



Model **100G-UQ-FS2**

## Double Fail Safe Pneumatically Actuated On/Off Deluge Valve with Manual Reset



### Description

The Cla-Val Model 100G-UQ-FS2 is a Double Fail Safe pneumatically actuated on/off deluge valve designed for use in multiple applications.

The 100G-UQ-FS2 can be actuated locally by relieving cover pressure through our EDVR (Emergency Deluge Valve Release) or remotely via solenoid. The 100G-UQ-FS2 will need to be reset locally by reengaging the latching pilot.

\*\*Review IOM manual for latching pilot details.

### Main Valve Features

- Dual Guided Stem Internal for Consistent Linear Seating
- Tapered Metal Seat for Drip Tight Shut-off
- Replaceable 316 Stainless Steel Seat
- Single Internal Guided Assembly
- Proven Repeat Functionality in Harsh Conditions
- In-Line Maintenance

### Optional UL Features

- X101 Valve Position Indicator
- X141 Pressure Gauges
- Pressure Switch Assembly
- X105 Limit Switch

### Listings and Approvals



### Actuation Method

- EDVR Manual Release
- Solenoid Actuation

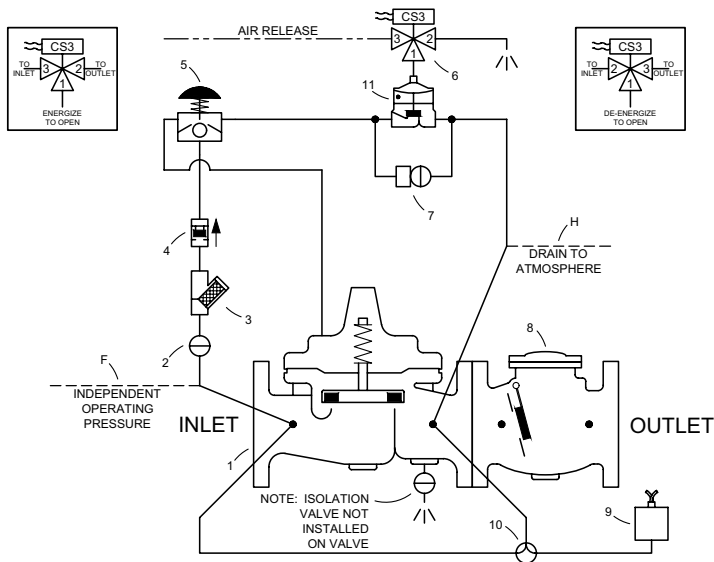
### Typical Applications

- Programmable Logic Systems
- Local Reset Applications
- Foam Applications
- Pneumatically Actuated Systems
- Automatic Deluge Systems



# Double Fail Safe Electrically Pneumatically On/Off Deluge Valve with Manual Reset

## Schematic Diagram



Item	Description
1	UL Listed Valve
2	Isolation Valve
3	Strainer
4	Check Valve
5	Manual Reset Pilot
6	Solenoid Control
7	Emergency Deluge Valve Release
8	Swing Check
9	Pressure Switch
10	CK3 Cock
11	Auxiliary Powertrol

## Optional Features

Item	Description
F	Independent Operating Pressure
H	Drain to Atmosphere

Cla-Val Model 100G-UQ-FS2 is a Single Fail Safe, pneumatically actuated on/off latching deluge valve designed for use in multiple applications. The 100G-UQ-FS2 pilot system will need to be reset locally by reengaging the latching pilot. \*\*\*Review IOM manual for latching pilot details.

**Closed Position:** Supply pressure is applied through our Main Valve(1) Inlet Port or Independent Supply Line (F). The supply pressure will pass through our inlet isolation ball valve (2), strainer (3), check valve (4), and our manual reset pilot (5) before being applied to our Main Valve (1) Cover. Additionally, the supply pressure will pass through our solenoid (6) before applying supply pressure to our auxiliary hytrol cover (8).

**Open Position:** Main Valve (1) Cover pressure is released through our EDVR (Item 7) which consists of a quarter turn ball valve or via electric actuation per customer design. The 100G-UQ-FS2 requires two predetermined controller logics to be met before electric actuation can occur.

**Note: For seawater applications use 100GS/2100GS main valve**

## Main Valve Specifications

### UL APPROVED SIZES

Globe: 3" - 12" flanged  
 Globe: 3" - 8" grooved  
 Angle: 3" - 12" flanged

### PRESSURE RATINGS

150 class, 250 psi maximum (Ductile Iron)  
 150 class, 285 psi maximum (All other materials)  
 300 class, 300 psi maximum (All materials)

### TEMPERATURE RANGE

Water: to 180° F. Max

### FLUIDS

Air, water, light oils

## Materials

### Main valve body & cover:

Standard Epoxy Coated Ductile Iron  
 ASTM A-536\*

### Main valve trim:

Stainless Steel

### Pilot control system:

Cast Bronze

### Rubber Parts:

Buna-N® Synthetic Rubber

## Optional UL Listed Materials for Seawater and Severe Service Applications:

- **Nickel Aluminum Bronze (NAB)**  
ASTM B148 Alloy C95800
- **Monel - QQ-N-288 Comp B**  
ASTM A494 Grade M30H
- **Cast Steel**  
ASTM A216 Grade WCB
- **316 Stainless Steel**  
ASTM A743 Grades CF3M and CFM8
- **Super Austenitic Stainless Steel**  
ASTM A351 Grade CK3MCuN (SMO 254)
- **Super Duplex Stainless Steel** ASTM A890 Grade 5A (CE3MN)

## Functional Data

Valve Size	Inches	3	4	6	8	10	12	
	mm	80	100	150	200	250	300	
C <sub>v</sub> Factor	<b>Globe Pattern</b>	Gal./Min. (gpm)	115	200	440	770	1245	1725
		Litres/Sec. (l/s)	27.6	48	105.6	184.8	299	414
	<b>Angle Pattern</b>	Gal./Min. (gpm)	139	240	541	990	1575	2500*
		Litres/Sec. (l/s)	33.4	58	130	238	378	600

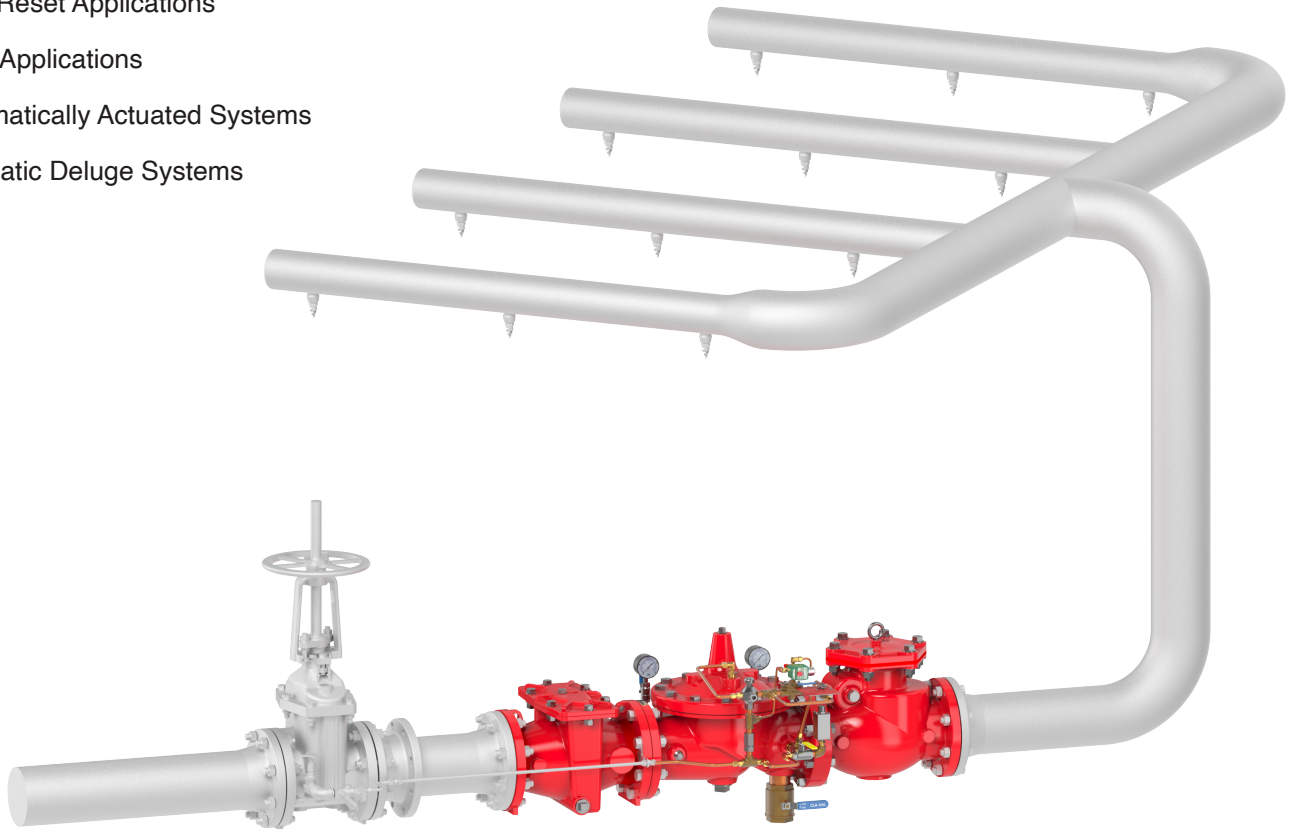


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### Typical Applications

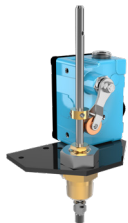
- Programmable Logic Systems
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### Optional Features



Position Indicator



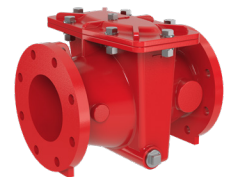
Limit Switch



Pressure Switch



Pressure Gauge

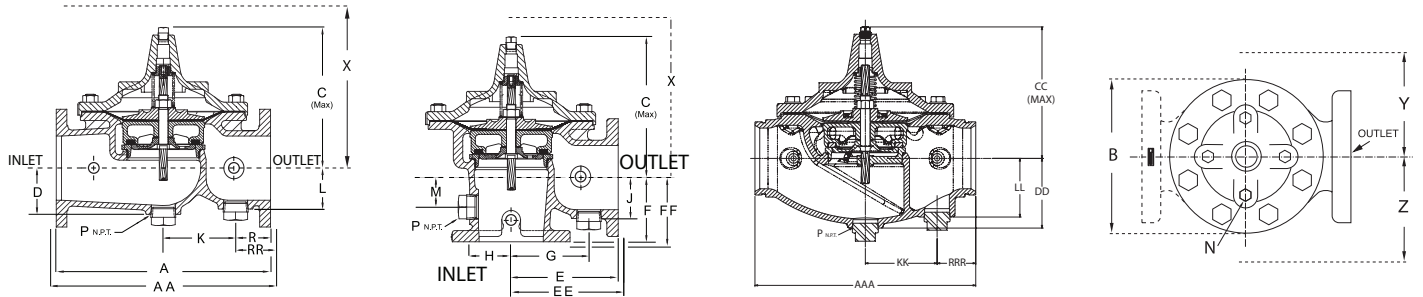


Strainer  
(Not UL Listed)



# Double Fail Safe Electrically Pneumatically On/Off Deluge Valve with Manual Reset

## Dimensions



Unit	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
<b>Valve Size</b>	<b>3</b>	<b>80</b>	<b>4</b>	<b>100</b>	<b>6</b>	<b>150</b>	<b>8</b>	<b>200</b>	<b>10</b>	<b>250</b>	<b>12</b>	<b>300</b>
<b>A 150 ANSI</b>	12.00	305	15.00	381	20.00	508	25.38	645	29.75	756	34.00	864
<b>AA 300 ANSI</b>	13.25	337	15.62	397	21.00	533	26.38	670	31.12	791	35.50	902
<b>AAA Grooved</b>	12.50	318	15.00	381	20.00	508	25.38	645	—	—	—	—
<b>B Dia.</b>	9.12	232	11.50	292	15.75	400	20.00	508	23.62	600	28.00	711
<b>C Max.</b>	8.19	208	10.62	270	13.38	340	16.00	406	17.12	435	21.00	533
<b>CC Max.</b>	7.50	191	9.94	252	12.13	308	15.00	381	—	—	—	—
<b>D</b>	2.56	65	3.19	81	4.31	110	5.16	131	8.50	216	9.39	239
<b>DD</b>	3.62	92	4.50	114	6.31	160	7.81	198	—	—	—	—
<b>E 150 ANSI</b>	7.00	178	8.50	216	10.00	254	12.69	322	14.88	378	17.00	432
<b>EE 300 ANSI</b>	—	—	8.81	224	10.50	267	13.19	350	—	—	17.75	451
<b>F 150 ANSI</b>	4.00	102	4.97	126	6.00	152	8.00	203	8.62	219	13.75	349
<b>FF 300 ANSI</b>	—	—	5.28	134	6.50	165	8.50	216	—	—	14.50	368
<b>L</b>	2.56	65	2.81	71	3.81	97	4.81	122	8.50	216	9.39	239
<b>LL</b>	3.25	83	4.00	102	5.31	135	7.00	178	—	—	—	—
<b>P NPT</b>	1-1/4 - 11-1/2		2 - 11-1/2		2 - 11-1/2		2 - 11-1/2		2 - 11-1/2		2 - 11-1/2	
<b>R 150 ANSI</b>	2.50	64	3.47	88	3.25	83	4.19	106	7.12	181	6.50	165
<b>RR 300 ANSI</b>	3.12	79	3.78	96	3.75	95	4.69	119	7.81	198	7.25	184
<b>RRR Grooved</b>	2.75	70	2.94	75	3.50	89	5.69	145	—	—	—	—
<b>X Pilot System</b>	15.00	381	17.00	432	29.00	737	31.00	787	33.00	838	35.00	889
<b>Y Pilot System</b>	11.00	279	12.00	305	20.00	508	22.00	559	24.00	610	26.00	660
<b>Z Pilot System</b>	11.00	279	12.00	305	20.00	508	22.00	559	24.00	610	26.00	660

## Model Number Codes



Size	Main Valve	Service	Trim	Body	Trim	Pilots	Tubing & Fittings	Elastomer	Flange	Face
3"	100 Globe	G Firewater		D Ductile Iron	S Stainless Steel	B Bronze w/SST	B Copper with Brass Fittings	B Buna	ANSI 150#	RF
4"	2100 Angle	GS Seawater		C Cast Steel	T 316 SS (F)	BM Bronze with Monel Internals	T 316 SS (F)	E EPDM	ANSI 300#	FF
6"		F Foam**(F)**		T 316 SS	M Bronze/Monel	T 316 SS (F)	M Monel	V Viton	ISO PN10	X Other
8"				N N.A.B.	U Super Duplex	M Monel	U 2507		ISO PN16	
10"				U Super Duplex	X Other	U Super Duplex	X Other		ISO PN25	
12"				X Other		X Other			Grooved 300#	



Strainer	Check Valve	Hytrol	Latching Pilot	Voltage	Solenoid Preference	Main Valve Function	Optional Features
S3 X43	0 None	0 None	0 None	12 VDC	0 None	EO Energize to Open	F Indep. Operating Pressure
S4 X44	CC CDC	H1 100-01	LM MRP-1	24 VDC		DO Deenergize to Close	H Drain to Atmosphere
S6 X46A	C8 81-01	H1A 100-01-3H	L2 100-02L	120 VAC			P Pressure Gauge Assembly
S7 X47A	CS SW200	H2A 102F/X103					U Pressure Switch Assembly
							PT Pressure Transmitter
							LS Limit Switch
							PI Position Indicator
							TL Test Loop
							ADC Automatic Drip Check
							LPA Low Pressure Actuation
							CLF Controlled Line Fill