

# Gas Shutoff Valves

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

## 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 |
| <b>1" Through 3"</b> |         |         |         |
| 120V/60Hz            | 13.2    | 1.32    | 0.14    |
| 240V/60Hz            | 6.6     | 0.66    | 0.07    |
| <b>4" Only</b>       |         |         |         |
| 120V/60Hz            | 24.0    | 2.40    | 0.18    |

## Auxiliary Switches:

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

## Proof of Closure Switch:

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



## Installation

Multi-poise, may be mounted in any position.

## Approvals

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

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

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

## 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 |                          |                  |             |        |                    |                                  |
| <b>Combustion (Fuel Gas) - Normally Closed</b>   |                     |                |     |   |             |                          |                  |             |        |                    |                                  |
| <b>Standard Trim, Type 1 General Purpose Enclosure</b>   |                     |                |     |   |             |                          |                  |             |        |                    |                                  |
| 1  | 17(14)              | 915            | 0   | 35(2.4)                                   | 150(66)     | H118AF142F1              | 1                | 0           | 0      | 7-18               | 22(10.0)                         |
| 1-1/4  | 25(21)              | 1,155          | 0   | 35(2.4)                                   | 150(66)     | H118AG142F1              | 1                | 0           | 0      | 7-18               | 23(10.5)                         |
| 1-1/2  | 35(30)              | 1,525          | 0   | 25(1.7)                                   | 150(66)     | H118AH142F1              | 2                | 0           | 0      | 8-20               | 28(12.7)                         |
| 2  | 67(57)              | 3,300          | 0   | 15(1)                                     | 150(66)     | H118AJ142F1              | 3                | 0           | 0      | 10-24              | 32(14.5)                         |
| 2-1/2  | 86(73)              | 3,730          | 0   | 15(1)                                     | 150(66)     | H118AK142F1              | 4                | 0           | 0      | 11-28              | 52(23.6)                         |
| 3  | 125(106)            | 6,095          | 0   | 15(1)                                     | 150(66)     | H118AL142F1              | 5                | 0           | 0      | 12-18              | 54(24.5)                         |
| 4 (Flange)   | 168(143)            | 9,710          | 0   | 15(1)                                     | 150(66)     | H118AN132F1              | 6                | 0           | 0      | 15-24              | 148(67.3)                        |
| <b>Standard Trim, Type 4/7 Watertight/Explosionproof Enclosure</b>                                 |                     |                |     |   |             |                          |                  |             |        |                    |                                  |
| 1  | 17(14)              | 915            | 0   | 35(2.4)                                   | 150(66)     | H118BF142F1              | 7                | 0           | 0      | 7-18               | 32(14.5)                         |
| 1-1/4  | 25(21)              | 1,155          | 0   | 35(2.4)                                   | 150(66)     | H118BG142F1              | 7                | 0           | 0      | 7-18               | 33(15.0)                         |
| 1-1/2  | 35(30)              | 1,525          | 0   | 25(1.7)                                   | 150(66)     | H118BH142F1              | 8                | 0           | 0      | 8-20               | 38(17.2)                         |
| 2  | 67(57)              | 3,300          | 0   | 15(1)                                     | 150(66)     | H118BJ142F1              | 9                | 0           | 0      | 10-24              | 42(19.1)                         |
| 2-1/2  | 86(73)              | 3,730          | 0   | 15(1)                                     | 150(66)     | H118BK142F1              | 10               | 0           | 0      | 11-28              | 62(28.1)                         |
| 3  | 125(106)            | 6,095          | 0   | 15(1)                                     | 150(66)     | H118BL142F1              | 11               | 0           | 0      | 12-18              | 64(29.0)                         |
| 4 (Flange)   | 168(143)            | 9,710          | 0   | 15(1)                                     | 150(66)     | H118BN132F1              | 12               | 0           | 0      | 15-24              | 160(72.6)                        |
| <b>Valve Seal Overtravel Trim (Proof of Closure), Type 1 General Purpose Enclosure</b>             |                     |                |     |   |             |                          |                  |             |        |                    |                                  |
| 2  | 67(57)              | 3,300          | 0   | 15(1)                                     | 150(66)     | H118AJ142F1F26V16        | 3                | 0           | 0      | 9-17               | 37(16.8)                         |
| 2-1/2  | 86(73)              | 3,730          | 0   | 15(1)                                     | 150(66)     | H118AK142F1F26V16        | 4                | 0           | 0      | 11-20              | 57(25.9)                         |
| 3  | 125(106)            | 6,095          | 0   | 15(1)                                     | 150(66)     | H118AL142F1F26V16        | 5                | 0           | 0      | 13-23              | 59(26.8)                         |
| 4 (Flange)   | 168(143)            | 9,710          | 0   | 15(1)                                     | 150(66)     | H118AN132F1F26V16        | 6                | 0           | 0      | 15-24              | 153(69.5)                        |
| <b>Valve Seal Overtravel Trim (Proof of Closure), Type 4/7 Watertight/Explosionproof Enclosure</b> |                     |                |     |   |             |                          |                  |             |        |                    |                                  |
| 2  | 67(57)              | 3,300          | 0   | 15(1)                                     | 150(66)     | H118BJ142F1F26V16        | 9                | 0           | 0      | 9-17               | 47(21.3)                         |
| 2-1/2  | 86(73)              | 3,730          | 0   | 15(1)                                     | 150(66)     | H118BK142F1F26V16        | 10               | 0           | 0      | 11-20              | 67(30.4)                         |
| 3  | 125(106)            | 6,095          | 0   | 15(1)                                     | 150(66)     | H118BL142F1F26V16        | 11               | 0           | 0      | 13-23              | 69(31.3)                         |
| 4 (Flange)   | 168(143)            | 9,710          | 0   | 15(1)                                     | 150(66)     | H118BN132F1F26V16        | 12               | 0           | 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)

## 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                   |
|----------------------|-----------|------------------------|
| <b>1" Through 3"</b> |           |                        |
| S104772EA1           | 1         | Auxiliary (Adjustable) |
| S104772EA2           | 2         |                        |
| S104772EA3           | 3         |                        |
| S104772EAX1          | 1         | Proof of Closure       |
| <b>4" Only</b>       |           |                        |
| S104772FA1           | 1         | Auxiliary (Adjustable) |
| S104772FA2           | 2         |                        |
| S104772FA3           | 3         |                        |
| S104772FAX1          | 1         | Proof of Closure       |

\* Yoke Mounted

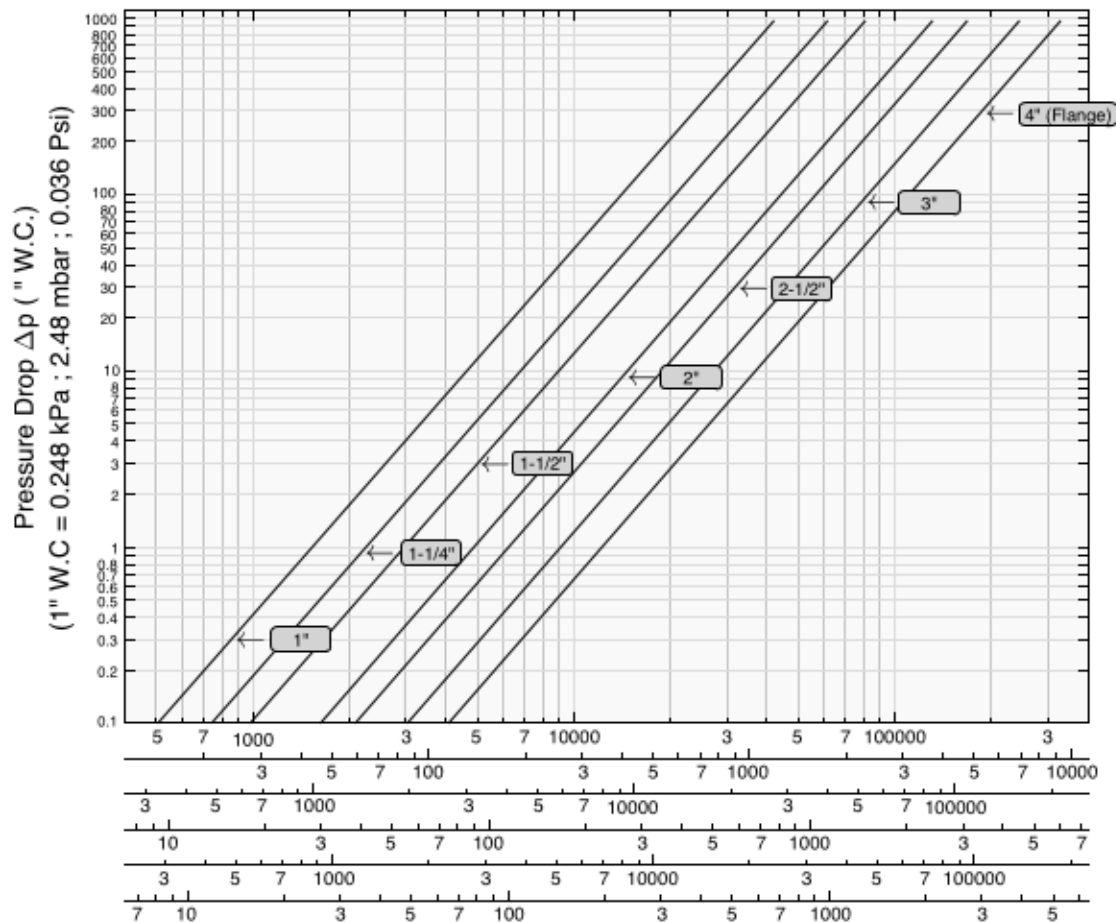
# Gas Shutoff Valves

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

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SERIES  
H118

## Gas Flow Chart

### H118 N.C Standard Trim

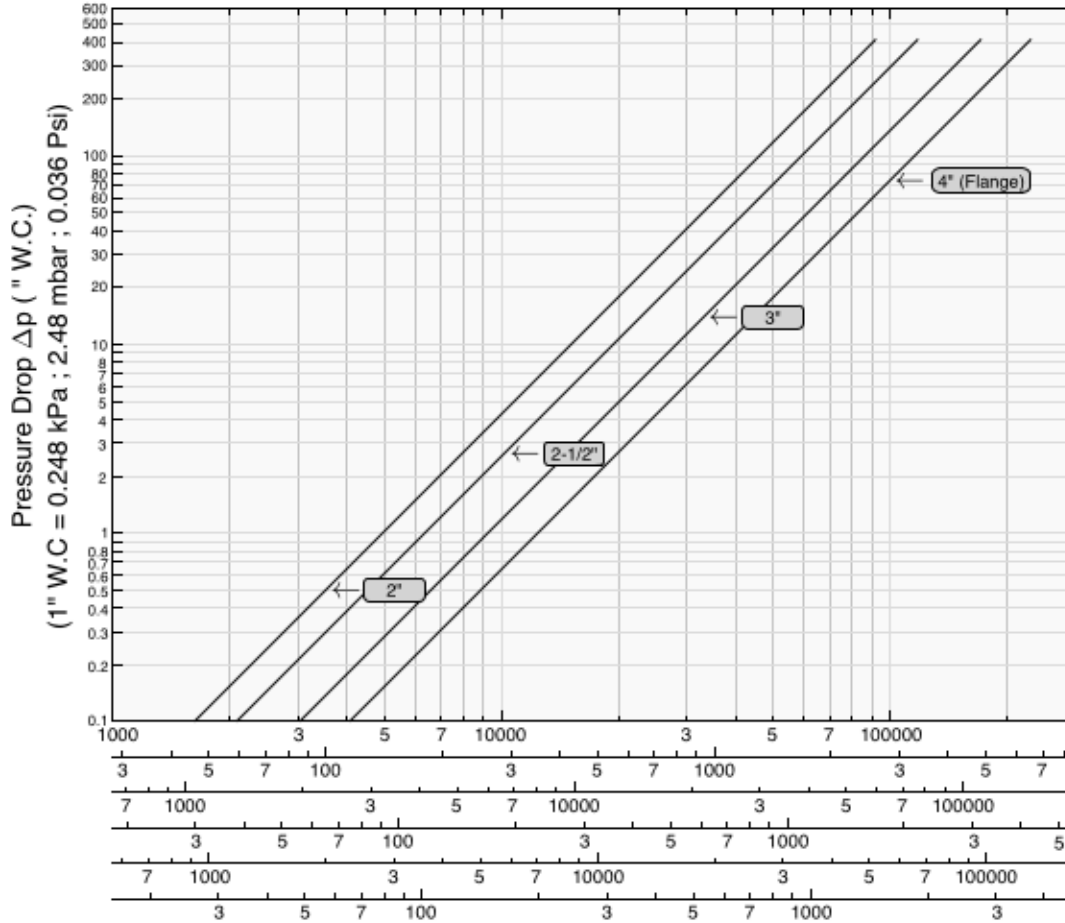


**Note:** Flow curves are based on the following standard conditions: 5 psi (0.3 bar) inlet pressure and 68°F (20°C) fluid temperature.

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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.

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# Gas Shutoff Valves

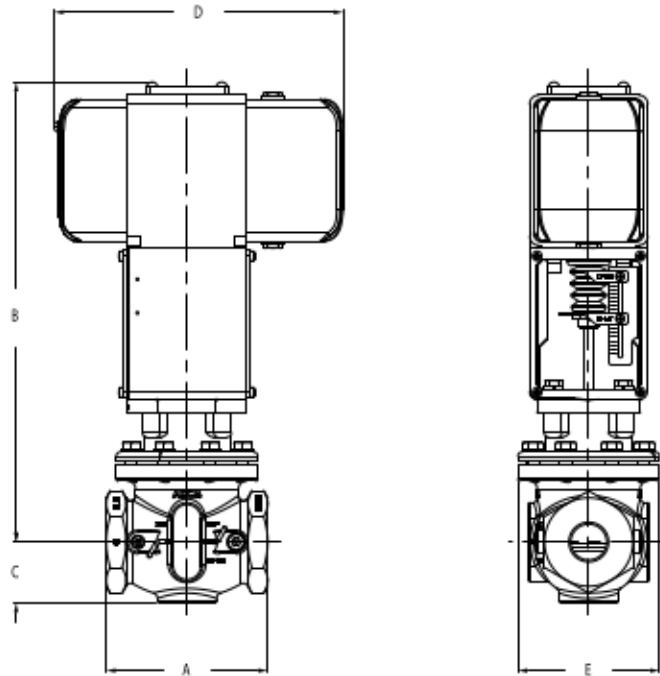
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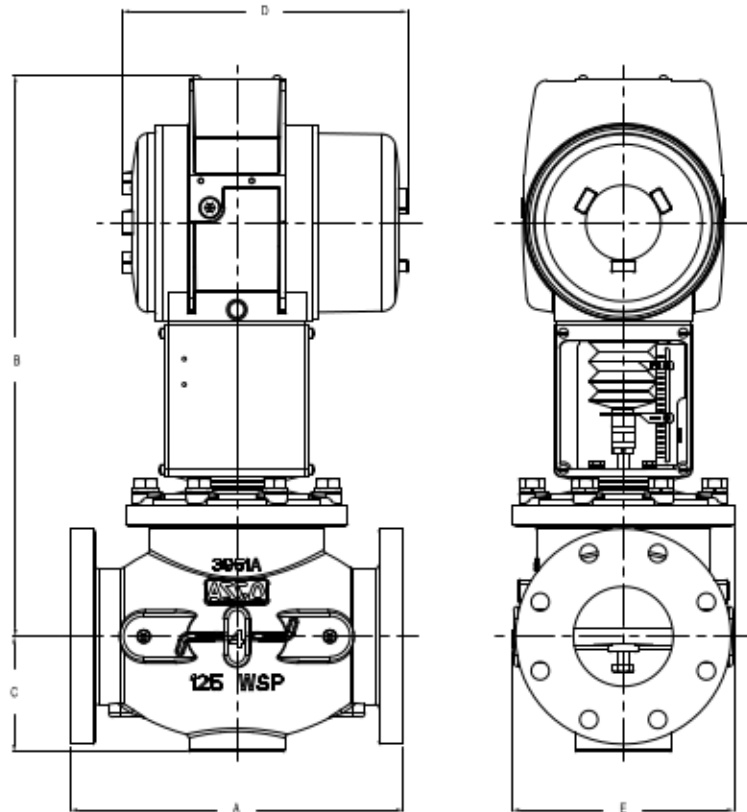
## Dimensions inches (mm)

| 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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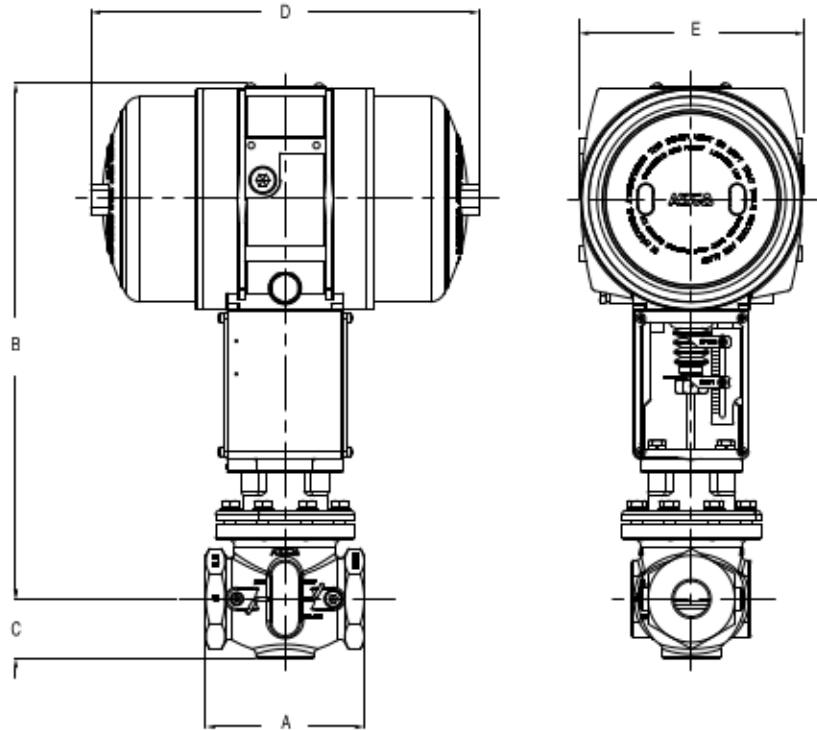
**Gas Shutoff Valves**

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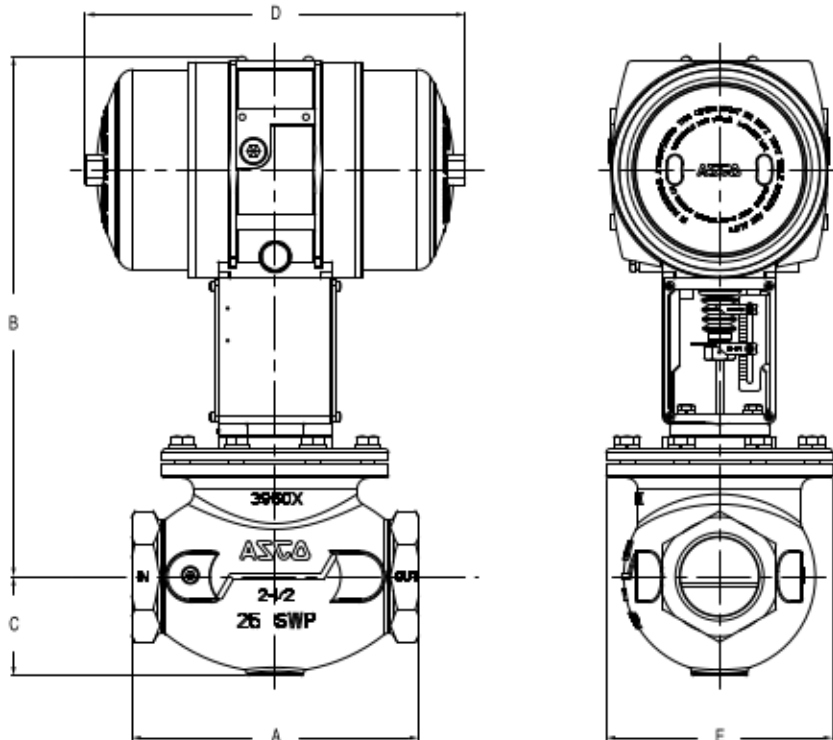
**Dimensions inches (mm)**

| 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 |
|            |                                    | mm | 130   | 426   | 49   | 319   | 184  |
| 1-1/4" 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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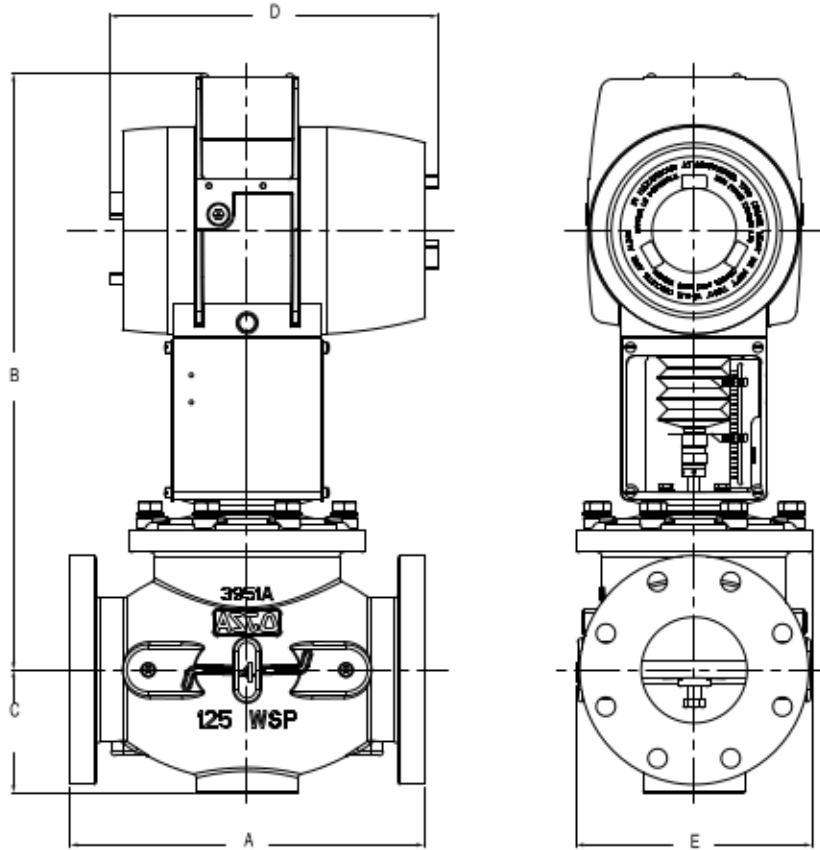
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## Dimensions inches (mm)

Const. Ref. 12

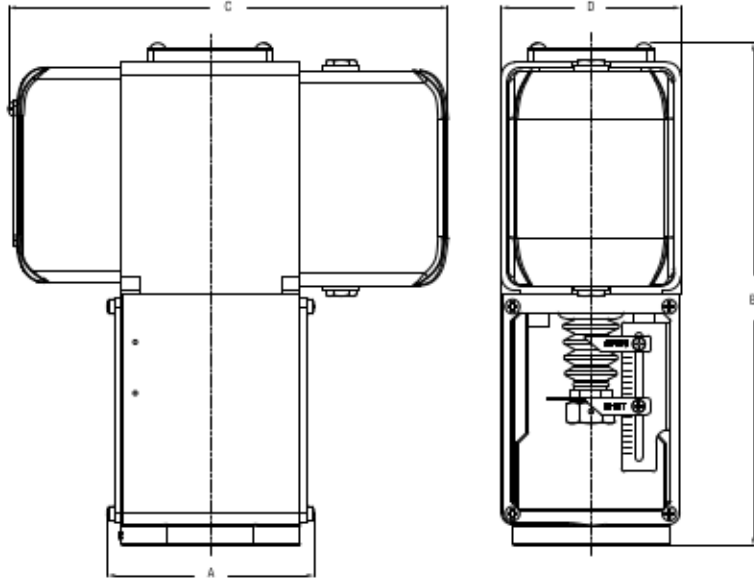


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## Dimensions inches (mm)

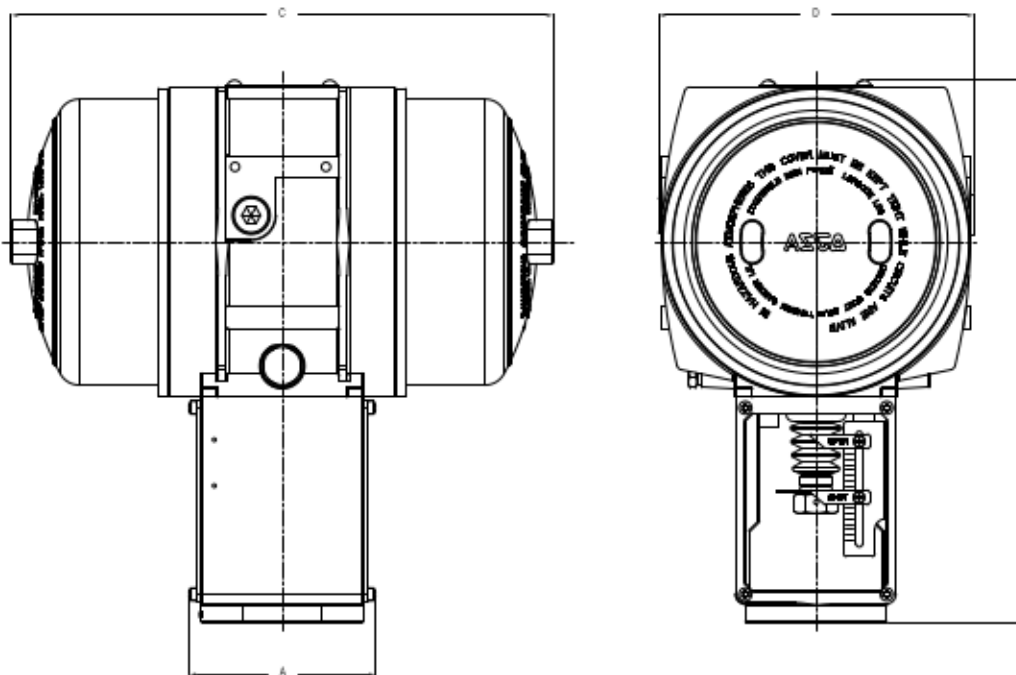
| Type 1 General Purpose              |    |      |       |      |      |
|-------------------------------------|----|------|-------|------|------|
| H10/H11 Series Replacement Actuator |    |      |       |      |      |
| Const. Ref.                         |    | A    | B     | C    | D    |
| 13                                  | 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



COMBUSTION



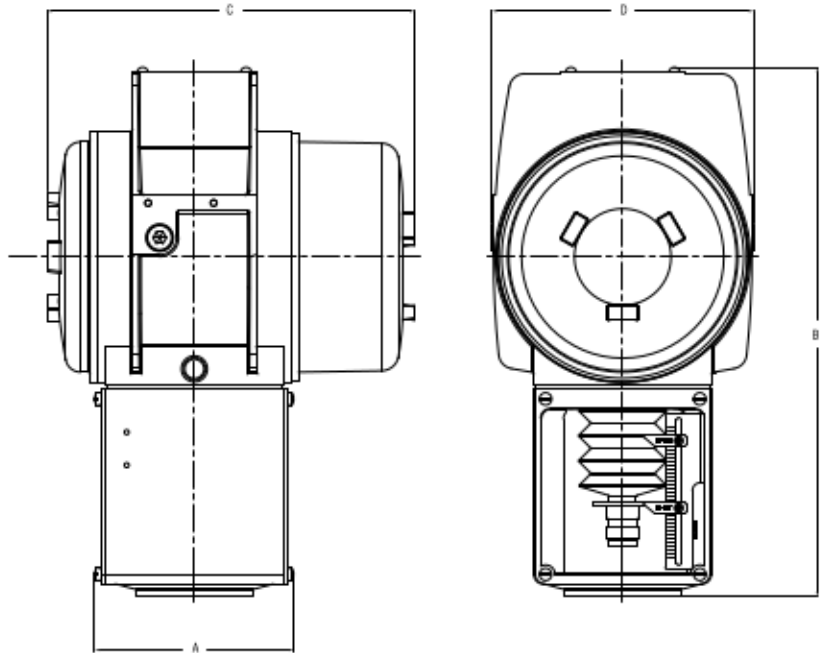
# Gas Shutoff Valves

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

## Dimensions inches (mm)

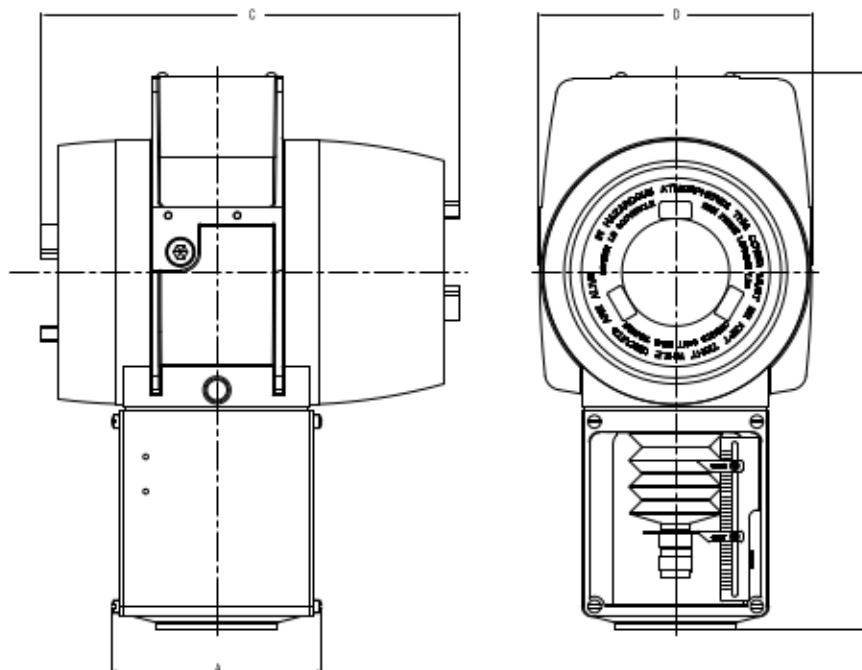
| Type 1 General Purpose<br>H30 Series Replacement Actuator |    |      |       |       |      |
|---|----|------|-------|-------|------|
| Const. Ref.   |    | A    | B     | C     | D    |
| 15  | in | 6.45 | 17.15 | 11.92 | 8.48 |
|   | mm | 164  | 436   | 303   | 215  |

Const. Ref. 15



| Type 4/7 Watertight/Explosionproof<br>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