CLA-VAL™

— MODELS — 100G/2100G

Deluge Valve



- UL Listed / ULC Listed/ABS Approved
- Globe or Angle Pattern
- Proven Reliable Design

UL LISTED · ULC · ABS ASSESSED

Type Approved

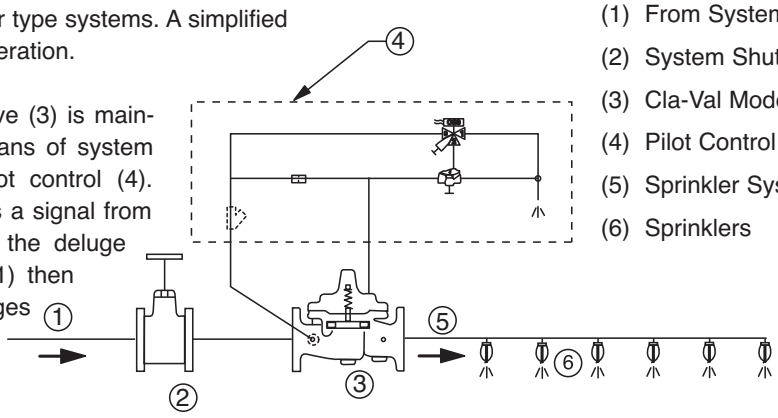
The Cla-Val Model 100G/2100G Deluge Valve is designed for use in controlling water flow to Deluge, Pre-Action, or Foam-Water type fire protection sprinkler systems. This valve is UL Listed in "Special Systems Water Control Valves Class I (VLFT) for both vertical and horizontal installation applications. This valve is UL/ULC Listed for operation manually, electronically, with hydraulic or pneumatic pilot control system for a wet pilot line of sprinklers.

The Model 100G/2100G 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 ferrous parts are fusion epoxy coated internally and externally for added corrosion resistance, along with a Dura-Kleen™ stem.

Typical Application

The Model 100G/2100G 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 100G/2100G 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).



(1) From System Water Supply
(2) System Shut-off Valve (Visual Stem)
(3) Cla-Val Model 100G or 2100G
(4) Pilot Control System
(5) Sprinkler System Piping
(6) Sprinklers

Specifications

Sizes *Globe:* 3" – 12" • *Angle:* 3" – 12"
Ductile Iron 150 ANSI B16.42 flanged
End Details Ductile Iron 300 Grooved Ends
Cast Steel 150 ANSI B16.5 flanged
Pressure Rating 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.
Materials ***Main Valve Body & Cover:***

- Ductile Iron ASTM A-536* **UL**, **ULC**
- Cast Steel ASTM A216-WCB* **UL**, **ULC**
- Nickel Aluminum Bronze ASTM B148 **UL**, **ULC**
- Naval Bronze ASTM B61 **UL**, **ULC**
- 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)

Main Valve Internal Trim:
Bronze ASTM B61 • Monel QQ-N-281 Class B
Diaphragm and Disc: Buna-N® synthetic rubber

***Internally & Externally Epoxy Coated**

Specifications Seawater Service Option

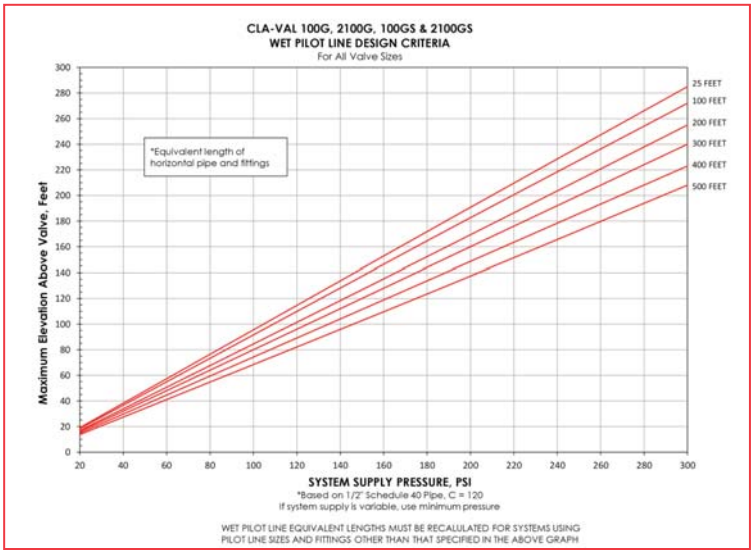
Sizes *Globe:* 3" - 12" flanged
Globe: 3" - 8" grooved
Angle: 3" - 12" flanged

Consult factory for materials and flange ratings.

When Ordering, Please Specify

1. Model No. 100G or 2100G
2. Size
3. Body and Cover Material
4. Globe or Angle Pattern
5. Pressure Class
6. Internal Trim Material

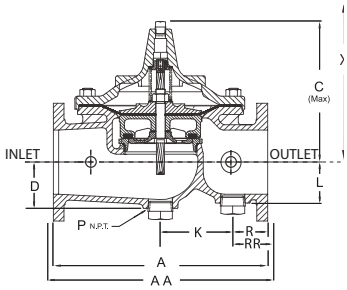
***optional Teflon™ coated seat upon request.**

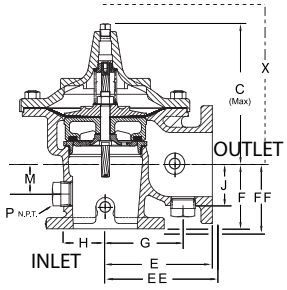


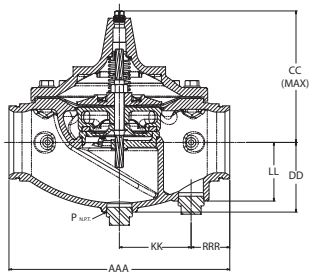
To calculate the maximum wet sprinkler pilot height above the valve, use the graph shown.

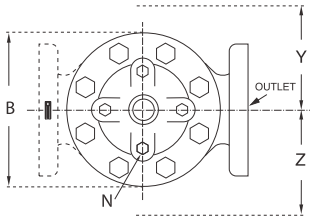
Functional Data

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









Valve Size (in.)	3	4	6	8	10	12
A 150 ANSI	12.00	15.00	20.00	25.38	29.75	34.00
AA 300 ANSI	13.25	15.62	21.00	26.38	31.12	35.50
AAA Grooved	12.50	15.00	20.00	25.38	—	—
B Dia.	9.12	11.50	15.75	20.00	23.62	28.00
C Max.	8.19	10.62	13.38	16.00	17.12	21.00
CC Max.	7.50	9.94	12.13	15.00	—	—
D	2.56	3.19	4.31	5.16	8.50	9.39
DD	3.62	4.50	6.31	7.81	—	—
E 150 ANSI	7.00	8.50	10.00	12.69	14.88	17.00
EE 300 ANSI	--	8.81	10.50	13.19	--	17.75
F 150 ANSI	4.00	4.97	6.00	8.00	8.62	13.75
FF 300 ANSI	--	5.28	6.50	8.50	--	14.50
G	4.75	5.94	7.25	8.50	10.50	17.00
H	2.69	2.81	3.88	5.31	6.56	7.00
J	2.56	2.81	3.81	4.81	5.81	7.00
K	7.00	4.03	6.75	17.00	15.50	21.00
KK	3.50	4.56	6.50	7.00	—	—
L	2.56	2.81	3.81	4.81	8.50	9.39
LL	3.25	4.00	5.31	7.00	—	—
M	1.75	2.41	2.75	4.00	4.24	8.75
N NPT	1/2 -14	3/4 -14	3/4 - 14	1 - 11-1/2	1 - 11-1/2	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	6.50
RR 300 ANSI	3.12	3.78	3.75	4.69	7.81	7.25
RRR Grooved	2.75	2.94	3.50	5.69	—	—
X Pilot System	15.00	17.00	29.00	31.00	33.00	35.00
Y Pilot System	11.00	12.00	20.00	22.00	24.00	26.00
Z Pilot System	11.00	12.00	20.00	22.00	24.00	26.00

Valve Size (mm)	80	100	150	200	250	300
A 150 ANSI	305	381	508	645	756	864
AA 300 ANSI	337	397	533	670	791	902
AAA Grooved	318	381	508	645	—	—
B Dia.	232	292	400	508	600	711
C Max.	208	270	340	406	435	533
CC Max.	191	252	308	381	—	—
D	65	81	110	131	216	239
DD	92	114	160	198	—	—
E 150 ANSI	178	216	254	322	378	432
EE 300 ANSI	--	224	267	350	--	451
F 150 ANSI	102	126	152	203	219	349
FF 300 ANSI	--	134	165	216	--	368
G	121	151	184	216	267	432
H	68	71	99	135	167	178
J	65	71	97	122	148	178
K	178	102	171	432	394	533
KK	89	116	165	178	—	—
L	65	71	97	122	216	239
LL	83	102	135	178	—	—
M	45	61	70	102	108	222
N NPT	1/2 - 14	3/4 - 14	3/4 - 14	1 - 11-1/2	1 - 11-1/2	1 - 11-1/2
P NPT	1-1/4 - 11- 1/2	2 - 11-1/2				
R 150 ANSI	64	88	83	106	181	165
RR 300 ANSI	79	96	95	119	198	184
RRR Grooved	70	75	89	145	—	—
X Pilot System	381	432	737	787	838	889
Y Pilot System	279	305	508	559	610	660
Z Pilot System	279	305	508	559	610	660

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