

## 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.

**Specifications (English units)**

Pipe Size (in)	Cv Flow Factor	Gas Capacity ① Cu.Ft/hr.	Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Catalog Number ② ③	Const. Ref.	Agency			Opening Time (Sec.)	Approx. Shipping Weight (lbs)
			Min.	Max.				UL	FM	CSA		
<b>COMBUSTION (Fuel Gas) - Normally Closed</b>												
<b>Standard Trim</b>												
2	151	8,000	0	20	150	H117AJ112F1	1	○	○	○	12-18	75
2 1/2	244	12,900	0	8	150	H117AK112F1	2	○	○	○	12-18	105
3	320	17,000	0	8	150	H117AL112F1	3	○	○	○	12-18	105
4 (Flange)	510	27,000	0	4	150	H117AN112F1	4	○	○	○	12-20	140
<b>Valve Seal Overtravel Trim (Proof of Closure)</b>												
2	124	6,600	0	20	150	H117AJ112F1F26V16	1	○	○	○	12-18	80
2 1/2	171	9,100	0	8	150	H117AK112F1F26V16	2	○	○	○	12-18	110
3	320	17,000	0	8	150	H117AL112F1F26V16	3	○	○	○	12-18	110
4 (Flange)	444	24,000	0	4	150	H117AN112F1F26V16	4	○	○	○	12-20	145

○ = Safety Shutoff Valve. ① One cu. ft/hr = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.  
 ② Type 4/7 Watertight/Explosionproof change 5th digit to "B" (EX: H117BJ112F1). ③ 240V/60Hz change 9th digit to "4" (EX: H117AJ114F1).

**Specifications (Metric units)**

Pipe Size (in)	Kv Flow (m³/h)	Gas Capacity ① Cu.Ft/hr.	Operating Pressure Differential (bar)		Max. Fluid Temp. °C	Catalog Number ② ③	Const. Ref.	Agency			Opening Time (Sec.)	Approx. Shipping Weight (kgs)
			Min.	Max.				UL	FM	CSA		
<b>COMBUSTION (Fuel Gas) - Normally Closed</b>												
<b>Standard Trim</b>												
2	128	8,000	0	1.4	66	H117AJ112F1	1	○	○	○	12-18	34.1
2 1/2	207	12,900	0	0.6	66	H117AK112F1	2	○	○	○	12-18	47.7
3	272	17,000	0	0.6	66	H117AL112F1	3	○	○	○	12-18	47.7
4 (Flange)	434	27,000	0	0.3	66	H117AN112F1	4	○	○	○	12-20	63.6
<b>Valve Seal Overtravel Trim (Proof of Closure)</b>												
2	105	6,600	0	1.4	66	H117AJ112F1F26V16	1	○	○	○	12-18	36.4
2 1/2	145	9,100	0	0.6	66	H117AK112F1F26V16	2	○	○	○	12-18	50
3	272	17,000	0	0.6	66	H117AL112F1F26V16	3	○	○	○	12-18	50
4 (Flange)	377	24,000	0	0.3	66	H117AN112F1F26V16	4	○	○	○	12-20	65.9

○ = Safety Shutoff Valve. ① One cu. ft/hr = 1,000 Btu/hr, 0.64 Specific Gravity Gas @ 1" W.C.P.D.  
 ② Type 4/7 Watertight/Explosionproof change 5th digit to "B" (EX: H117BJ112F1). ③ 240V/60Hz change 9th digit to "4" (EX: H117AJ114F1).

**COMBUSTION**

**Replacement Switches:**

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

\* Yoke Mounted

**Replacement Actuators:**

Catalog Number	Voltage
H10A620B5F1	120V/60Hz
H10A640B5F1	240V/60Hz

For FM Proof of Closure add F26 to Cat. No.

### Dimensions inches (mm)

Const Ref.		A	B	C
1	in	8.13	18.13	2.50
	mm	207	461	64
2	in	10.88	18.63	2.88
	mm	276	473	73
3	in	10.88	18.63	3.88
	mm	276	473	99
4	in	13.88	20.00	4.06
	mm	353	508	103



