



### General Description

The AH2 Hydramotors are push-type, self-contained, electrohydraulic linear actuators which extend when powered and retract by spring force upon power interruption.

AH2 Hydramotors provide a fast spring return shutoff time of one second or less. When the actuator is mounted to a V710 gas valve, position indicators on both sides of the actuator show the open or closed position of the valve.

The AH2 Hydramotor/V710 gas valve combination provides reliable main line gas control for a wide range of applications, including boilers, furnaces, ovens and all types of industrial and commercial burners. It is available in either a slow or fast opening construction.

### Specifications:

**Power Requirement:** 220 VA max.

**Closing Time:** One second max.

**Opening Time:**

Fast Opening: 14 seconds max.

Slow Opening: 26 seconds max.

**Note:** Opening time is double between -30°F and -40°F ambient.  
 Opening time increased 20% when operating on 50Hz.

### Enclosure:

Type 1, 2, 3, 3S, 4, 12, and 13 Combination General Purpose, Watertight, Dusttight and Driptight.

### Ambient Temperature:

-40°F to 150°F (-40°C to 66°C)

### Electrical:

**Actuator:**

**Standard voltages:**

24, 120, 240 volts, AC, 60 Hz (or 110, 220 volts AC, 50 Hz)

**Proof of Closure Switch: (optional)**

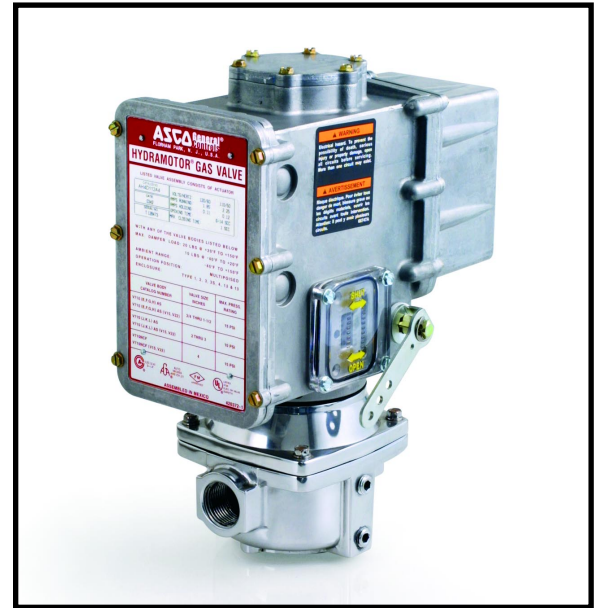
A factory set, non-field adjustable SPDT switch. 1800VA max. connected load (e.g. one 15A load @ 120V or two 3.75A loads @ 240V).

**Auxiliary Switches: (optional)**

One or two integral SPDT switches; field adjustable to actuate at any position of stroke. 1800 VA max. connected load (e.g. one 15A load @ 120V or two 3.75A loads @ 240V).

### Electrical Characteristics

Voltage	Amperes		
	Inrush	Opening	Holding
24V	28	8.00	0.73
120V	5.6	1.85	0.11
240V	2.8	0.92	0.05



Series AH2D Hydramotor with V710 valve body.

### Installation:

AH2 Hydramotor mounts in any position directly to a V710 valve with 4 set screws.



### Damper Arm Rating:

Drives damper in one direction only. 20 lb. max. at 2.85" radius at 20°F to 150°F and 10 lb. max. at -40°F to 20°F.

### Approvals:

AH2 Hydramotor with V710 valve.



File # MP932, Vol. 17, Sec. 3;  
 Safety Valves



CSA Certified to:

- 1) Automatic Gas Valves Z21.21 (6.5), File 109157 and 113070.
- 2) Automatic Gas Safety Shutoff Valves C/I (3.9), File 113070.



J1 3000606  
 Gas Safety Shut-off Valves

### Ordering Information:

Important: Order by Catalogue Number and add suffix number for desired optional feature.  
 e.g. AH2D112A5

### Specifications

Applications	Catalogue Number		
	24 V	120 V	240 V
<b>On-Off Slow Opening (14 to 26 seconds)</b>			
Standard on-off	AH2D101A	AH2D102A	AH2D104A
Proof of closure	AH2D101S	AH2D102S	AH2D104S
<b>On-Off Fast Opening (6 to 14 seconds)</b>			
Standard on-off	AH2D111A	AH2D112A	AH2D114A
Proof of closure	AH2D111S	AH2D112S	AH2D114S

### Optional Features:

(add appropriate suffix number to catalogue number)

One Auxiliary Switch (add suffix 2)

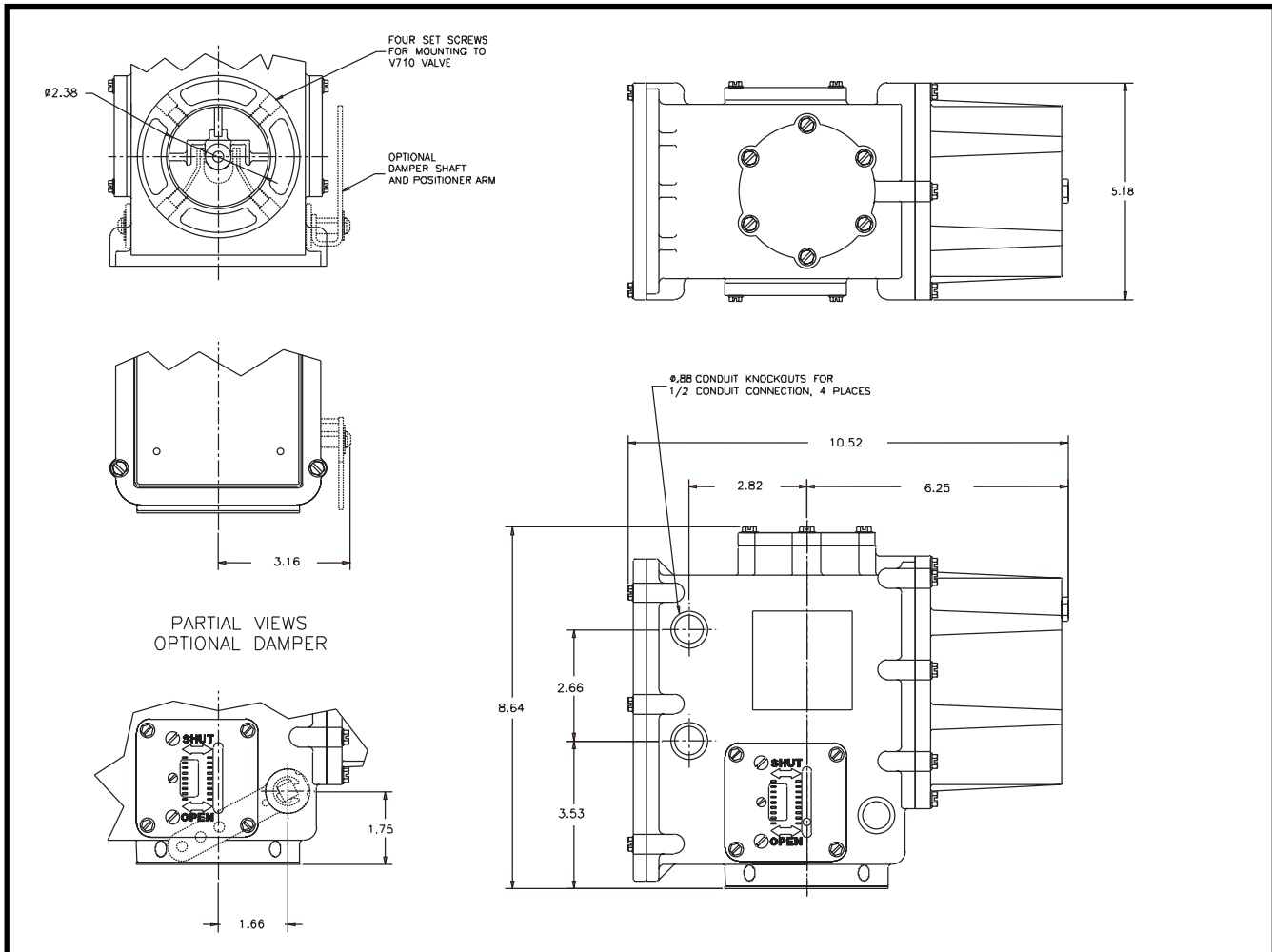
Spring Return Damper Arm (add suffix 3)

Damper Shaft & Arm (add suffix 4)

Damper Shaft, Arm & one Auxiliary Switch, (add suffix 5)

Manual Reset (add suffix R)

### Dimensions: inches



## General Description

These 2 way normally closed globe type valve bodies are designed for on/off or proportional control of commercial or industrial gas burners. The V710 is designed exclusively for use with the AH Hydramotor actuator. The AH Hydramotor valve consists of two assemblies; the valve body and the AH Hydramotor actuator.

The V710 is a Push-to-Open valve which opens when the valve stem is depressed by an AH Hydramotor actuator. An internal return spring closes the valve when the Hydramotor actuator is de-energized.

## Model Types:

### Quick Opening Trim: (Standard)

For applications where metered flow control is not required.

### Quick Opening w/Valve Seal Overtravel Trim: (Suffix V22)

For any "on-off" application where the user, code or approval agency requires a valve seal overtravel arrangement.

### Linear Trim: (Suffix V15)

For applications that require flow control, such as slow opening, low fire turn down, or proportional control.

### Linear w/Valve Seal Overtravel Trim: (Suffix V25)

For applications where both valve seal overtravel and flow control are required. (Not available in 4" flange size.)

## Specifications:

### Pressure Taps:

Two 1/4" NPT downstream, two 1/4" NPT upstream.

**Fluid:** Fuel Gas

### Valve Parts in Contact with Fluid:

Body: 3/4" to 3" NPT, Die-cast aluminum, 4" Flange - cast iron

Bonnet: Die-cast aluminum

Seals: Nitrile

Springs: Zinc-plated music wire

Stem Bushing: Delrin

Valve Stem: 303 s.s.

Retaining Pin: 303 s.s.

Retaining Ring: 17-7 s.s.

Pipe Plugs: Zinc-plated steel

Seal Ring: Teflon (models with overtravel)

**Closeoff Pressure:** 25 psi maximum



Series V710 Valve Body with AH Hydramotor

## Installation:

V710 valve body mounts in any position directly to AH2, AH4, AH8 Hydramotor actuator.



## Approvals:

V710 valve with AH Hydramotor.



File # MP932, Vol. 17, Sec. 3;  
Safety Valves



CSA Certified to:

- 1) Automatic Gas Valves Z21.21 (6.5), File 109157 and 113070.
- 2) Automatic Gas Safety Shutoff Valves C/I (3.9), File 113070.



JI 3000606

Gas Safety Shut-off Valves

## Ordering Information:

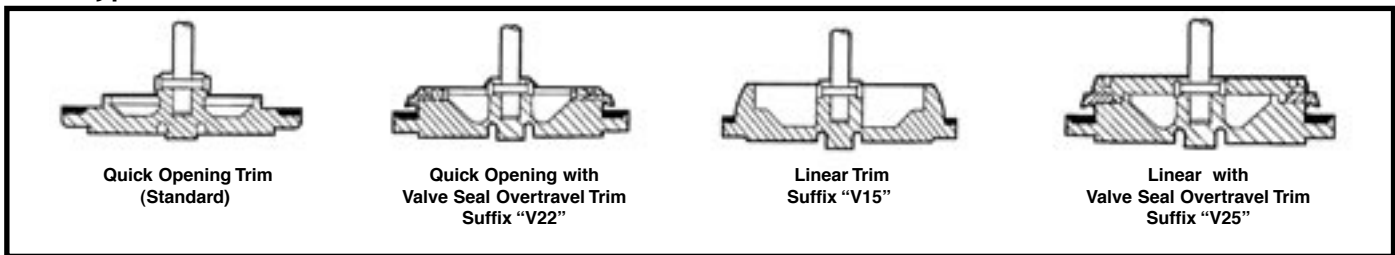
Important: Order by Catalogue Number.  
e.g. V710EASV22

### Specifications

Pipe Size (ins.)	Min. Cv Flow Factor	Min. Gas Capacity* Btu/hr	Operating Pressure Differential (psi)		Fluid & Ambient Temp. °F		Catalogue Numbers			
			Min.	Max.	Min.	Max.	Quick Opening Trim	Quick Opening w/Valve Seal Overtravel Trim	Linear Trim	Linear w/Valve Seal OvertravelTrim
<b>Normally Closed (Closed when released)</b>										
3/4	12	665,000	0	15	-40	150	V710EAS	V710EASV22	V710EASV15	V710EASV25
1	17	960,000	0	15	-40	150	V710FAS	V710FASV22	V710FASV15	V710FASV25
1 1/4	25	1,406,000	0	15	-40	150	V710GAS	V710GASV22	V710GASV15	V710GASV25
1 1/2	30	1,717,000	0	15	-40	150	V710HAS	V710HASV22	V710HASV15	V710HASV25
2	64	3,620,000	0	10	-40	150	V710JAS	V710JASV22	V710JASV15	V710JASV25
2 1/2	75	4,250,000	0	10	-40	150	V710KAS	V710KASV22	V710KASV15	V710KASV25
3	92	5,230,000	0	10	-40	150	V710LAS	V710LASV22	V710LASV15	V710LASV25
4	180	10,200,000	0	15	-40	150	V710NCF	V710NCFV22	V710NCFV15	N/A

\* 1" W. C. Drop @ 2" W. C. Inlet Pressure, 1,000 Btu/Cu. Ft or more, 0.64 Spec. Grav. Gas

### Trim Types



### Dimensions: inches

**3/4" - 3" NPT**

UPSTREAM PRESSURE TAP 1/4" NPT

DOWNSTREAM PRESSURE TAP 1/4" NPT

Pipe Size	A	B	C	D	E	Shipping Weight (lbs.)
3/4	5.78	1.95	2.64	5.19	1.16	4.0
1	5.78	1.95	2.64	5.19	1.16	4.0
1 1/4	5.78	2.01	2.94	5.19	0.70	4.2
1 1/2	5.78	2.01	2.94	5.19	0.70	4.2
2	8.12	2.66	3.05	8.01	0.96	9.5
2 1/2	9.00	2.96	3.87	8.01	0.70	13
3	9.00	2.96	3.87	8.01	0.70	12
4	13.88	5.00	7.40	9.00	0.00	100

**4" FLANGE**

UPSTREAM PRESSURE TAP 1/4" NPT

DOWNSTREAM PRESSURE TAP 1/4" NPT