

### Features

- DC construction (12 & 24 VDC)
- High-force closing spring provides positive shutoff for reverse pressure up to 15" W.C.
- Low Power 24 VDC Peak & Hold: Reduces energy consumption to 3.2 W (Hold). Ideal for remote power-critical installations (2" High Flow to 3")
- Broad ambient temperature range: -40°F to 140°F (-40°C to 60°C)
- 2-way normally closed operation
- Zero differential piloted diaphragm
- High-flow die-cast aluminum bodies
- 1/8" NPT pipe taps with plugs for routine testing
- Optional flange adapters for ease of installation and service
- For on/off control of fuel gas in emergency and standby power systems requiring a primary and alternate fuel source

### Fluid

Fuel Gas

### Construction

Valve Parts in Contact with Fluids	
Body	Aluminum
Seals and Disc	NBR
Core Bushing	PTFE Coated Fiberglass
Core, Bonnet and Plugnut	Zinc-Plated CRS
Springs	302 Stainless Steel
Pipe Plug	Zinc-Plated Steel
Pilot Seat	302 Stainless Steel

### Electrical

Standard Coil and Class of Insulation	Pipe Sizes (in)	Watt Rating (DC)			Ambient Temp. °F (°C)	Spare Coil Family	
		Standard	Peak Watts	Hold Watts		Open Frame DC	General Purpose DC
H	3/4" to 2"	45	-	-	-40 to 140 (-40 to 60)	236825	-
F	2" High Flow to 3"	-	61	3.2		-	-

Standard DC Voltages: 12, 24 (3/4" to 2"); 24 only (2" High Flow to 3")

### Solenoid Enclosures

Open Frame: 18" leads std; 72" leads optional

Type 1 General Purpose: Metal housing with 7/8" hole for 1/2" conduit connection

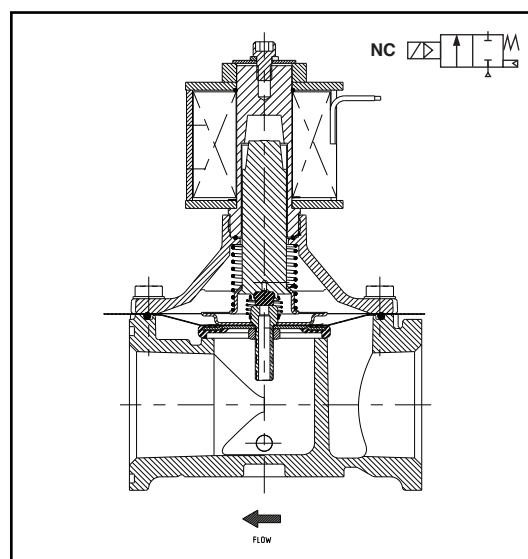
### Valve Response Time

Valve Opening/Closing Time: Less than 1 second

### Closeoff Pressure

50 psi (3.5 bar) maximum (3/4" to 2")

5 psi (0.35 bar) maximum (2" High Flow to 3")



### Approvals

Open Frame: UL recognized component to standard 429 "Electrically Operated Valve", Guide Y10Z2, File MP618 Safety Valves

General Purpose: UL Listed to standard 429 "Electrically Operated Valve", Guide Y10Z, File MP618 Safety Valves

Open Frame/General Purpose: CSA Certified to:

1) Standard C22.2 No.139 "Electrically Operated Valves", File 010381

2) Automatic Gas Valves Z21.21, CSA 6.5 C/I, File 112872

COMBUSTION



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Thorne & Derrick  
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## How to Order (Example: X214439998001H3)

Base Catalog Number	Item	Voltage / Class
X214439998 Small body, Open frame	001* 3/4"	H3 12VDC / H
	002* 1"	H1 24VDC / H
	003* 1-1/4"	
	004* 1-1/2"	
X214439999 Medium body Open frame	005* 1-1/4", High flow	H3 12VDC / H
	006* 1-1/2", High flow	H1 24VDC / H
	007* 2"	
X214440000 Large body, Type 1 General Purpose Enclosure	018 2", High flow	F1 24VDC / F
	019 2-1/2"	
	010 3"	

\* 18" leads std. For 72" Leads change  
1st digit to 1 (example, 101)

## Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Fuel Gas Capacity		Operating Pressure Differential (psi)		Max. Fluid Temp. °F	Base Catalog Number	Item	Const. Ref.	Agency		Wattage	Approx. Shipping Weight (lbs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.	DC				UL	CSA	DC	
Open Frame														
3/4"	1 5/8	11	593,200	1,411,500	0	5	140	X214439998	001 ③	1	○	○	45	9.2
1"	1 5/8	21	1,132,300	2,695,000	0	5	140		002 ③	1	○	○	45	9
1-1/4"	1 5/8	32	1,725,500	4,107,000	0	5	140		003 ③	1	○	○	45	8.9
1-1/2"	1 5/8	35	1,887,200	4,492,000	0	5	140		004 ③	1	○	○	45	8.7
1-1/4" (High Flow)	2 3/32	36	1,925,000	4,620,000	0	5	140	X214439999	005 ③	2	○	○	45	10.2
1-1/2" (High Flow)	2 3/32	45	2,406,000	5,775,500	0	5	140		006 ③	2	○	○	45	10
2"	2 3/32	55	2,940,500	7,059,000	0	5	140		007 ③	2	○	○	45	9.7
General Purpose														
2 (High Flow)	3	75	4,044,100	15,388,000	0	5	140	X214440000	018	3	○	○	61/3.2 ④	19.2
2-1/2	3	104	5,607,800	21,339,000	0	5	140		019	3	○	○	61/3.2 ④	18.5
3	3	105	5,661,700	21,544,000	0	5	140		010	3	○	○	61/3.2 ④	17.5
○ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Per CSA 6.5 @ 25% Inlet Pressure /10% pressure drop. ③ 18" leads standard. For 72" leads change 1st digit to 1 (example, 101). ④ Peak & Hold Construction, 61 watts for up to 2 seconds to pull in and 3.2 watts to hold.														

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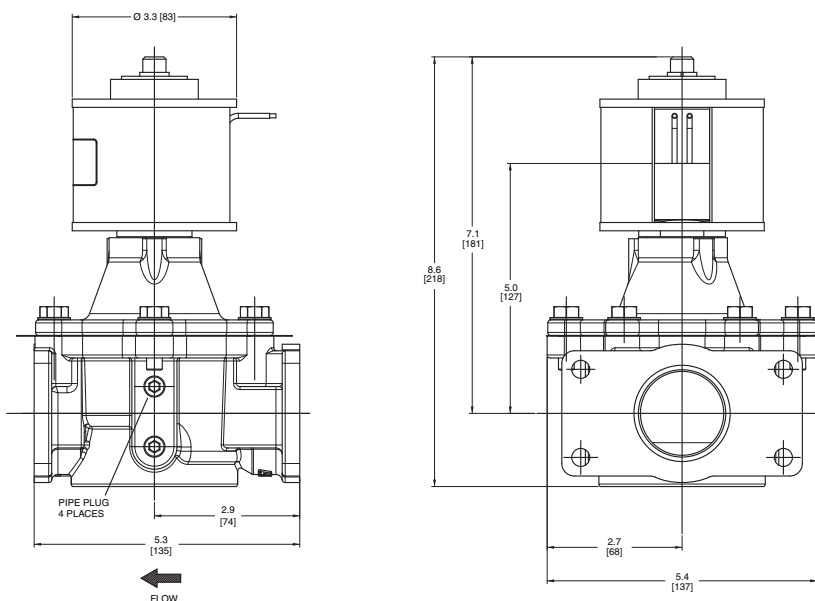
## Specifications (Metric units)

Pipe Size (in)	Orifice Size (in)	Kv Flow (m³/hr)	Fuel Gas Capacity		Operating Pressure Differential (bar)		Max. Fluid Temp. °C	Base Catalog Number	Item	Const. Ref.	Agency		Wattage	Approx. Shipping Weight (kgs)
			Btu/hr. ①	Btu/hr. ②	Min.	Max.	DC				UL	CSA	DC	
Open Frame														
3/4"	41	9.4	593,200	1,411,500	0	0.3	60	X214439998	001 ③	1	○	○	45	4.2
1"	41	17.9	1,132,300	2,695,000	0	0.3	60		002 ③	1	○	○	45	4.1
1-1/4"	41	27.3	1,725,500	4,107,000	0	0.3	60		003 ③	1	○	○	45	4
1-1/2"	41	29.9	1,887,200	4,492,000	0	0.3	60		004 ③	1	○	○	45	3.9
1-1/4" (High Flow)	53	30.7	1,925,000	4,620,000	0	0.3	60	X214439999	005 ③	2	○	○	45	4.6
1-1/2" (High Flow)	53	38.4	2,406,000	5,775,500	0	0.3	60		006 ③	2	○	○	45	4.5
2"	53	46.9	2,940,500	7,059,000	0	0.3	60		007 ③	2	○	○	45	4.4
General Purpose														
2 (High Flow)	76	64	4,044,100	15,388,000	0	0.3	60	X214440000	018	3	○	○	61/3.2 ④	8.7
2-1/2	76	88.7	5,607,800	21,339,000	0	0.3	60		019	3	○	○	61/3.2 ④	8.4
3	76	89.6	5,661,700	21,544,000	0	0.3	60		010	3	○	○	61/3.2 ④	7.9
○ = Safety Shutoff Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas. ② Per CSA 6.5 @ 25% Inlet Pressure /10% pressure drop. ③ 18" leads standard. For 72" leads change 1st digit to 1 (example, 101). ④ Peak & Hold Construction, 61 watts for up to 2 seconds to pull in and 3.2 watts to hold.														

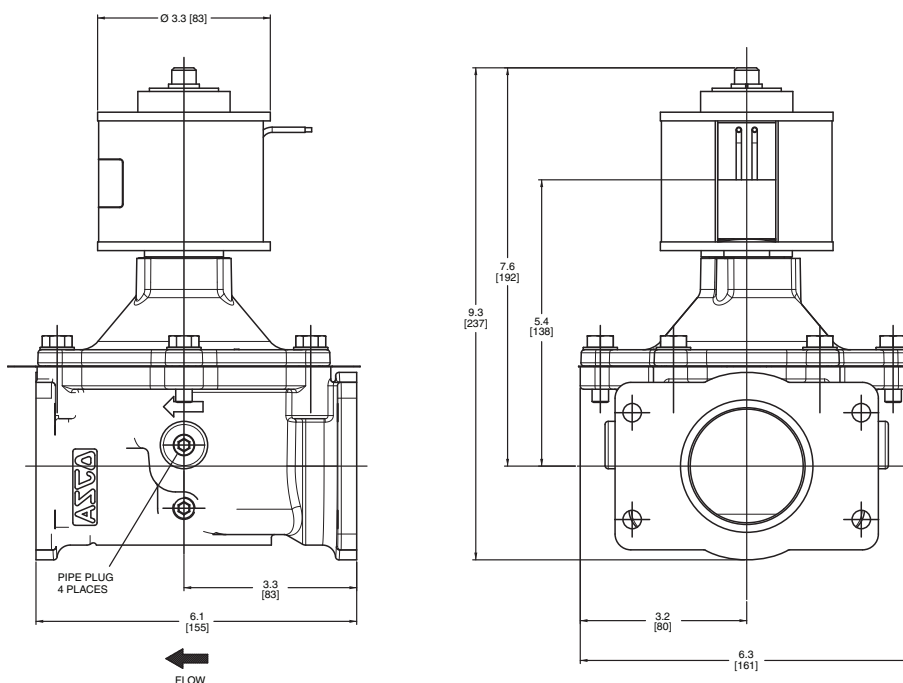
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### Dimensions inches (mm)

Const. Ref. 1

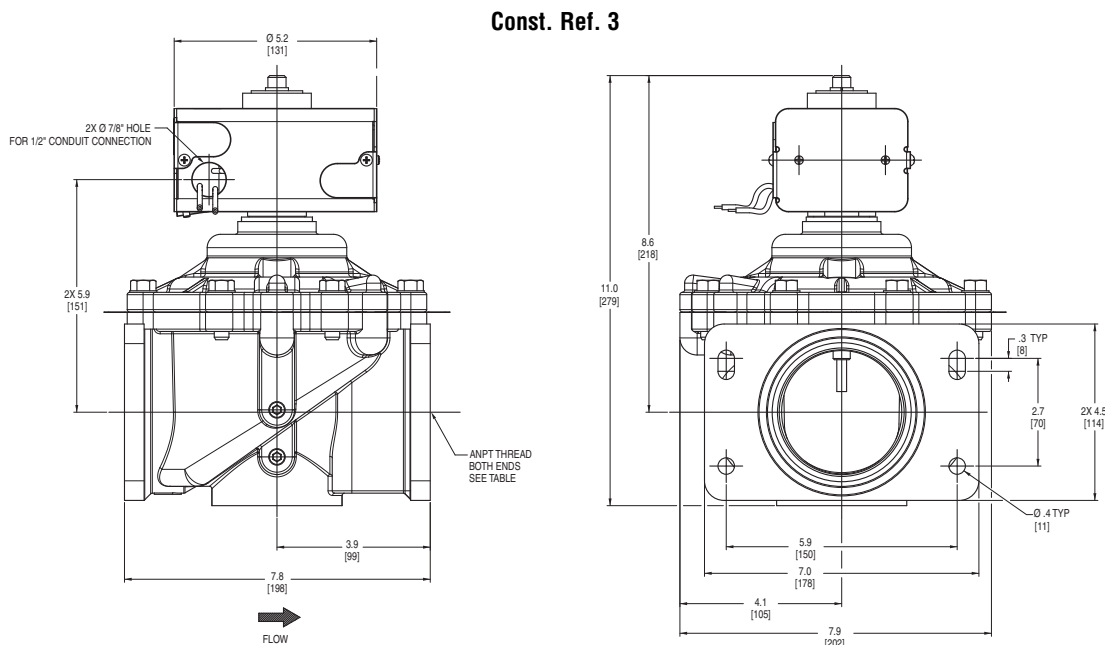


Const. Ref. 2



Must be mounted with solenoid vertical and upright.

**Dimensions inches (mm)**



**Must be mounted with solenoid vertical and upright.**

**Flange Adapters**

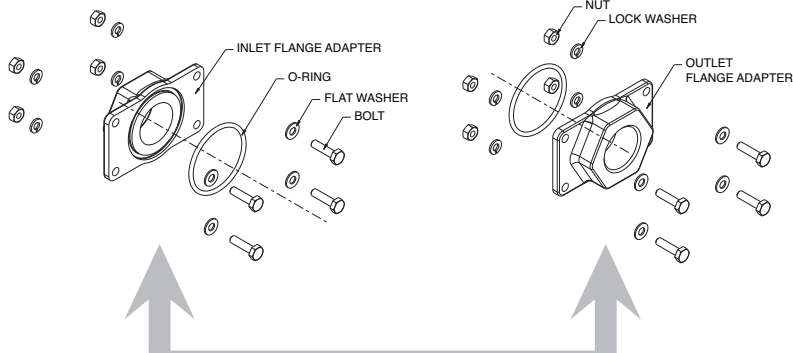
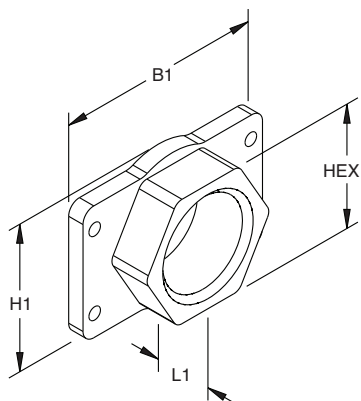
Pipe Size (in)		B1	H1	L1	HEX
3/4", 1"	in	4.8	2.5	1.27	2.5
	mm	122	76	32	64
1-1/4" 2"	in	5	3.56	1.38	3
	mm	127	90	35	76
2" (High Flow) - 3"	in	7	4.5	2.01	4.5
	mm	178	114	51	114

**Flange Adapter Kits (Optional)**

Pipe Size (in)	Inlet & Outlet Adapter/Hardware Kit	Approx. Shipping Weight (lbs)
3/4	296659-001	1.6
1	296659-002	1.5
1-1/4	296659-003	1.3
1-1/2	296659-004	1.2
1-1/4 (High Flow)	296659-005	2.4
1-1/2 (High Flow)	296659-006	2.1
2	296659-007	1.7
2 (High Flow)	296659-008	6.6
2-1/2	296659-009	6.0
3	296659-010	4.9

**Rebuild Kits**

Pipe Size (in)	Standard Rebuild Kit
3/4, 1-1/4, 1-1/2	M200384N00
1-1/4 (High Flow), 1-1/2 (High Flow), 2	M200385N00
2 (High Flow), 2-1/2, 3	-



**INLET & OUTLET  
FLANGE ADAPTERS AND HARDWARE KIT**