

Gas Shutoff Valves

Hydramotor® Operated | 1"-3" NPT, 4" Flangen | Cast-Iron Body

2/2
SERIES
H118

General Description

The normally closed H118 is a combination Hydramotor actuator and safety shutoff/control gas valve. It is used for commercial and industrial burners in applications such as furnaces, dryers, dehydrators, conversion burners and heaters.

The cast iron, globe-type valve body features a soft synthetic seat and integral heavy-duty return spring for tight and certain closure in one second or less upon current interruption.

The self-contained, hermetically sealed, pull-type electrohydraulic actuator consists of a motor/pump unit immersed in oil, reducing wear and providing highly reliable operation.

Fluid

Fuel Gas - Use with natural, mixed, manufactured, or LP gas.
Also suitable for the following service: Scrubbed and dried coke, sewer and digester gases.

Specifications

Opening Time: 28 second max.

Closing Time: 1 second max.

Enclosure: Type 1 General Purpose standard
Type 4/7 Watertight/Explosion proof optional

Ambient Temperature: -40°F to 150°F (-40°C to 66°C)

Body Class: Cast Iron, 1" to 3" - 250# screw, 4" - 125# flange

Pipe Taps: 1/4" upstream & downstream taps for routine leak testing

Electrical

Power Requirement: 158 VA max (1-3"), 288 VA max. (4")

Standard Voltage: 120V/60Hz
240V/60Hz (Optional)

Operating Voltage	Amperes		
	Inrush	Opening	Holding
1" Through 3"			
120V/60Hz	13.2	1.32	0.14
240V/60Hz	6.6	0.66	0.07
4" Only			
120V/60Hz	24.0	2.40	0.18

Auxiliary Switches:

One integral SPDT switch, 15A@120V, 7.5A@240V, (1800VA max). Actuates at full open position of actuator stroke (not adjustable). Up to 6 adjustable yoke mounted switches may be added.

Proof of Closure Switch:

Optional factory set non-field adjustable SPDT switch, 15A@120V, 7.5A@240V (1800VA max.).



Installation

Multi-poise, may be mounted in any position.

Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide Y10Z, File MP932 Safety Valves.

FM Approved to Class 7400 "Liquid and Gas Safety Shutoff Valves."

CSA Certified to Automatic Gas Valves ANSI Z21.21
CSA 6.5 C/I, (Meets standard C22.2 No 139, File113070.)

COMBUSTION

Specifications (English units)

Pipe Size (in)	Flow Factor Cv (Kv)	Gas Capacity ①	Operating Pressure Differential psi (bar)		Max. Fluid Temp. °F (°C)	Catalog Number ②	Const. Ref.	Agency	Opening Time (Sec)	Approx Shipping Weight lbs (kgs)
		Cu.Ft./Hr.	Min	Max				UL, FM, CSA		
Combustion (Fuel Gas) - Normally Closed										
Standard Trim, Type 1 General Purpose Enclosure										
1	17(14)	915	0	35(2.4)	150(66)	H118AF142F1	1	0	7-18	22(10.0)
1-1/4	25(21)	1,155	0	35(2.4)	150(66)	H118AG142F1	1	0	7-18	23(10.5)
1-1/2	35(30)	1,525	0	25(1.7)	150(66)	H118AH142F1	2	0	8-20	28(12.7)
2	67(57)	3,300	0	15(1)	150(66)	H118AJ142F1	3	0	10-24	32(14.5)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118AK142F1	4	0	11-28	52(23.6)
3	125(106)	6,095	0	15(1)	150(66)	H118AL142F1	5	0	12-18	54(24.5)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118AN132F1	6	0	15-24	148(67.3)
Standard Trim, Type 4/7 Watertight/Explosionproof Enclosure										
1	17(14)	915	0	35(2.4)	150(66)	H118BF142F1	7	0	7-18	32(14.5)
1-1/4	25(21)	1,155	0	35(2.4)	150(66)	H118BG142F1	7	0	7-18	33(15.0)
1-1/2	35(30)	1,525	0	25(1.7)	150(66)	H118BH142F1	8	0	8-20	38(17.2)
2	67(57)	3,300	0	15(1)	150(66)	H118BJ142F1	9	0	10-24	42(19.1)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118BK142F1	10	0	11-28	62(28.1)
3	125(106)	6,095	0	15(1)	150(66)	H118BL142F1	11	0	12-18	64(29.0)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118BN132F1	12	0	15-24	160(72.6)
Valve Seal Overtravel Trim (Proof of Closure), Type 1 General Purpose Enclosure										
2	67(57)	3,300	0	15(1)	150(66)	H118AJ142F1F26V16	3	0	9-17	37(16.8)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118AK142F1F26V16	4	0	11-20	57(25.9)
3	125(106)	6,095	0	15(1)	150(66)	H118AL142F1F26V16	5	0	13-23	59(26.8)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118AN132F1F26V16	6	0	15-24	153(69.5)
Valve Seal Overtravel Trim (Proof of Closure), Type 4/7 Watertight/Explosionproof Enclosure										
2	67(57)	3,300	0	15(1)	150(66)	H118BJ142F1F26V16	9	0	9-17	47(21.3)
2-1/2	86(73)	3,730	0	15(1)	150(66)	H118BK142F1F26V16	10	0	11-20	67(30.4)
3	125(106)	6,095	0	15(1)	150(66)	H118BL142F1F26V16	11	0	13-23	69(31.3)
4 (Flange)	168(143)	9,710	0	15(1)	150(66)	H118BN132F1F26V16	12	0	15-24	165(74.8)

○ = Safety Shutoff Valve
 ① One cu.ft./hr. = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.
 ② 240V/60Hz change 9th digit to "4" (Example: H118AF144F1)

COMBUSTION

Replacement Actuators

Enclosure	Catalog ①	Const. Ref.	Voltage ②
Type 1 General Purpose	H10B620B5F1	13	120V/60Hz
Type 4/7 Watertight Explosionproof	H10B620BC25F1	14	120V/60Hz
Type 1 General Purpose	H30B2220B20F1 ③	15	120V/60Hz
Type 4/7 Watertight Explosionproof	H30B2220B20C2F1 ③	16	120V/60Hz

① For Proof of Closure add F26 to Catalog Number (Example: H10B620B5F1F26)
 ② 240V/60Hz change 6th digit to "4" (Example: H10B640B5F1)
 ③ 4" Size only

Replacement Switches

Kits	Switches*	Type
1" Through 3"		
S104772EA1	1	Auxiliary (Adjustable)
S104772EA2	2	
S104772EA3	3	
S104772EAX1	1	Proof of Closure
4" Only		
S104772FA1	1	Auxiliary (Adjustable)
S104772FA2	2	
S104772FA3	3	
S104772FAX1	1	Proof of Closure

* Yoke Mounted

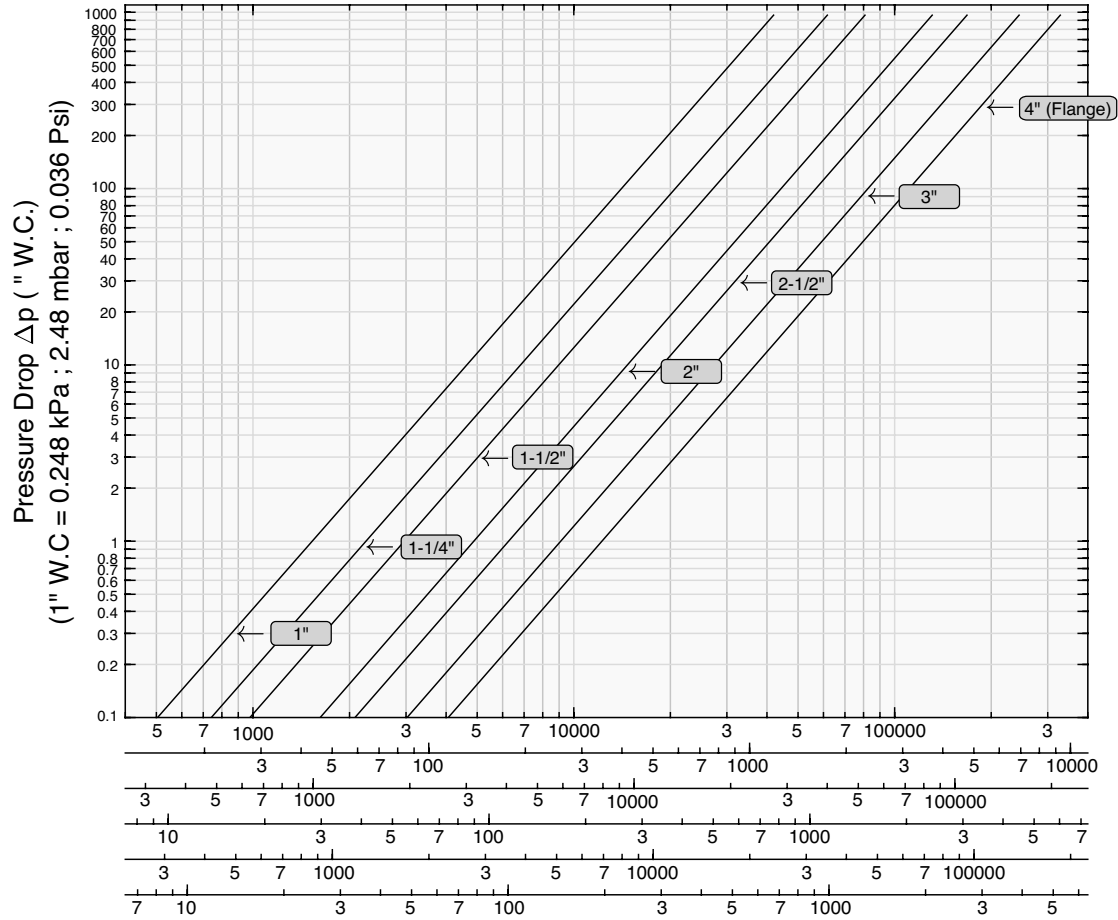
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Gas Flow Chart

H118 N.C Standard Trim

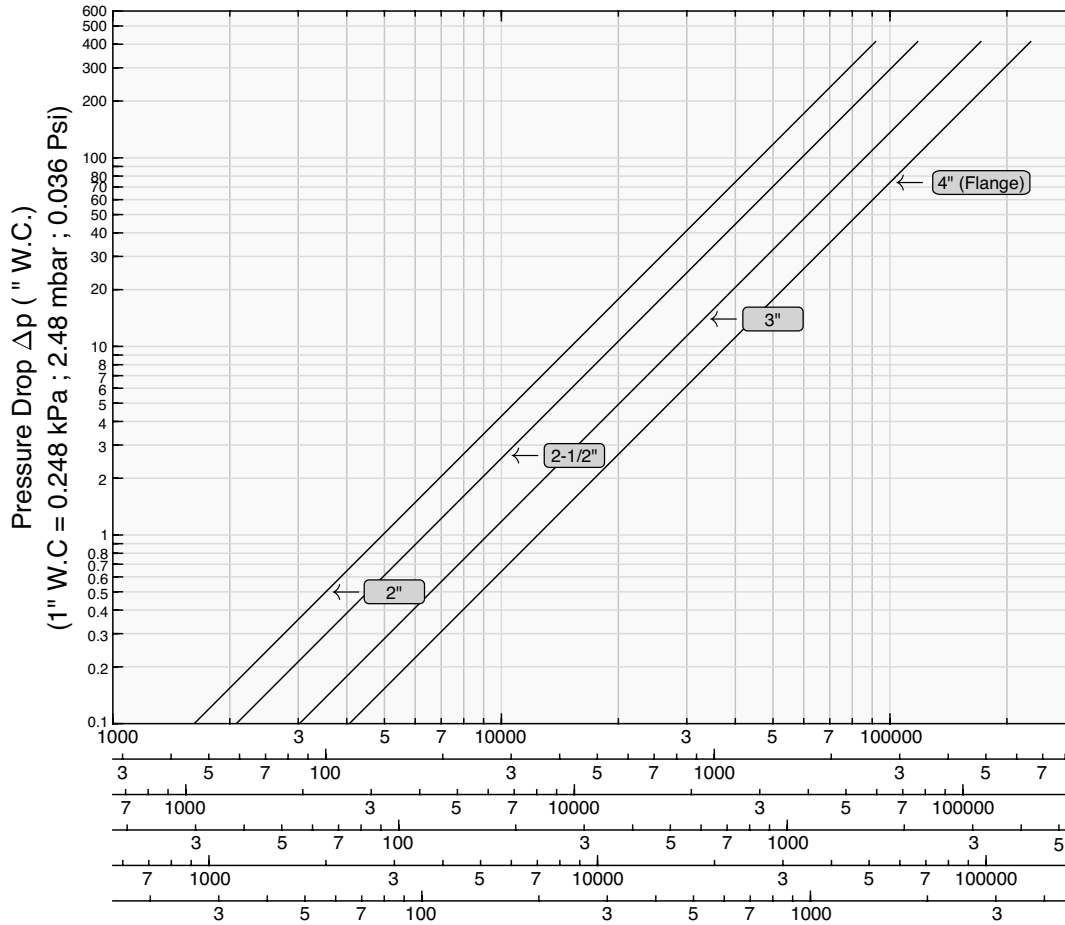


Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68°F (20°C) fluid temperature.

COMBUSTION

Gas Flow Chart

H118 N.C Valve Seal Overtravel Trim



Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68°F (20°C) fluid temperature.

Gas Shutoff Valves

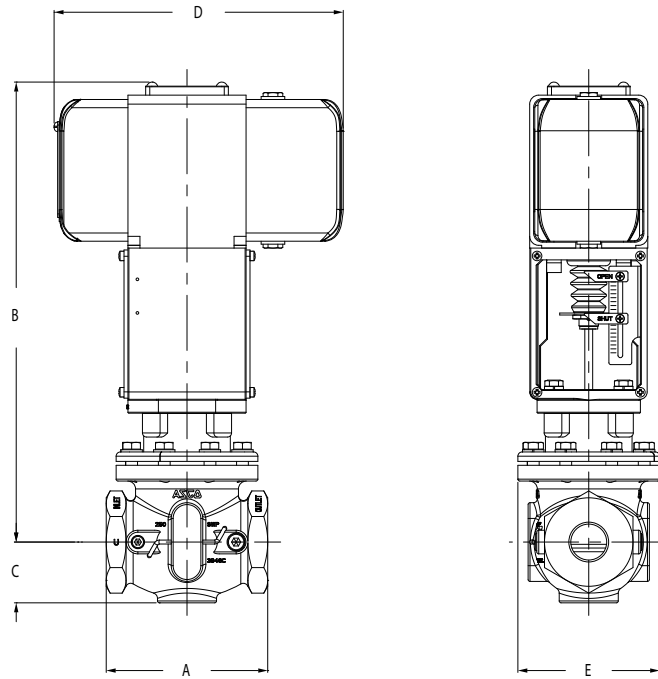
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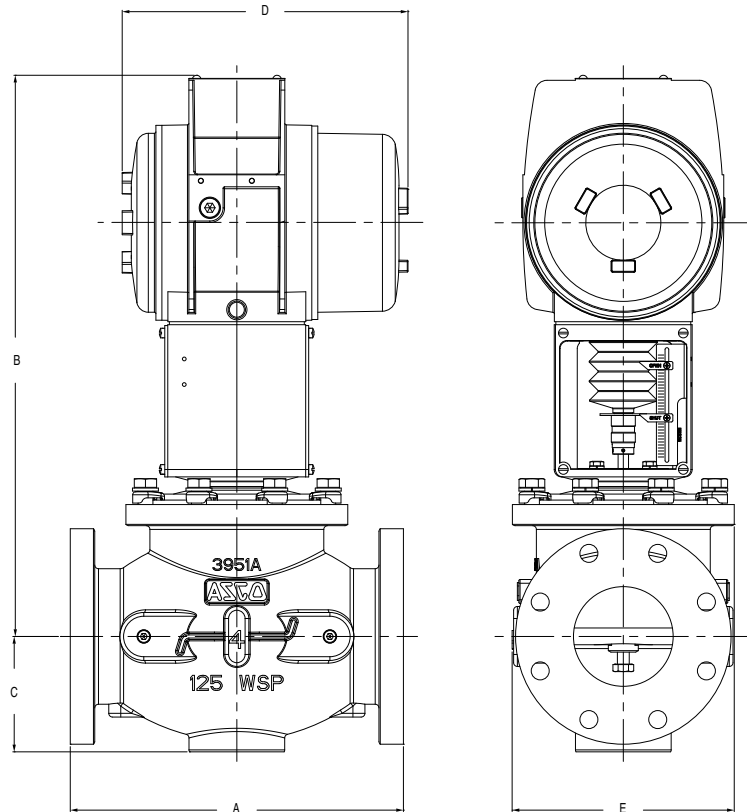
Dimensions inches (mm)

Pipe Size	Type 1 General Purpose						
	Const. Ref.		A	B	C	D	E
1" NPT	1	in	5.13	14.65	1.93	9.23	4.50
1-1/4" NPT		mm	130	372	49	235	114
1-1/2" NPT	2	in	6.50	15.14	2.56	9.23	5.13
		mm	165	385	65	235	130
2" NPT	3	in	8.13	14.98	2.71	9.23	5.63
		mm	206	381	70	235	143
2-1/2" NPT	4	in	9.50	14.98	3.46	9.23	7.50
		mm	241	381	88	235	191
3" NPT	5	in	10.87	15.70	3.75	9.23	7.50
		mm	276	399	95	235	191
4" flange	6	in	13.89	23.40	4.81	11.92	9.25
		mm	353	594	122	303	235

Const. Ref. 1-5



Const. Ref. 6

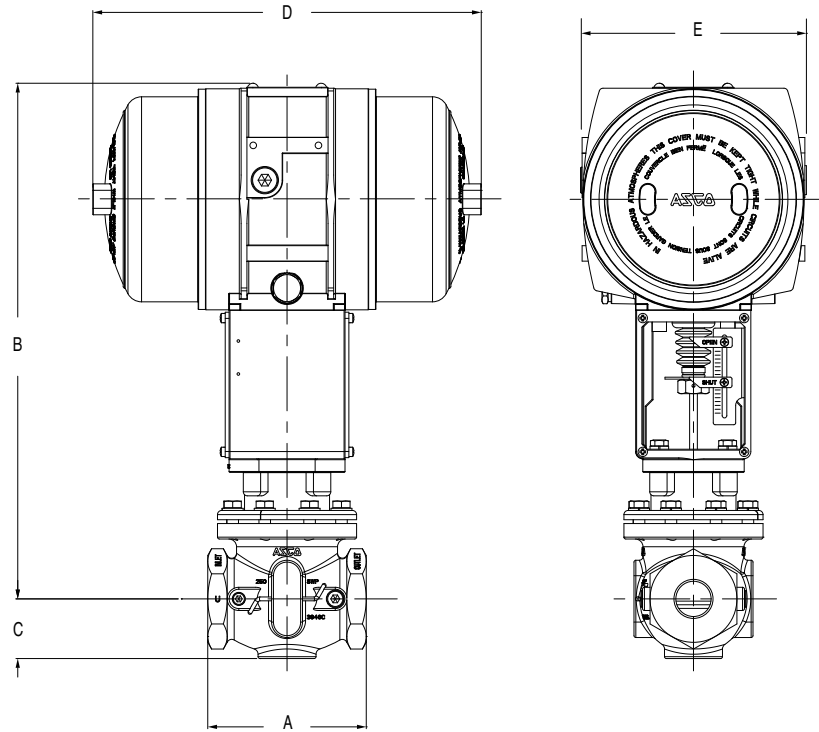


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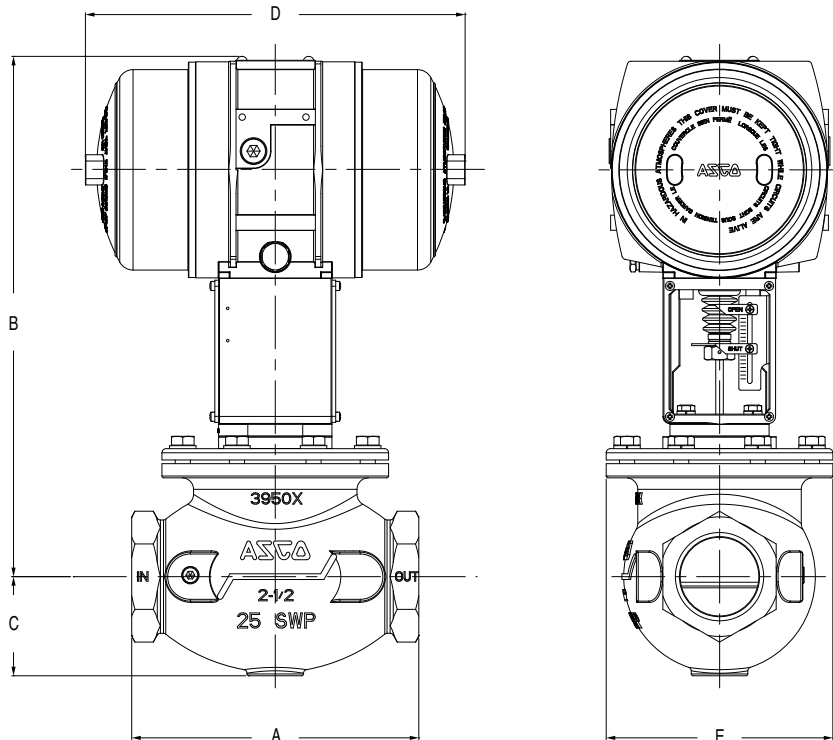
Dimensions inches (mm)

Pipe Size	Type 4/7 Watertight/Explosionproof						
	Const. Ref.		A	B	C	D	E
1" NPT	7	in	5.13	16.75	1.93	12.57	7.26
1-1/4" NPT		mm	130	426	49	319	184
1-1/2" NPT	8	in	6.50	17.25	2.56	12.57	7.26
		mm	165	438	65	319	184
2" NPT	9	in	8.13	17.09	2.71	12.57	7.26
		mm	206	434	70	319	184
2-1/2" NPT	10	in	9.50	17.30	3.46	12.57	7.50
		mm	241	440	88	319	191
3" NPT	11	in	10.87	17.81	3.75	9.23	7.50
		mm	276	452	95	235	191
4" flange	12	in	13.89	23.40	4.81	12.89	9.25
		mm	353	594	122	327	235

Const. Ref. 7, 8, 9



Const. Ref. 10, 11



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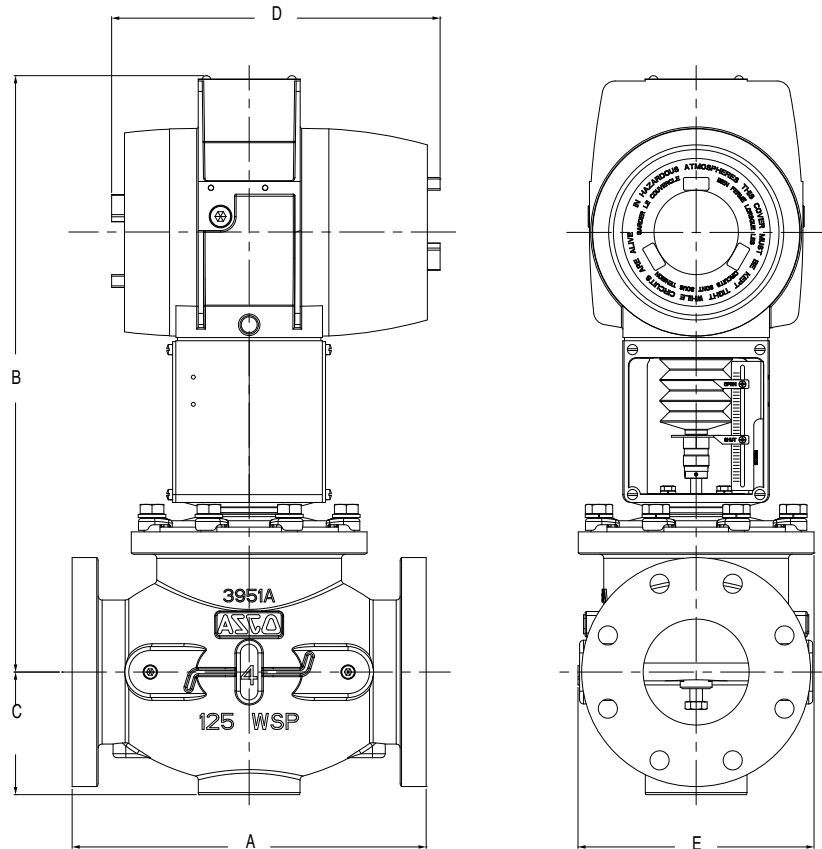
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Dimensions inches (mm)

Const. Ref. 12

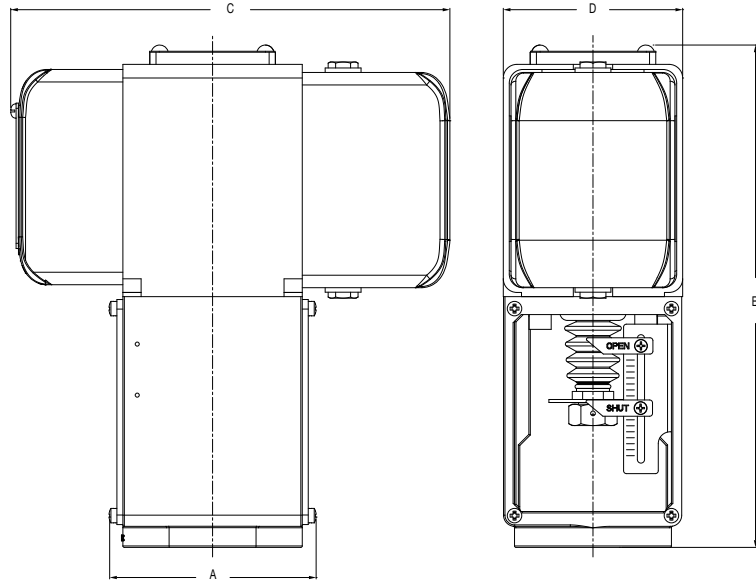


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Dimensions inches (mm)

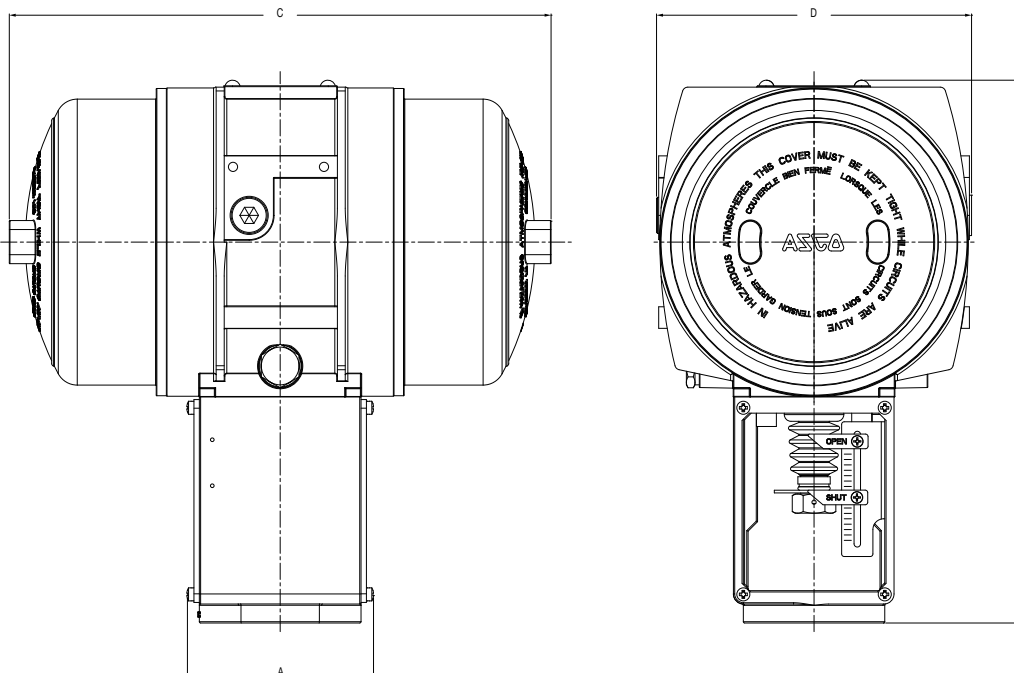
Type 1 General Purpose H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
13	in	4.32	10.51	9.23	3.74
	mm	110	267	235	95

Const. Ref. 13



Type 4/7 Watertight/Explosionproof H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
14	in	4.32	11.60	12.57	7.26
	mm	110	295	319	184

Const. Ref. 14



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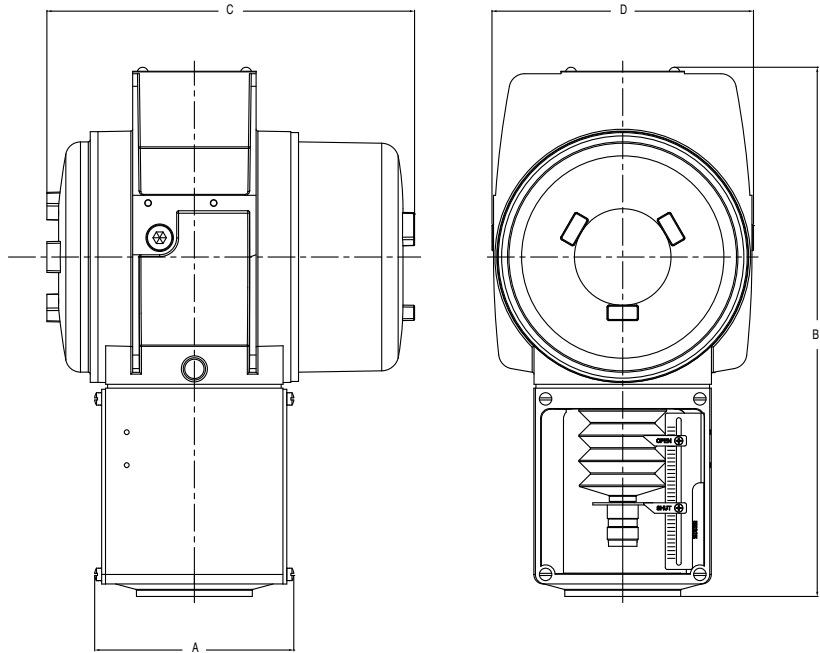
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Dimensions inches (mm)

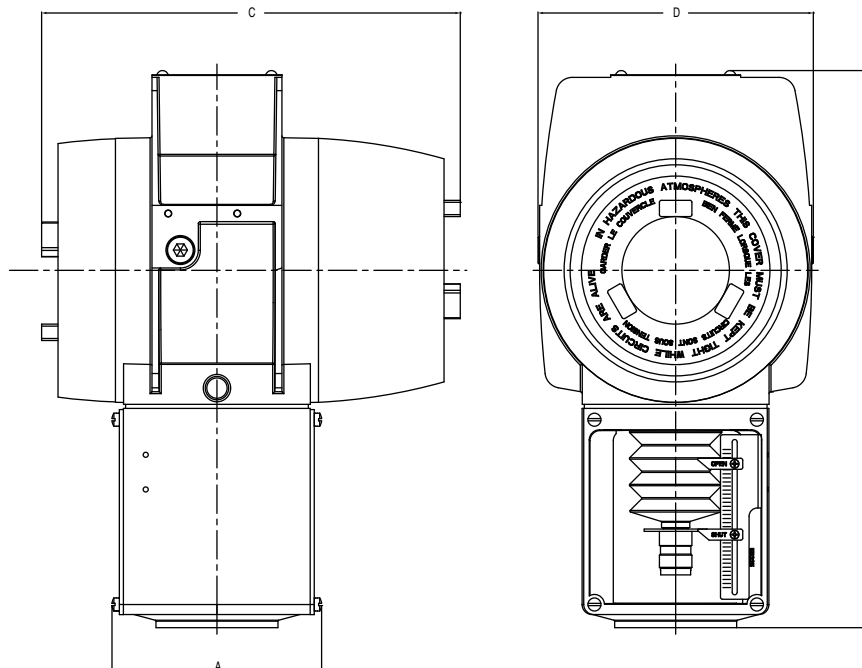
Type 1 General Purpose H30 Series Replacement Actuator					
Const. Ref.		A	B	C	D
15	in	6.45	17.15	11.92	8.48
	mm	164	436	303	215

Const. Ref. 15



Type 4/7 Watertight/Explosionproof H30 Series Replacement Actuator					
Const. Ref.		A	B	C	D
16	in	6.45	17.15	12.89	8.48
	mm	164	436	327	215

Const. Ref. 16



COMBUSTION