

ASCO™ Gas Shutoff Valves

Hydramotor® Operated | 2"-3" NPT, 4" Flange

2/2
SERIES
H117

General Description

The normally closed H117 is a combination Hydramotor actuator and safety shutoff/control gas valve. It is used for commercial and industrial burners in applications such as furnaces, dryers, dehydrators, conversion burners and heaters.

The cast iron valve body provides high flow and self cleaning operation. Its soft synthetic seat and integral, heavy-duty return spring closes the valve tightly upon current interruption, in one second or less.

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

Fluid

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

Specifications

Opening Time: 20 second max.

Closing Time: 1 second max.

Note: Opening time increased 20% with 50Hz.

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

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

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

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

Electrical

Power Requirement: 158 VA max

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

Operating Voltage	Amperes		
	Inrush	Opening	Holding
120V/60Hz	13.2	1.32	0.14
240V/60Hz	6.6	0.66	0.07

Auxiliary Switches:

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

Proof of Closure Switch:

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



Installation

Multi-poise, may be mounted in any position.

Approvals

UL listed

FM Approved

CSA Certified to:

1) Automatic Gas Safety Shutoff Valves C/I (3.9),
File 113070.

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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											
2	151(128)	8,000	0	20(1.4)	150(66)	H117AJ122F1	1	○	○	12-18	75(34.1)
2-1/2	244(207)	12,900	0	8(0.6)	150(66)	H117AK122F1	2	○	○	12-18	105(47.7)
3	320(272)	17,000	0	8(0.6)	150(66)	H117AL122F1	3	○	○	12-18	105(47.7)
4 (Flange)	510(434)	27,000	0	4(0.3)	150(66)	H117AN122F1	4	○	○	12-20	140(63.6)
Standard Trim, Type 4/7 Watertight/Explosionproof Enclosure											
2	151(128)	8,000	0	20(1.4)	150(66)	H117BJ122F1	5	○	○	12-18	85(38.5)
2-1/2	244 (207)	12,900	0	8(0.6)	150(66)	H117BK122F1	6	○	○	12-18	115(52.2)
3	320 (272)	17,000	0	8(0.6)	150(66)	H117BL122F1	7	○	○	12-18	115(52.2)
4 (Flange)	510 (434)	27,000	0	4(0.3)	150(66)	H117BN122F1	8	○	○	12-20	150(68)
Valve Seal Overtravel Trim (Proof of Closure), Type 1 General Purpose Enclosure											
2	124 (105)	6,600	0	20(1.4)	150(66)	H117AJ122F1F26V16	1	○	○	12-18	80(36.4)
2-1/2	171 (145)	9,100	0	8(0.6)	150(66)	H117AK122F1F26V16	2	○	○	12-18	110(50)
3	320 (272)	17,000	0	8(0.6)	150(66)	H117AL122F1F26V16	3	○	○	12-18	110(50)
4 (Flange)	444 (377)	24,000	0	4(0.3)	150(66)	H117AN122F1F26V16	4	○	○	12-20	145(65.9)
Valve Seal Overtravel Trim (Proof of Closure), Type 4/7 Watertight/Explosionproof Enclosure											
2	124 (105)	6,600	0	20(1.4)	150(66)	H117BJ122F1F26V16	5	○	○	12-18	90(40.8)
2-1/2	171 (145)	9,100	0	8(0.6)	150(66)	H117BK122F1F26V16	6	○	○	12-18	120(54.4)
3	320 (272)	17,000	0	8(0.6)	150(66)	H117BL122F1F26V16	7	○	○	12-18	120(54.4)
4 (Flange)	444 (377)	24,000	0	4(0.3)	150(66)	H117BN122F1F26V16	8	○	○	12-20	155(70.3)
○ = Safety Shutoff Valve											
① One cu.ft./hr. = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.											
② 240V/60Hz change 9th digit to "4" (Example: H117AJ124F1)											

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Replacement Actuators

Enclosure ①	New Catalog	Const. Ref.	Voltage ②
Type 1 General Purpose	H10B620B5F1	9	120V/60Hz
Type 4/7 Watertight Explosionproof	H10B620BC25F1	10	120V/60Hz

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

Replacement Switches

Kits	Switches*	Type
S104772EA1	1	Auxiliary (Adjustable)
S104772EA2	2	
S104772EA3	3	
S104772EAX1	1	Proof of Closure

* Yoke Mounted



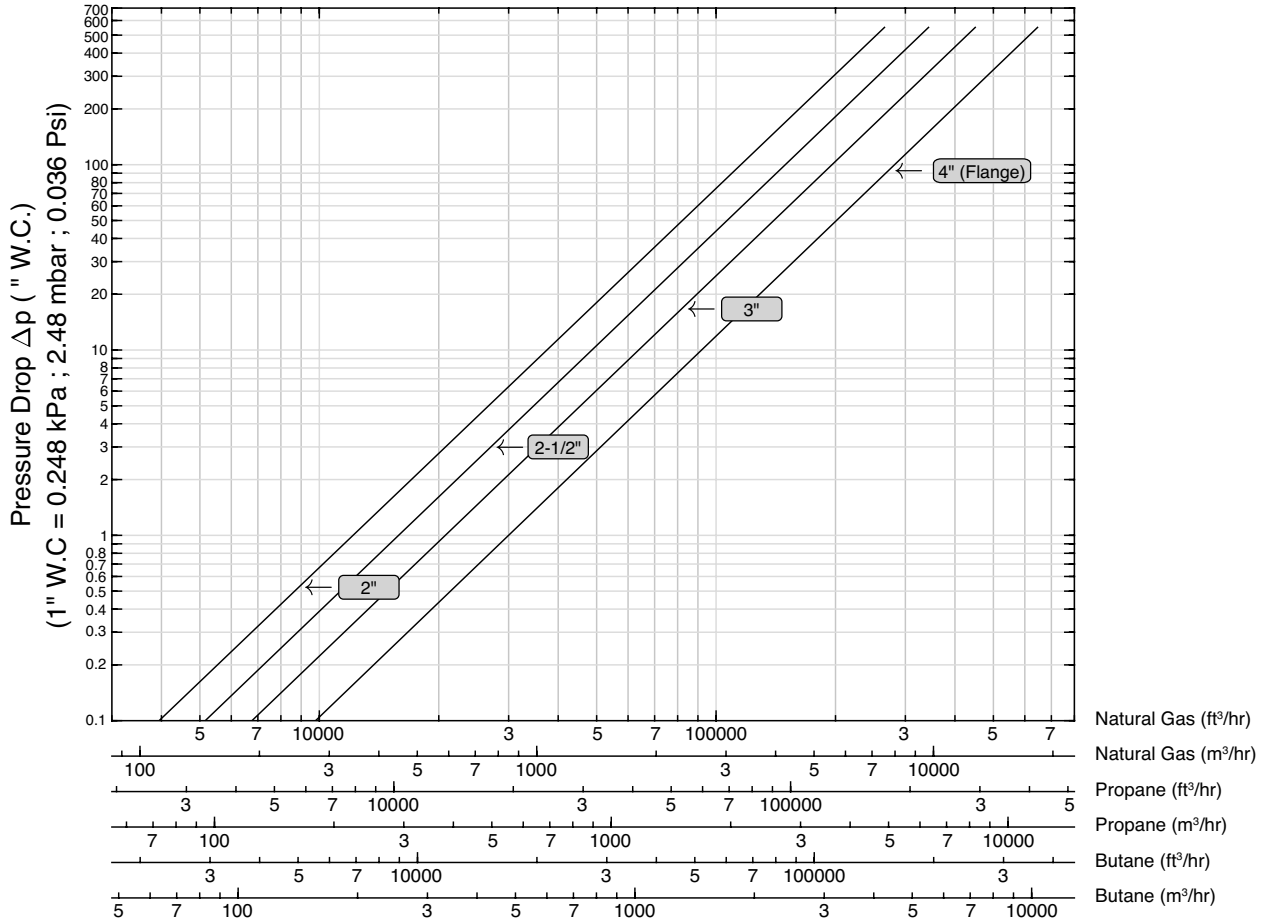
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Gas Flow Chart

H117 N.C Standard Trim



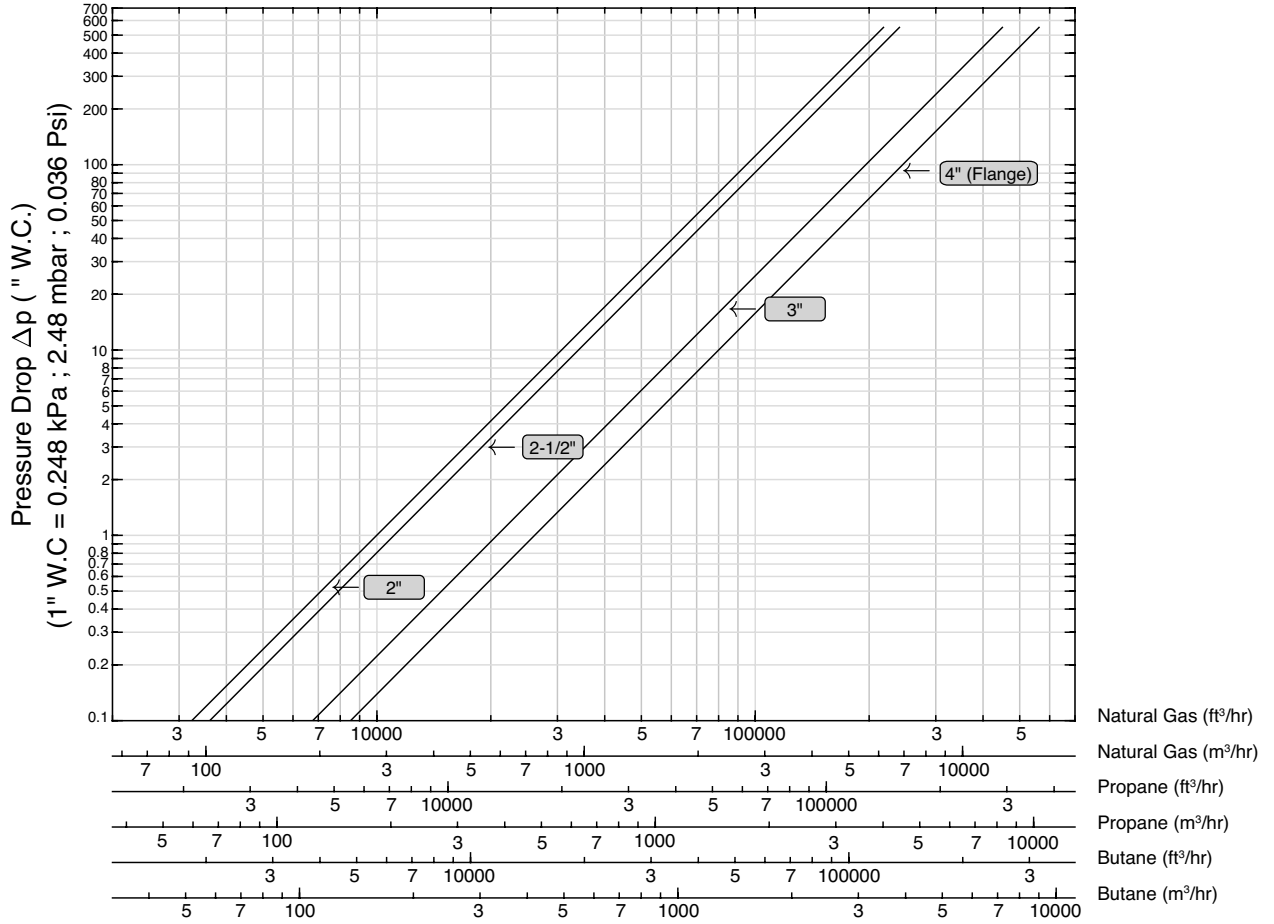
Note: Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68°F (20°C) fluid temperature.

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Gas Flow Chart

H117 N.C Valve Seal Overtravel Trim



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

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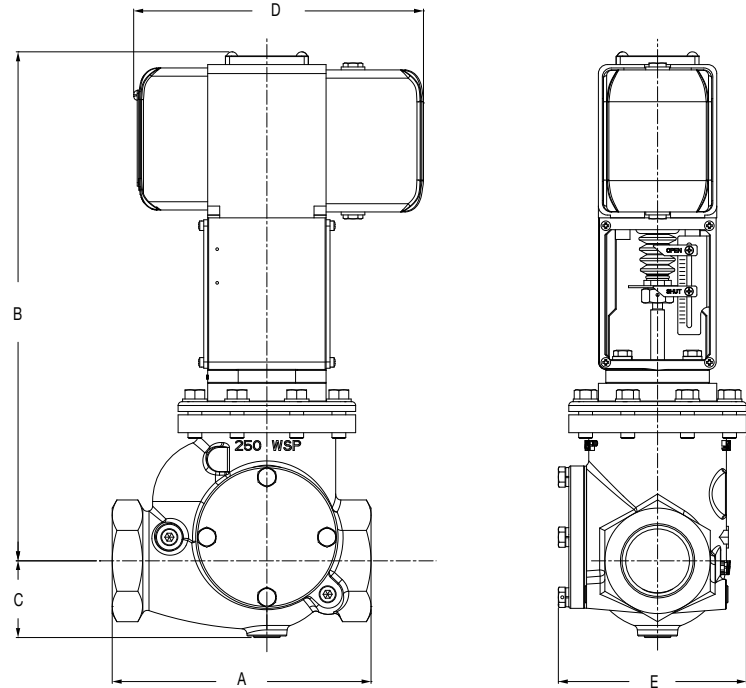
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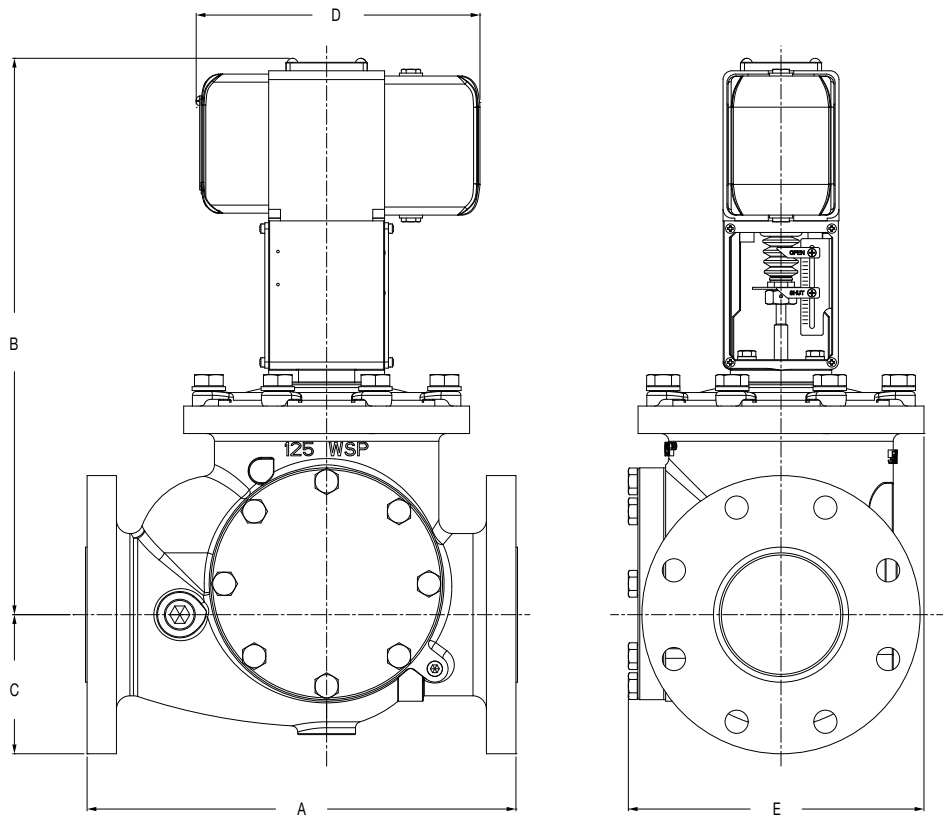
Dimensions inches (mm)

Pipe Size	Const. Ref.	Type 1 General Purpose					
		A	B	C	D	E	
2" NPT	1	in	8.20	15.00	2.50	9.23	5.96
		mm	208	381	64	235	151
2-1/2" NPT	2	in	11.00	16.50	2.91	9.23	7.5
		mm	279	419	74	235	191
3" NPT	3	in	11.00	16.50	2.91	9.23	7.5
		mm	279	419	74	235	191
4" flange	4	in	13.88	17.95	4.50	9.23	9.57
		mm	353	456	114	235	243

Const. Ref. 1, 2, 3



Const. Ref. 4



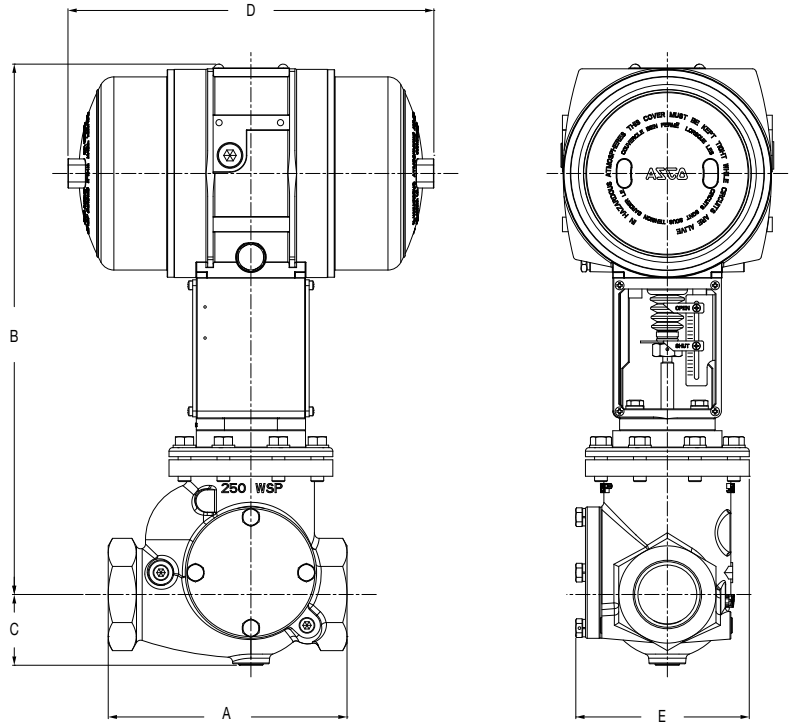
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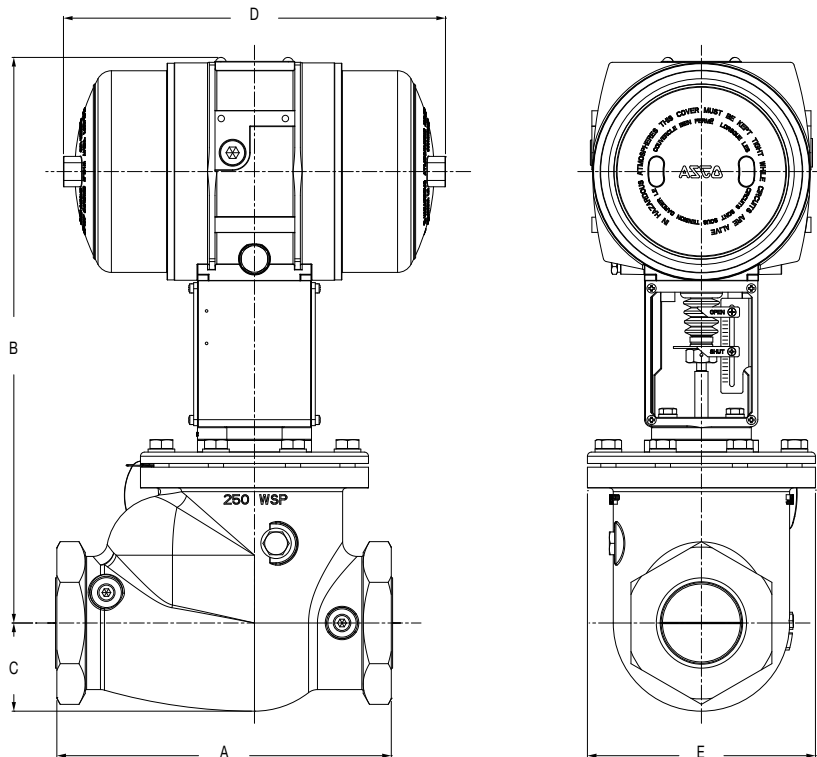
Dimensions inches (mm)

Pipe Size	Type 4/7 Watertight/Explosionproof						
	Const Ref.		A	B	C	D	E
2" NPT	5	in	8.20	18.22	2.50	12.57	7.26
		mm	208	463	64	319	184
2-1/2" NPT	6	in	11.00	18.67	2.91	12.57	7.5
		mm	279	474	74	319	191
3" NPT	7	in	11.00	18.67	2.91	12.57	7.5
		mm	279	474	74	319	191
4" flange	8	in	13.88	20.00	4.50	12.57	9.74
		mm	353	509	114	319	247

Const. Ref. 5



Const. Ref. 6, 7



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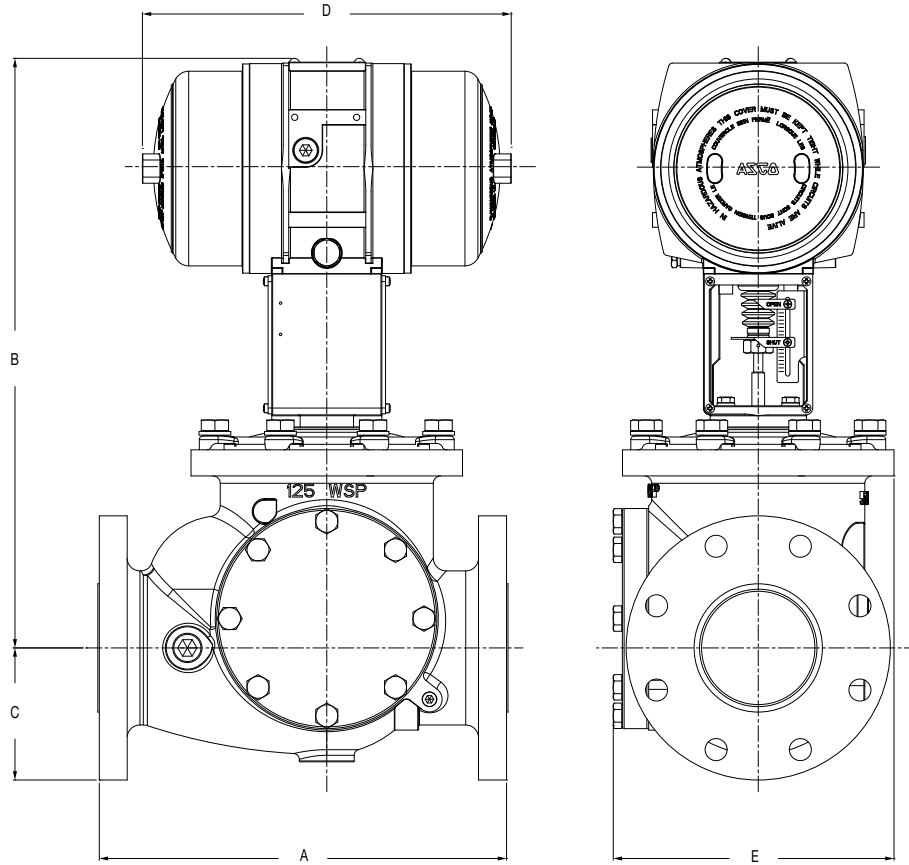
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Dimensions inches (mm)

Const. Ref. 8



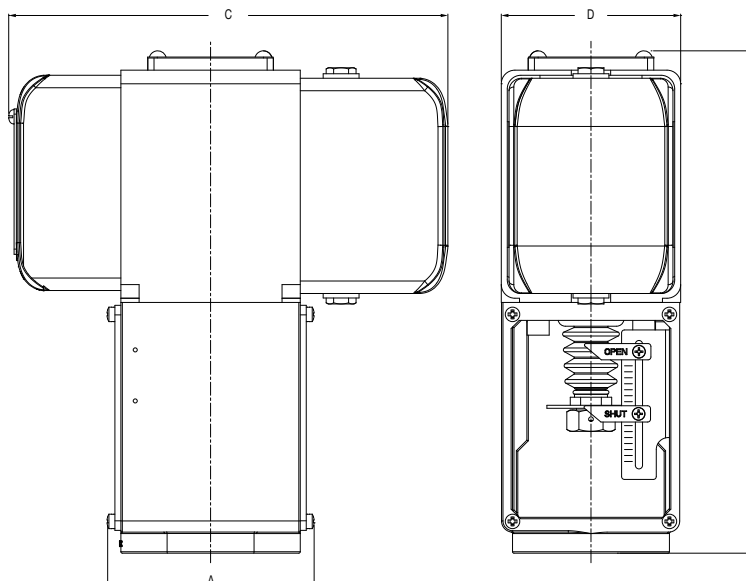
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Dimensions inches (mm)

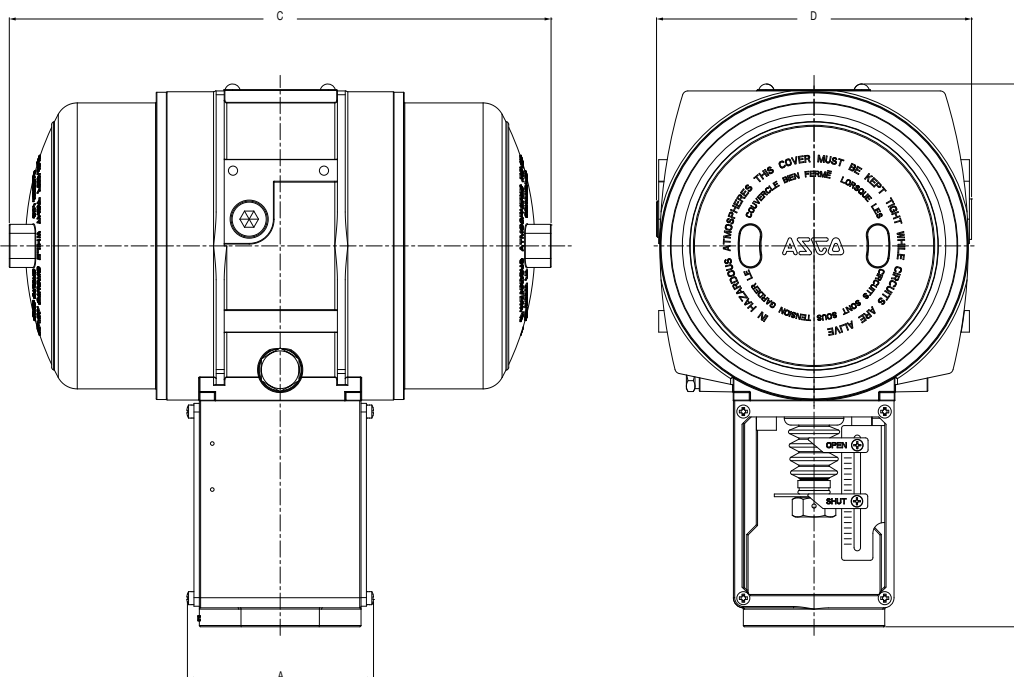
Type 1 General Purpose H10/H11 Series Replacement Actuator					
Const. Ref.		A	B	C	D
9	in	4.32	10.51	9.23	3.74
	mm	110	267	235	95

Const. Ref. 9



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

Const. Ref. 10



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