



**LOW POWER | Solutions**

Low Wattage Valves: 0.48 to 2 W

Intrinsically Safe and Non-Incendive Field Wiring

Harsh Environment and Magnetic Latching Valves

Electronically Enhanced Valves



# LOW POWER SOLUTIONS

ASCO Low Power solenoid valves are the ideal choice for customers seeking to reduce their power consumption without compromising performance. With wattages as low as 0.48 watts, the valves can be used in a variety of industrial, commercial and process applications ranging from plant control systems with low power limitations to offshore and other remote installations using solar panels or batteries. ASCO Low Power valves allow power generation and power storage equipment size to be minimized for considerable savings and are suitable for General Purpose service and environments requiring Intrinsic Safety and Non-Incendive Field Wiring. Certified by Exida, the valves are SIL 3 capable per IEC 61508 and carry UL, CSA, CE and FM approvals.

## 0.55 W to 1.4 W Low Power

Featuring a molded one-piece solenoid and highly efficient solenoid cartridge, ASCO's 0.55 and 1.4 watt Low Power valves are "Green" solutions that reduce temperature rise, reduce wiring costs, increase battery life and provide energy savings. The 0.55 watt valves are ideal for use in remote applications requiring solar power or battery charging circuits, while the 1.4 watt valves provide PLC and DCS compatibility for BUS networks and traditional wiring. Both of these valves are proven in use and have undergone 3rd party evaluation by Exida per IEC 61508. They are available in 2/2 and 3/2 Normally Closed, 3/2 Universal, 4/2, 5/2 and 5/3 constructions.



## Intrinsically Safe (IS) and Non-Incendive Field Wiring (NIFW)

ASCO's IS and NIFW Series valves are designed solely for installation in intrinsically safe or non-incendive field wiring areas with properly approved and sized current and voltage-limiting safety barriers. They feature a 0.48 watt IS or NIFW solenoid enclosure that provides corrosion resistance in harsh environments, polarity protected coils and triple redundant diodes to prevent electrical pulses from flowing back into hazardous areas. The valves have been classified by the National Electric Code for use in areas requiring Class I, II, and III, Division 1 (IS) or 2 (NIFW), including Groups A-G approval and are SIL 3 capable per IEC 61508.



## 0.55 W and 1.3 W Harsh Environment

ASCO's Harsh Environment valves are designed specifically for applications where the environment is extremely hot, humid and highly corrosive and where power consumption is minimal. With their rugged 316L Stainless Steel body, high flow and low wattage coil, these valves are the ideal choice for use in control panels in offshore oil platforms, remote solar panels and battery operated applications. The Harsh Environment valves also feature quick exhaust constructions for fast shut down of valves and actuators. The valves carry UL, CSA, ATEX, and IECEX approvals on all constructions and are SIL 3 capable per IEC 61508.





## Electrically Enhanced (Next Generation)

ASCO's 2 watt Next Generation voltage ranging solenoid valves can help lower energy and inventory costs. The new technology accepts both AC and DC voltages without sacrificing flow or pressure specifications and eliminates the need for AC output cards, reduces wiring costs and provides safer working environments for users operating on DC. Each coil has built-in electrical surge suppression that protects from external voltage spikes and eliminates the need for additional surge protection. The valves carry UL, CSA and CE approval and select series are certified SIL 3 capable by Exida.

## Magnetic Latching Valves

ASCO's 2 and 3-way Direct Acting Magnetic Latching Valves are ideal for use in remote applications where continuously powered devices cannot be used, such as gas well equipment and irrigation systems. By utilizing a magnetic latching system, the valves do not consume any power when left in the latched position. They feature brass or rugged stainless steel bodies, and 3-way models have an explosion-proof coil for increased durability.

Type	Series	0.55 W	1.4 W	Next Generation Voltage Ranging (2 W)	Intrinsically Safe & Non-Incendive Field Wiring (0.35 W)	Magnetic Latching (0 W Latched) (14.2 / 33.2 W Energized)
2-Way	8223	✓	✓	✓	✓	
	8262	✓	✓	✓	✓	✓
3-Way	8314	✓	✓	✓	✓	
	8316	✓	✓	✓	✓	
4-Way	Harsh Environment (8317/8320/8321)	✓	✓			
	Maglatch (HV)					✓
	8344	✓	✓	✓	✓	
4-Way	8345		✓	✓		
	8551/8553	✓	✓	✓	✓	

# 0.55 W Low Power Solenoid Valves

Aluminum, Brass, or Stainless Steel Bodies

1/4" to 1" NPT



## 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	-13°F to 140°F (-25°C to 60°C)	
8553	Aluminum	5°F to 140°F (-15°C to 60°C)	
8551	Stainless Steel	-40°F to 149°F (-40°C to 65°C)	
8262	Brass / Stainless Steel	-20°F to 149°F (-29°C to 65°C)	Low Limit is the same as Normal Temperature Ratings, but High Limit is 176°F (80°C)
8314		-4°F to 149°F (-20°C to 65°C)	
8317		-4°F to 149°F (-20°C to 65°C)	
8316*		-4°F to 149°F (-20°C to 65°C)	
8223	Brass only	-4°F to 149°F (-20°C to 65°C)	
8344		-4°F to 149°F (-20°C to 65°C)	
8316H334			

\*Does not include 8316H334; Includes 8316J374. Note: 8553 not available in brass

## Important

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

## Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Air-Inert Gas	Min.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
<b>2/2 VALVES, NORMALLY CLOSED, with NBR Disc</b>										
1/4	1/16	.06		0	130	149	8262H320 ††	1	8262H386 ††	1
3/8	5/16	1.5		10	130	149	8223H323	2	-	-
1/2	3/8	3.2		25	130	149	8223H303	3	8223H310 ⑥	3
<b>3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑨ ⑩</b>										
1/4	1/20	.06	.06	0	130/105 ⑦	149	8314H300 ††	4	8314H301 ††	5
<b>3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc or FPM, as Listed – SIL 3 Capable, Certified by Exida ⑨</b>										
1/4	5/16	1.5	1.5	⑤	130	149	8316H301 ③	6	EV8316H381 ⑥	6
3/8	5/16	1.8	1.8	⑤	130	149	8316H302 ③	6	EV8316H382 ⑥	6
3/8	5/8	4	4	⑤	130	149	8316H303 ③	6	-	-
1/2	5/8	4	4	⑤	130	149	8316H304 ③	6	EV8316H384 ⑥	6
3/4	11/16	5.5	5.5	10	130	149	8316J374 ③	7	-	-
1	1	13	13	10	130	149	8316H334 ③⑧	8	-	-
<b>3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc</b>										
1/4	②	.06	.73	5	130	149	8317H307 ①	9	8317H308 ①⑥	10
<b>4/2 VALVES, Brass Body with NBR Disc</b>										
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid	
		Pressure to Cylinder	Cylinder to Exhaust	Air-Inert Gas	Min.	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	
1/4	1/4	.80	1	10	130	149	8344H370 ①③	11	8344H344 ③†	12
3/8	3/8	1.5	2.2	10	130	149	8344H372 ①③	13	8344H380 ③†	14
1/2	3/8	1.5	2.2	10	130	149	8344H374 ①③	13	8344H382 ③†	14
3/4	3/4	5.2	5.6	10	130	149	8344H376 ①③	15	8344H354 ③†	16
1	3/4	5.2	5.6	10	130	149	8344H378 ①③	15	8344H356 ③†	16
<b>Note:</b> Pilot core discs are low-temperature NBR. Adding Suffix V (FKM) does NOT change the pilot core discs material. Suffix V (FKM) is not available on Series 8551 and 8553.										
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 <b>IMPORTANT:</b> 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 Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 15 psi Operating Pressure Differential when selection gasket is in the internal position.										
⑤ Can be used for <b>dry</b> natural gas service (no agency approvals) with the EF or EV prefix without manual operator.										
⑥ Normally closed = 130 psi. Normally open = 105 psi.										
⑦ Solenoid only approvals with EF or EV prefix, no approvals with general purpose coil (no prefix).										
⑧ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.										
⑨ SIL 3 Capable, Certified by Exida, only valid when used as Normally Closed.										
† Dual solenoid 8344 requires minimum pressure of 20 psi. Single solenoid version has 10 psi minimum pressure requirement.										
†† UL/CSA approved for use with dry natural gas or propane gas with EF or EV prefix without manual operator.										



## Specifications (English units)

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – SIL 3 Capable, Certified by Exida ①					Dual Solenoid										
				Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number	Const. Ref.						
				Air-Inert Gas					Air-Inert Gas										
				Min.	Max.				Min.	Max.									
<b>3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals</b>																			
Aluminum 3/2	1/4	1/4	.86	35	130	149	8551H305 ②③	17	30	130	149	8551H306 ②③	17						
Aluminum 5/2							8551H317 ②③	18				8551H318 ②③	18						
Aluminum 5/3 Center Closed							-	18				8551H367 ②③	18						
Aluminum 5/3 Center Open							-	18				8551H368 ②③	18						
Brass 3/2							EF8551H307 ②③④	17				EF8551H308 ②③④	17						
Brass 5/2							EF8551H319 ②③④	18				EF8551H320 ②③④	18						
316L Stainless Steel 3/2							EV8551H313 ③④⑤⑥	17				EV8551H314 ③④⑤⑥	17						
316L Stainless Steel 5/2							EV8551H321 ③④⑤	18				EV8551H322 ③④⑤	18						
Aluminum 3/2		1/2	1/2	3.7	8553H305 ②③	17	8553H317 ②③	18				8553H306 ②③	17						
Aluminum 5/2							EV8553H313 ③④⑤⑥	17				EV8553H314 ③④⑤⑥	17						
316L Stainless Steel 3/2							EV8553H321 ③④⑤⑥	18				EV8553H322 ③④⑤⑥	18						
316L Stainless Steel 5/2							EV8553H306 ②③④⑤⑥	19				EV8553H307 ②③④⑤⑥	19						
<b>3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount</b>																			
Aluminum 3/2, 5/2	1/4	1/4	.86	35	130	149	8551H301 ①	19	30	130	149	8551H302 ①	19						
Aluminum 5/3 Center Closed							-	-				8551H365 ②③	20						
Aluminum 5/3 Center Open							-	-				8551H366 ②③	20						
Brass 3/2, 5/2							EF8551H303 ①②③	19				EF8551H304 ①②③	19						
316L Stainless Steel 3/2, 5/2							EV8551H309 ③④⑤	20				EV8551H310 ③④⑤	20						
Aluminum 3/2, 5/2		1/2	1/2	3.7	8553H301 ②③	20	8553H302 ②③	20				8553H306 ②③	20						
316L Stainless Steel 3/2, 5/2							EV8553H309 ③④⑤⑥	20				EV8553H310 ③④⑤⑥	20						
① 1/8" NPT exhaust for 1/4" aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Stainless steel construction supplied standard with EV solenoid. ④ Can be used for <b>dry</b> natural gas service (no agency approvals) with the EF or EV prefix without manual operator. ⑤ Solenoid only approvals with EF or EV prefix, no approvals with (no prefix) general purpose coil. ⑥ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.																			

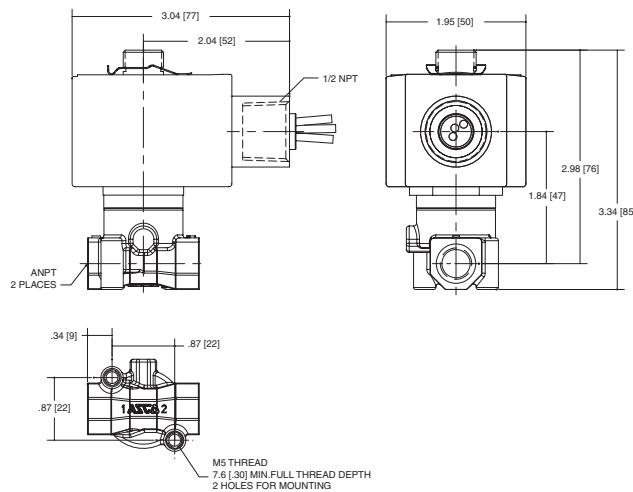
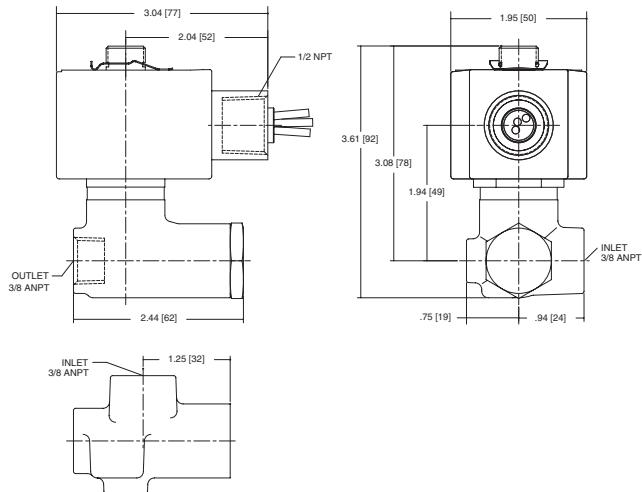
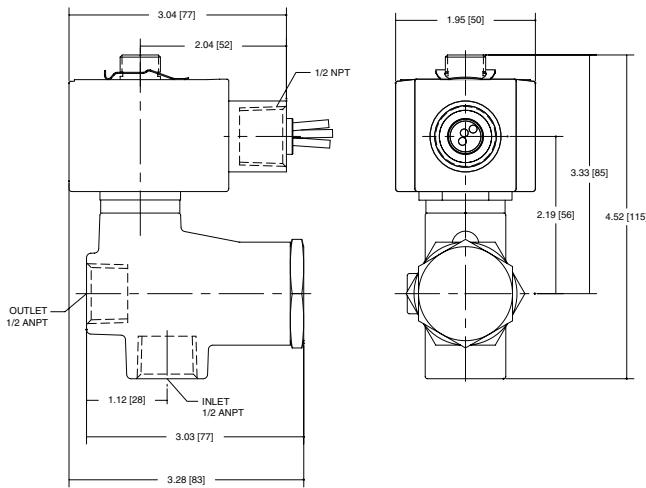
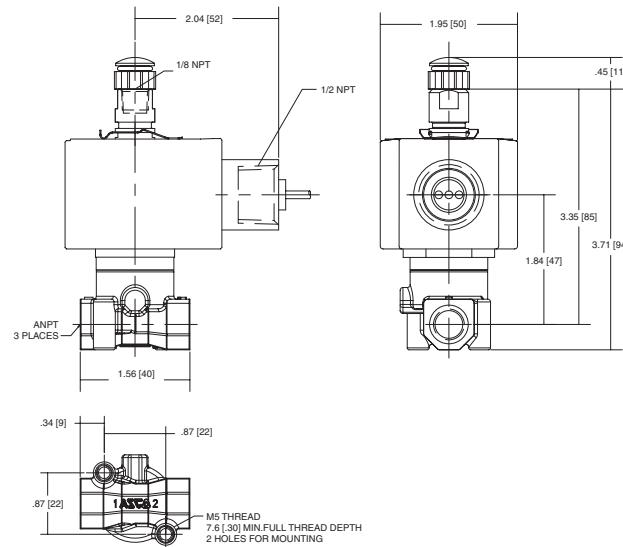
## Electrical Information

① IMPORTANT: Supervisory and leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.					
Description	Wattage	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA) ①	Coil Resistance @68°F (20°C) (ohms)
Standard Ambient Version	.55W	12V	34	3.63	255
		24V	17	1.80	1025
		48V	8.5	0.91	4080
		125V ②	3.2	0.34	27,400
High Ambient Version	.70W	12V	37	3.97	206
		24V	19	1.98	830
		48V	9.7	1.03	3185
		125V ②	3.7	0.39	21150
Surge Suppression Version (Available only in Explosionproof version)	.75W	12V	41	4.41	165 ③
		24V	19	1.98	830 ③
		48V	9.7	1.03	3185 ③
		125V ②	3.7	0.39	21150 ③

Note: ② Not for battery applications. ③ Surge suppression contains diode bridge.

### How to choose the right product

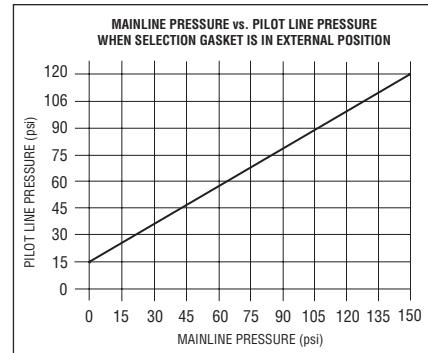
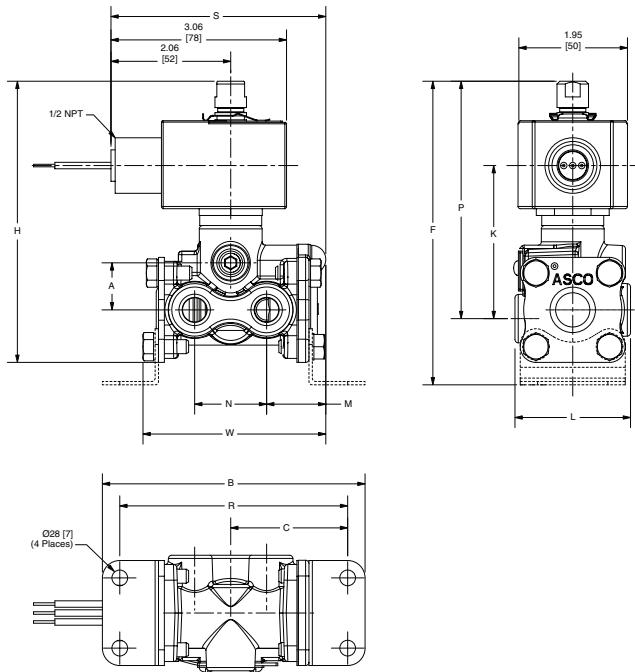
- I/O modules with leakage/supervisory current that is higher than listed on table above will need to use the 1.4W low power products (Rev G)
- Modules with leakage/supervisory current above 7mA such as the P&F KFD2-SL2-Ex2 or DeltaV SIS DO card will need to use ASCO's standard product offering

**Dimensions: inches (mm)****Const. Ref. 1****Const. Ref. 2****Const. Ref. 3****Const. Ref. 4, 5**



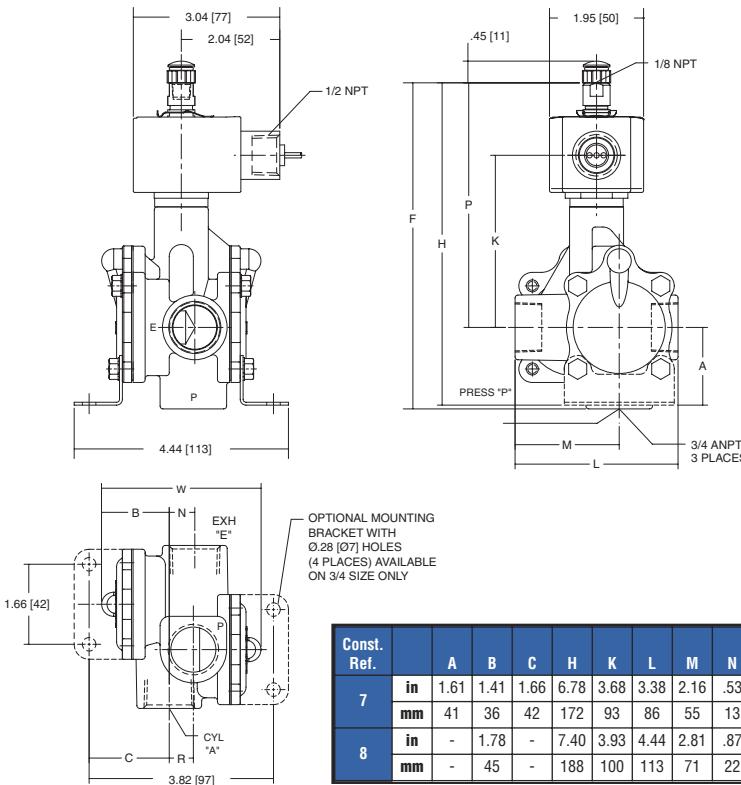
## Dimensions: inches (mm)

Const. Ref. 6

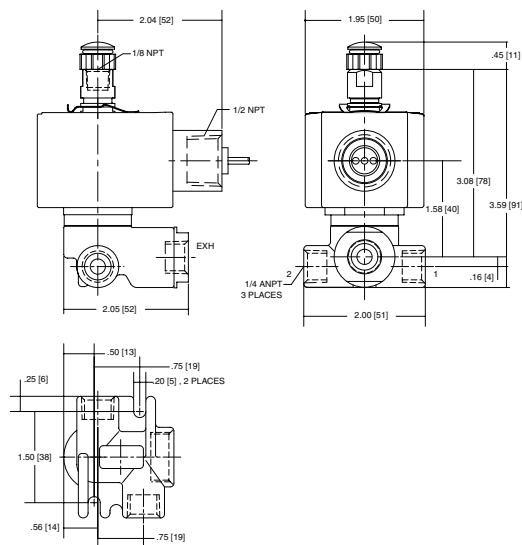


Catalog Number		A	B	C	F	H	K	L	M	N	P	R	S	W
8316H301, 302	in	.84	4.68	2.08	5.41	5.01	2.73	2.06	1.06	1.28	4.23	4.06	3.83	3.26
	mm	21	119	53	137	127	69	52	27	33	107	103	97	83
8316H303, 304	in	1.19	4.88	2.18	5.90	5.40	2.98	2.72	1.24	1.32	4.48	4.26	4.03	3.59
	mm	30	124	56	150	167	76	69	31	34	114	108	102	91
8316H381, 382	in	1.00	4.71	2.11	5.57	5.17	2.73	2.06	1.08	1.28	4.24	4.09	3.86	3.28
	mm	25	120	54	141	131	69	52	27	33	108	104	98	83
8316H384	in	1.11	4.88	2.18	5.98	5.48	2.84	2.72	1.24	1.37	4.34	4.26	4.04	3.59
	mm	28	124	55	152	139	72	69	31	35	110	108	102	91

Const. Ref. 7, 8



Const. Ref. 9, 10

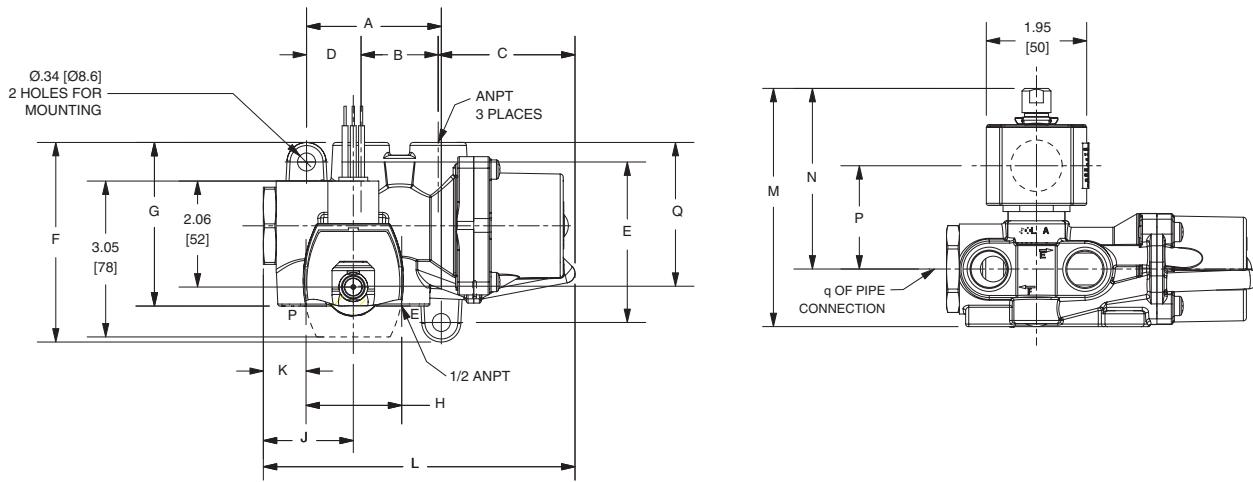


Const. Ref.	A	B	C	H	K	L	M	N	P	R	W	
7	in	1.61	1.41	1.66	6.78	3.68	3.38	2.16	.53	5.09	.50	3.31
	mm	41	36	42	172	93	86	55	13	129	13	84
8	in	-	1.78	-	7.40	3.93	4.44	2.81	.87	5.34	1.74	5.31
	mm	-	45	-	188	100	113	71	22	136	44	135

**Dimensions: inches (mm)**

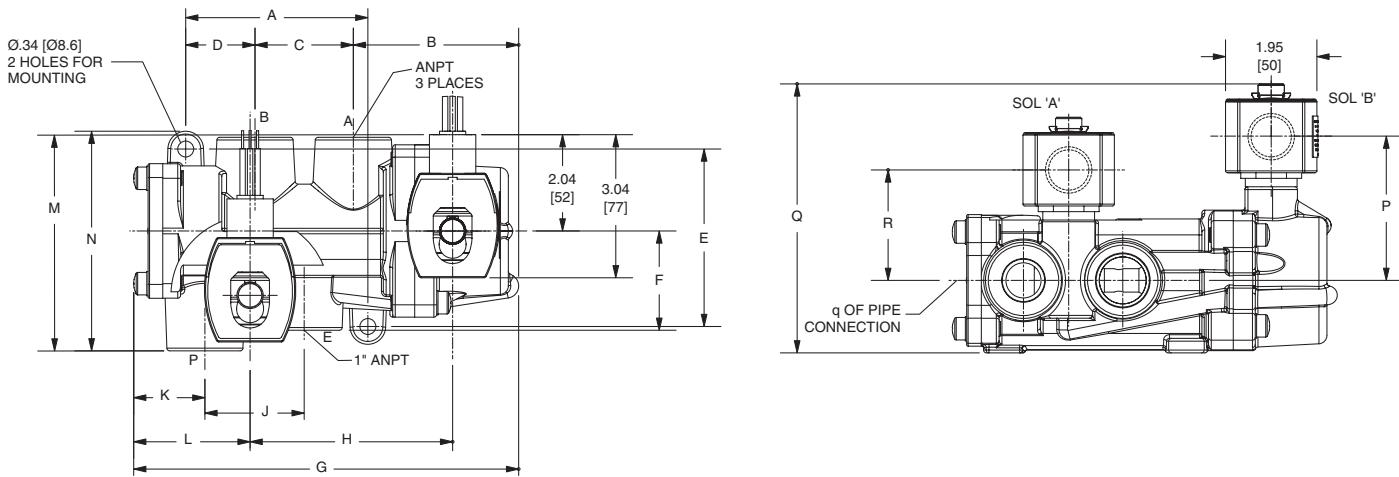
Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
8344H370	in	1.88	1.03	2.15	0.72	2.41	3.21	3.13	1.41	1.36	0.72	4.71	4.65	3.70	2.19	2.22
	mm	48	26	55	18	61	82	80	36	35	18	120	118	94	56	57
8344H372, 374	in	2.62	1.50	2.66	1.06	3.12	3.88	3.18	1.86	1.75	0.83	6.06	4.63	3.51	2.01	2.81
	mm	67	38	68	27	79	99	81	47	45	21	154	118	89	51	71
8344H376, 378	in	3.89	2.10	3.53	1.48	3.79	4.69	4.56	2.12	2.49	1.52	8.22	5.41	3.86	2.36	3.38
	mm	99	53	90	38	96	119	116	54	63	39	209	137	98	60	86

Const. Ref. 11, 13, 15



Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
8344H344	in	1.88	2.16	1.03	0.75	2.41	1.69	4.91	2.61	1.41	0.72	1.36	3.92	3.13	2.60	4.70	2.02
	mm	48	55	26	19	61	43	125	66	36	18	35	100	80	51	119	51
8344H354, 356	in	3.88	3.53	2.09	1.47	3.81	2.12	8.25	4.34	2.12	1.55	2.51	4.60	4.56	3.07	5.71	2.38
	mm	99	90	53	37	97	54	210	110	54	39	64	125	116	80	145	60
8344H380, 382	in	2.62	2.66	1.50	1.06	3.12	1.56	6.06	3.09	1.86	0.83	1.75	4.31	3.18	2.74	4.89	2.11
	mm	67	68	38	27	79	40	154	78	47	21	45	109	81	70	124	54

Const. Ref. 12, 14, 16





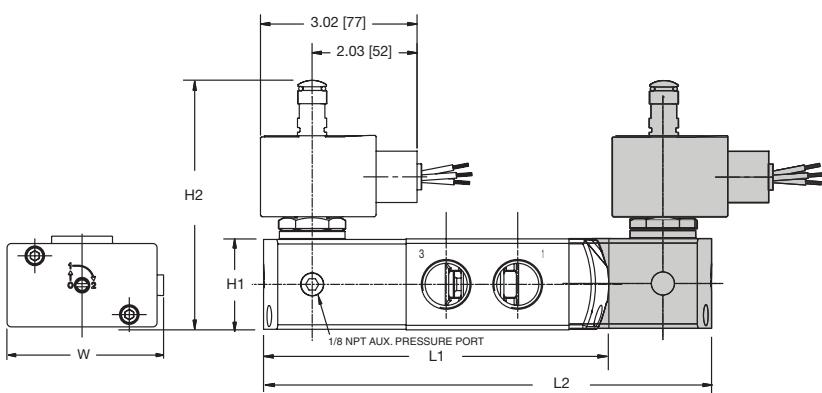
## Dimensions: inches (mm)

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

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

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

Const. Ref. 17

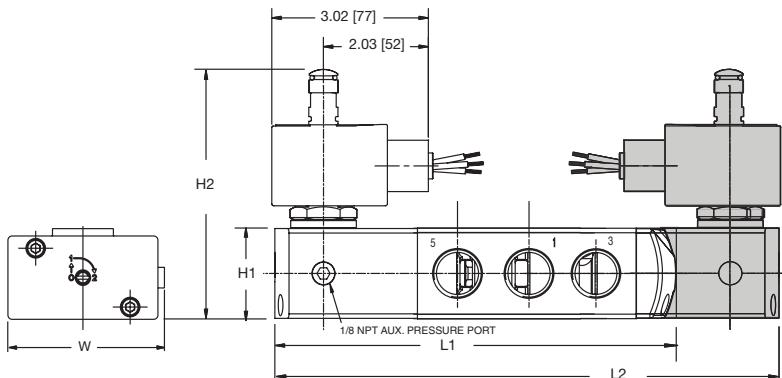


Series	8551	8553
NPT	1/4	1/2
L1 ①	5.63 (144)	7.06 (180)
L2 ①	7.20 (183)	8.86 (225)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

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

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

Const. Ref. 18



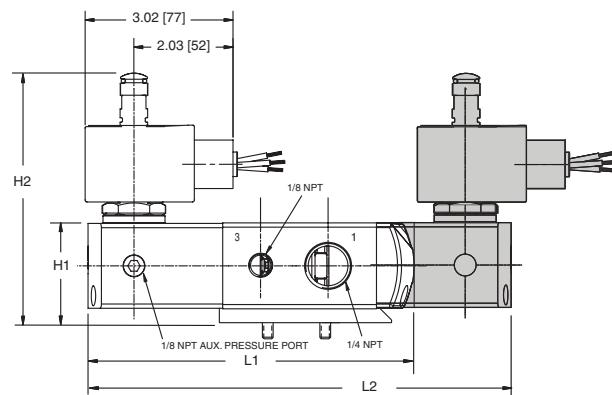
**Dimensions: inches (mm)**

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

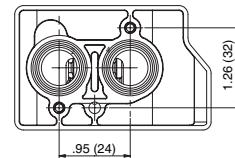
① Manual override option MH adds .250" (6.4),  
MS option adds .468" (11.9) to each solenoid endcap.

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

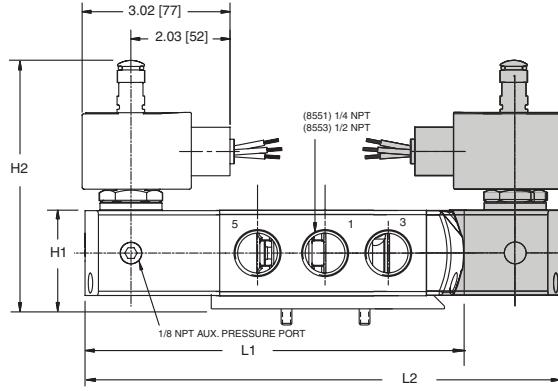
Const. Ref. 19



8551 NAMUR Footprint

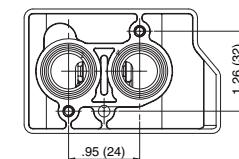
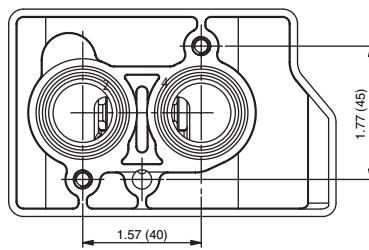


Const. Ref. 20



8553 NAMUR Footprint

8551 NAMUR Footprint





# 1.4 W Low Power Solenoid Valves

Aluminum, Brass, or Stainless Steel Bodies

1/4" to 1" NPT

## 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)	
8551	Brass		
8553	Aluminum	-13°F to 140°F (-25°C to 60°C)	
8551		5°F to 140°F (-15°C to 60°C)	
8551	Stainless Steel	-4°F to 140°F (-20°C to 60°C)	
8262			
8314		-40°F to 140°F (-40°C to 60°C)	
8317	Brass / Stainless Steel	-20°F to 140°F (-29°C to 60°C)	Low Limit is the same as Normal Temperature Ratings, but High Limit is 176°F (80°C)
8316*			
8223			
8344	Brass only	-4°F to 140°F (-20°C to 60°C)	
8316G334			

\*Does not include 8316G334; Includes 8316H374. Note: 8553 not available in brass

## Important

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

## Specifications (English units)

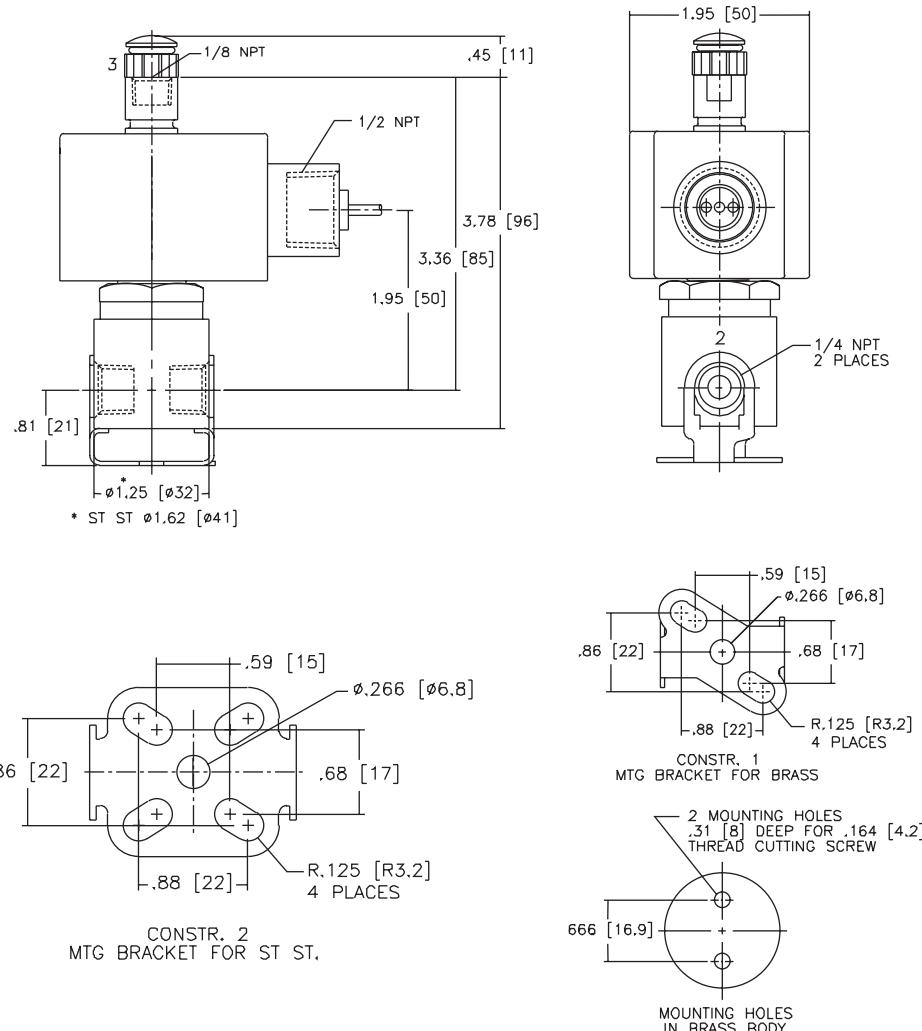
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body		
		Pressure to Cylinder		Air-Inert Gas			Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	
		Min.	Max.								
<b>3/2 VALVES, NORMALLY CLOSED, with NBR Disc</b>											
1/4	1/16	.08	0	150	140	8262G320	18	8262G386 ⑥	18		
3/8	5/16	1.5	10	150	140	8223G323	19	-	-		
1/2	3/8	3.2	25	150	140	8223G303	20	8223G310 ⑥	20		
<b>3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc - SIL 3 Capable, Certified by Exida ⑦ ⑧</b>											
1/4	1/16	.08	.08	0	150	140	8314G300	1	8314G301 ⑥	2	
<b>3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc or FPM, as Listed - SIL 3 Capable, Certified by Exida ⑦</b>											
1/4	5/16	1.5	1.5	⑤	150	140	8316G301 ③	3	EV8316G381 ⑥	3	
3/8	5/16	1.8	1.8	⑤	150	140	8316G302 ③	3	EV8316G382 ⑥	3	
3/8	5/8	4	4	⑤	150	140	8316G303 ③	3A	-	-	
1/2	5/8	4	4	⑤	150	140	8316G304 ③	3A	EV8316G384 ⑥	3A	
3/4	11/16	5.5	5.5	10	150	140	8316H374 ③	4	-	-	
1	1	13	13	10	150	140	8316G334 ③	5	-	-	
<b>3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with CR Diaphragm and NBR Disc</b>											
1/4	②	.08	.73	5	150	140	8317G307 ①	6	8317G308 ①⑥	7	
<b>4/2 VALVES, with NBR Disc and Seals</b>											
1/4	1/16	.08	.08	10	150	140	8345G301 ①③	6	EV8345G381 ①③⑥	8	
<b>4/2 VALVES, Brass Body with NBR Disc</b>											
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid		
		Pressure to Cylinder		Air-Inert Gas			Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	
		Min.	Max.								
1/4	1/4	.80	1	10	150	140	8344G370 ①③	9	8344G344 ③	12	
3/8	3/8	1.4	2.2	10	150	140	8344G372 ①③	11	8344G380 ③	10	
1/2	3/8	1.4	2.2	10	150	140	8344G374 ①③	11	8344G382 ③	10	
3/4	3/4	5.2	5.6	10	150	140	8344G376 ①③	13	8344G354 ③	14	
1	3/4	5.2	5.6	10	150	140	8344G378 ①③	13	8344G356 ③	14	
<b>Note:</b> Pilot core discs are low-temperature NBR. Adding Suffix V (FKM) does NOT change the pilot core discs material. Suffix V (FKM) is not available on Series 8551 and 8553.											
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 <b>IMPORTANT:</b> 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 Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 15 psi Operating Pressure Differential when selection gasket is in the internal position.											
⑤ Can be used for <b>dry</b> natural gas service (no agency approvals) with the EF or EV prefix.											
⑥ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.											
⑦ SIL 3 Capable, Certified by Exida, only valid when used as Normally Closed.											

**Specifications (English units)**

Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid				Dual Solenoid					
				Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F		
				Air-Inert Gas	Min.				Air-Inert Gas	Min.			
<b>3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals</b>													
Aluminum 3/2	1/4	1/4	.86	30	150	140	8551G305 ⑦	21	30	150	140	8551G306 ⑦	21
Aluminum 5/2							8551G317 ⑦	22				8551G318 ⑦	22
Aluminum 5/3 Center Closed							-	22				8551G367 ⑦	22
Aluminum 5/3 Center Open							-	22				8551G368 ⑦	22
Brass 3/2							EF8551G307 ②⑦	21				EF8551G308 ②⑦	21
Brass 5/2							EF8551G319 ②⑦	22				EF8551G320 ②⑦	22
316L Stainless Steel 3/2							EV8551G313 ③⑥⑦	21				EV8551G314 ③⑥⑦	21
316L Stainless Steel 5/2		1/2	3.7	30	150	140	EV8551G321 ③⑥	22				EV8551G322 ③⑥	22
Aluminum 3/2							8553G305 ⑦	21				8553G306 ⑦	21
Aluminum 5/2							8553G317 ⑦	22				8553G318 ⑦	22
316L Stainless Steel 3/2							EV8553G313 ③⑥⑦	21				EV8553G314 ③⑥⑦	21
316L Stainless Steel 5/2							EV8553G321 ③⑥⑦	22				EV8553G322 ③⑥⑦	22
<b>3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount</b>													
Aluminum 3/2, 5/2	1/4	1/4	.86	30	150	140	8551G301 ①	23	30	150	140	8551G302 ①	23
Aluminum 5/3 Center Closed							-	-				8551G365 ⑦	24
Aluminum 5/3 Center Open							-	-				8551G366 ⑦	24
Brass 3/2, 5/2							EF8551G303 ②①⑦	23				EF8551G304 ②①⑦	23
316L Stainless Steel 3/2, 5/2							EV8551G309 ③⑥	24				EV8551G310 ③⑥	24
Aluminum 3/2, 5/2		1/2	1/2	3.7	150	140	8553G301 ⑦	24				8553G302 ⑦	24
316L Stainless Steel 3/2, 5/2							EV8553G309 ③⑥⑦	24				EV8553G310 ③⑥⑦	24
① 1/8" NPT exhaust for 1/4" aluminum and brass. ② Brass construction supplied standard with EF solenoid. ③ Brass construction supplied standard with EF solenoid. ④ Stainless steel construction supplied standard with EV solenoid. ⑤ Can be used for <b>dry</b> natural gas service (no agency approvals) with the EF or EV prefix. ⑥ Solenoid only approvals with EF or EV prefix, no approvals with general purpose coil (no prefix).													

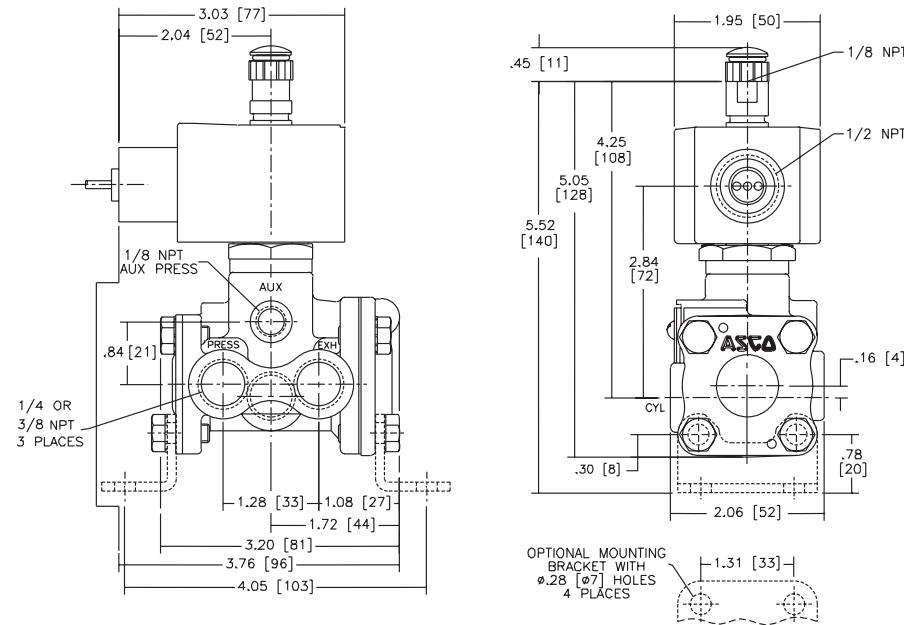
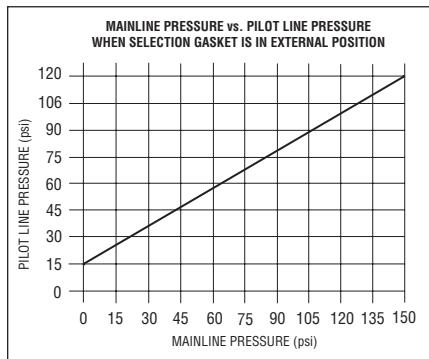
**Electrical Information**

① IMPORTANT: Supervisory and leakage current above the drop out current listed will cause improper operation. Consult your local ASCO sales office for additional assistance.						
Description	Wattage	Voltage (DC)	Min. Pull In (mA)	3-Way Drop Out (mA) ①	2-Way Drop Out (mA) ①	Coil resistance @ 68°F (20°C) (ohms)
Standard Ambient Version	1.4 W	12V	83.5	13.9	3.2	102
		24V	42.0	7.0	1.6	410
		48V	21.4	3.6	0.8	1640
		120V	8.7	1.4	0.3	10000
High Ambient Version	1.8 W	12V	94.3	15.7	3.6	80
		24V	47.9	8.0	1.8	320
		48V	24.0	4.0	0.9	1260
Surge Suppression Version	1.7 W	12V	94.3	15.7	3.6	80
		24V	47.9	8.0	1.8	320
		48V	22.7	3.8	0.9	1470
Surge Suppression High Ambient Version	2.0 W	12V	105.3	17.6	4.0	64
		24V	54.1	9.0	2.1	270
		48V	24.0	4.0	0.9	1260

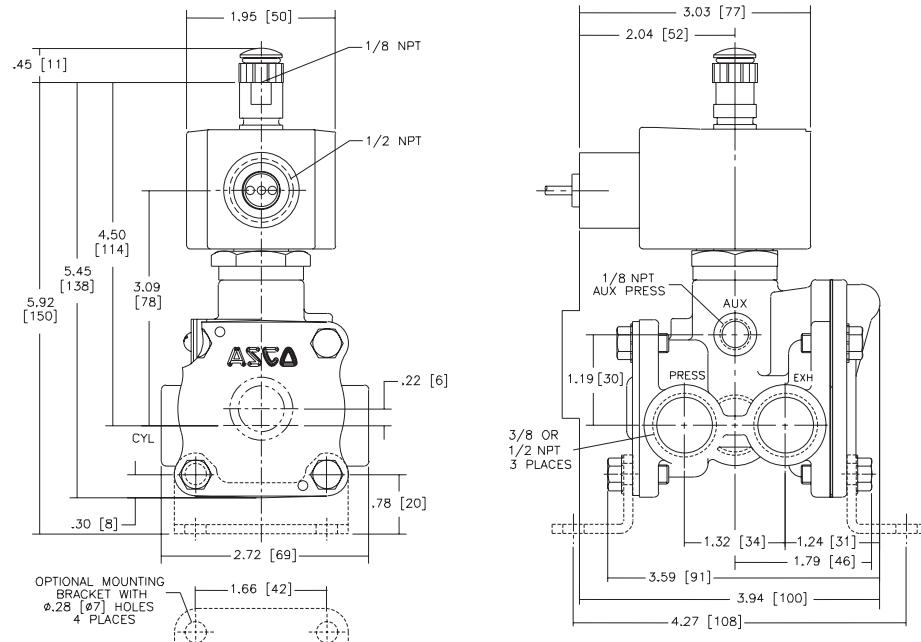
**Dimensions: inches (mm)****Const. Ref. 1, 2**

**Dimensions: inches (mm)**

**Const. Ref. 3**



**Const. Ref. 3A**

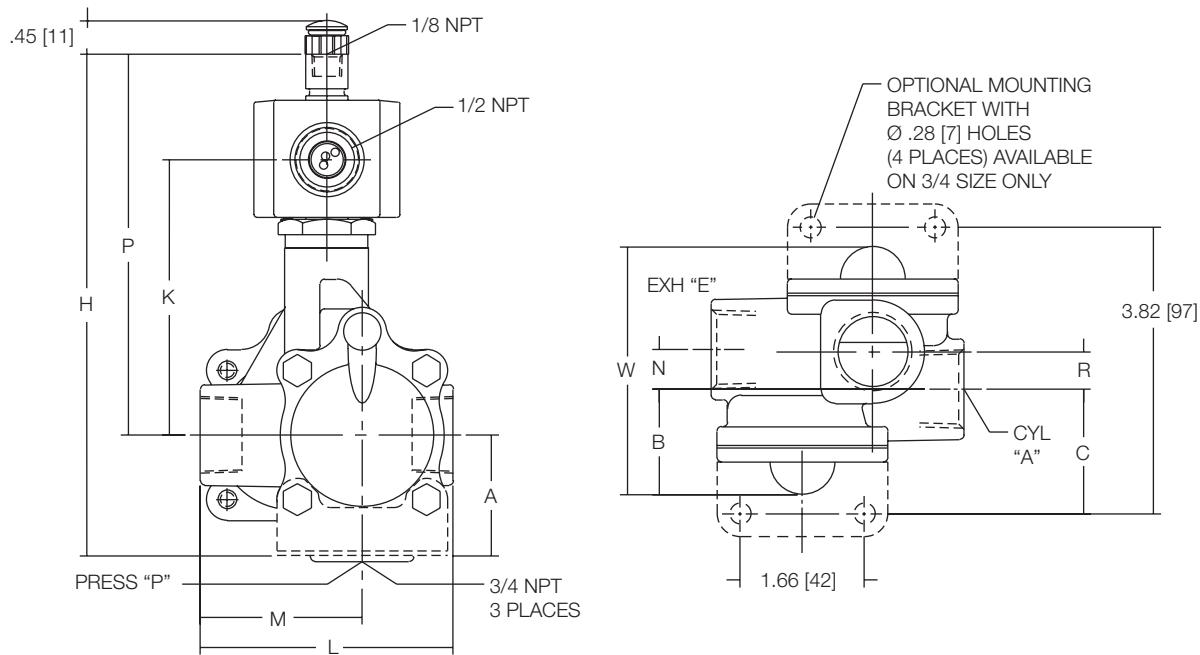




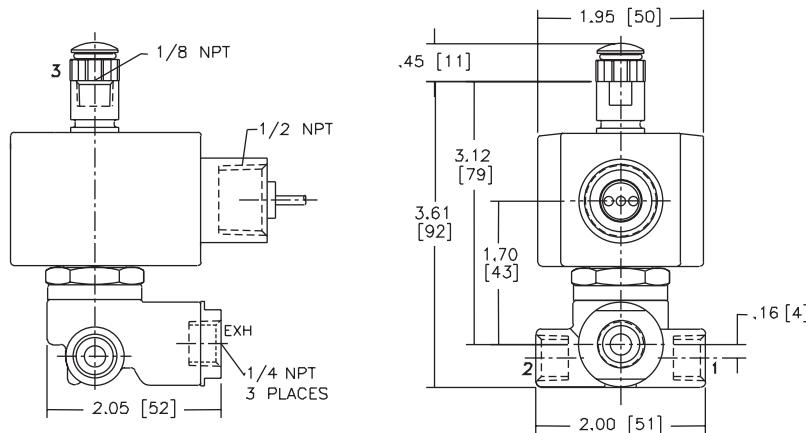
## Dimensions: inches (mm)

Const. Ref.		A	B	C	H	K	L	M	N	P	R	W
4	in	1.61	1.41	1.66	6.78	3.68	3.38	2.16	.53	5.09	.50	3.31
	mm	41	36	42	172	93	86	55	13	129	13	84
5	in	-	1.78	-	7.40	3.93	4.44	2.81	.87	5.34	1.74	5.31
	mm	-	45	-	188	100	113	71	22	136	44	135

Const. Ref. 4, 5

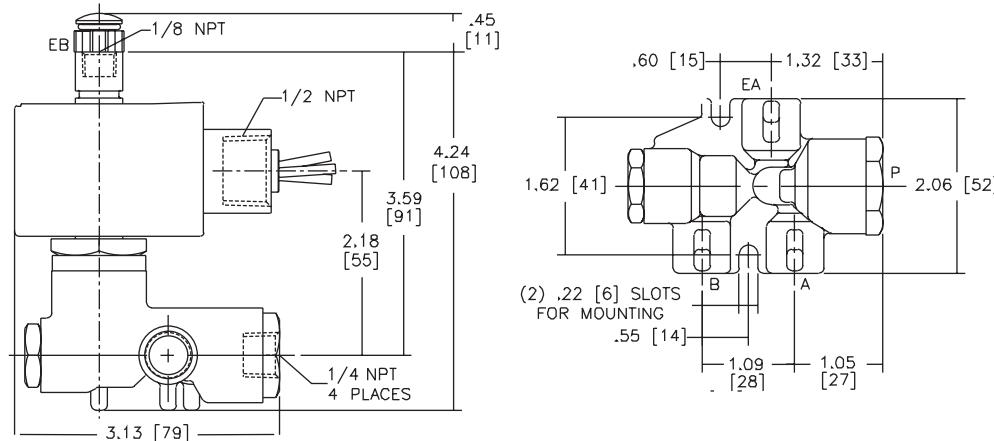


Const. Ref. 6, 7

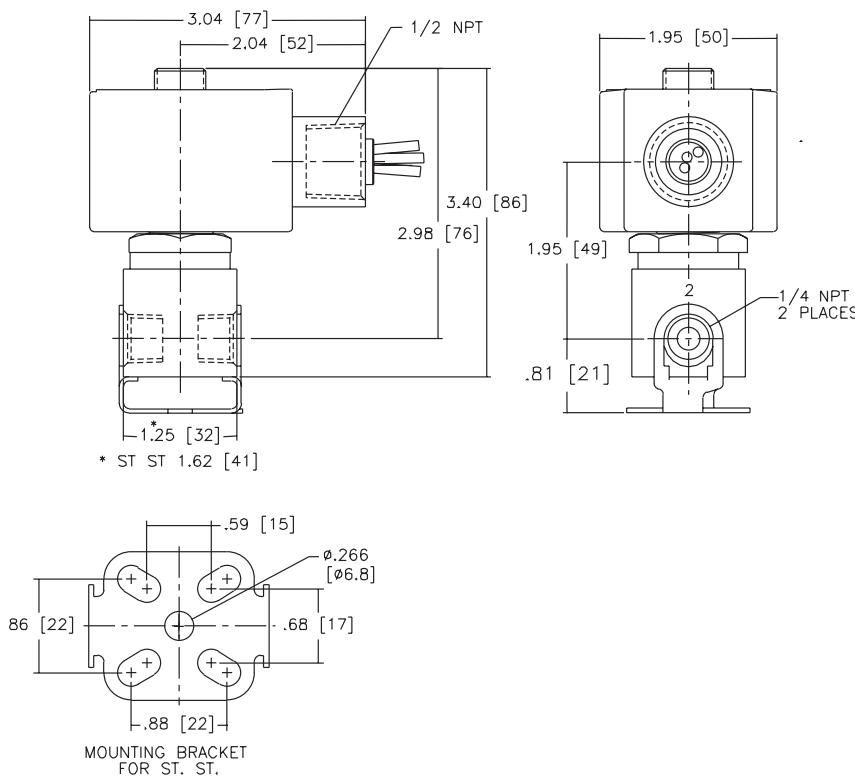


**Dimensions: inches (mm)**

**Const. Ref. 8**



**Const. Ref. 18**

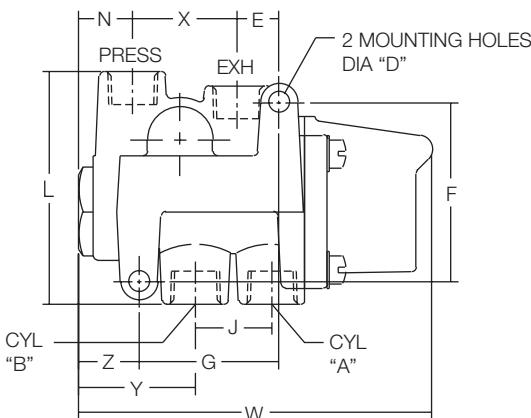
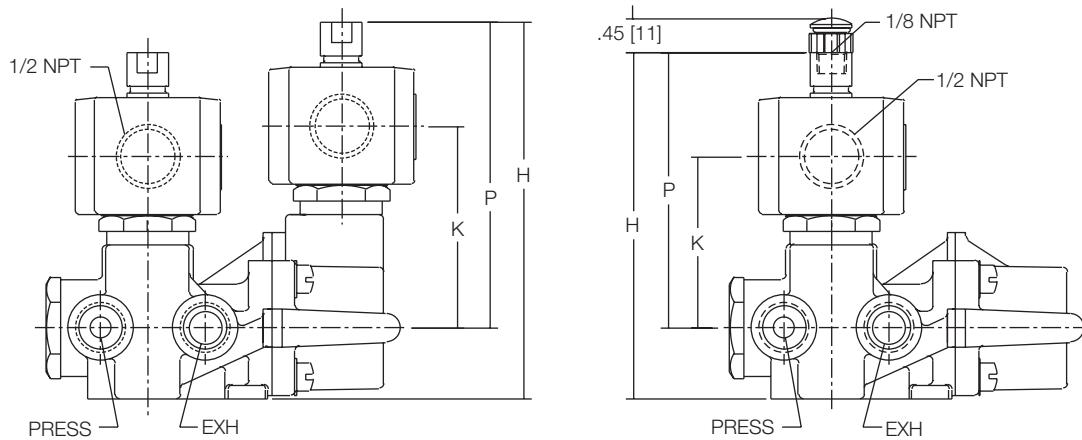




## Dimensions: inches (mm)

Const. Ref.		Dia "D"	E	F	G	H	J	K	L	N	P	W	X	Y	Z	Exhaust Pipe Size
9	in	.28	.56	2.41	1.88	4.67	1.03	2.30	3.12	.72	3.72	4.75	1.41	1.56	.81	3/8
	mm	7	14	61	48	119	26	58	79	18	95	121	36	40	21	
10	in	.34	.76	3.12	2.62	4.89	1.50	2.11	3.18	.83	3.77	6.06	1.86	1.89	.83	1/2
	mm	9	16	79	67	118	38	70	81	21	90	154	48	49	21	
11	in	.34	.76	3.12	2.62	4.65	1.50	2.11	3.18	.83	3.53	6.06	1.86	1.89	.83	1/2
	mm	9	35	97	99	138	53	54	116	40	99	210	54	67	30	
12	in	.28	.56	2.41	1.88	5.06	1.03	2.71	3.12	.72	4.12	4.81	1.41	1.56	.81	3/8
	mm	7	14	61	48	129	26	69	79	18	105	122	36	40	21	
13	in	.34	.78	3.12	2.62	5.27	1.50	2.49	3.19	.84	4.16	6.06	1.88	1.91	.84	1
	mm	9	16	79	67	134	38	63	81	21	106	154	48	49	21	
14	in	.34	1.38	3.81	3.88	6.09	2.09	3.18	4.56	1.56	4.59	8.25	2.12	2.62	1.16	1
	mm	9	35	97	99	155	53	81	116	40	117	210	54	67	30	

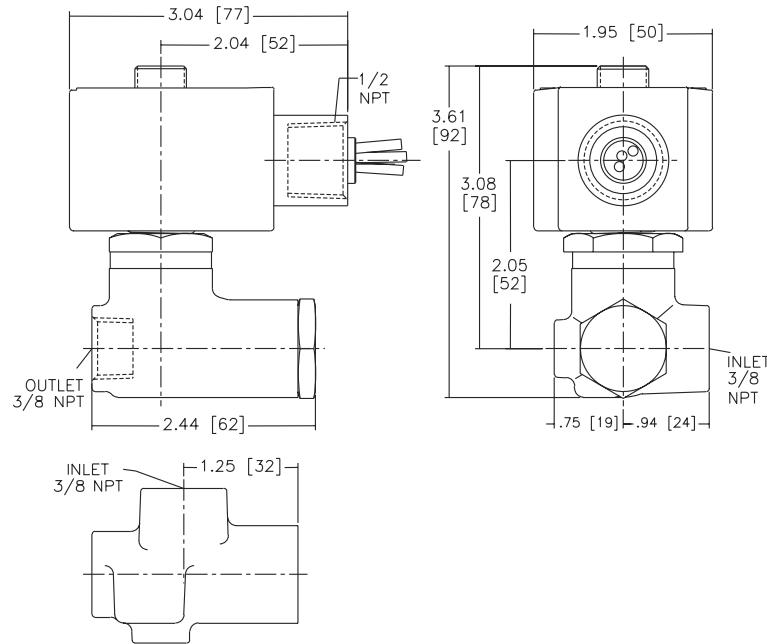
Const. Ref. 9, 10, 11, 12, 13, 14



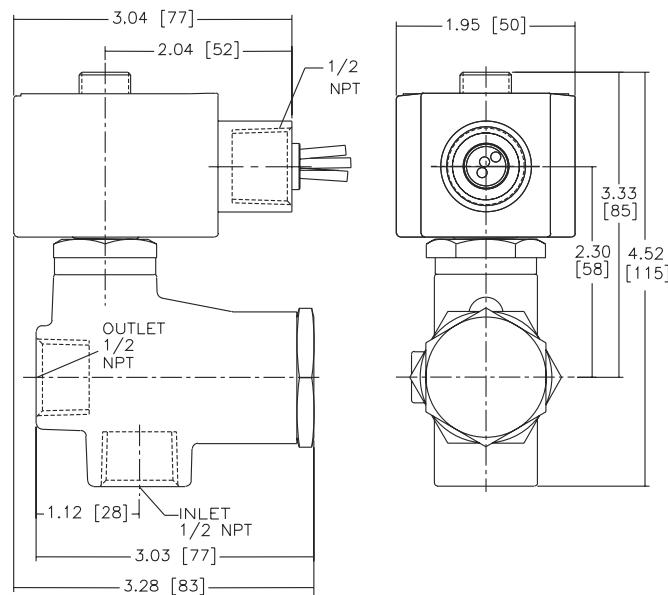
BOTTOM VIEW OF VALVE

**Dimensions: inches (mm)**

**Const. Ref. 19**



**Const. Ref. 20**





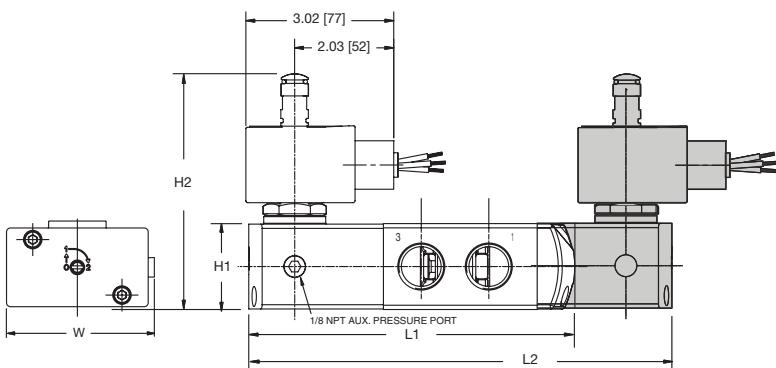
### Dimensions: inches (mm)

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

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

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

Const. Ref. 21

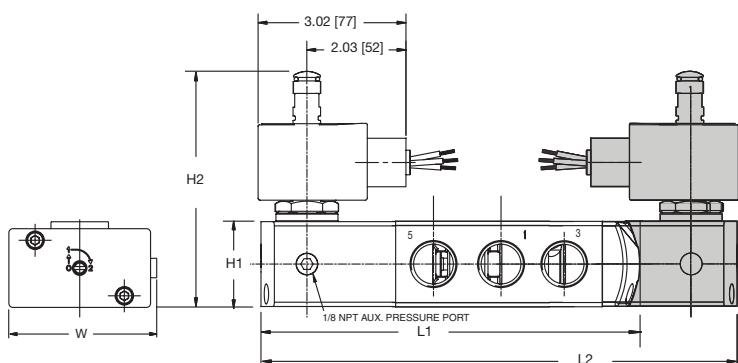


Series	8551	8553
NPT	1/4	1/2
L1 ①	5.63 (144)	7.06 (180)
L2 ①	7.20 (183)	8.86 (225)
H2	4.38 (111)	4.77 (121)
H1	1.10 (28)	1.58 (40)
W	1.77 (45)	2.85 (72)

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

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

Const. Ref. 22



**Dimensions: inches (mm)**

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

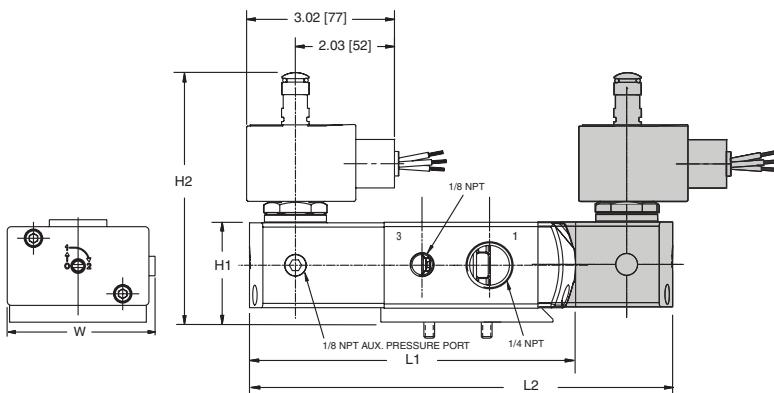
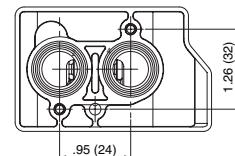
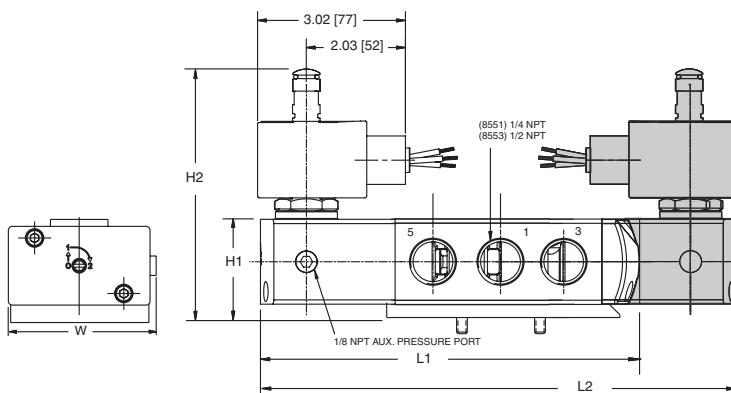
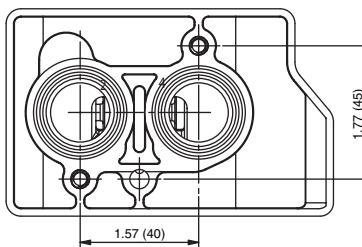
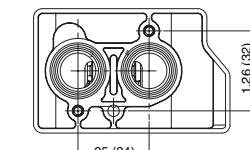
① Manual override option MH adds .250" (6.4),  
MS option adds .468" (11.9) to each solenoid endcap.

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

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

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

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

**Const. Ref. 23****8551 NAMUR Footprint****Const. Ref. 24****8553 NAMUR Footprint****8551 NAMUR Footprint**



# Intrinsically Safe & Non-Incendive Field Wiring Valves

Aluminum, Brass, or Stainless Steel Bodies

1/4" to 1" NPT

2/2•3/2•4/2

5/2•5/3

SERIES

IS & NIFW

## Nominal Ambient Temp. Ranges

Series	Body Material	Normal Temperature Range
8553	Stainless Steel	-40°F to 140°F (-40°C to 60°C)
8551	Brass	-13°F to 140°F (-25°C to 60°C)
8553	Aluminum	5°F to 140°F (-15°C to 60°C)
8551	Stainless Steel	-40°F to 149°F (-40°C to 65°C)
8262	Brass / Stainless Steel	-20°F to 149°F (-29°C to 65°C)
8314		-4°F to 149°F (-20°C to 65°C)
8317		-4°F to 149°F (-20°C to 65°C)
8316*		-4°F to 149°F (-20°C to 65°C)
8223	Brass only	-4°F to 149°F (-20°C to 65°C)
8344		-4°F to 149°F (-20°C to 65°C)
8316H334		

\*Does not include JPIS8316B334; Includes JPIS8316B374. Note: 8553 not available in brass

## Important

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

## Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Brass Body		Stainless Steel Body	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.		Catalog Number	Const. Ref.	Catalog Number	Const. Ref.
<b>2/2 VALVES, NORMALLY CLOSED, with NBR Disc</b>										
1/4	1/16	.06		0	130	149	JPIS8262B320	1	JPIS8262B386	1
3/8	5/16	1.5		10	130	149	JPIS8223B323	2	-	-
1/2	3/8	3.2		25	130	149	JPIS8223B303	3	JPIS8223B310	3
<b>3/2 VALVES, UNIVERSAL OPERATION (Normally Closed or Normally Open) with NBR Disc – SIL 3 Capable, Certified by Exida ⑦ ⑧</b>										
1/4	1/20	.06	.06	0	130/105 ⑥	149	JPIS8314B300	4	JPIS8314B301	5
<b>3/2 VALVES, NORMALLY CLOSED (Closed when de-energized) with NBR Disc or FKM (Suffix V), as Listed – SIL 3 Capable, Certified by Exida ⑧</b>										
1/4	5/16	1.5	1.5	⑤	130	149	JPIS8316B301 ③	6	JPIS8316B381	6
3/8	5/16	1.8	1.8	⑤	130	149	JPIS8316B302 ③	6	JPIS8316B382	6
3/8	5/8	4	4	⑤	130	149	JPIS8316B303 ③	6	-	-
1/2	5/8	4	4	⑤	130	149	JPIS8316B304 ③	6	JPIS8316B384	6
3/4	11/16	5.5	5.5	10	130	149	JPIS8316B374 ③	7	-	-
1	1	13	13	10	130	149	JPIS8316B334 ③	8	-	-
<b>3/2 VALVES, UNIVERSAL (Normally Closed or Normally Open) "Quick Exhaust" with NBR Diaphragm and NBR Disc</b>										
1/4	②	.06	.73	5	130	149	JPIS8317B307 ①	9	JPIS8317B308 ①	10
<b>4/2 VALVES, Brass Body with NBR Disc</b>										
Pipe Size (in)	Orifice Size (in)	Cv Flow Factor		Operating Pressure Differential (psi)		Max. Fluid and Ambient Temp. °F	Single Solenoid		Dual Solenoid	
		Pressure to Cylinder	Cylinder to Exhaust	Min.	Max.	Catalog Number	Const. Ref.	Catalog Number	Const. Ref.	
1/4	1/4	.80	1	10	130	149	JPIS8344B370 ①③	11	JPIS8344B344 ③⑨	12
3/8	3/8	1.5	2.2	10	130	149	JPIS8344B372 ①③	13	JPIS8344B380 ③⑨	14
1/2	3/8	1.5	2.2	10	130	149	JPIS8344B374 ①③	13	JPIS8344B382 ③⑨	14
3/4	3/4	5.2	5.6	10	130	149	JPIS8344B376 ①③	15	JPIS8344B354 ③⑨	16
1	3/4	5.2	5.6	10	130	149	JPIS8344B378 ①③	15	JPIS8344B356 ③⑨	16

① There are two exhaust flows in the exhaust mode (pilot and main). The pilot exhaust must be connected to the main exhaust when the air or inert gas cannot be exhausted to atmosphere.

② For "Quick Exhaust" valves, pressure port is 1/2", 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 Zero minimum when valve selection gasket is in external position and proper auxiliary air pressure is applied. Minimum 15 psi Operating Pressure Differential when selection gasket is in the internal position.

⑤ Normally closed = 130 psi. Normally open = 105 psi.

⑥ Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

⑦ SIL 3 Capable per IEC 61508, Certified by Exida, only valid when used as Normally Closed.

⑧ Dual solenoid 8344 requires minimum pressure of 20 psi. Single solenoid version has 10 psi minimum pressure requirement.

**Specifications (English units)**

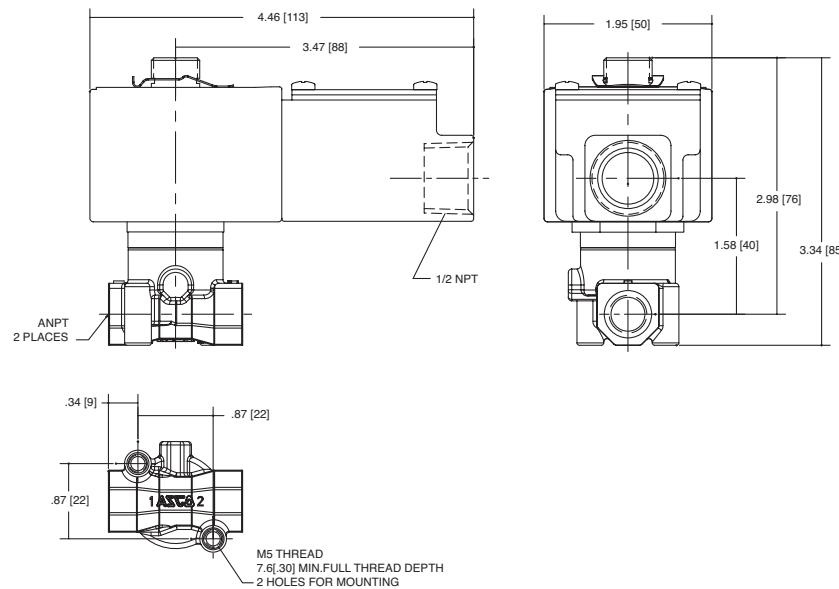
Body Material	Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Single Solenoid – SIL 3 Capable, Certified by Exida ②						Dual Solenoid					
				Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number	Const. Ref.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number	Const. Ref.		
				Air-Inert Gas	Min. Max.				Air-Inert Gas	Min. Max.					
<b>3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals</b>															
Aluminum 3/2	1/4	1/4	.86	35	130	149	JPIS8551B305	17	30	130	149	JPIS8551B306	17	149	149
Aluminum 5/2							JPIS8551B317	18				JPIS8551B318	18		
Aluminum 5/3 Center Closed							-	-				JPIS8551B367	18		
Aluminum 5/3 Center Open							-	-				JPIS8551B368	18		
Brass 3/2							JPIS8551B307	17				JPIS8551B308	17		
Brass 5/2							JPIS8551B319	18				JPIS8551B320	18		
316L Stainless Steel 3/2							JPIS8551B313	17				JPIS8551B314	17		
316L Stainless Steel 5/2		1/2	3.7	35	130	149	JPIS8551B321	18				JPIS8551B322	18		
Aluminum 3/2							JPIS8553B305	17				JPIS8553B306	17		
Aluminum 5/2							JPIS8553B317	18				JPIS8553B318	18		
316L Stainless Steel 3/2							JPIS8553B313	17				JPIS8553B314	17		
316L Stainless Steel 5/2							JPIS8553B321	18				JPIS8553B322	18		
<b>3/2, 5/2, 5/3 VALVES, with NBR and PUR Seals, NAMUR Mount</b>															
Aluminum 3/2, 5/2	1/4	1/4	.86	35	130	149	JPIS8551B301 ①	19	30	130	149	JPIS8551B302 ①	19	149	149
Aluminum 5/3 Center Closed							-	-				JPIS8551B365	20		
Aluminum 5/3 Center Open							-	-				JPIS8551B366	20		
Brass 3/2, 5/2							JPIS8551B303 ①	19				JPIS8551B304 ①	19		
316L Stainless Steel 3/2, 5/2							JPIS8551B309	20				JPIS8551B310	20		
Aluminum 3/2, 5/2		1/2	1/2	3.7	35	130	JPIS8553B301	20				JPIS8553B302	20		
316L Stainless Steel 3/2, 5/2							JPIS8553B309	20				JPIS8553B310	20		

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

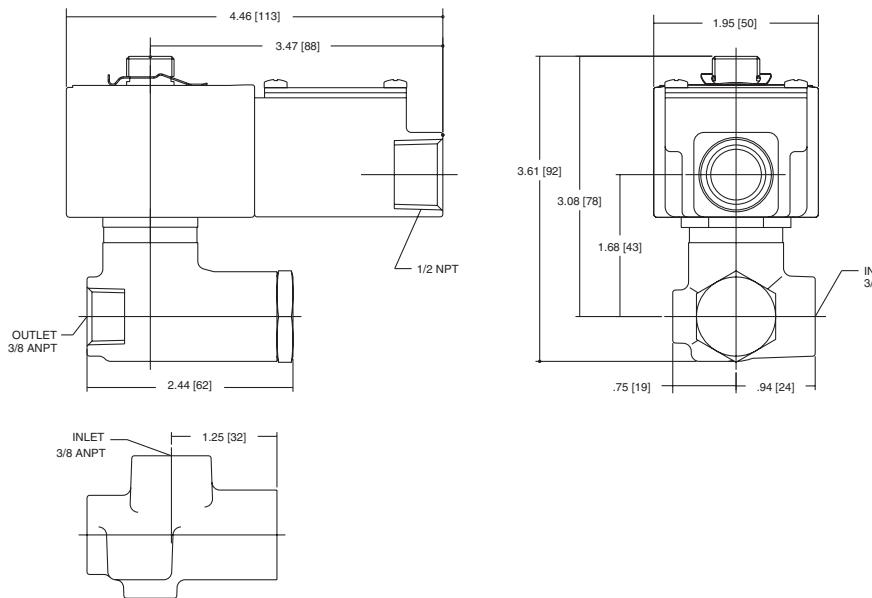
② Safety manual and FMEDA (Failure Modes Effects and Diagnostic Analysis) report available.

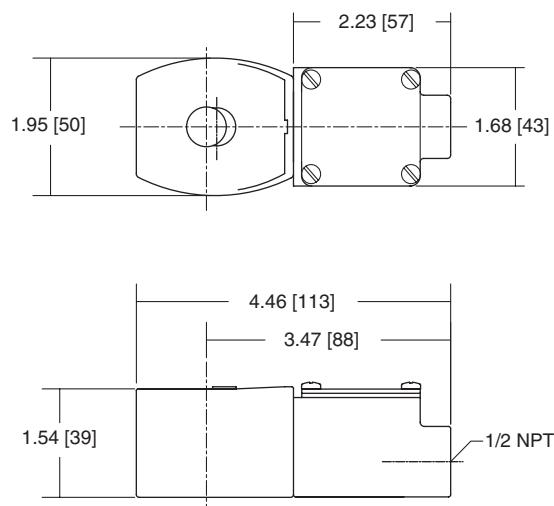
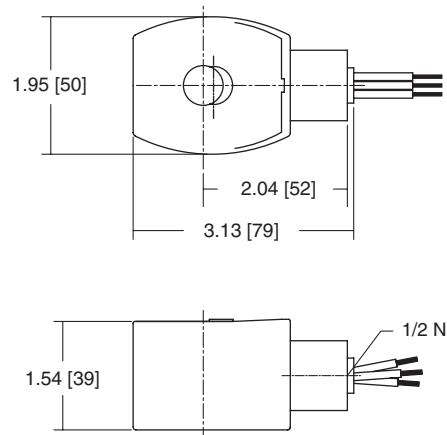
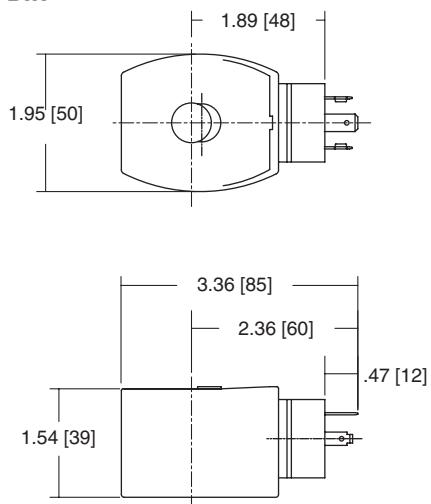
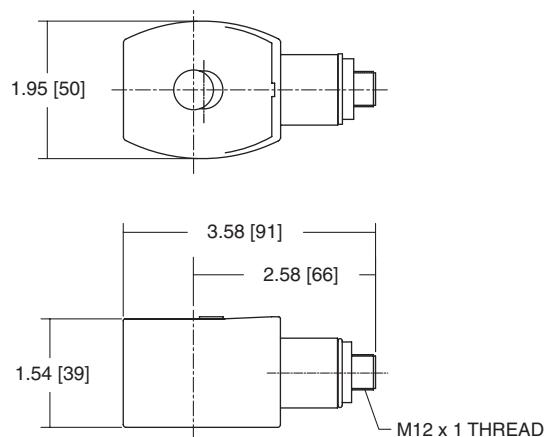
**Dimensions: inches (mm)**

**Const. Ref. 1**



**Const. Ref. 2**

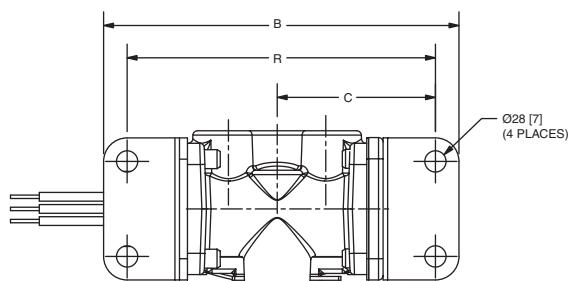
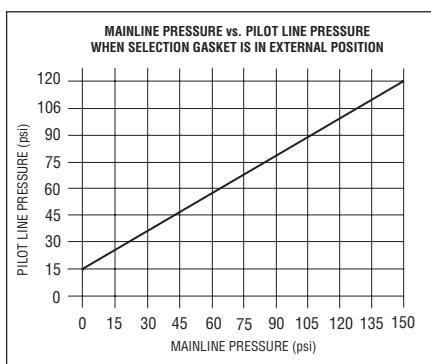
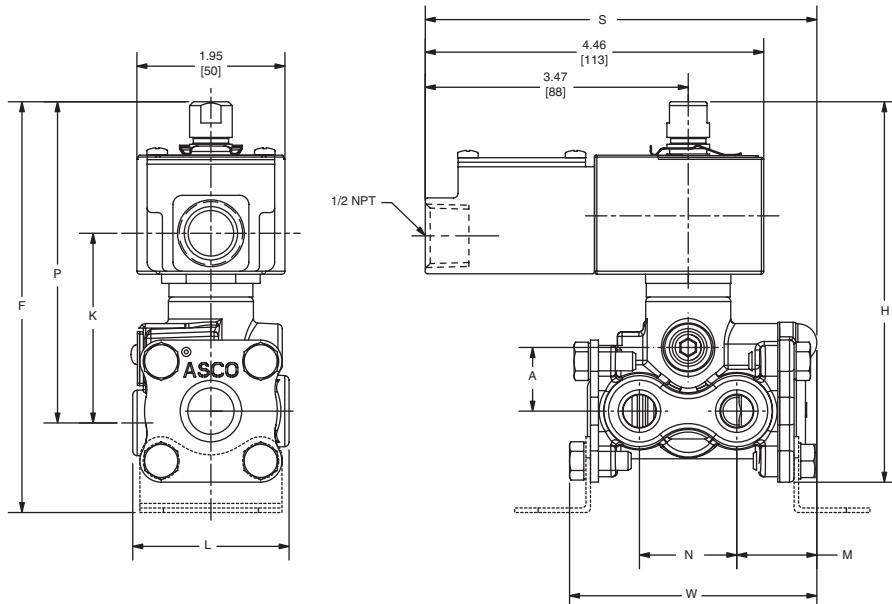


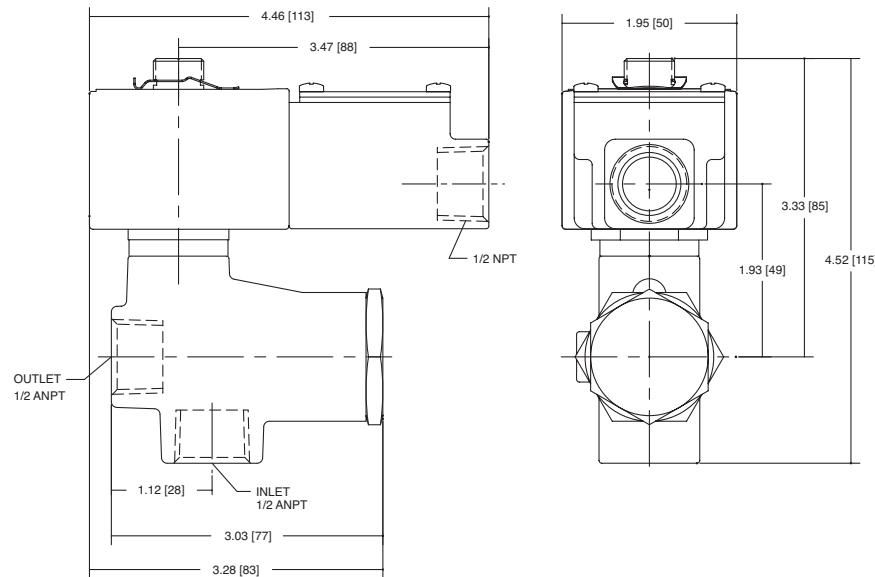
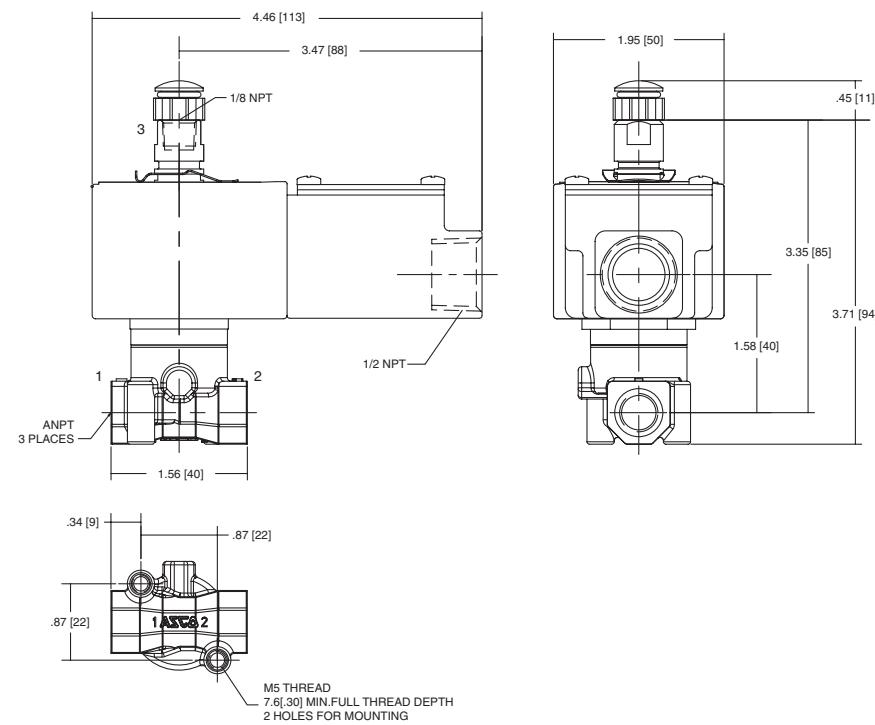
**Dimensions: inches (mm)****JUNCTION BOX****CONDUIT****DIN****MULTIPIN**

**Dimensions: inches (mm)**

Catalog Number		A	B	C	F	H	K	L	M	N	P	R	S	W
JPIS8316B301, 302	in	.84	4.68	2.08	5.41	5.01	2.47	2.60	1.06	1.28	4.23	4.06	5.16	3.26
	mm	21	119	53	137	127	63	52	27	33	108	103	131	83
JPIS8316B303, 304	in	1.19	4.88	2.18	5.90	5.40	2.72	2.72	1.24	1.32	4.48	4.26	5.36	3.59
	mm	30	124	56	150	137	69	69	31	34	114	108	136	91
JPIS8316B381, 382	in	1.00	4.71	1.98	5.57	5.17	2.47	2.06	1.08	1.28	4.24	4.09	5.19	3.28
	mm	25	120	50	141	131	63	52	27	33	108	104	132	83
JPIS8316B384	in	1.11	4.88	2.18	5.98	5.48	2.58	2.72	1.24	1.32	4.34	4.26	5.37	3.59
	mm	28	124	55	152	139	66	69	31	34	110	108	136	91

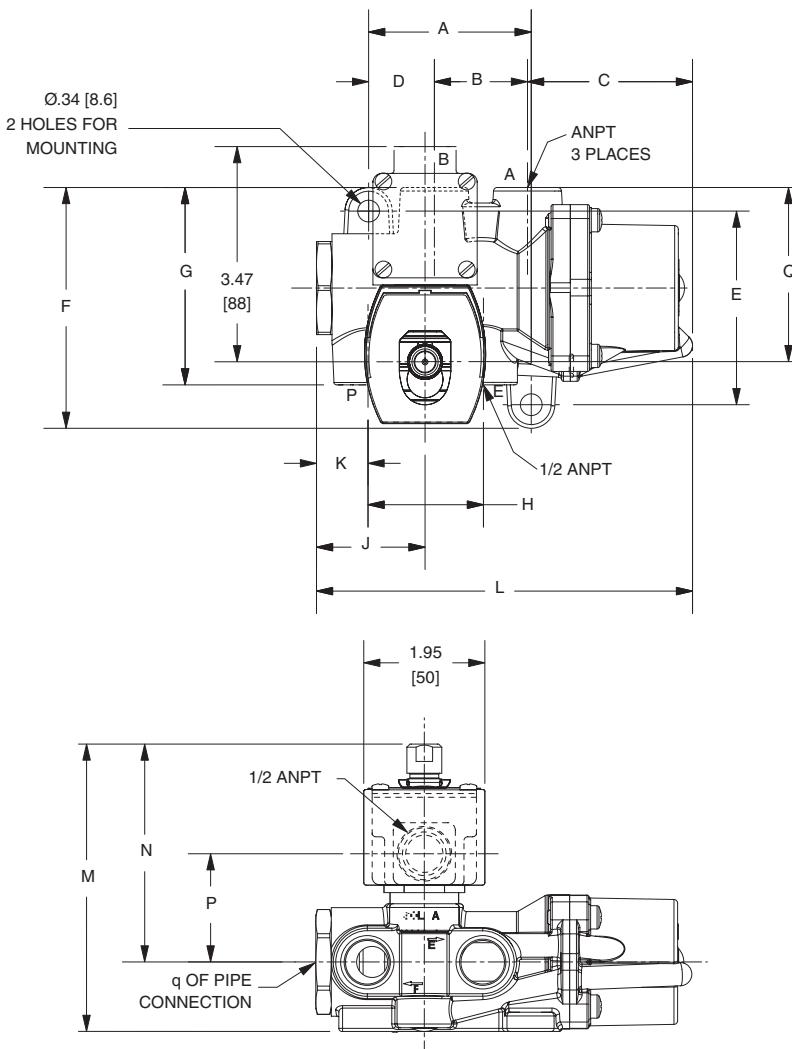
**Const. Ref. 6**

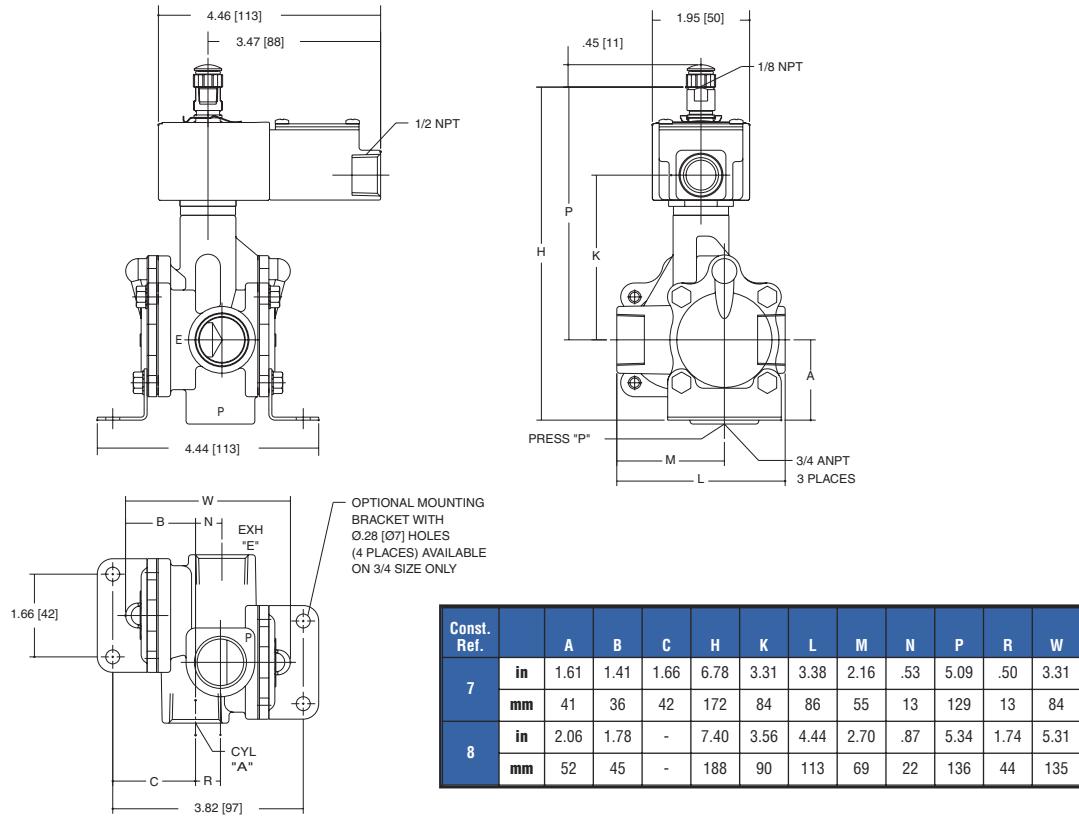
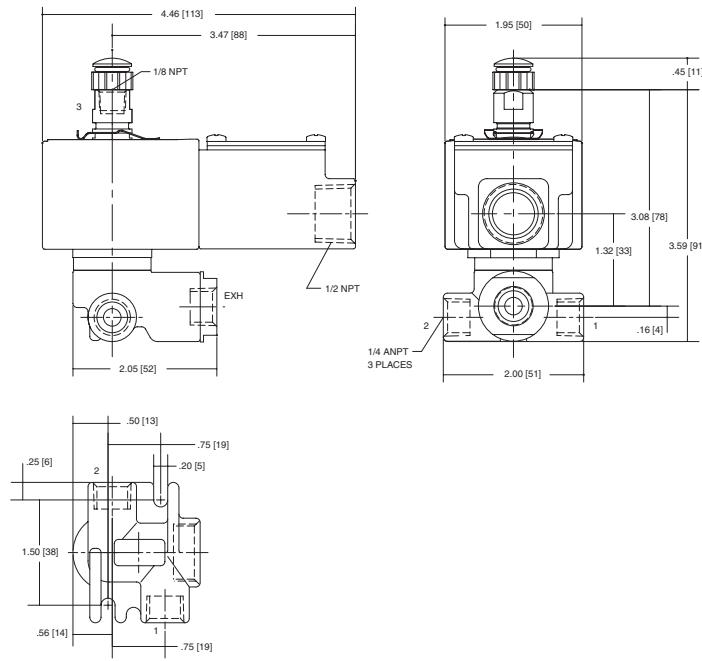


**Dimensions: inches (mm)****Const. Ref. 3****Const. Ref. 4, 5**

**Dimensions: inches (mm)**

Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
JPIS8344B370	in	1.88	1.03	2.15	0.72	2.41	3.21	3.13	1.41	1.36	0.72	4.71	4.65	3.70	1.93	2.22
	mm	48	26	55	18	61	82	80	36	35	18	120	118	94	49	57
JPIS8344B372, 374	in	2.62	1.50	2.66	1.06	3.12	3.88	3.18	1.86	1.75	0.83	6.06	4.63	3.51	1.75	2.81
	mm	67	38	68	27	79	99	81	47	45	21	154	118	89	44	71
JPIS8344B376, 378	in	3.89	2.10	3.53	1.48	3.79	4.69	4.56	2.12	2.49	1.52	8.22	5.41	3.86	2.10	3.38
	mm	99	53	90	38	96	119	116	54	63	39	209	137	98	53	86

**Const. Ref. 11, 13, 15**

**Dimensions: inches (mm)****Const. Ref. 7, 8****Const. Ref. 9, 10**



## 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.

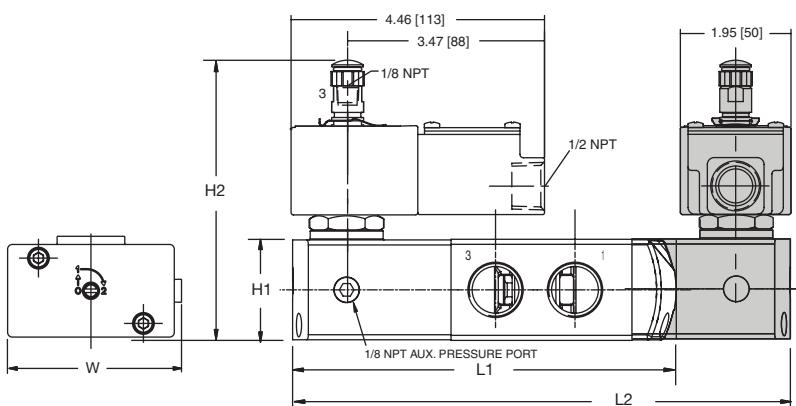
Optional Manual Operators		
Add Suffix		Description
MO		Push and turn to lock with flat head screwdriver slot
MI		Momentary push in with flat head screwdriver slot
MH		Momentary push in by hand
MS		Push and turn to lock by hand

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)

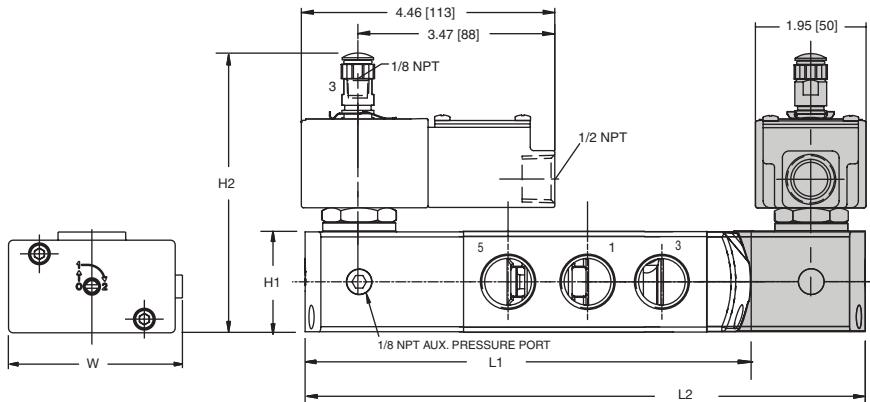
① Manual override option MH adds .250" (6.4),  
MS option adds .468" (11.9) to each solenoid endcap.

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. 17

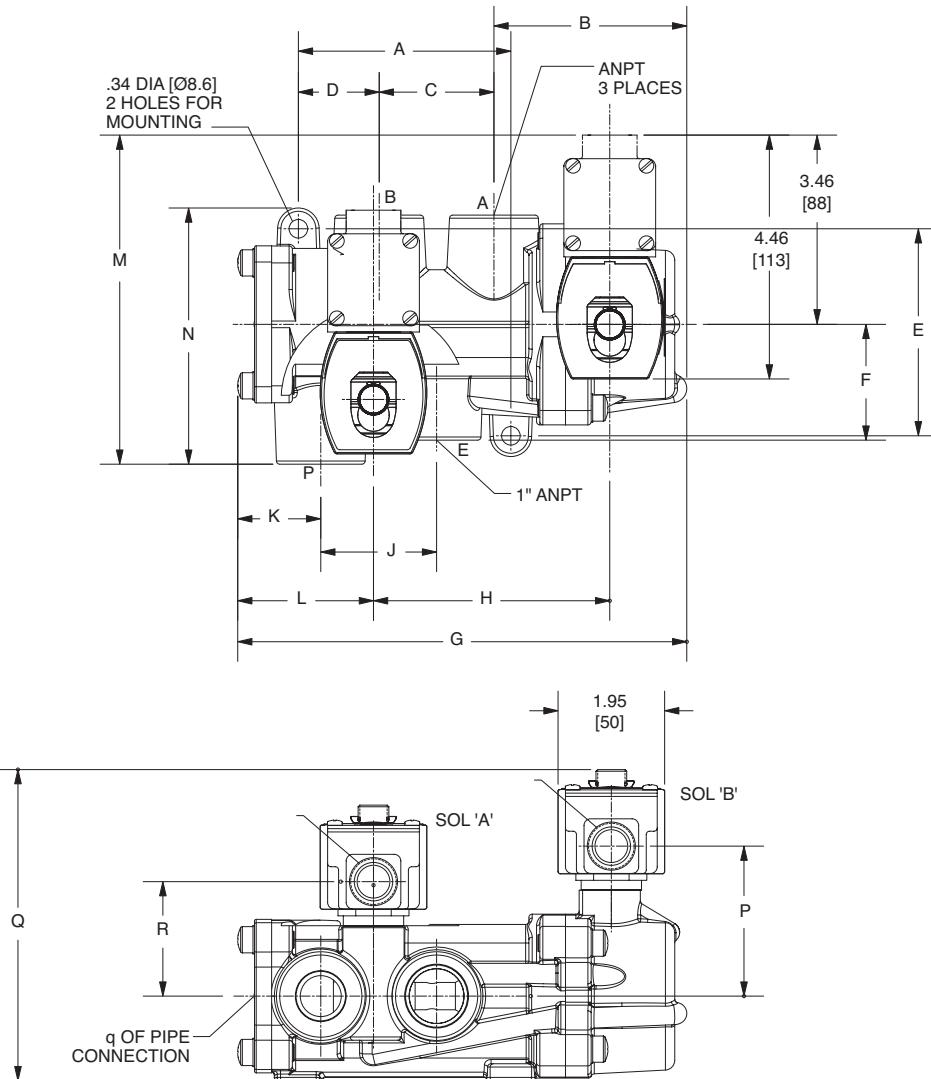


Const. Ref. 18



**Dimensions: inches (mm)**

Catalog Number		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
JPIS8344B344	in	1.88	2.16	1.03	0.75	2.41	1.69	4.91	2.61	1.41	0.72	1.36	5.35	3.13	2.36	4.46	2.02
	mm	48	55	26	19	61	43	125	66	36	18	35	136	80	60	113	51
JPIS8344B354, 356	in	3.88	3.53	2.09	1.47	3.81	2.12	8.25	4.34	2.12	1.55	2.51	6.03	4.56	2.83	5.47	2.38
	mm	99	90	53	37	97	54	210	110	54	39	64	153	116	72	139	60
JPIS8344B380, 382	in	2.62	2.66	1.50	1.06	3.12	1.56	6.06	3.09	1.86	0.83	1.75	5.74	3.18	2.50	4.65	2.11
	mm	67	68	38	27	79	40	154	78	47	21	45	146	81	64	118	54

**Const. Ref. 12, 14, 16**

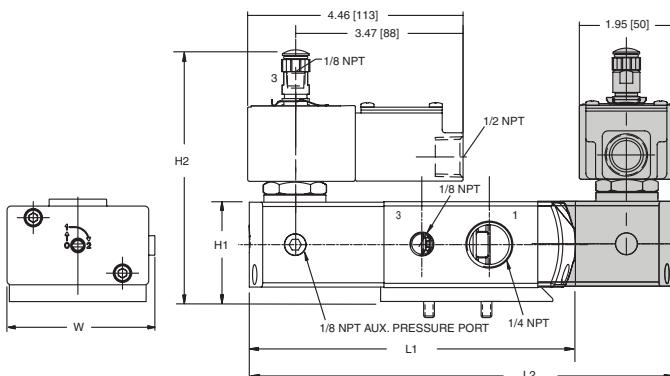
## Dimensions inches (mm)

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

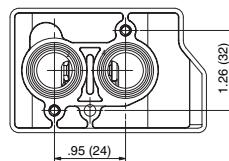
① Manual override option MH adds .250" (6.4),  
MS option adds .468" (11.9) to each solenoid endcap.

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

Const. Ref. 19



8551 NAMUR Footprint

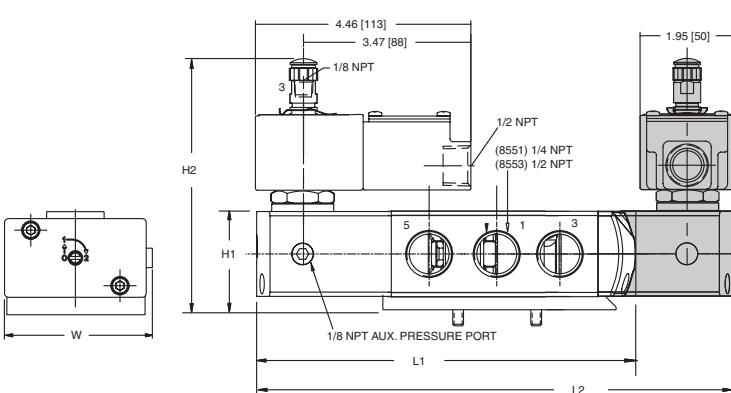


Series	8551 (316L SS)	8551 (5/3)	8553
NPT	1/4	1/4	1/2
L1 ①	5.20 (132)	-	7.08 (180)
L2 ①	6.73 (171)	7.44 (189)	8.85 (225)
H2	4.38 (111)	4.38 (111)	4.77 (121)
H1	1.57 (40)	1.57 (40)	2.08 (53)
W	1.77 (45)	1.77 (45)	2.87 (73)

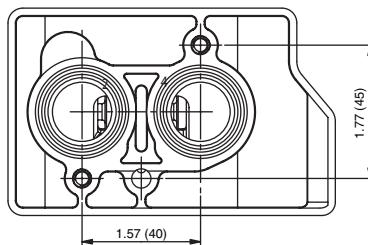
① Manual override option MH adds .250" (6.4),  
MS option adds .468" (11.9) to each solenoid endcap.

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

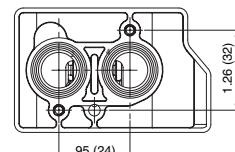
Const. Ref. 20



8553 NAMUR Footprint



8551 NAMUR Footprint



## Specifications (English units)

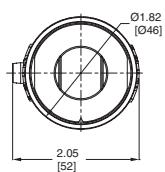
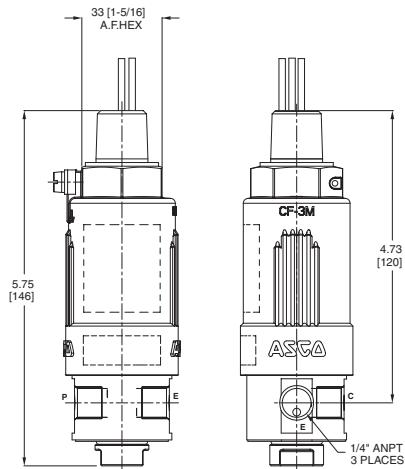
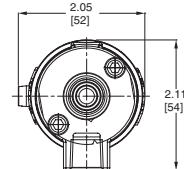
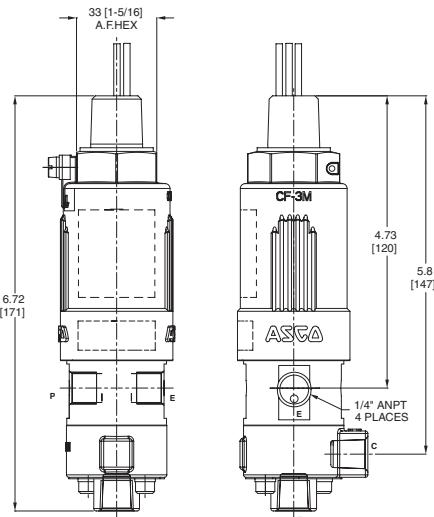
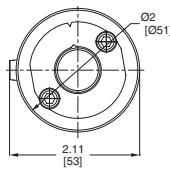
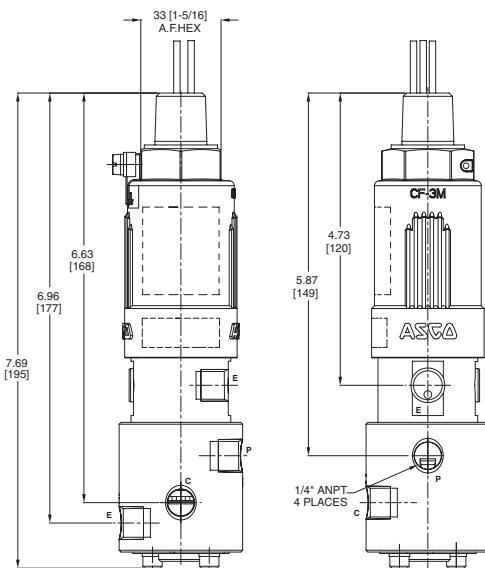
Pipe Size (in)	Orifice Size (in)		Cv Flow Factor		Operating Pressure Differential (psi)				Wattage Rating/ Coil Insulation Class		
					Air/Natural Gas						
	Pressure	Exhaust	Pressure	Exhaust							
<b>NORMALLY CLOSED (Closed when de-energized)</b>											
1/4	1/16	3/32	0.08	0.16	0	150 ③	EF8320A511	1	1.3/F		
1/4	3/64	5/64	0.05	0.11	0	125 ④	EF8320A512	1	0.55/F		
1/4	1/16	1/4	0.08	1.4	20	150	EF8317A511 ②	2	1.3/F		
1/4	5/16	5/16	1.10	1.40	20	150	EF8321A511 ①	3	1.3/F		
1/4	5/16	5/16	1.10	1.40	20	125	EF8321A512 ①	3	0.55/F		
<b>UNIVERSAL FLOW (Pressure at any port)</b>											
1/4	1/16	3/32	0.08	.16	0	65	EF8320A515	1	1.3/F		
① Main disc is NBR ② This valve has a Hytrel diaphragm. ③ Light Oil @ 300 SSU Max. Pressure 125 psi (8.6 bar). ④ Light Oil @ 300 SSU Max. Pressure 90 psi (6 bar).											

## Electrical Information

Standard Coil and Class of Insulation	Watt Rating and Power Consumption	
	DC Watts	
F	0.55	
F	1.3	
<b>Standard Voltages:</b> 12 and 24 volts DC.		

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

Wattage (DC)	Voltage (DC)	Min. Pull In (mA)	Drop Out (mA)*	Coil Resistance @ 68°F (20°C) (ohms)
1.3W	12V DC	81.4	11.3	111
	24V DC	41.0	6.6	443
0.55W	12V DC	35.8	3.4	262
	24V DC	17.9	1.7	1047


**Dimensions: inches (mm)**
**Const. Ref. 1**

**Const. Ref. 2 (Quick Exhaust)**

**Const. Ref. 3 (High Flow)**


## 2-Way Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Operating Pressure Differential (psi)				Max. Fluid Temp. °F	Catalog Number		Const. Ref.	Watt Rating/Class of Coil Insulation			
			Min.	Max. DC				Brass	Stainless Steel					
				Air-Inert Gas	Water	Lt.Oil								
1/8	3/64	0.06	0	2025	1710	825	140	-	MU8262A619	1	33.2			
1/8	3/64	0.06	0	1500	1350	825	140	MU8262A610	-	1	33.2			
1/8	3/32	0.21	0	500	350	325	140	MU8262A611	MU8262A620	1	33.2			
1/8	1/8	0.35	0	275	260	195	140	MU8262A612	MU8262A621	1	33.2			
1/4	3/64	0.06	0	1500	1350	825	140	MU8262A613	MU8262A622	2	33.2			
1/4	3/32	0.21	0	500	350	270	140	MU8262A614	MU8262A623	2	33.2			
1/4	1/8	0.35	0	275	260	150	140	MU8262A615	MU8262A624	2	33.2			
1/4	5/32	0.52	0	150	140	100	140	MU8262A616	MU8262A625	2	33.2			
1/4	7/32	0.73	0	55	54	40	140	MU8262A617	MU8262A626	2	33.2			
1/4	9/32	0.88	0	36	36	33	140	MU8262A618	MU8262A627	2	33.2			
3/8	1/8	0.35	0	275	260	140	140	MU8263A615	MU8263A624	3	33.2			
3/8	5/32	0.52	0	150	140	80	140	MU8263A616	MU8263A625	3	33.2			
3/8	7/32	0.73	0	55	54	29	140	MU8263A617	MU8263A626	3	33.2			
3/8	9/32	0.88	0	35	32	21	140	MU8263A618	MU8263A627	3	33.2			

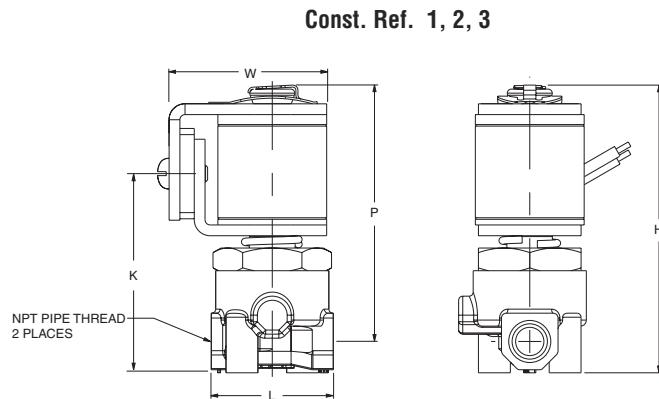
## Electrical Information

Standard Coil and Class of Insulation	Watt Rating and Power Consumption		Spare Coil Part No.	
	DC			
	Watts	General Purpose		
A	33.2		230725	

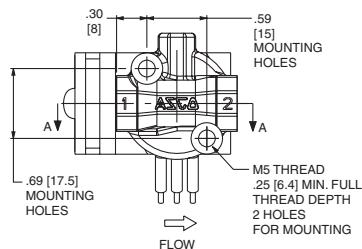
**Standard Voltages:** 6, 12, 24 VDC. Must be specified when ordering.  
 Other voltages available when required.

## Dimensions: inches (mm)

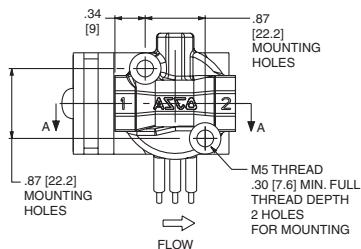
Const. Ref.		H	K	L	P	W
1	in	2.80	1.94	1.19	2.50	1.71
	mm	71	49	30	63	43
2	in	2.94	2.08	1.56	2.58	1.90
	mm	75	53	40	66	48
3	in	3.01	2.15	1.88	2.58	2.06
	mm	76	55	48	66	52



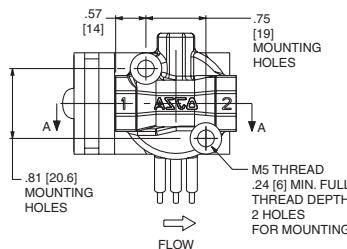
Const. Ref. 1 (1/8" Pipe)



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



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



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

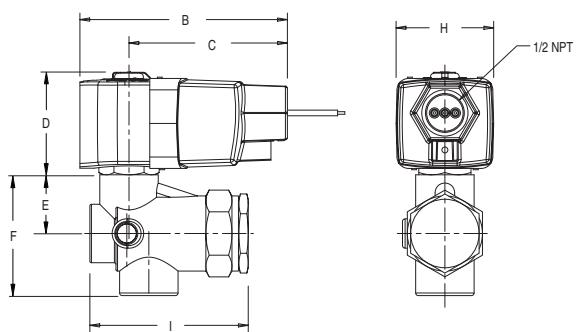
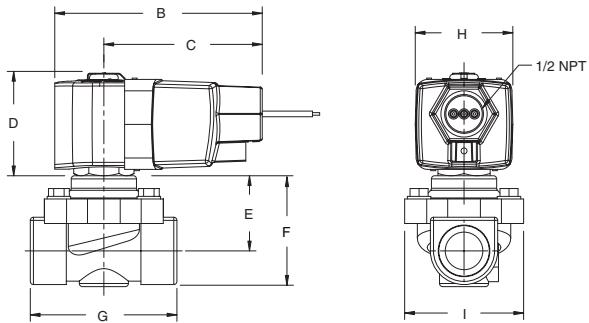
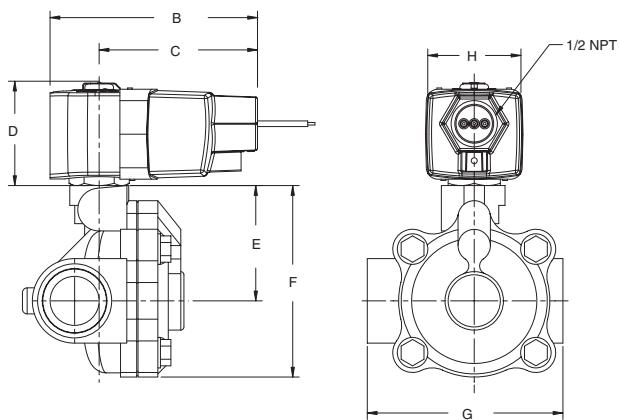
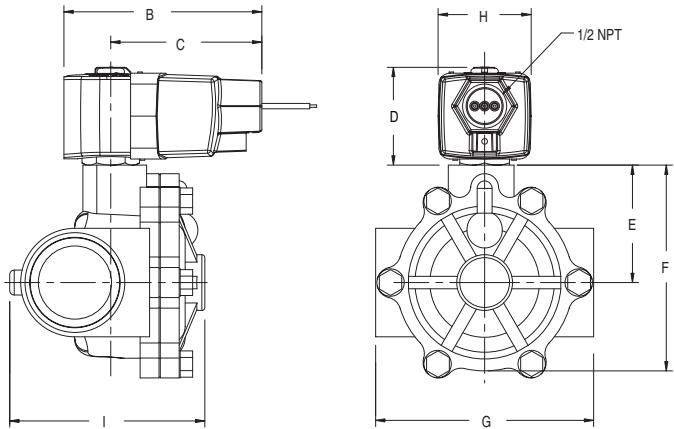
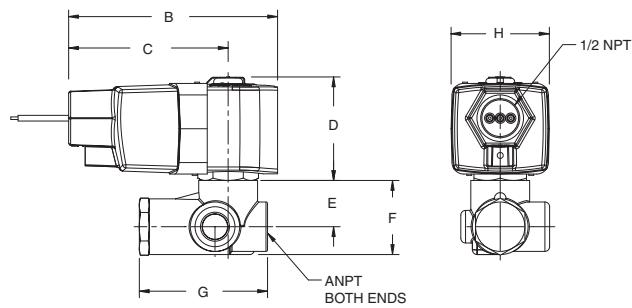










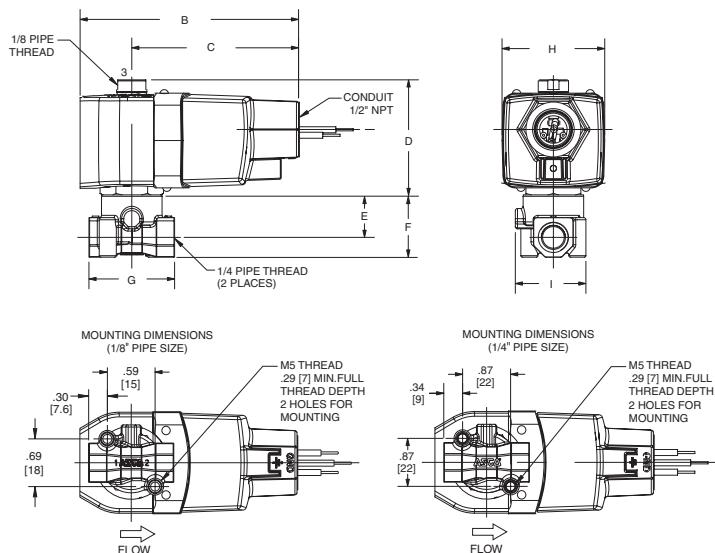
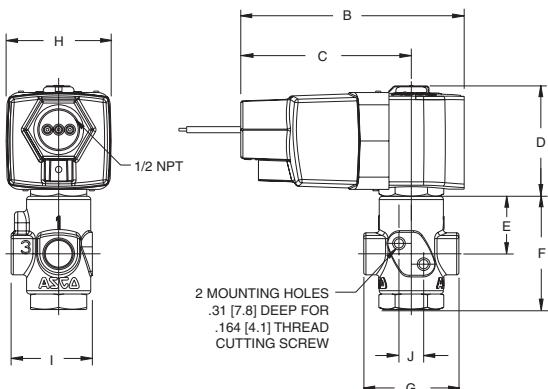
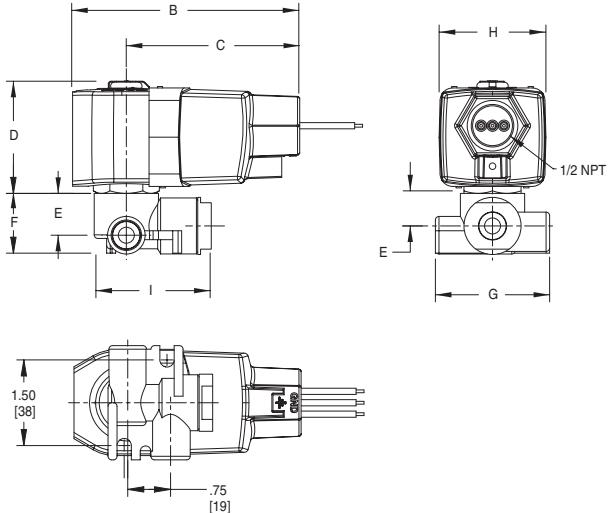
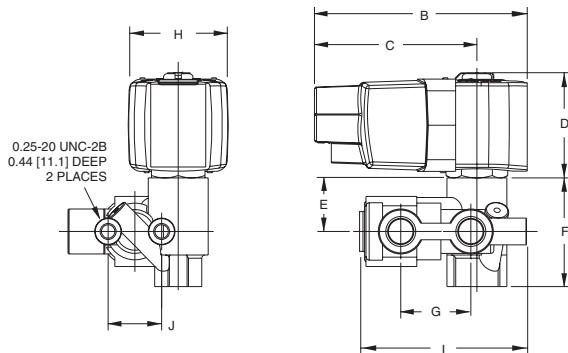
**Dimensions: inches (mm)****Const. Ref. 5, 6, 9****Const. Ref. 8****Const. Ref. 10****Const. Ref. 11, 12****Const. Ref. 18**

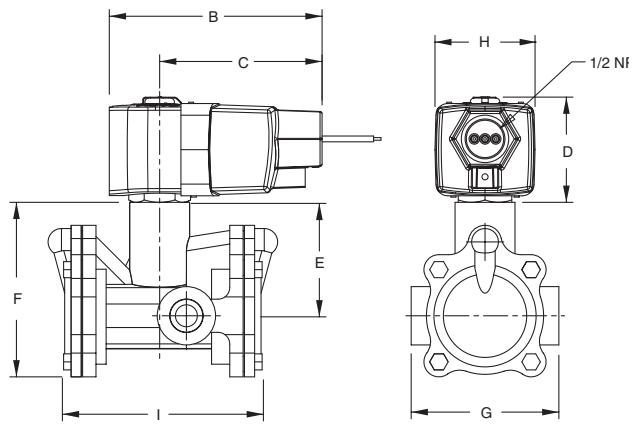
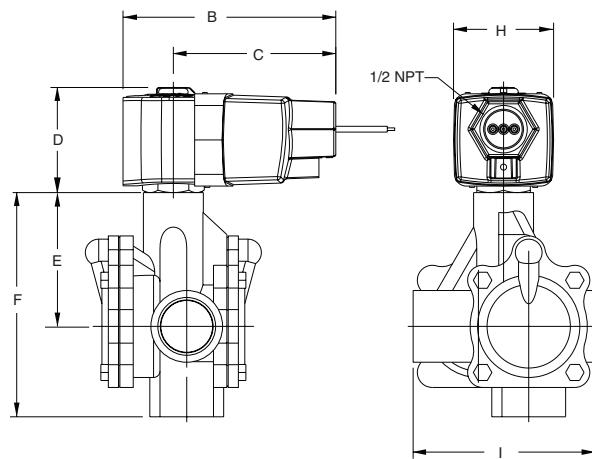
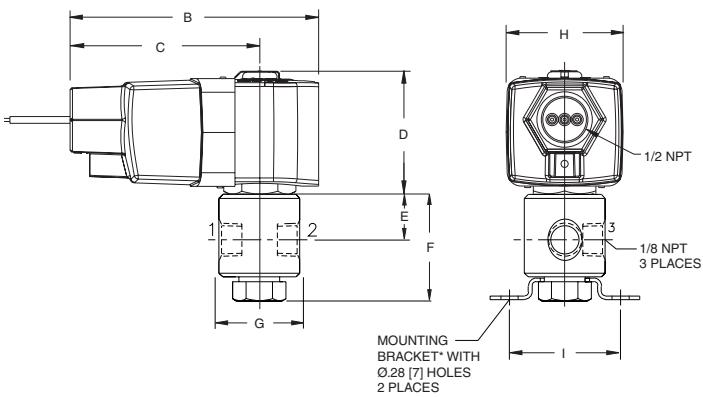
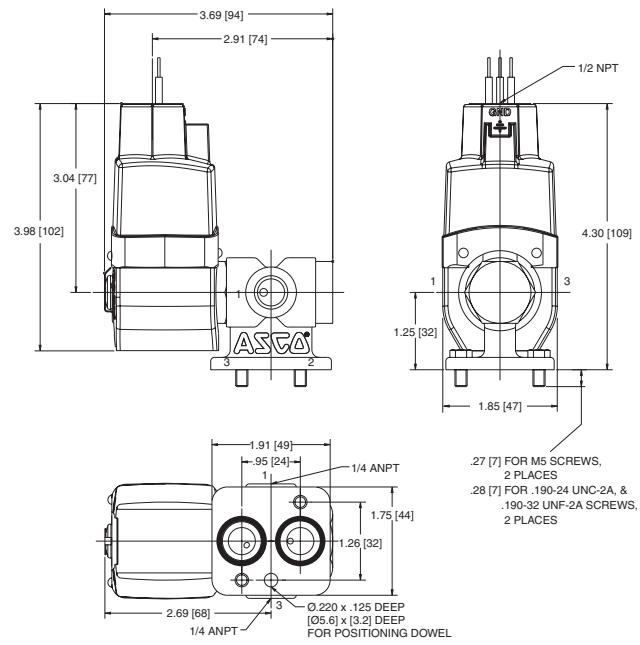




**Dimensions: inches (mm)**

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

**Const. Ref. 1, 2****Const. Ref. 3****Const. Ref. 4****Const. Ref. 5**

**Dimensions: inches (mm)****Const. Ref. 6****Const. Ref. 7****Const. Ref. 8****Const. Ref. 9**

**4-Way Features**

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

**4-Way Specifications (English units)**

Pipe Size (in)	Orifice Dia. (in)	Cv Flow		Operating Pressure Differential (psi)			Max. Fluid Temp. °F	Brass	Const. Ref.	Agency	Stainless Steel	Const. Ref.	Agency	Wattage AC/DC	Approx. Shipping Weight (lbs.)							
				Max. AC/DC																		
		Pressure Min.	Exhaust	Air-Inert Gas	Water ⑤ @ 300 SSU	Light Oil																
<b>General Service - Single Solenoid</b>																						
1/4	1/16 ②	0.09	0.09	10	150	150	150 ③	180	8345P001	2	●	-	-	-	2	4.8						
1/4	1/4	0.8	1.0	10 ①	250	250	250	180	8344P070	1	●	-	-	-	2	5.2						
3/8	3/8	1.4	2.2	10 ①	250	250	250	180	8344P072	3	●	-	-	-	2	9.6						
1/2	3/8	1.4	2.2	10 ①	250	250	250	180	8344P074	3	●	-	-	-	2	9.6						
3/4	3/4	5.2	5.6	10 ①	250	250	250	180	8344P076	4	●	-	-	-	2	18.6						
1	3/4	5.2	5.6	10 ①	250	250	250	180	8344P078	4	●	-	-	-	2	18.6						
<b>General Service - 4/2 Dual Solenoid</b>																2	10.8					
<b>NAMUR Mount - 3/2, 5/2 Single Solenoid</b>																2	4					

● = General Purpose Valve. ① 25 psi minimum for light oils. ② 3/32" exhaust orifice. ③ Viscosity 50 SSU max. ④ Aluminum body. ⑤ Water rating, CSA certified up to 232 psi.

**Important**

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

Refer to Engineering Section for details.

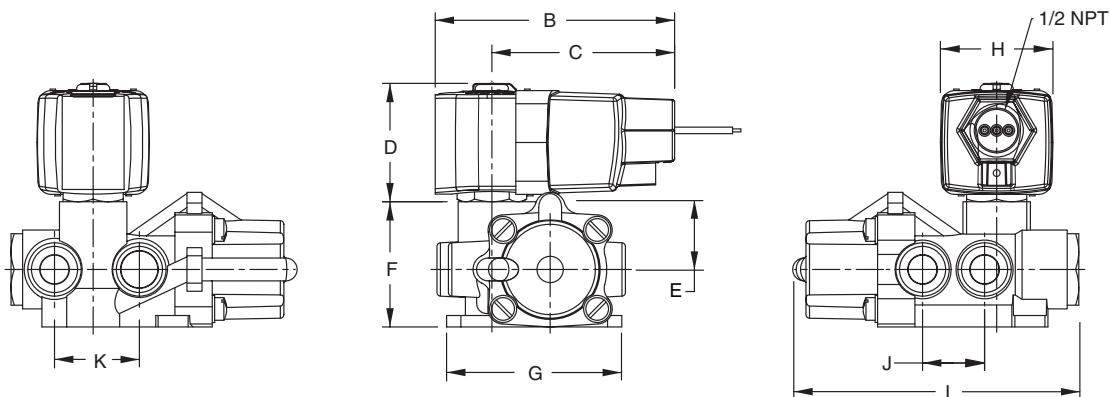
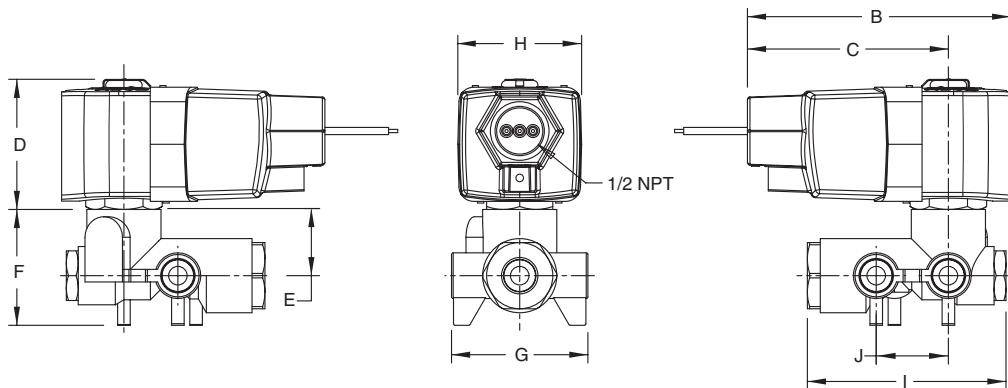
**4-Way Optional Features Chart**

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

● = Standard. \* Aluminum body.

**Dimensions: inches (mm)**

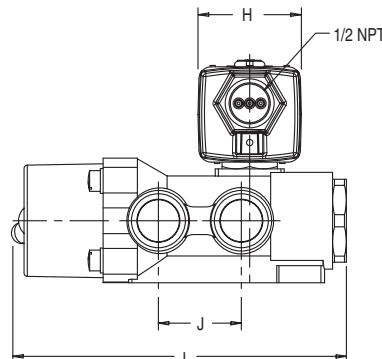
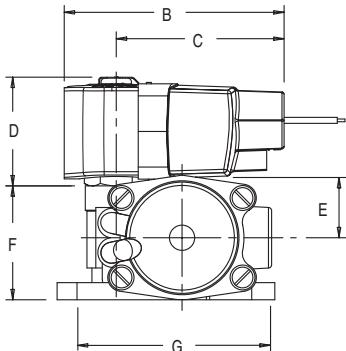
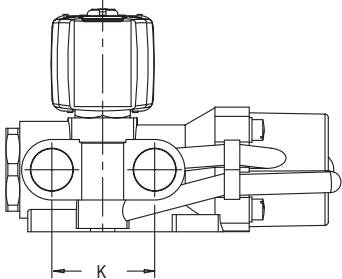
Const. Ref.		B	C	D	E	F	G	H	I	J	K	Exhaust Pipe Size
1	in	3.98	3.04	2.0	1.12	2.08	2.94	1.87	4.82	1.03	1.41	3/8
	mm	101	77	51	28	53	75	48	122	26	112	
2	in	3.98	3.04	2.09	1.00	1.75	2.06	1.87	3.00	1.09	-	1/4
	mm	101	77	53	25	44	52	35	76	28	-	
3	in	3.98	3.04	2.0	0.94	2.06	3.18	1.87	6.05	1.50	1.86	1/2
	mm	101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

**Const. Ref. 1****Const. Ref. 2**

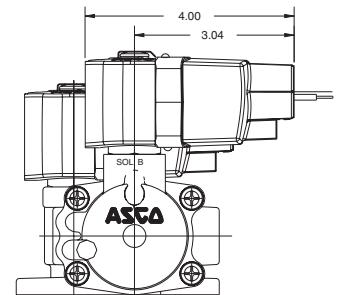
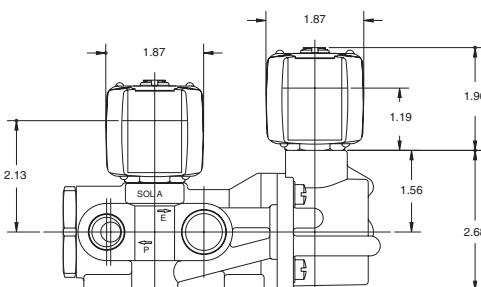
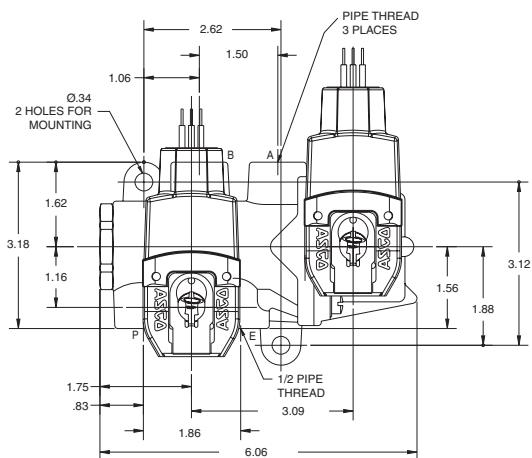


## Dimensions: inches (mm)

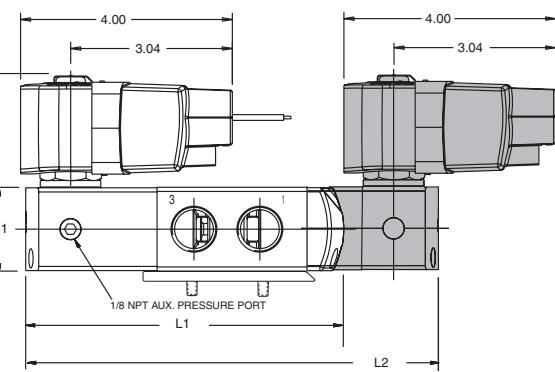
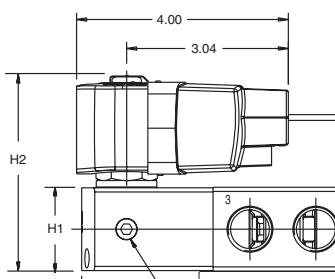
**Const. Ref. 3, 4**



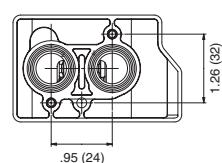
**Const. Ref. 5**



**Const. Ref. 6**



8551 NAMUR FOOTPRINT



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

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



## Global Contacts

Australia	(61) 2-9-451-7077
Brazil	(55) 11-4208-1700
Canada	(1) 519-758-2700
China	(86) 21-3395-0000
Czech Republic	(420) 235-090-061
Dubai - UAE	(971) 4 811 8200

France	(33) 1-47-14-32-00
Germany	(49) 7237-9960
India	(91) 44-39197300
Italy	(39) 02-356931
Japan	(81) 798-65-6361
Mexico	(52) 55-5809-5640

Netherlands	(31) 33-277-7911
Singapore	(65) 6556-1100
South Korea	(82) 2-3483-1570
Spain	(34) 942-87-6100
Turkey	(90) 216-577-3107
United Kingdom	(44) 1695-713600