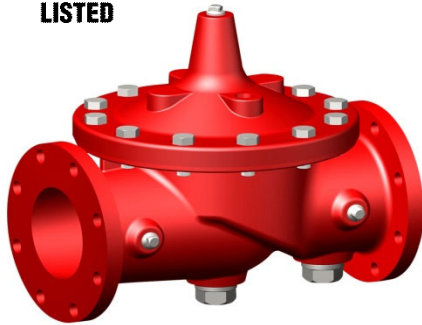


### ► Simple, Reliable and Accurate



- U.L. Listed
- Globe or Angle pattern
- Proven reliable design

The CLA-VAL Model 100GS/2100GS Deluge Valve is designed for use in controlling water flow to Deluge, Pre-Action, or Foam-Water type fire protection sprinkler systems. This valve is U.L. Listed in "Special Systems Water Control Valves Class I (VLFT)".

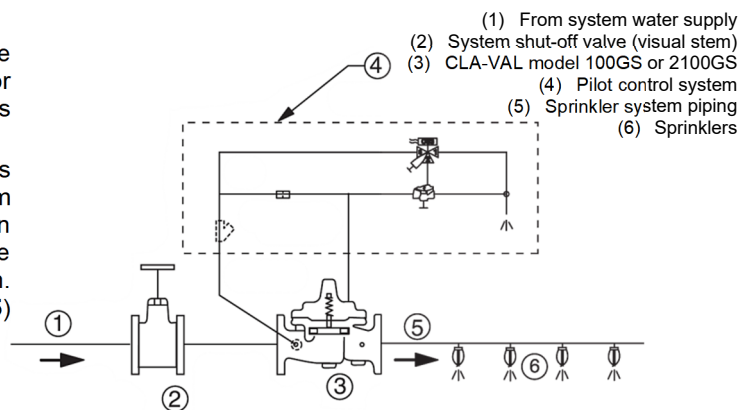
The Model 100GS-2100GS is a hydraulically-operated, diaphragm-actuated, globe or angle pattern Deluge Valve. It consists of three major components: the body, the cover, and the diaphragm assembly. The only moving part is the diaphragm assembly. Packless construction and simplicity of design assures long service life and dependable low maintenance for this valve. All internal ferrous surfaces are fusion epoxy coated for added corrosion resistance.

**Note:** The 100GS/2100GS are manufactured in materials suitable for seawater.

### ► TYPICAL APPLICATION

The Model 100GS/2100GS is installed to control the water flow to the sprinklers in Deluge, Pre-Action, or Foam-Water type systems. A simplified system is used to illustrate typical operation.

The Model 100GS/2100GS Deluge Valve (3) is maintained in the closed position by means of system water pressure controlled by a pilot control (4). When the pilot control valve receives a signal from the fire detection system, it allows the deluge valve to open. Firefighting water (1) then enters system piping (5) and discharges from sprinklers (6).



### ► SPECIFICATIONS

#### Sizes:

- Globe: 3" - 12"
- Angle: 3" - 12"

#### End Details:

- Ductile Iron 150 ANSI B16.42 / B16.5 flanged
- Cast Steel 150 ANSI B16.5 flanged

#### Pressure Rating:

- 150 class, MMWP\* 250 psi (Ductile Iron) / UL rating 250 psi
- 150 class, MMWP\* 285 psi (Cast Steel) / UL rating 285 psi
- 300 class, MMWP\* 400 psi / UL rating 300 psi

**Temperature Range:** Water max. 180°F / 82°C

\*MMWP (Manufacturer Maximum Working Pressure)

### ► WHEN ORDERING, PLEASE SPECIFY

1. Catalog No. 100GS or 2100GS
2. Valve size
3. Body and cover material
4. Globe or angle pattern
5. Pressure class
6. Internal trim material

### ► MATERIALS

#### Main Valve Body & Cover:

- Ductile Iron\*\* ASTM A-536 / EN-GJS-400 UL
- Cast Steel ASTM A216-WCB\* UL
- Nickel Aluminum Bronze ASTM B148 UL
- Naval Bronze ASTM B61 UL
- Super Duplex Stainless steel UNS J93404 UL
- Stainless Steel ASTM A743-CF-8M UL

#### Main Valve Internal Trim:

- Stainless Steel type SS316
- Monel QQ-N-281 Class B

#### Diaphragm and Disc:

- Buna-N® synthetic rubber

\*\*Internally & Externally Epoxy Coated Standard

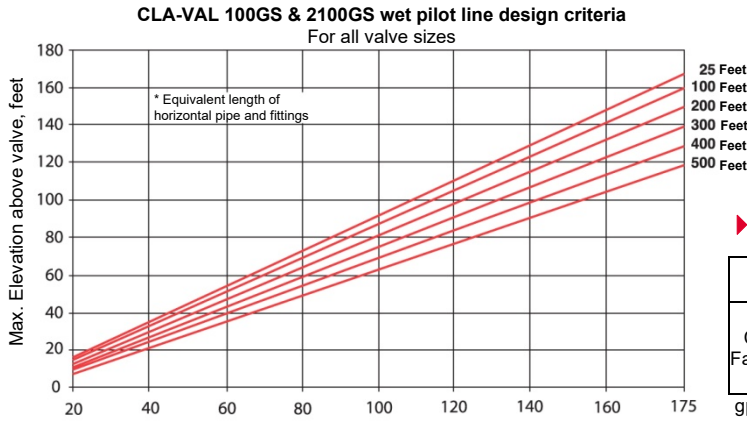
**Note:** Other materials available upon request.



# CLA-VAL 100GS / 2100GS

## Deluge Valve

To calculate the maximum wet sprinkler pilot height above the valve, use the graph below.



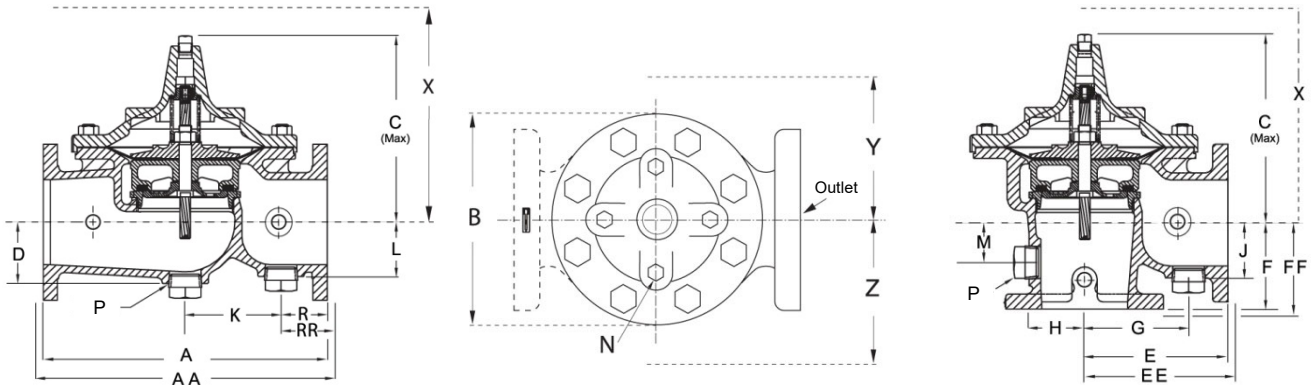
### FUNCTIONAL DATA

Valve size		Inches	3	4	6	8	10	12
CV Factor	Globe Pattern	gpm	115	200	440	770	1245	1725
		l/s	27.6	48	105.6	184.8	299	414
	Angle Pattern	gpm	139	240	541	990	1575	2500*
		l/s	33.4	58	130	238	378	600

gpm=Gal./Min. - l/s=Litres/Sec.

\* Based on 1/2 inch schedule 40 pipe, C=120  
If system supply pressure is variable, use minimum value  
**Wet pilot line equivalent lengths must be recalculated for systems using pilot line and fittings other than that specified in the above graph**

### DIMENSIONS



Valve size (inches)	3	4	6	8	10	12
A 150 ANSI	12.00	15.00	20.00	25.38	29.75	-
AA 300 ANSI	13.25	15.62	21.00	26.38	31.12	34.00
B Dia.	9.12	11.50	15.75	20.00	23.62	35.50
C Max.	8.19	10.62	13.38	16.00	17.12	-
D	2.56	3.19	4.31	5.16	8.50	28.00
E 150 ANSI	7.00	8.50	10.00	12.69	14.88	20.88
EE 300 ANSI	-	8.81	10.50	13.19	-	-
F 150 ANSI	4.00	4.97	6.00	8.00	8.62	-
FF 300 ANSI	-	5.28	6.50	8.50	-	17.00
G	4.75	5.94	7.25	8.50	10.50	17.75
H	2.69	2.81	3.88	5.31	6.56	-
J	2.56	2.81	3.81	4.81	5.81	10.75
K	7.00	4.03	6.75	17.00	15.50	-
L	2.56	2.81	3.81	4.81	8.50	9.50
M	1.75	2.41	2.755	4.00	4.24	10.25
N NPT	1/2 - 14	3/4 - 14	1 - 11-1/2	-	-	-
P NPT	1-1/4 - 11-1/2	-	2 - 11-1/2	-	-	-
R 150 ANSI	2.50	3.47	3.25	4.19	7.12	14.50
RR 300 ANSI	3.12	3.78	3.75	4.69	7.81	-
X Pilot System	15.00	17.00	29.00	31.00	33.00	1
Y Pilot System	11.00	12.00	20.00	22.00	24.00	1.25
Z Pilot System	11.00	12.00	20.00	22.00	24.00	1

Valve size (mm)	80	100	150	200	250	300
A 150 ANSI	305	381	508	645	756	-
AA 300 ANSI	337	397	533	670	791	864
B Dia.	232	292	400	508	600	902
C Max.	208	270	340	406	435	-
D	65	81	110	131	216	711
E 150 ANSI	178	216	254	322	378	530
EE 300 ANSI	-	224	267	350	-	-
F 150 ANSI	102	126	152	203	219	-
FF 300 ANSI	-	134	165	216	-	432
G	121	151	184	216	267	451
H	68	71	99	135	167	-
J	65	71	97	122	148	273
K	178	102	171	432	394	-
L	65	71	97	122	216	241
M	45	61	70	102	108	260
N NPT [inch]	1/2 - 14	3/4 - 14	1 - 11-1/2	-	-	-
P NPT [inch]	1-1/4 - 11-1/2	-	2 - 11-1/2	-	-	-
R 150 ANSI	64	88	83	106	181	368
RR 300 ANSI	79	96	95	119	198	-
X Pilot System	381	432	737	787	838	25.4
Y Pilot System	279	305	508	559	610	31.75
Z Pilot System	279	305	508	559	610	25.4