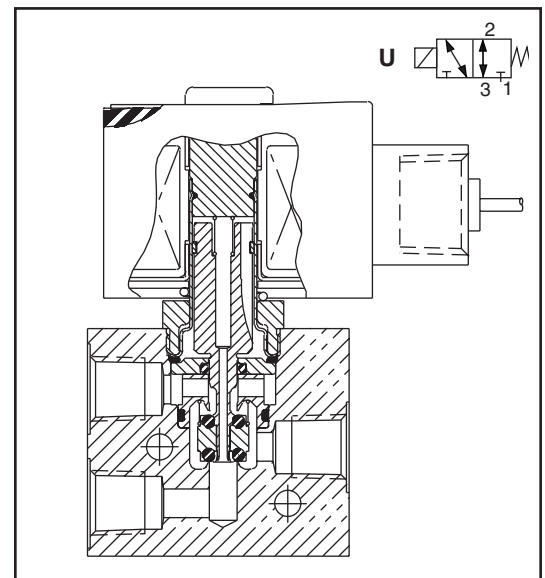
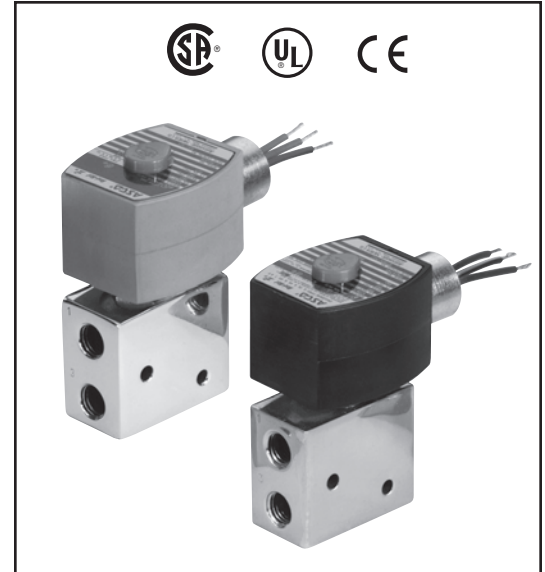
Standard:

For Brass and Aluminum 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 catalogue number.)

For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

-40°F to 131°F (-40°C to 55°C)

Approvals

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

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Maximum Operating Pressure Differential (psi)	Max. Fluid Temp. °F	Brass Body	316 Stainless Steel Body	Const. Ref.	Watt Rating/ Class of Coil Insulation	
		Ports 1-2	Ports 2-3			Air-Inert Gas	Catalogue Number		Catalogue Number	AC
UNIVERSAL LOW-TEMPERATURE OPERATION (pressure at any port) - SIL 3 Certified by Exida ①										
1/4	1/4	.49	.56	150	131	8327G051	—	1	12.0/F	11.6/F
1/4	1/4	.49	.56	150	131	—	EV8327G052	1	12.0/F	11.6/F

① Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available. SIL 3 Certified by Exida, only valid when used as Normally Closed.

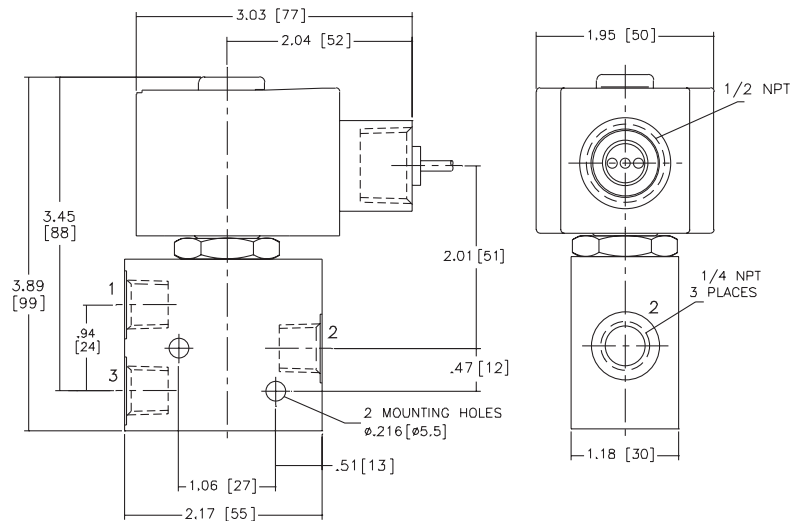
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Maximum Operating Pressure Differential (psi)	Max. Fluid Temp. °F	Aluminum Body	Stainless Steel Body	Const. Ref.	Watt Rating/ Class of Coil Insulation	
		Ports 1-2	Ports 2-3			Air-Inert Gas	Catalogue Number		Catalogue Number	AC
UNIVERSAL LOW-TEMPERATURE OPERATION - NAMUR Direct Mount										
1/4	1/4	.52	.53	150	131	8327G053	EV8327G055	2	12.0/F	11.6/F

Dimensions: inches (mm)

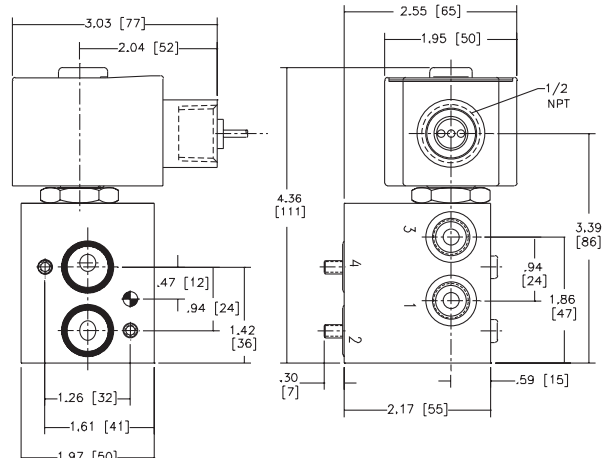
FLOW DIAGRAMS

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

Const. Ref. 1



Const. Ref. 2



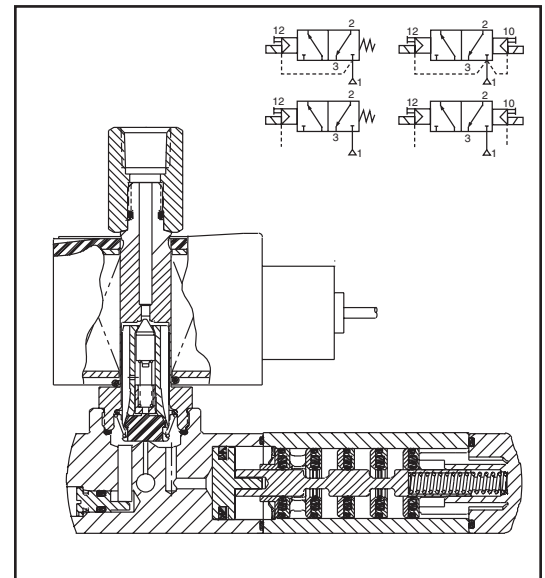
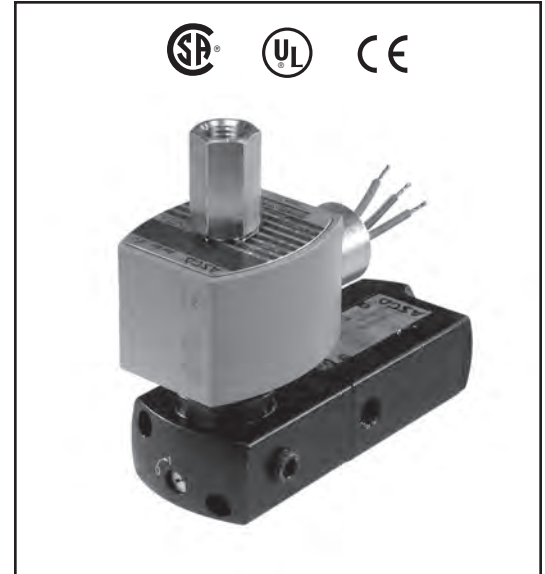
IMPORTANT: Valves may be mounted in any position.

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

Construction

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



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	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.

Nominal Ambient Temp. Ranges

Body Material	Description
Brass	AC: -40°F to 125°F (-40°C to 52°C)
Stainless Steel	DC: -40°F to 104°F (-40°C to 40°C)

Solenoid Enclosures

Standard: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 For Optional Features, consult factory.

Approvals

CSA certified, UL listed solenoids.
 Meets applicable CE directives.

Specifications

Body Material	Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Single Solenoid						Dual Solenoid											
				Operating Pressure Differential (psi)			Max. Fluid Temp. °F			Catalogue Number	Const. Ref.	Operating Pressure Differential (psi)			Max. Fluid Temp. °F			Catalogue Number	Const. Ref.	Watt Rating/Class of Coil Insulation	
				Air-Inert Gas								Air-Inert Gas								AC	DC
				Min.	Max. AC	Max. DC	AC	DC	Min.			Max. AC	Max. DC	AC	DC						
Brass	1/4	1/4	.86	30	150	120	140	120	EF8551G407 ①③	1	30	150	120	140	120	EF8551G408 ①	1	10.1/F	11.6/F		
316L Stainless Steel									EV8551G413 ②							EV8551G414 ②					

① Brass construction supplied standard with EF solenoid. ② Stainless steel construction supplied standard with EV solenoid.
 ③ SIL 3 Certified by EXIDA - Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Dimensions inches (mm)

Series	8551
NPT	1/4
L1 ①	5.12 (132)
L2 ①	6.73 (171)
H2	4.38 (111)
H1	1.10 (28)
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	
MI	
MH	
MS	

Const. Ref. 1

Features

- Sturdy, robust construction
- Piston-operated poppet design provides high flow
- 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	POM
Shaft Gasket	PA

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	10.6	6.1	16	30	238214	238314
F	11.6	10.1	25	50	238614	238714
F	22.6	17.1	40	70	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.

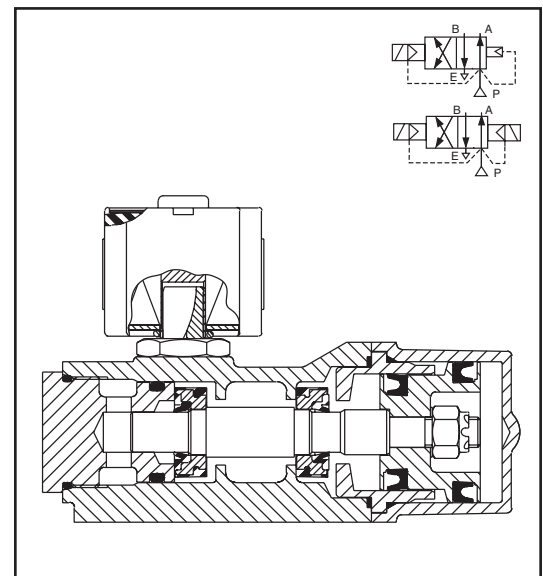
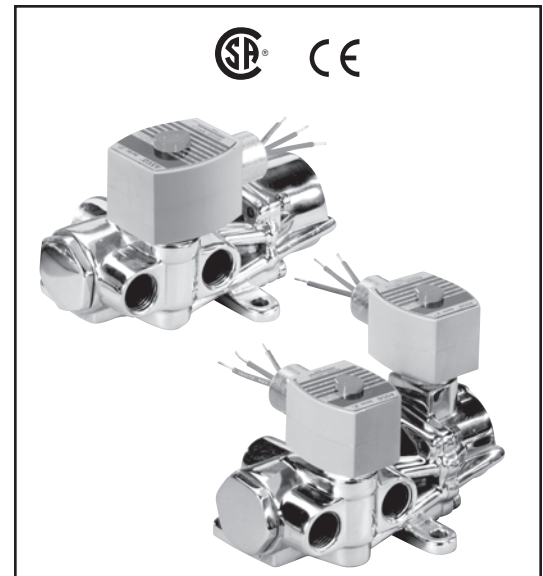
Caution: Do not energize both solenoids simultaneously.

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

For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

AC: -40°F to 125°F (-40°C to 52°C)

DC: -40°F to 104°F (-40°C to 40°C)

Approvals

CSA certified solenoid.

Meets applicable CE directives.

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.

Specifications

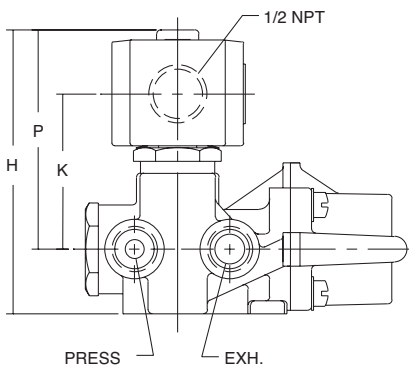
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Operating Pressure Differential (psi)			Max. Fluid Temp. °F		Brass Body		Watt Rating/ Class of Coil Insulation	
				① Min.	Max. AC	Max. DC	AC	DC	Catalogue Number	Const. Ref.	AC	DC
		Press.	Exh.		Air-Inert Gas	Air-Inert Gas						
SINGLE SOLENOID												
1/4	1/4	.80	1.0	30	150	125	180	150	EFX8344G070MF/18897	1	10.1/F	11.6/F
3/8	3/8	1.4	2.2	20	150	125	180	150	EFX8344G072MF/18897	2	10.1/F	11.6/F
1/2	3/8	1.4	2.2	20	150	125	180	150	EFX8344G074MF/18897	2	10.1/F	11.6/F
3/4	3/4	5.2	5.6	20	150	125	180	150	EFX8344G076MF/18897	3	10.1/F	11.6/F
1	3/4	5.2	5.6	20	150	125	180	150	EFX8344G078MF/18897	3	10.1/F	11.6/F
DUAL SOLENOID ①												
1/4	1/4	.80	1.0	30	250	125	180	120	EFX8344G044MF/18897	4	6.1/F	10.6/F
3/8	3/8	1.4	2.2	20	250	125	180	120	EFX8344G080MF/18897	6	6.1/F	10.6/F
1/2	3/8	1.4	2.2	20	250	125	180	120	EFX8344G082MF/18897	6	6.1/F	10.6/F

① On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

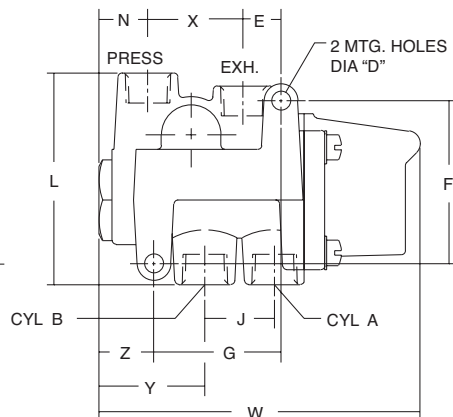
Dimensions inches (mm)

Const. Ref.		ØD	E	F	G	H	J	K	L	N	P	W	X	Y	Z	Exhaust Pipe Size
1	ins.	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	ins.	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	ins.	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	ins.	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	ins.	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

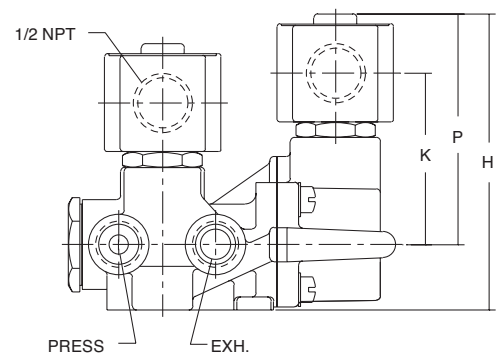
Const. Ref 1 - 3



Const. Ref 1 - 6



Const. Ref. 4 - 6



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

Construction

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

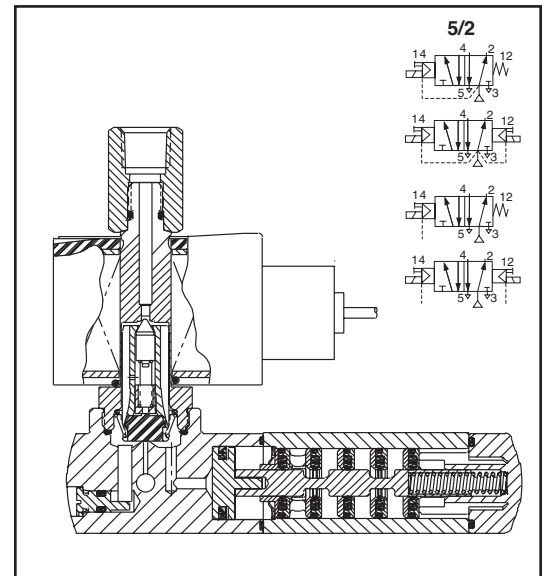
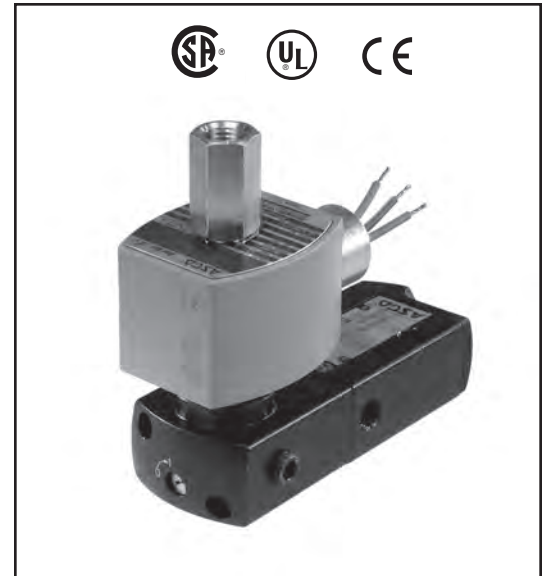
Electrical

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	10.1	25	50	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: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 For Optional Features, consult factory.



Nominal Ambient Temp. Ranges

Body Material	Description
Brass	AC: -40°F to 125°F (-40°C to 52°C)
Stainless Steel	DC: -40°F to 104°F (-40°C to 40°C)

Approvals

CSA certified, UL listed solenoids.
 Meets applicable CE directives.

Specifications





Body Material	Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Single Solenoid								Dual Solenoid									
				Operating Pressure Differential (psi)			Max. Fluid Temp. °F		Catalogue Number	Const. Ref.	Operating Pressure Differential (psi)			Max. Fluid Temp. °F		Catalogue Number	Const. Ref.	Watt Rating/ Class of Coil Insulation			
				Air-Inert Gas			AC	DC			AC	DC	Air-Inert Gas					AC	DC	AC	DC
				Min.	Max. AC	Max. DC							Min.	Max. AC	Max. DC						
Brass 5/2	1/4	1/4	.86	30	150	120	140	120	EF8551G419 ①	1	30	150	120	140	120	EF8551G420 ①	1	10.1/F	11.6/F		
316L Stainless Steel 5/2									EV8551G421 ②							EV8551G422 ②					

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

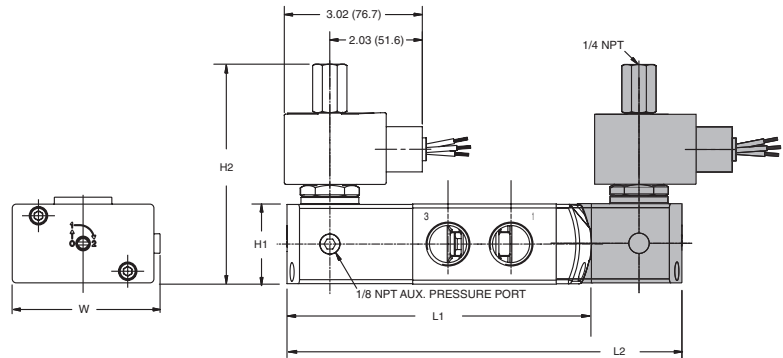
Dimensions inches (mm)

Series	8551
NPT	1/4
L1 ①	5.63 (143)
L2 ①	7.20 (183)
H2	4.38 (111)
H1	1.10 (28)
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. 1



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

Construction

Valve Parts in Contact with Fluids ①		
Body	Brass	316L Stainless Steel
End Cover (Spring end)	Brass	316L Stainless Steel
Spool Valve Internals	Brass, POM	
Pilot End Covers	Brass	316L Stainless Steel
Core Tube	Stainless Steel	
Core and Plugnut	Stainless Steel	
Springs	Stainless Steel	
Seals and Discs	NBR	
Top Disc	PA	
Core Guide	POM	
Seat and Seat Insert	Brass, POM	
Shading Coil	Copper	
Rider Ring (low power)	PTFE	

① Consult factory for construction details on catalogue numbers EE8551P401 and EE8551P409.

Electrical

Standard Coil and Class of Insulation	① Watt Rating and Power Consumption				Spare Coil Part Number	
	DC Watts	AC			Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC
F	11.6	10.1	25	50	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.
 ① Consult factory for electrical information and standard voltages on catalogue numbers EE8551P401 and EE8551P409.

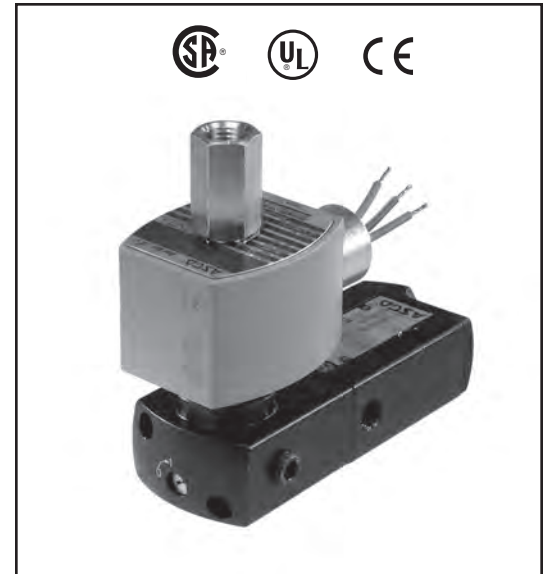
Solenoid Enclosures

RedHat II

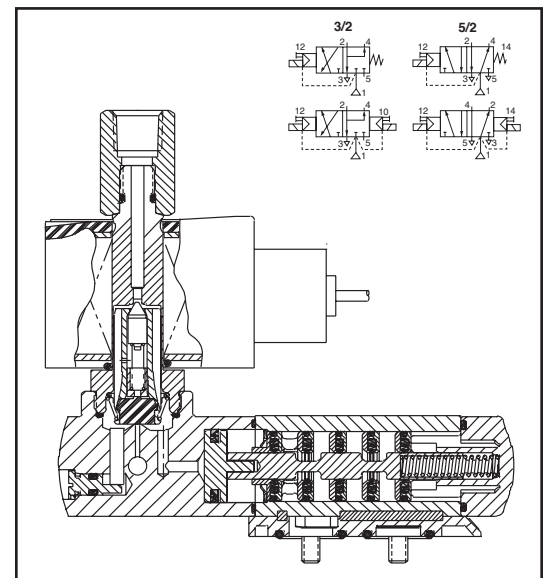
Standard: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9.
 For Optional Features, consult factory.

RedHat Next Generation

Standard: Class I, Division 2 for Hazardous Locations/Watertight. Meets Types 1 through 4X and 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.



4-WAY



Nominal Ambient Temp. Ranges

RedHat II

AC: -40°F to 125°F (-40°C to 52°C)
 DC: -40°F to 104°F (-40°C to 40°C)

RedHat Next Generation

AC/DC: -40°F to 140°F (40°C to 60°C)

Approvals

CSA certified, UL listed solenoids.
 Meets applicable CE directives.

Specifications

Body Material	Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Single Solenoid							Dual Solenoid								
				Operating Pressure Differential (psi) Air-Inert Gas			Max. Fluid Temp. °F		Catalogue Number	Const. Ref.	Operating Pressure Differential (psi) Air-Inert Gas			Max. Fluid Temp. °F		Catalogue 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
Brass 3/2, 5/2 ③	1/4	1/4	0.86	30	150	120	140	120	EF8551G403 ④	1	30	150	120	140	120	EF8551G404 ④	1	10.1/F	11.6/F
316L Stainless Steel 3/2, 5/2 ③	1/4	1/4	0.86	30	150	150	180	180	EE8551P409 ①	②	-	-	-	-	-	-	-	2/H	2/H
	1/4	1/4	0.86	30	150	120	140	120	EV8551G409 ⑤	2	30	150	120	140	120	EV8551G410 ⑤	2	10.1/F	11.6/F

① RedHat Next Generation Valve. ② Consult factory for dimensions. ③ 1/8 inch NPT exhaust.
 ④ Brass construction supplied with EF solenoid. ⑤ Stainless steel construction supplied standard with EV solenoid.

Dimensions inches (mm)

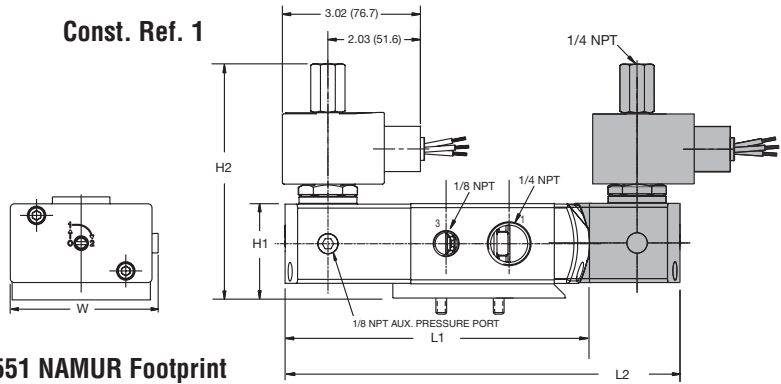
Series	8551
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.50 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

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

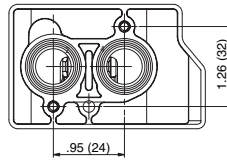
Optional Manual Operators ①		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

① For construction references 1 and 2 only

Const. Ref. 1



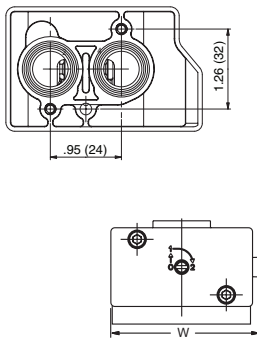
8551 NAMUR Footprint



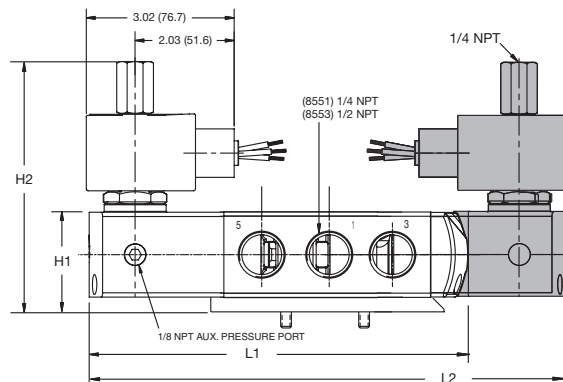
Series	8551 (5/3)
NPT	1/4
L1 ①	-
L2 ①	7.44 (189)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

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

8551 NAMUR Footprint



Const. Ref. 2



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

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 CO₂ 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			
	DC Watts	AC			General Purpose		Explosionproof	
		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

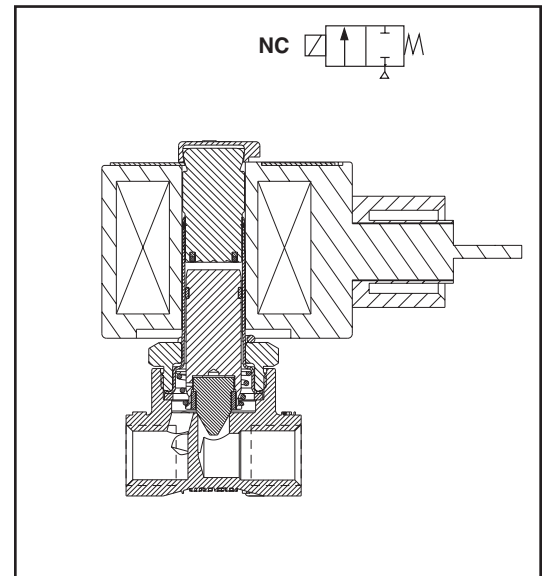
Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X.

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

See *Optional Features Section* for other available options.



SPECIAL SERVICE VALVES



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 CO₂ 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. Meets applicable CE directives.

Refer to *Engineering Section* for details.

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)				Catalogue Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Min.	Max.					AC	DC
				AC ②	DC @ 104°F	DC @ 131°F				
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 CO₂ 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 CO₂ inside the valve.

② For 8262 & 8263 Series, AC pressure ratings are at 131°F ambient; for all other series, AC pressure ratings are at 125°F. ③ Consult factory for dimensions.

Specifications (Metric units)

Pipe Size (ins.)	Orifice Size (mm)	Kv Flow Factor (m ³ /h)	Operating Pressure Differential (bar)				Catalogue Number	Const. Ref.	Watt Rating/ Class of Coil Insulation	
			Min.	Max.					AC	DC
				AC ②	DC @ 40°C	DC @ 55°C				
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 CO₂ 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 CO₂ inside the valve.

② For 8262 & 8263 Series, AC pressure ratings are at 55°C ambient; for all other series, AC pressure ratings are at 52°C.

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) or No Voltage Release (trips when de-energized)
- Available for Latched Open or Latched Closed operation
- Ideal for controlling critical processes

Construction

Valve Parts in Contact with Fluids		
Body	Brass	Stainless Steel
Stem	303 Stainless Steel	
Springs	302 Stainless Steel	
Pilot Seat Cartridge	POM (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	
	DC Watts	AC			AC	DC
		Watts	VA Holding	VA Inrush		
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.

Solenoid Enclosures

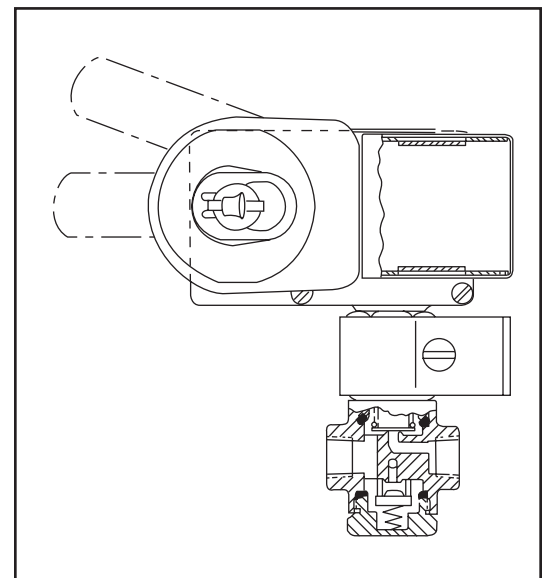
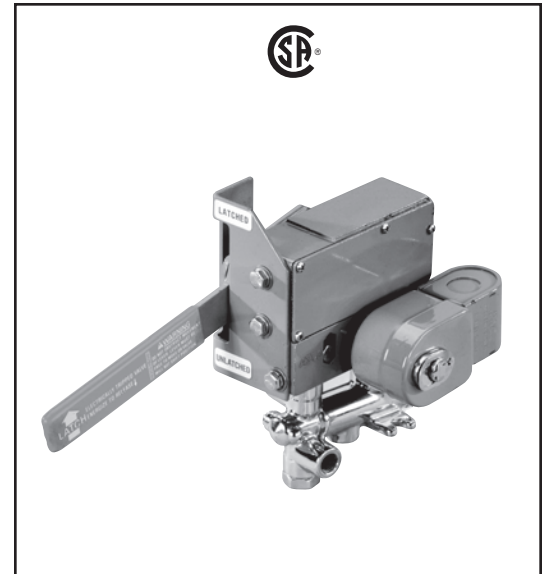
Standard: Explosionproof and Watertight, Types 3, 7 (C and D), and 9.
For Optional Features, consult factory.

Nominal Ambient Temp. Ranges

AC: -40°F to 104°F (-40°C to 40°C)
DC: -40°F to 77°F (-40°C to 25°C)

Approvals

CSA certified solenoid. Some constructions meet shock and vibration ISA S71.03C2.



SPECIAL SERVICE VALVES

Operation Alternatives

Electrically Tripped – Manually move the lever to the latched position with the solenoid de-energized. Trips when solenoid is energized. Once tripped, the lever may be cycled causing the valve discs to open and close.

No Voltage Release – Manually move the lever to the latched position with the solenoid energized. Trips when solenoid is de-energized. Once tripped, the lever may be cycled causing the valve discs to open and close.

Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)			Max. Fluid Temp. °F		No Voltage Release Catalogue Number	Electrically Tripped Catalogue Number	Const. Ref.	Flow Diagram	Watt Rating/ Class of Coil Insulation	
			Min.	Max. AC	Max. DC	AC	DC					AC	DC
UNIVERSAL OPERATION (Except as Noted ①), Brass Body with NBR Disc/Diaphragm (CA Pilot Cartridge) for Air-Inert Gas. This group of valves meets shock and vibration ISA S71.03C2.													
1/4	11/64	.38	0	125	125	180	180	EFX8308B040MF/17687	EFX8310B040MF/17687	1	B	20/F	36.2/H
1/2	5/8	4	0 ④	250	250	180	180	EFX8308C042MF/17687 ① ②	EFX8310C042MF/17687 ① ②	2	C	20/F	36.2/H
UNIVERSAL OPERATION, Brass Body with Stainless Steel Seats and Discs for Air-Inert Gas													
1/4	1/4	.45	0	125	125	200	200	EFX8308044MF/17687	EFX8310044MF/17687	4	A	20/F	36.2/H
UNIVERSAL OPERATION, Stainless Steel Body with FKM Discs for Air-Inert Gas													
1/4	1/8	.21	0	125	125	180	180	EFX8308A011MF/17687	EFX8310A011MF/17687	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	-	200	-	EFX8308047MF/17571	EFX8310047MF/17687	5	A	20/F	-
1/2	5/16	.75	0	-	125	-	200	EFX8308047MF/17687	EFX8310047MF/17687	5	A	-	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.
- ③ For dimensions, consult factory.
- ④ 0-150 mainline pressure. Valve is externally piloted and requires a minimum pilot/auxiliary pressure of 15-120 psi. See graph below for mainline vs. pilot line pressure requirements.

SPECIAL SERVICE VALVES

Flow Diagrams

MAINLINE PRESSURE vs. PILOT LINE PRESSURE WHEN SELECTION GASKET IS IN EXTERNAL POSITION

Mainline Pressure (psi)	Pilot Line Pressure (psi)
0	0
15	5
30	10
45	15
60	20
75	25
90	30
105	35
120	40
135	45
150	50

Electrically Tripped and No Voltage Release Constructions

Flow Diagram A

Flow Diagram B

Flow Diagram C

Normally Open

Unlatched

Latched

Normally Closed

Unlatched

Latched

Features

- Moulded one-piece solenoid with highly efficient solenoid cartridge and special low wattage coil
- 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, and 4/2
- Air or inert gas only
- Lower-cost alternative to intrinsically safe valves in critical applications not requiring a safety barrier

Construction

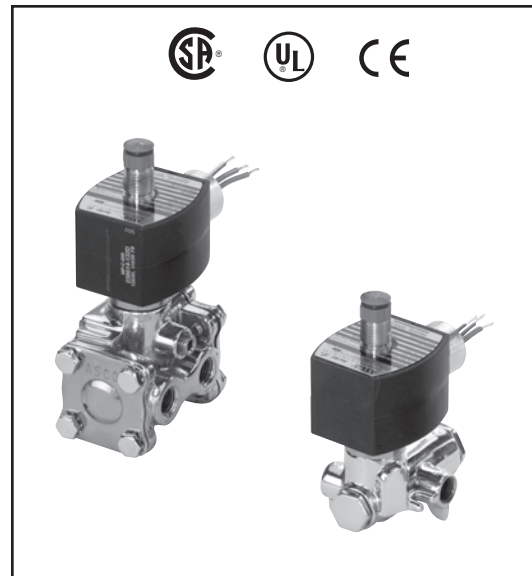
Valve Parts in Contact with Fluids		
Body	Brass	Stainless Steel
Seals and Discs	NBR	
Sleeve	304L Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Pilot Seat Cartridge (Series 8316 & 8344 only)	POM	
Rider Rings	PTFE	
Spring Retainer	POM	

Electrical

Description	Wattage	Max. Ambient Temp.	T Code	Insulation Class	TPL
Standard Ambient Version	1.4W	140°F(60°C)	T6	F	-
High Ambient Version	1.8W	179°F(80°C)	T5	F	TPL #23033
Surge Suppression Version	1.7W	140°F(60°C)	T5	F	-
Surge Suppression High Ambient Version	2.0W	179°F(80°C)	T5	F	TPL #23033

Description	Wattage	Voltage (DC)	Min. Pull In (mA)	3way Drop Out (mA)	2way Drop Out (mA)	Coil resistance @68°F(20°C) (ohms)
Standard Ambient Version	1.4W	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	1.8W	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 Suppression Version	1.7W	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 Suppression High Ambient Version	2.0W	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*
Explosionproof	238714-902-D*	238714-905-D*
Explosionproof, Corrosion Resistant	274714-902-D*	274714-905-D*
Explosionproof, Surge Suppression	276006-006-D*	276006-106-D*
Explosionproof, Corrosion Resistant, Surge Suppression	276007-006-D*	276007-106-D*



SPECIAL SERVICE VALVES

Nominal Ambient Temp. Ranges

Series	Body Material	Temperature Range
8316/15444	Brass & Stainless Steel	-40°F to 140°F (-40°C to 60°C)
8317		
8344/18897		
8223	Stainless Steel	-4°F to 140°F (-20°C to 60°C)
8316/17596	Stainless Steel	-59°F to 140°F (-50°C to 60°C)
8316/21104		

Approvals

8317/8223: UL listed General Purpose Valves (MP618), CSA certified (10381). Meets applicable CE directives.

83344/18897, 8316 as 15444, 17596 & 21104: UL listed solenoid (Hazardous Location Classified), CSA certified solenoid only, nonincendive for Class I, Division 2 UL E12264 for -40°F (-40°C). Meets applicable CE directives.

8317/8223 with EF/EV Prefix: UL listed (Hazardous Location Classified), Class I, Division 2 UL E25549. Certified CSA valve (13976). Meets applicable CE directives.

SIL 3 capable per IEC 61508 on 8316 const. Third party certification provided by EXIDA.

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 catalogue number. For explosionproof with 316 Stainless Steel hub and trim, specify prefix "EV".) Surge suppression coils also available "MF" prefix.

For Optional Features, consult factory.

Specifications

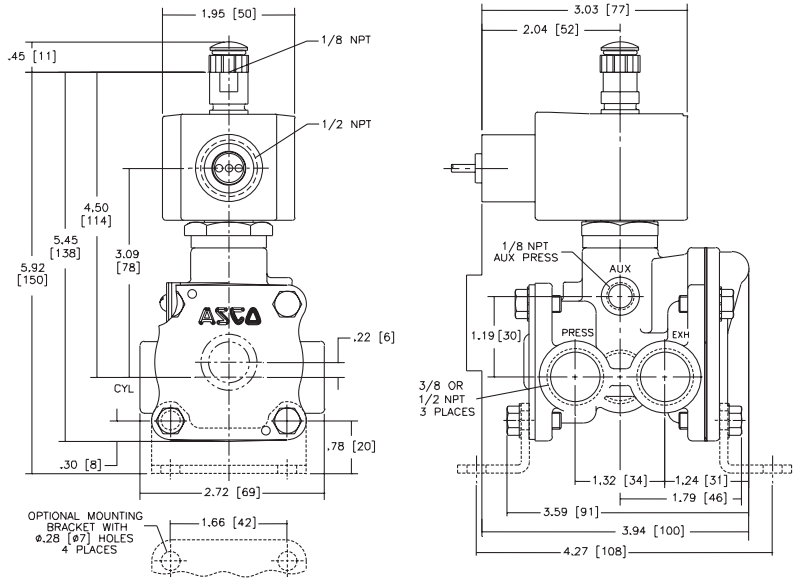
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
				Air-Inert Gas			Catalogue Number	Const. Ref.	Catalogue Number	Const. Ref.
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.					
2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
1/2	3/8	3.2		25	150	140	-	-	8223G310	20
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc - SIL 3 Certified by Exida ⑨										
1/4	5/16	1.5	1.5	④	150	140	EFX8316G301MF/15444 ③	3	EVX8316G381MF/15444 ③	3
1/4	5/16	1.5	1.5	0 ⑦	110	140	-	-	EVX8316G381MB/17596 ⑧	3
1/4	5/16	1.5	1.5	15 ⑥	110	140	-	-	EVX8316G381MB/21104 ⑧	3
3/8	5/16	1.6	1.6	④	150	140	EFX8316G302MF/15444 ③	3	EVX8316G382MF/15444 ③	3
3/8	5/16	1.6	1.6	0 ⑦	110	140	-	-	EVX8316G382MB/17596 ⑧	3
3/8	5/16	1.6	1.6	15 ⑥	110	140	-	-	EVX8316G382MB/21104 ⑧	3
3/8	5/8	4	4	⑤	150	140	EFX8316G303MF/15444 ③	3A	-	-
1/2	5/8	4	4	⑤	150	140	EFX8316G304MF/15444 ③	3A	EVX8316G384MF/15444 ③	3A
3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc										
1/4	②	.08	.73	5	150	140	8317G307 ①	6	8317G308 ①	7
4/2 VALVES, Brass Body with NBR Disc										
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid	
				Air-Inert Gas			Catalogue Number	Const. Ref.	Catalogue Number	Const. Ref.
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.					
1/4	1/4	.80	1	30	150	140	EFX8344G370MF/18897 ①③	9	EFX8344G344MF/18897 ③	12
3/8	3/8	1.4	2.2	20	150	140	EFX8344G372MF/18897 ①③	11	EFX8344G380MF/18897 ③	10
1/2	3/8	1.4	2.2	20	150	140	EFX8344G374MF/18897 ①③	11	EFX8344G382MF/18897 ③	10
3/4	3/4	5.2	5.6	20	150	140	EFX8344G376MF/18897 ①③	13	-	-
1	3/4	5.2	5.6	20	150	140	EFX8344G378MF/18897 ①③	13	-	-

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.
 ④ At temperatures below 32°F: 15 psi minimum mainline operating pressure differential when valve selection gasket is in external position and proper auxiliary air pressure is applied. See graph on page 36 for auxiliary pressure vs. mainline pressure. Minimum 40 psi operating pressure differential when selection gasket is in the internal position.
 ⑤ At temperatures below 32°F: 25 psi minimum mainline operating pressure differential when valve selection gasket is in external position and proper auxiliary air pressure is applied. See graph on page 36 for auxiliary pressure vs. mainline pressure. Minimum 50 psi operating pressure differential when selection gasket is in the internal position.
 ⑥ **IMPORTANT:** Internal Pilot Construction: 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.
 ⑦ **IMPORTANT:** External Pilot Construction: Zero minimum operating pressure differential when the gasket is in the external position and proper auxiliary air pressure is applied. See graph on page 36 for pilot line pressure vs. mainline pressure.
 ⑧ At -59°F (-50°C), these constructions have a reduced life expectancy. Consult factory for details.
 ⑨ SIL 3 Certified by Exida, only valid when used as Normally Closed. Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.
 ⑩ **IMPORTANT:** Supervisory and leakage current above the drop out current of 7mA for 24V DC will cause improper operation. Consult your local ASCO sales office for additional assistance.

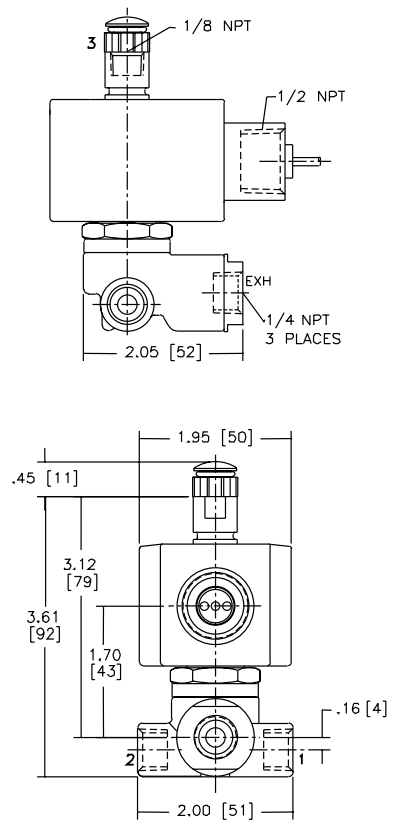
SPECIAL SERVICE VALVES

Dimensions: inches (mm)

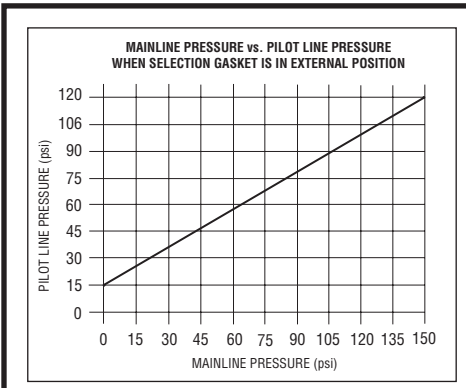
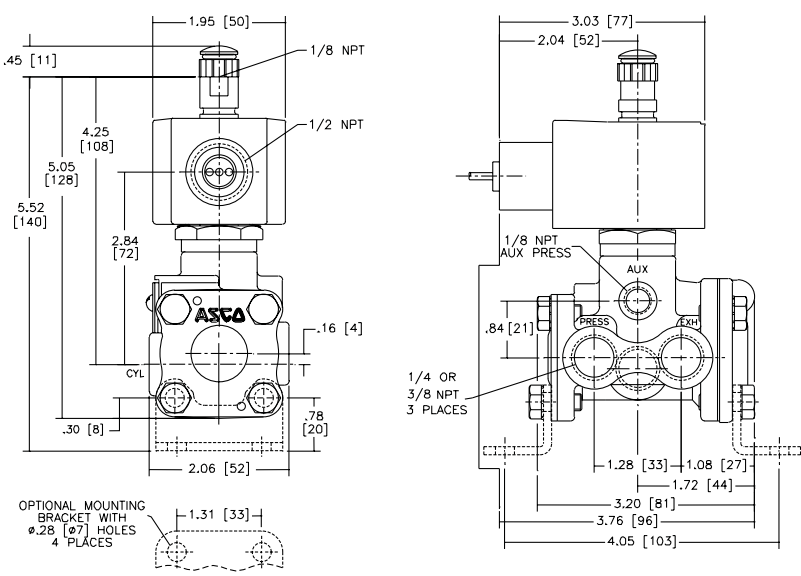
Const. Ref. 3A



Const. Ref. 6. 7



Const. Ref. 3



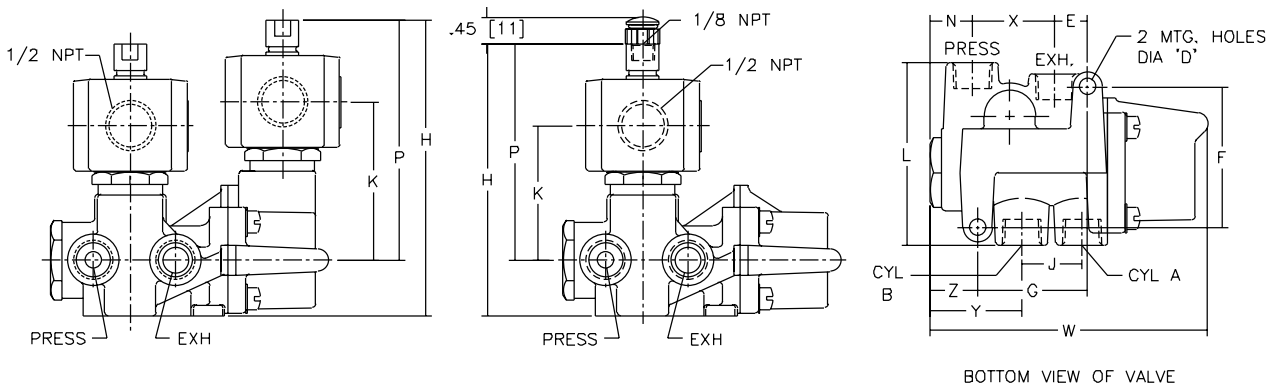
SPECIAL SERVICE VALVES

Dimensions: inches (mm)

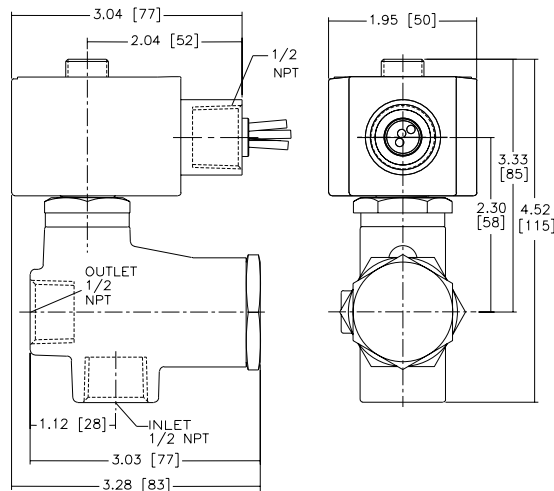
Const. Ref.		Dia "D"	E	F	G	H	J	K	L	N	P	W	X	Y	Z	Exhaust Pipe Size
9	ins.	Ø .28	.56	2.41	1.88	4.67	1.03	2.30	3.12	.72	3.72	4.75	1.41	1.56	.81	3/8
	mm	7	14	61	48	119	26	58	79	18	95	121	36	40	21	
10	ins.	Ø .34	.76	3.12	2.62	4.89	1.50	2.11	3.18	.83	3.77	6.06	1.86	1.89	.83	1/2
	mm	9	16	79	67	118	38	70	81	21	90	154	48	49	21	
11	ins.	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	ins.	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	ins.	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	

SPECIAL SERVICE VALVES

Const. Ref. 9, 10, 11, 12, 13



Const. Ref. 20



Features

- Moulded 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 DCS compatibility for BUS network and traditional wiring
 - Reduced temperature rise
 - Increase battery life
 - Reduce wiring cost
 - Energy savings
- Wide selection includes 2/2 normally closed, 3/2 universal, 5/2, and 5/3

Construction

Valve Parts in Contact with Fluids		
Body	Brass	Stainless Steel
Seals and Discs	PUR, NBR, FKM, CR, as listed	
Sleeve	304L Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Rider Rings	PTFE	
Spring Retainer	POM	

Electrical

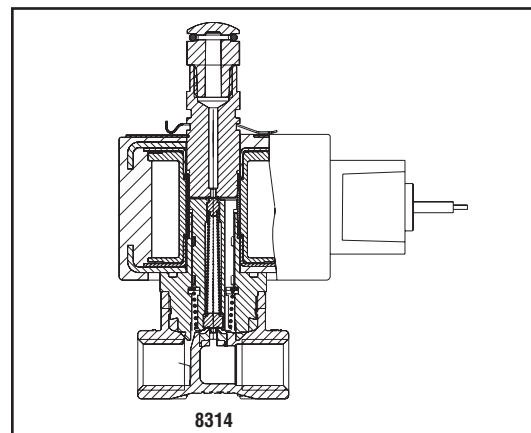
Description	Wattage	Max. Ambient Temp.	T Code	Insulation Class	Prefix
Standard Ambient Version	.55 W	149°F (65°C)	T6	F	-
High Ambient Version	.70 W	176°F (80°C)	T6	H	HT
Surge Suppression Version	.75 W	149°F (65°C)	T6	F	MF

Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)	Coil Resistance @68°F (20°C) (ohms)
Standard Ambient Version	.55W	12V	34	1.8	255
		24V	17	0.89	1025
		48V	8.5	0.45	4080
		125V**	3.2	0.17	27,400
High Ambient Version	.70W	12V	37	1.9	206
		24V	19	0.98	830
		48V	9.7	0.52	3185
		125V**	3.7	0.2	21150
Surge Suppression Version	.75W	12V	41	2.2	165*
		24V	19	0.98	830*
		48V	9.7	0.52	3185*
		125V**	3.7	0.2	21150*

Note: * Surge suppression contains diode bridge. ** Not for battery applications

24VDC Spare Coil P/N	Standard Ambient Temp. Version	High Ambient Temp. Version
General Purpose	238910-906-D*	238910-906-D*
Explosionproof	238714-913-D*	238914-906-D*
Explosionproof, Corrosion Resistant	274714-909-D*	274914-906-D*
Explosionproof, Surge Suppression	276006-206-D*	Not Available
Explosionproof, Corrosion Resistant, Surge Suppression	276007-206-D*	Not Available

Note: For 12VDC, 48VDC and 125VDC coil PN consult factory



SPECIAL SERVICE VALVES

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 catalogue number. For explosionproof with 316 Stainless Steel hub and trim, specify prefix "EV".) Surge suppression coils also available "MF" prefix.

For Optional Features, consult factory.

Approvals

UL & CSA Approved for Class I Div. 1 Locations & Class I Div. 2 Nonincendive. UL Listed General Purpose Valves. Meets applicable CE directives.

Brass 8551 & 8553: UL listed solenoid (Hazardous Location Classified, E12264), CSA certified solenoid only (13976), nonincendive for Class I, Division 2, -40°F (-40°C). Meets applicable CE directives.

Stainless Steel 8551 with EF prefix: UL listed (Hazardous Location Qualified), Class I Division 2 UL E25549. Certified CSA valve (13976). Meets applicable CE directives.

SIL 3 capable per IEC 61508 on 8314, 8316, 8551, and 8553 const. Third party certification provided by EXIDA.

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		
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)
8314	Brass / Stainless Steel		
8317			
8316	Stainless Steel	-59°F to 149°F (-50°C to 65°C)	

Important

These solenoids are intended for use on clean, dry air or inert gas filtered to 50 microns or better. To prevent freezing, the dew point of the media should be at least 18°F (-8°C) below the minimum temperature to which any portion of the clean air or gas system could be exposed. Instrument air in compliance with ANSI/ISA Standard S7.3-1975 (R1981) exceeds the above requirements and is, therefore, an acceptable medium for these valves.

Specifications

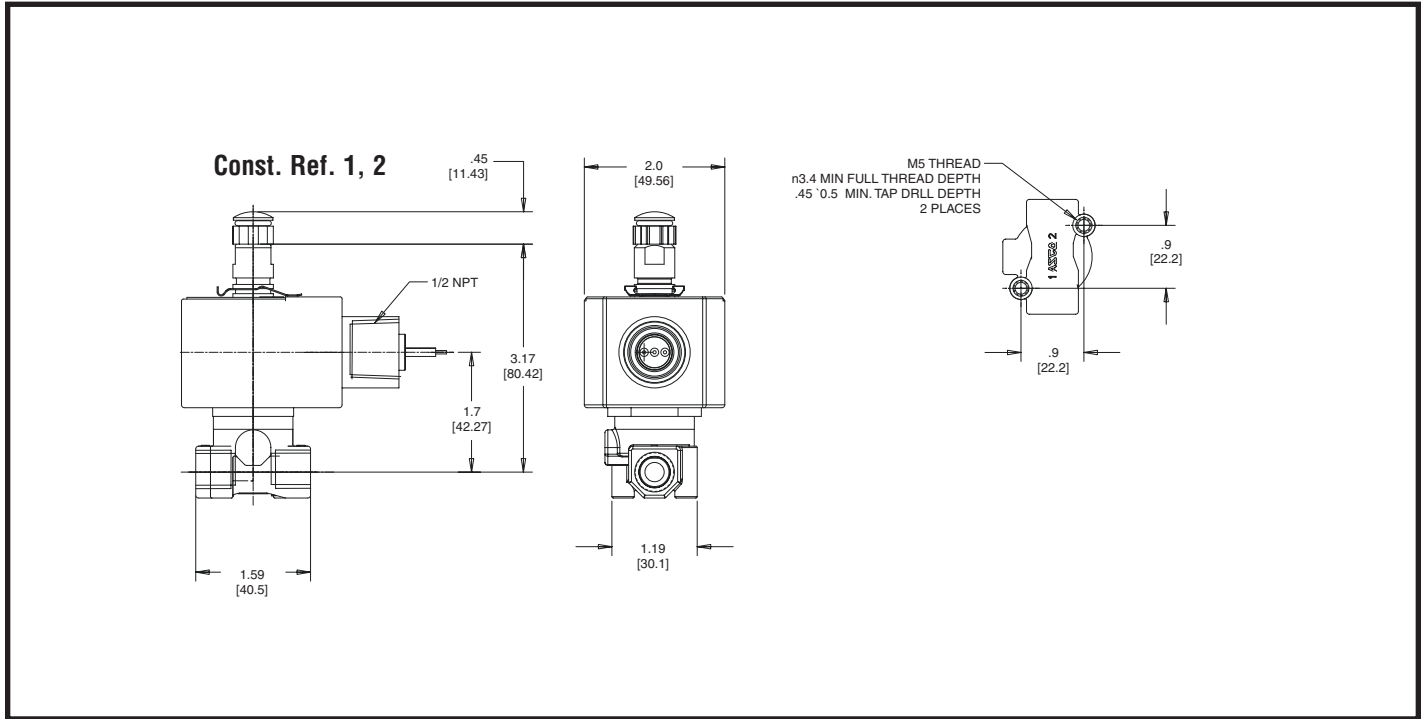
P Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Air-Inert Gas			Const. Ref.	Catalogue Number	Const. Ref.	Catalogue Number
				Min.	Max.					
3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Certified by Exida ②										
1/4	1/20	.06	.06	0	130/105 ①	149	8314H300	1	8314H301	2
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc - SIL 3 Certified by Exida ②										
1/4	5/16	1.5	1.5	0 ③	110	149	-	-	EV8316H385 ⑤	25
1/4	5/16	1.5	1.5	15 ④	110	149	-	-	EV8316H386 ⑤	25
3/8	5/16	1.6	1.6	0 ③	110	149	-	-	EV8316H387 ⑤	25
3/8	5/16	1.6	1.6	15 ④	110	149	-	-	EV8315H388 ⑤	25

① Normally closed = 130 psi. Normally open = 105 psi.
 ② SIL 3 Certified by Exida, only valid when used as Normally Closed. Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.
 ③ **IMPORTANT:** Internal Pilot Construction: 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.
 ④ **IMPORTANT:** External Pilot Construction: Zero minimum operating pressure differential when the gasket is in the external position and proper auxiliary air pressure is applied. See graph on page 36 for pilot line pressure vs. mainline pressure.
 ⑤ At -59°F (-50°C), these constructions have a reduced life expectancy. Consult factory for details.
IMPORTANT: Supervisory and leakage current above the drop out current of 0.89 mA for 24V DC will cause improper operation. Consult your local ASCO sales office for additional assistance.

Body Material	Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Single Solenoid – SIL 3 Certified by Exida ④				Dual Solenoid								
				Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalogue Number	Const. Ref.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalogue Number	Const. Ref.			
				Min.	Max.				Min.	Max.						
3/2, 5/2 VALVES, with NBR and PUR Seals																
Brass 3/2	1/4	1/4	.86	30	130	149	EF8551H307 ②	21	30	130	149	EF8551H308 ②	21			
Brass 5/2							EF8551H319 ②	22				EF8551H320 ②	22			
316L Stainless Steel 3/2							EV8551H313 ③	21				EV8551H314 ③	21			
316L Stainless Steel 5/2							EV8551H321 ③	22				EV8551H322 ③	22			
316L Stainless Steel 3/2							1/2	1/3				3.7	EV8553H313 ③	21	EV8553H314 ③	21
316L Stainless Steel 5/2													EV8553H321 ③	22	EV8553H322 ③	22
3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount																
Brass 3/2, 5/2	1/4	1/4	.86	30	130	149	EF8551H303 ①②	23	30	130	149	EF8551H304 ①②	23			
316L Stainless Steel 3/2, 5/2							EV8551H309 ③	24				EV8551H310 ③	24			
316L Stainless Steel 3/2, 5/2							EV8553H309 ③	24				EV8553H310 ③	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.
 ④ SIL 3 Certified by Exida, only valid when used as Normally Closed. Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

Dimensions: inches (mm)



SPECIAL
SERVICE VALVES

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.

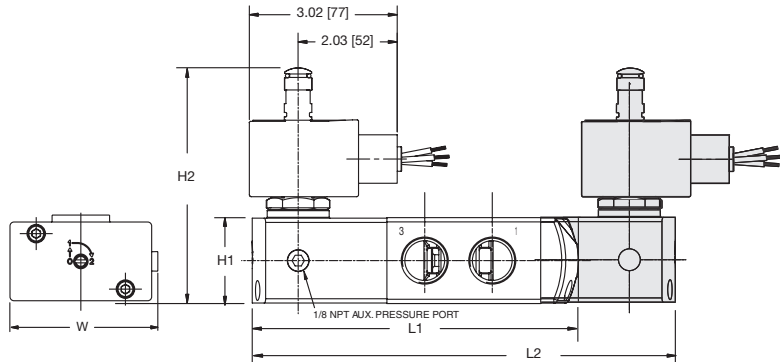
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

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)

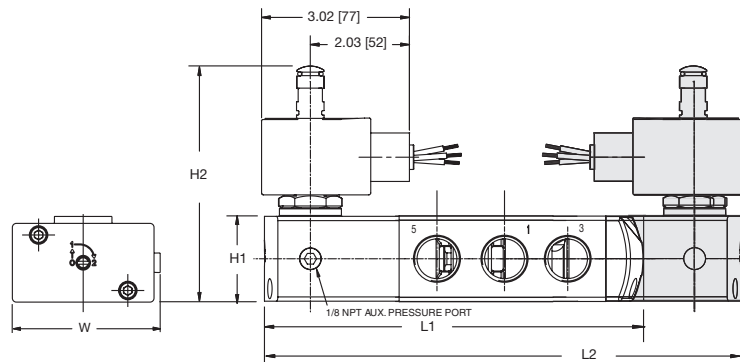
① Manual override option MH adds .250" (6.4),
MS option adds .468" (11.9) to each solenoid endcap.

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. 21







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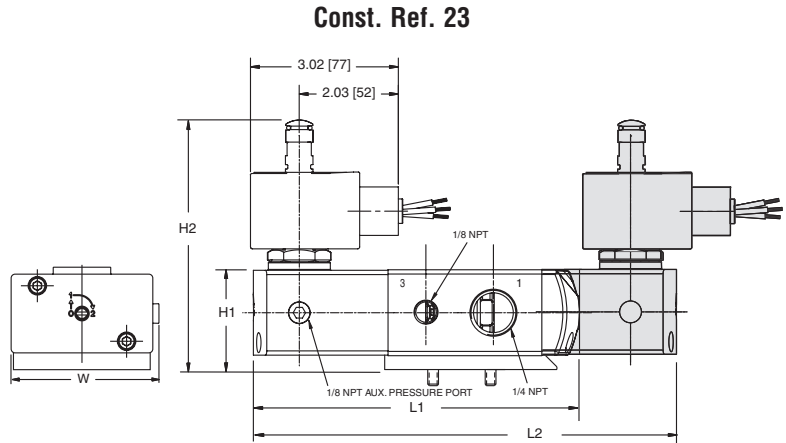


Dimensions: inches (mm)

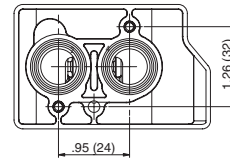
Series	8551 (Brass)
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.49 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

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



8551 NAMUR Footprint



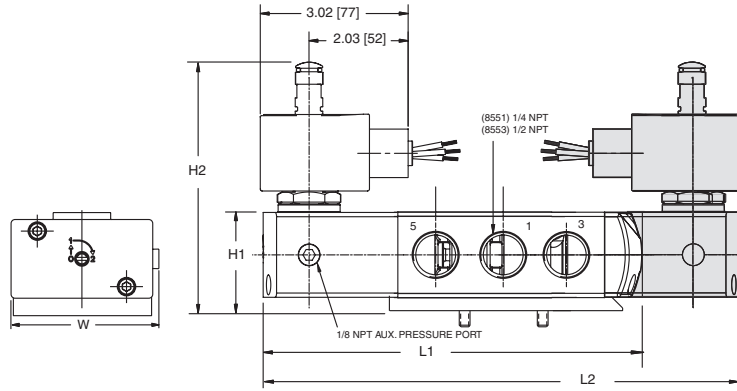
Dimensions: inches (mm)

Series	8551 (316L SS)	8553
NPT	1/4	1/2
L1 ①	5.20 (132)	7.08 (180)
L2 ①	6.73 (171)	8.85 (225)
H2	4.38 (111)	4.77 (121)
H1	1.57 (40)	2.08 (53)
W	1.77 (45)	2.87 (73)

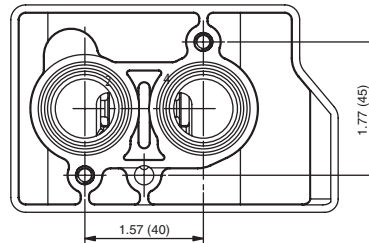
① Manual override option MH adds .250" (6.4),
MS option adds .468" (11.9) to each solenoid endcap.

Optional Manual Operators		
Add Suffix		Description
MO		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

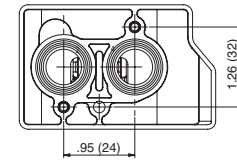
Const. Ref. 24



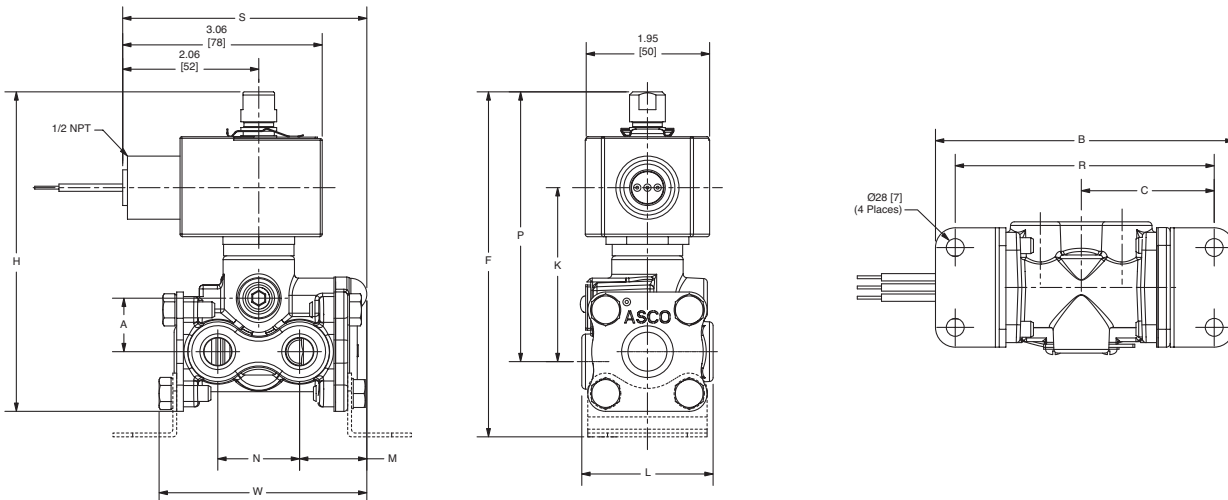
8553 NAMUR Footprint



8551 NAMUR Footprint



Const. Ref. 25



Catalogue 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
	mm	21	119	53	137	127	69	52	27	33	107	103	97	83

SPECIAL SERVICE VALVES

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

Catalogue Prefix	Description	Enclosure Type Rating	Enclosure IP Rating
IS	1/2" NPT Conduit	3, 3S	IP55
		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
VT	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, FKM as listed		
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%. Maximum Allowable "Off" State Leakage Current or Supervisory Current – 1.6mA

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.



SPECIAL SERVICE VALVES

Ordering Information

Example:

- With Junction Box – JPIS8314B300
- With 316L Stainless Steel Junction Box – JSIS8314B300
- With Conduit – IS8314B300
- With Quick Disconnect – ISVT8314B300
- With DIN Connector – ISSC8314B300

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.
FM approved only for NIFW - Class I, Div. 2 (US only)
FM (US & Canada) approved under 3037789 & 3037789C
CSA certified under File 13976, Class 3228-01 (C of C 1099243)
ATEX Approved for: II 1 G Ex ia IIC T6 under FM10ATEX0015X
IECEx Approved for: Ex ia IIC T6 under IECExFMG10.0008X
Meets applicable CE directives.

Refer to Engineering Section for details.

Entity Parameters

$V_{max} = 32 \text{ VDC}$ $C_i = 0 \text{ nF}$ $I_{max} = 500 \text{ mA}$
 $I_{max} = 500 \text{ mA}$ $P_i = 1.5 \text{ W}$

JPIS/JSIS Nominal Ambient Temp. Range

Series	Body Material	Normal Temperature Range
8553	Stainless Steel	-40°F to 140°F (-40°C to 60°C)
8551	Brass	
8316/15444	Brass / Stainless Steel	-40°F to 149°F (-40°C to 65°C)
8551	Stainless Steel	
8314	Brass / Stainless Steel	
8317	Brass / Stainless Steel	-59°F to 149°F (-50°C to 65°C)
8316/21105	Stainless Steel	
8316/21106	Stainless Steel	

WBIS Nominal Ambient Temp. Range

Series	Body Material	Normal Temperature Range
8262	Brass /	-40°F to 140°F (-40°C to 60°C)
8344MF	Stainless Steel	
8223	Stainless Steel	-4°F to 140°F (-20°C to 60°C)

Specifications

2/2 VALVES, NORMALLY CLOSED, with NBR Disc										
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body		
			Air-Inert Gas			Catalogue Number	Const. Ref.	Catalogue Number	Const. Ref.	
			Min.	Max.						
1/4	1/16	.08	0	150	140	WBIS8262A320	1	WBIS8262A386	1A	
1/2	3/8	3.2	25	150	140	-	-	WBIS8223A310	3	
3/2 VALVES										
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Air-Inert Gas			Catalogue Number	Const. Ref.	Catalogue Number	Const. Ref.
				Min.	Max.					
UNIVERSAL OPERATION (Pressure at any port) with NBR Disc										
1/4	1/16	.06	.08	0	130/105 ④	149	JPIS8314B300	4	JPIS8314B301	4A
NORMALLY CLOSED (Closed when de-energized)										
1/4	5/16	1.5	1.5	④	130	149	JPISX8316B301MF/15444 ③	5	JPISX8316B381MF/15444 ③	8
1/4	5/16	1.5	1.5	15 ⑥	110	149	-	-	JPISX8316B381/21105 ⑥	8
1/4	5/16	1.5	1.5	0 ⑦	110	149	-	-	JPISX8316B381/21106 ⑥	8
3/8	5/16	1.6	1.6	④	130	149	JPISX8316B302MF/15444 ③	5	JPISX8316B382MF/15444 ③	8
3/8	5/16	1.6	1.6	15 ⑥	110	149	-	-	JPISX8316B382/21105 ⑥	8
3/8	5/16	1.6	1.6	0 ⑦	110	149	-	-	JPISX8316B382/21106 ⑥	8
3/8	5/8	4	4	⑤	130	149	JPISX8316B303MF/15444 ③	6	-	-
1/2	5/8	4	4	⑤	130	149	JPISX8316B304MF/15444 ③	6	JPISX8316B384MF/15444 ③	9
UNIVERSAL OPERATION (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc										
1/4	②	.06	.73	5	130	149	JPIS8317B307 ①	10	JPIS8317B308 ①	11
4/2 VALVES, Brass Body with NBR Disc										
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Cylinder to Exhaust	Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Single Solenoid	Const. Ref.	Dual Solenoid	Const. Ref.
				Min.	Max.					
1/4	1/4	.80	1	30	150	140	WBIS8344A370MF ①③	13	WBIS8344A344MF ③	16
3/8	3/8	1.4	2.2	20	150	140	WBIS8344A372MF ①③	14	WBIS8344A380MF ③	17
1/2	3/8	1.4	2.2	20	150	140	WBIS8344A374MF ①③	14	WBIS8344A382MF ③	17
3/4	3/4	5.2	5.6	20	150	140	WBIS8344A376MF ①③	15	-	-
1	3/4	5.2	5.6	20	150	140	WBIS8344A378MF ①③	15	-	-

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 the 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.

④ At temperatures below 32°F: 50 psi minimum mainline operating pressure differential when valve selection gasket is in external position and proper auxiliary air pressure is applied. See graph with dimensional drawings for auxiliary pressure vs. mainline pressure. Minimum 50 psi operating pressure differential when selection gasket is in the internal position.

⑤ At temperatures below 32°F: 50 psi minimum mainline operating differential when valve selection gasket is in external position and proper auxiliary air pressure is applied. See graph with dimensional drawings for auxiliary pressure vs. mainline pressure. Minimum 50 psi operating pressure differential when selection gasket is in the internal position.

⑥ **IMPORTANT:** Internal Pilot Construction: 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.

⑦ **IMPORTANT:** External Pilot Construction: Zero minimum operating pressure differential when the gasket is in the external position and proper auxiliary air pressure is applied. See graph on page 48 for pilot line pressure vs. mainline pressure.

⑧ At -59°F (-50°C), these constructions have a reduced life expectancy. Consult factory for details.

⑨ Normally closed = 130 psi. Normally open = 105 psi.

SPECIAL SERVICE VALVES

Specifications

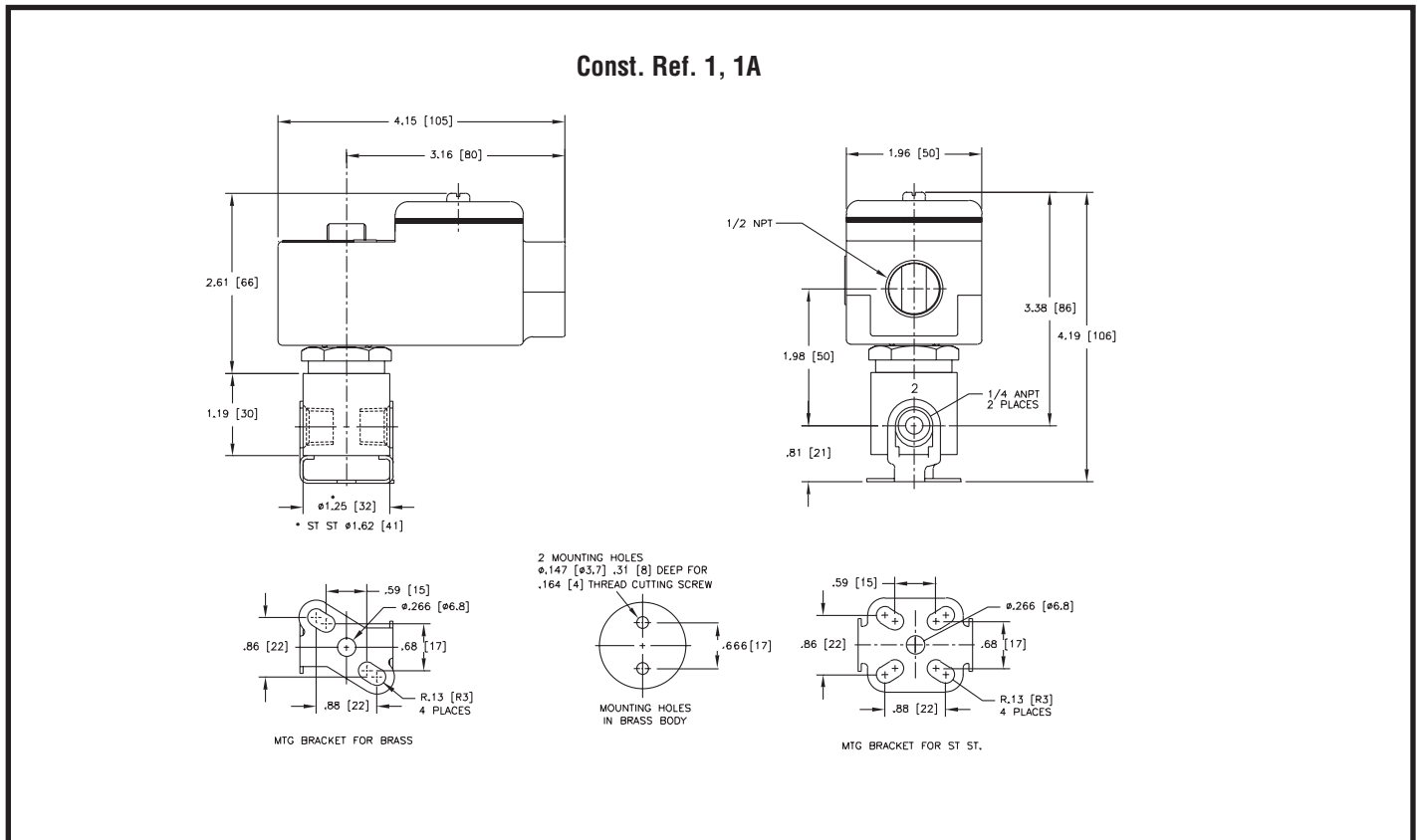
Body Material	Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Single Solenoid				Dual Solenoid					
				Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalogue Number	Const. Ref.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalogue Number	Const. Ref.
				Air-Inert Gas					Air-Inert Gas				
				Min.	Max.	Min.	Max.						
3/2, 5/2 VALVES, with NBR and PUR Seals													
Brass 3/2	1/4	1/4	.86	30	130	149	JPIS8551B307	19	30	130	149	JPIS8551B308	19
Brass 5/2							JPIS8551B319	20				JPIS8551B320	20
316L Stainless Steel 3/2							JPIS8551B313	19				JPIS8551B314	19
316L Stainless Steel 5/2							JPIS8551B321	20				JPIS8551B322	20

Body Material	Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Single Solenoid				Dual Solenoid					
				Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalogue Number	Const. Ref.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalogue Number	Const. Ref.
				Air-Inert Gas					Air-Inert Gas				
				Min.	Max.	Min.	Max.						
3/2, 5/2 VALVES, with NBR and PUR Seals, NAMUR Mount													
Brass 3/2, 5/2	1/4	1/4	.86	30	130	149	JPIS8551B303 ①	21	30	130	149	JPIS8551B304 ①	21
316L Stainless Steel 3/2, 5/2							JPIS8551B309	22				JPIS8551B310	22

① 1/8" NPT exhaust for 1/4" aluminum and brass.

SPECIAL SERVICE VALVES

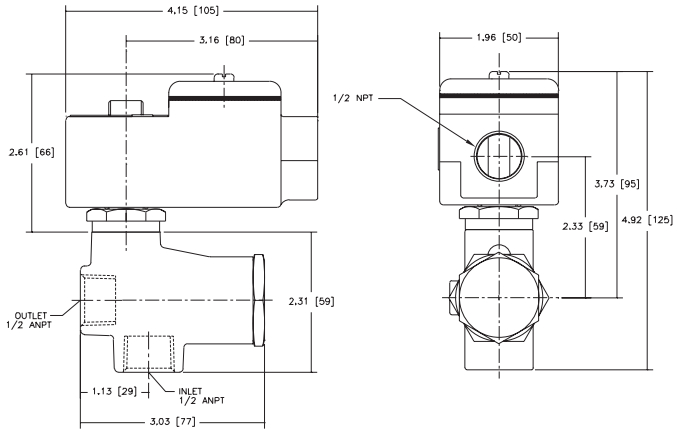
Dimensions: inches (mm)



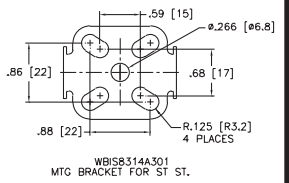
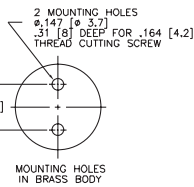
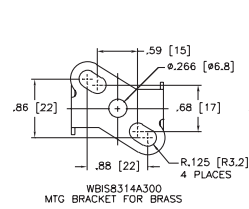
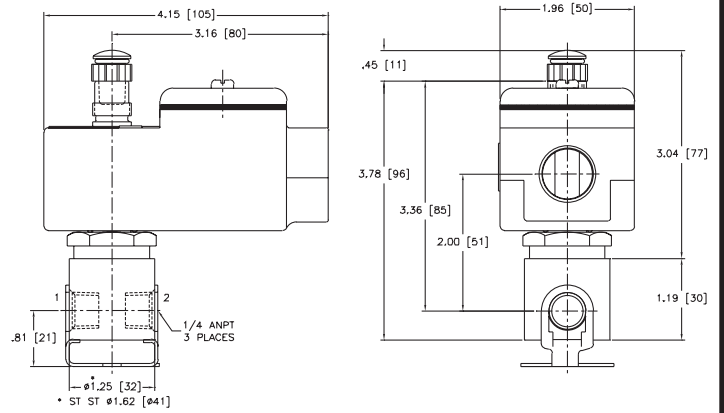
Dimensions: inches (mm)

SPECIAL SERVICE VALVES

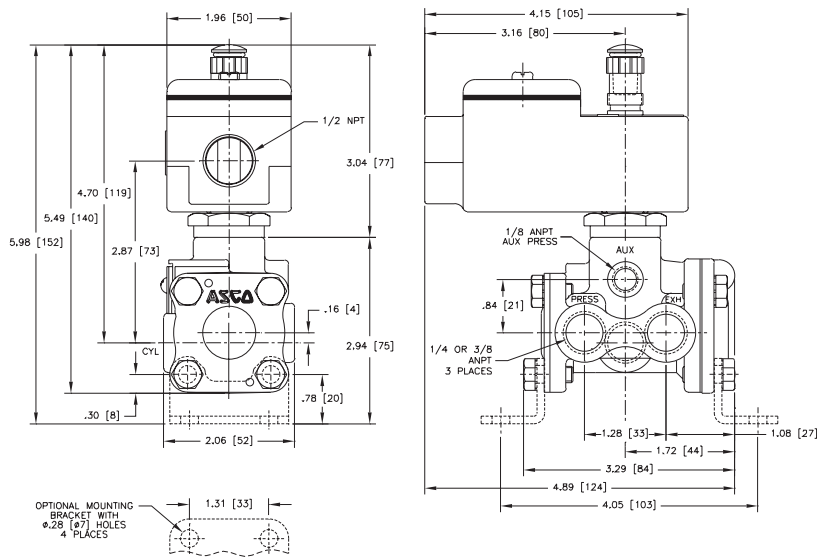
Const. Ref. 3



Const. Ref. 4, 4A



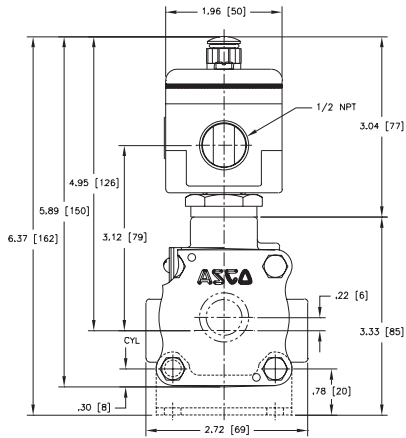
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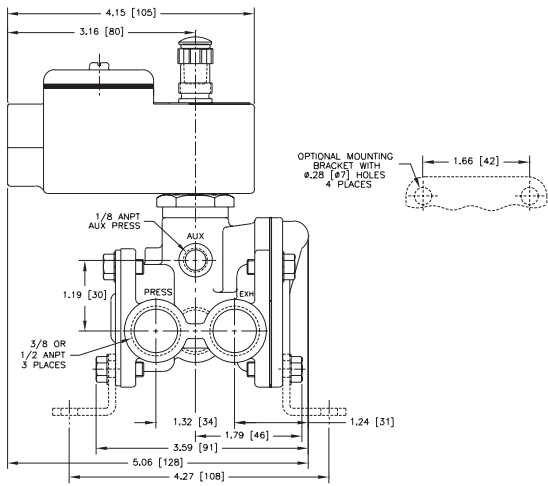
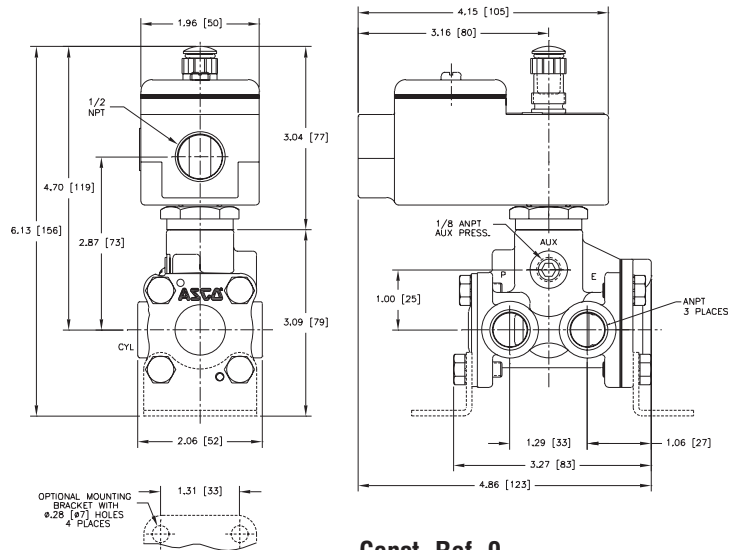
Dimensions: inches (mm)

SPECIAL
SERVICE VALVES

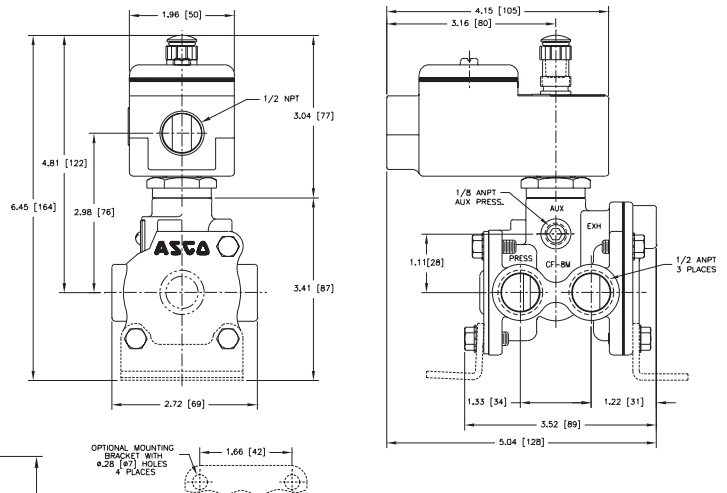
Const. Ref. 6



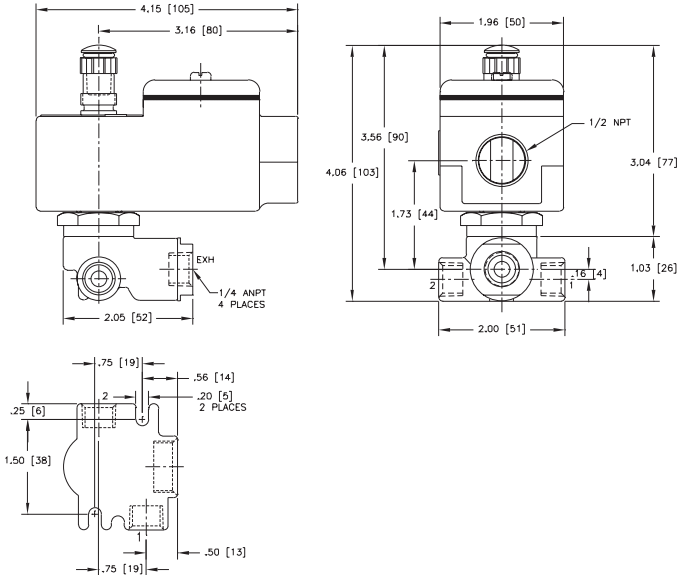
Const. Ref. 8



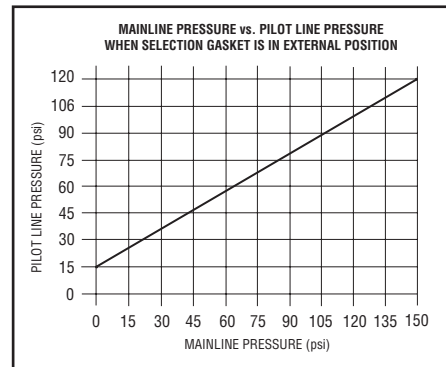
Const. Ref. 9



Const. Ref. 10



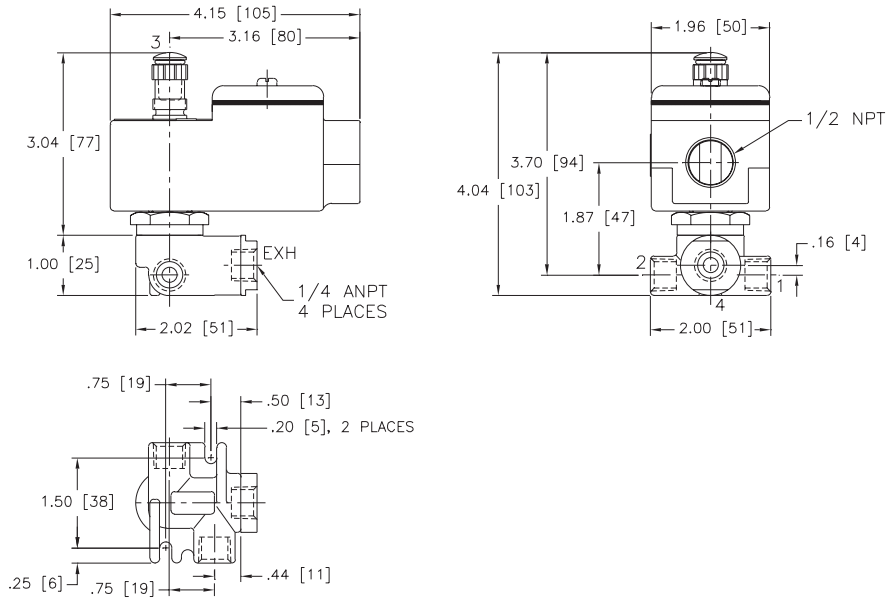
Refer to note ⑦.
For all 8316.



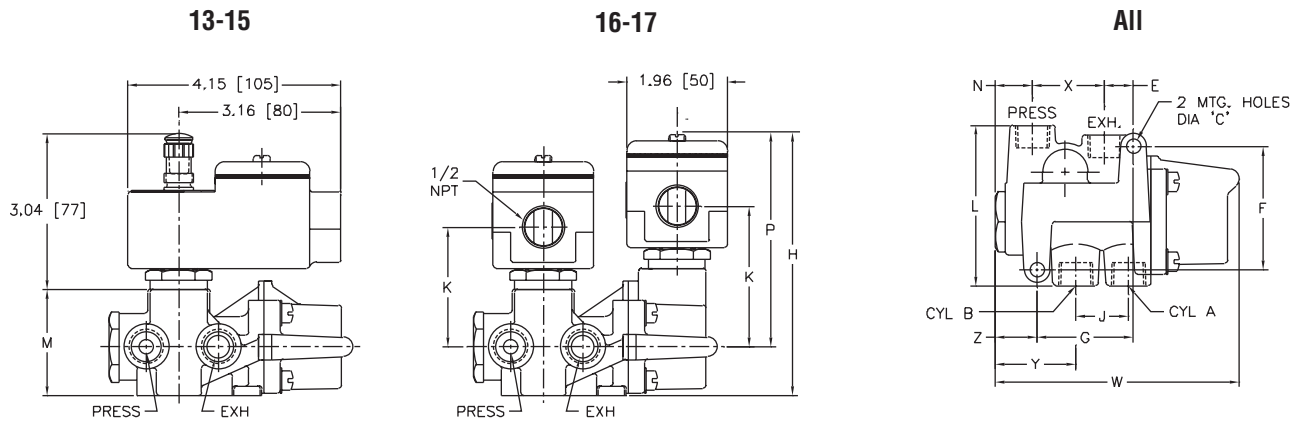
Dimensions: inches (mm)

SPECIAL SERVICE VALVES

Const. Ref. 11



Const. Ref. 13-17



Catalogue No.	ØC	E	F	G	H	J	K	L	M	N	P	W	X	Y	Z	Exhaust Pipe Size	
WBIS8344A370	ins.	.28	.56	2.41	1.88	5.12	1.03	2.33	3.13	2.08	.72	4.16	4.75	1.41	1.56	.81	3/8"
	mm	7.1	14	61	48	130	26	59	80	53	18	106	121	36	40	21	
WBIS8344A380, 382	ins.	.34	.77	3.12	2.62	5.72	1.50	2.77	3.18	2.06	.83	4.60	6.06	1.86	1.90	.84	1/2"
	mm	8.6	20	79	67	145	38	70	81	52	21	117	154	47	48	21	
WBIS8344A372, 374	ins.	.34	.77	3.12	2.62	5.10	1.50	2.14	3.18	2.06	.83	3.98	6.06	1.86	1.90	.84	1/2"
	mm	8.6	20	79	67	120	38	54	81	52	21	101	154	47	48	21	
WBIS8344A344	ins.	.28	.56	2.41	1.88	5.12	1.03	2.74	3.13	2.08	.72	4.16	4.75	1.41	1.56	.81	3/8"
	mm	7.1	14	61	48	130	26	70	80	53	18	106	121	36	40	21	
WBIS8344A376, 378	ins.	.34	1.37	3.81	3.88	5.90	2.09	2.52	4.56	2.86	1.55	4.35	8.25	2.12	2.63	1.16	1"
	mm	8.6	35	97	99	150	53	64	116	73	39	110	210	54	67	30	

IMPORTANT: Valves can be mounted in any position.

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.

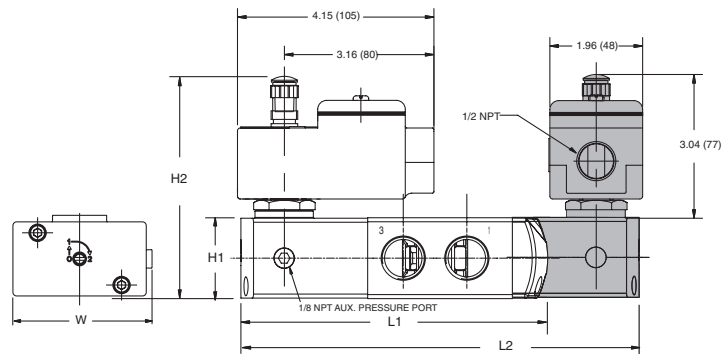
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

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)

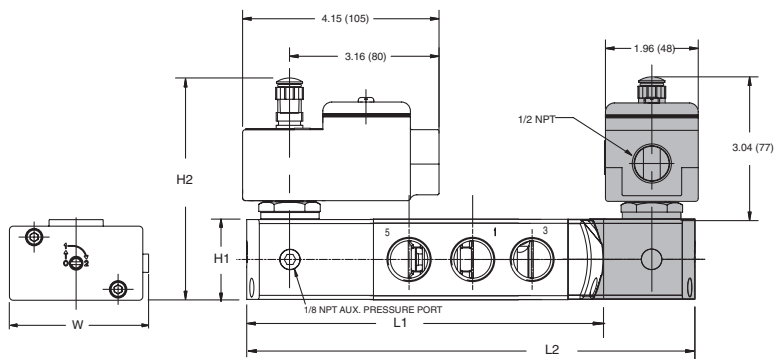
① Manual override option MH adds .250" (6.4),
MS option adds .468" (11.9) to each solenoid endcap.

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. 19



Const. Ref. 20

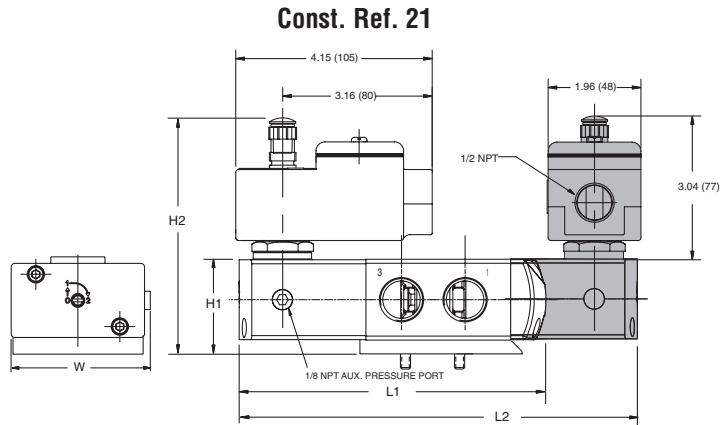


Dimensions: inches (mm)

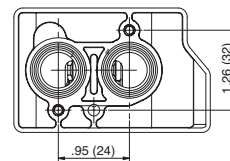
Series	8551 (Aluminum, Brass)
NPT	1/4
L1 ①	4.96 (126)
L2 ①	6.49 (165)
H2	4.38 (111)
H1	1.57 (40)
W	1.77 (45)

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

Optional Manual Operators		Description
Add Suffix		
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



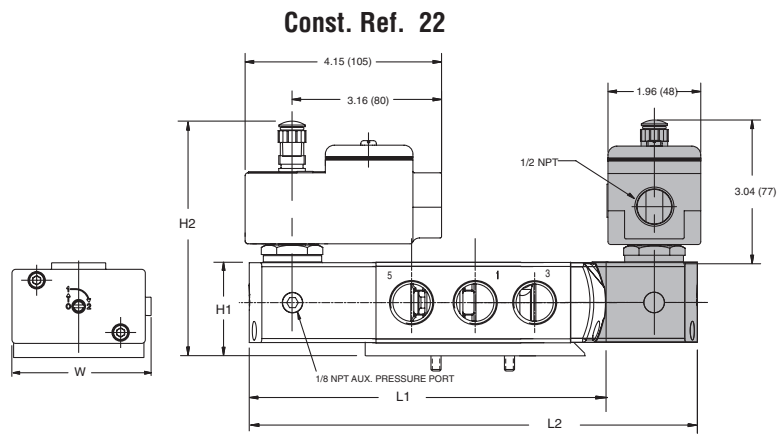
8551 NAMUR Footprint



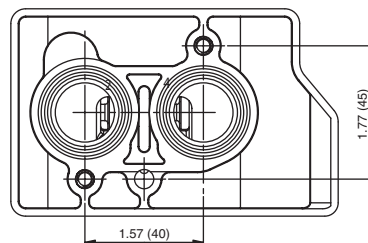
Series	8551 (316L SS)	8551 (5/3)	8553
NPT	1/4	1/4	1/2
L1 ①	5.20 (132)	-	7.08 (180)
L2 ①	6.73 (171)	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.38 (111)	4.77 (121)
H1	1.57 (40)	1.57 (40)	2.08 (53)
W	1.77 (45)	1.77 (45)	2.87 (73)

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

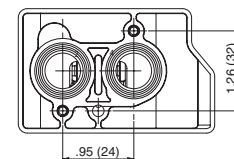
Optional Manual Operators		Description
Add Suffix		
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand



8553 NAMUR Footprint



8551 NAMUR Footprint



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	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	POM (Series WPIS8308C42)
Rider Rings	PTFE
Spring Retainer	POM

Electrical

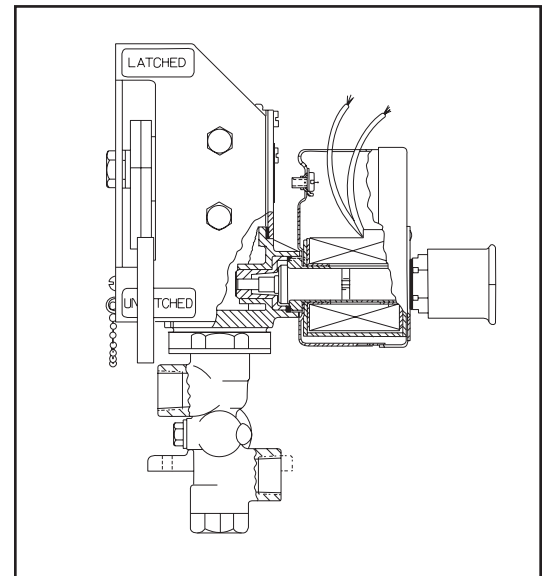
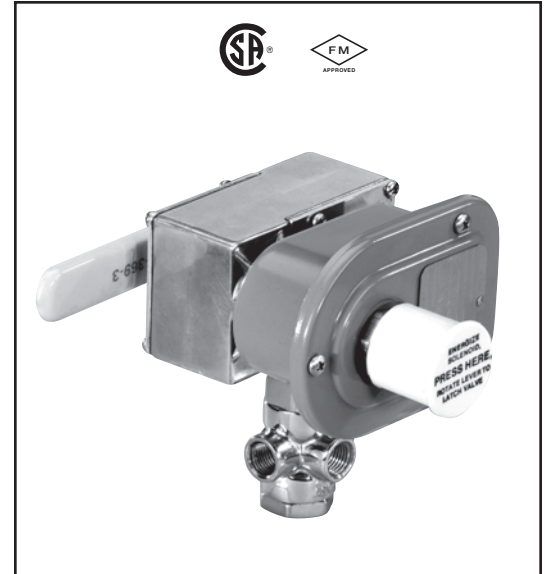
Standard Voltages: 24 volts DC		
Coil: Continuous duty moulded Class A.		
Minimum Operating Current: 0.024 amps		
Parameters	Groups A-D	Groups C-D
Entity	V max - 28 VDC	V max - 34 VDC
	I max - 92 mA	I max - 125 mA
	Capacitance = 0	Capacitance = 0
	Inductance = 0	Inductance = 0
IMPORTANT: Electrical parameters 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

-40°F to 200°F (-40°C to 93°C).

Approvals

FM approved under J. I. 3W2A7.AX (3610).

CSA certified under File LR-13976.

FM Nonincendive approved for Class 1, Division 2.

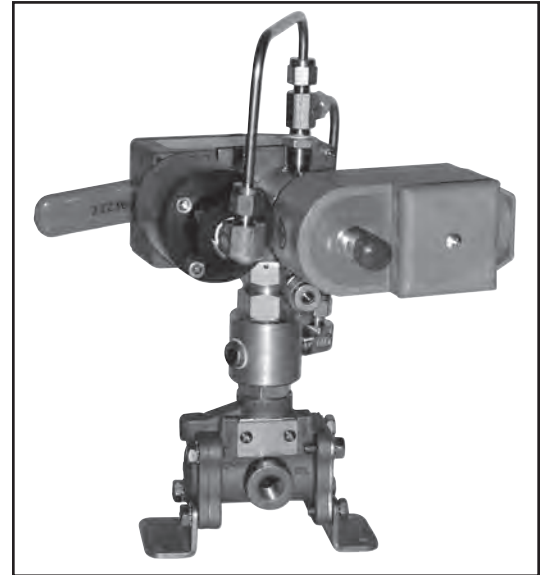
Specifications

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Catalogue Number	① Const. Ref.
			Air-Inert Gas				
			Min.	Max.			
3/2 UNIVERSAL OPERATION, Stainless Steel Body with NBR Discs							
1/4	1/8	.21	0	125	180	WPIS8308A011MF	①
3/2 UNIVERSAL OPERATION, Stainless Steel Body with Stainless Steel Seats and Discs							
1/2	5/16	.75	0	125	200	WPIS8308047MF	3

① For dimensions, consult factory.

Features

- 3 Way constructions
- -59° F (-50° C) constructions available
- Low Power or "IS" with Limit Switch
- 316SS (CF-8M) Stainless Steel externals with NBR elastomers
- Wide range of Cv flow rates 1.5, 1.8 and 4
- Solenoid operator CSA certified, UL Listed for Hazardous Locations
- Used by numerous refineries as emergency shut down



Model shown HV281307-1 24VDC
Ambient rating -59° F (-50° C)
3 Way Tamper Proof Manual Reset Valve

SPECIAL
SERVICE VALVES

General Description

This unique tamper proof manual reset valve has the special ability that once tripped the latching handle, if moved will not change the position of the valve. Conversely, if the handle is held in the up position and the control room de-energizes the solenoid, the valve will go to the shut-off position. It will also automatically trip to the closed position if the auxiliary instrument air pressure drops below 25 psi.

Features

- ATEX 94/9/EC directive approved
- Can be used in Zone 1 and Zone 2 hazardous areas
- Direct acting and indirect acting valves available
- Available voltages of 24 volts DC and 230 volts, 50 Hz AC
- All constructions have functional safety data per IEC 61508 available



Construction

Valve Parts in Contact with Fluid		
	Valve Series	
	8327	8551
Body	Br or 316 SS	316 SS
Core and Plugnut	430F SS	
Core Tube	303 SS	
Disc and Seals	VMQ	PUR & VMQ
Rider Ring	PTFE	
Springs	303 SS	

Series	Body Material	Voltage	Min. Ambient Temp. °F (°C)	ATEX Safety Code					
				II G/D Eex d IIC					
				T4°F (°C)		T5°F (°C)		T6°F (°C)	
				T Amb.	T Cable	T Amb.	T Cable	T Amb.	T Cable
8327	All Materials	AC	-40 (-40)	-				104 (40)	158 (70)
		DC						104 (40)	158 (70)
8551	SS	AC	-40 (-40)	140 (60)	194 (90)	104 (40)	158 (70)	77 (25)	158 (70)
		DC		-	194 (90)	140 (60)	176 (80)	104 (40)	158 (70)

Solenoid Enclosures

Standard: Electrical Enclosure Protection (EN60529): Aluminum IP-67

Approvals

Directive ATEX 94/9/EC
II 2 G/D Eex d IIC T6. T4 IP67
EC type examination certificate no. LCIE 00ATEX 6008 X

SPECIAL SERVICE VALVES

Specifications

3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open), Direct Acting																
Pipe Size (ins)	Orifice Size (ins)	Cv Flow Factor		Operating Pressure Differential (psi)							Max. Fluid Temp. °F		Catalogue Number	Body Material	Wattage	
				Max. AC			Max. DC								AC	DC
		Ports 1-2	Ports 2-3	Min.	Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU						
1/4	1/4	0.49	0.56	0	150	150	150	150	150	150	104	104	NF8327B011	BR	10	11.2
													NF8327B012	316 SS		
3/2 VALVES, NORMALLY CLOSED (Closed when de-energized), Indirect Acting																
Pipe Size (ins)	Orifice Size (ins)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp. °F	Catalogue Number	Body Material	Wattage			
			Min.	Air-Inert Gas									AC	DC		
1/4	1/4	0.86	30 ①	150						140	NF8551A413	316 SS			10.5	11.2
5/2 VALVES, Indirect Acting																
Pipe Size (ins)	Orifice Size (ins)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp. °F	Catalogue Number	Body Material	Wattage			
			Min.	Air-Inert Gas									AC	DC		
1/4	1/4	0.86	30 ①	150						140	NF8551A421	316 SS			10.5	11.2
3/2, 5/2 NAMUR MOUNT VALVES, Indirect Acting																
Pipe Size (ins)	Orifice Size (ins)	Cv Flow Factor	Operating Pressure Differential (psi)							Max. Fluid Temp. °F	Catalogue Number	Body Material	Wattage			
			Min.	Air-Inert Gas									AC	DC		
1/4	1/4	0.86	30 ①	150						140	NF8551A409	316 SS			10.5	11.2

SPECIAL SERVICE VALVES

① Zero minimum when end cap gasket is in external position and proper auxiliary air pressure is applied. Minimum 30 psi Operating Pressure Differential when end cap gasket is in the external position. See I&M sheet for details.

② For dimensions, consult factory.

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
- Mountable in any position

Construction

Valve Parts in Contact with Fluids	
Body and Bonnet	316 Stainless Steel
Seat	TEEE

Nominal Ambient Temp. Ranges
 -40°F to 125°F (-40°C to 52°C)

Specifications

Pipe Size (ins.)	Cv Flow Factor		Opening Pressure (psi)	Maximum Operating Pressure Differential (psi)	Max. Air Temp. °F	Quick Exhaust/ Shuttle Valve	Body Material	Const. Ref.
	Pressure to Cylinder	Cylinder to Exhaust				Catalogue Number		
1/4	.8	1.4	15	150	125	V043 051	S.S	3

Dimensions inches (mm)

Const. Ref. 3

Flow Diagrams

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, Explosionproof 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 moulded 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 Moulded
Ground Screws	Steel
Terminal Block	Plastic
Lock Nut	Zinc

Electrical

Standard AC: 24, 120, 240, 480 volts, 60 Hz
Volts or (110, 220 volts, 50 Hz)

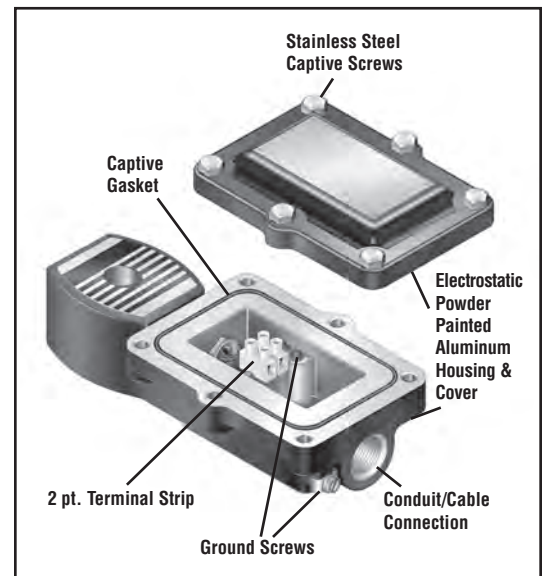
DC: 6, 12, 24, 120, 240

Note: Valves with JBEP housing maintain wattage and current ratings as shown on individual catalogue sheets.

Conduit Sizes 1/2" NPT JBEP Prefix (Standard)
 3/4" NPT JCEF Prefix (Optional)

Approvals

Explosionproof Junction Box Agency Approvals				
Agency	Gas Groups	Temperature Range		Dust Groups
		JBEF (1/2")	JCEF (3/4")	
UL	Class I, Groups B, C, & D	-40°F to 175°F (-40°C to 80°C)	-13°F to 175°F (-25°C to 80°C)	Class II, Groups E, F, & G
CSA	Class I, Group B		-40°F to 175°F (-40°C to 80°C)	
	Class I, Groups C & D		-40°F to 175°F (-40°C to 80°C)	



OPTIONAL FEATURES

Ordering Information

Add prefix corresponding to specific conduit size required to any RedHat II valve catalogue numbers & specify the voltage.
 Example: JBEP8314H301, 24VDC.

Dimensions

Consult factory.