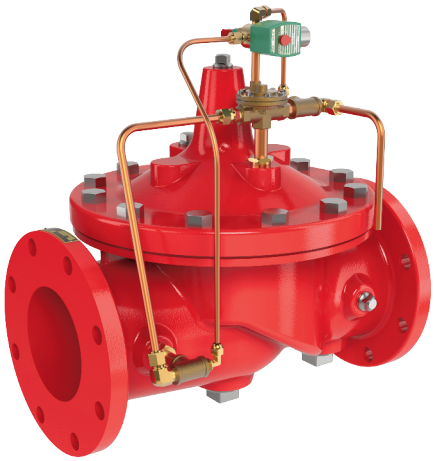
CLA-VAL™

— MODEL — 134-05

Solenoid Operated Deluge Valve



- **UL Listed / ULC Listed Main Valves - 3 - 12 inch sizes***
- **Fast Acting Solenoid Control**
- **Reliable Drip Tight Shut-off**
- **Simple Design, Proven Reliable**
- **Easy Installation & Maintenance**

The Cla-Val Model 134-05 Solenoid Control Valve is an on-off control valve which either opens or closes upon receiving an electrical signal to the solenoid pilot control. This valve consists of a 100G/2100G UL/ULC Listed Hytrol Main Valve, a three-way solenoid valve and an auxiliary pilot valve. This pilot control system alternately applies pressure to/or relieves pressure from the diaphragm chamber of the main valve. It is furnished either normally open (de-energize solenoid to open) or normally closed (energize solenoid to open).

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

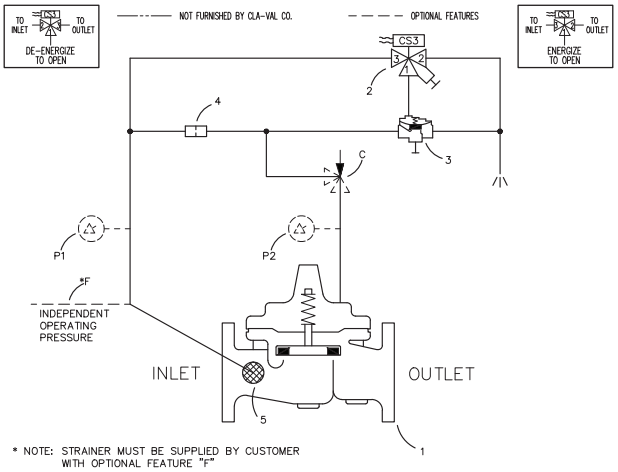
Please note that the UL and ULC Listings apply to the 100G/2100G Hytrol Main Valve equipped with the trim configuration of Model 134-05

Schematic Diagram

Item	Description
1	100G/2100G UL/ULC Listed Hytrol Main Valve
2	CS3 Solenoid Control
3	100-01 Hytrol Pilot Valve
4	X58C Restriction Orifice
5	X46A Flow Clean Strainer

Optional Features

Item	Description
C	CV Flow Control (closing)
F	Independent Operating Pressure
P	X141 Pressure Gauge



Specifications

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

END DETAILS Ductile Iron 150 ANSI B16.42 flanged
Ductile Iron 300 grooved
Cast Steel 150 ANSI B16.5 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

Materials

Main valve body & cover:
Ductile Iron ASTM A-536*
Cast Steel ASTM A216-WCB*
Naval Bronze ASTM B61
Nickel Aluminum Bronze ASTM B148
Super Duplex Stainless Steel
Stainless Steel ASTM A743-CF-8M

Main valve trim:
Bronze / Stainless Steel

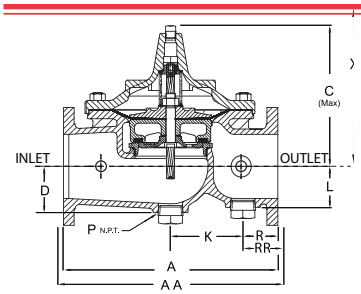
Pilot control system:
Cast Bronze ASTM B62
UL /ULC Listed 3" - 12"

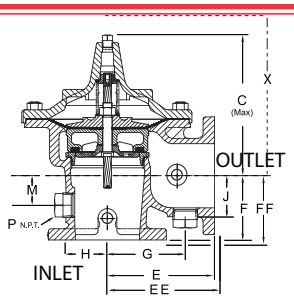
Cover Capacity

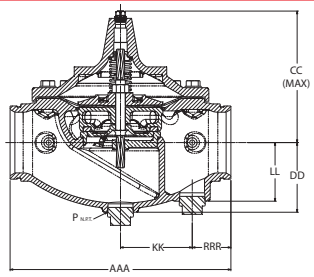
Valve Size	Displacement
3"	.080 gal
4"	.169 gal
6"	.531 gal
8"	1.26 gal
10"	2.51 gal
12"	4.00 gal

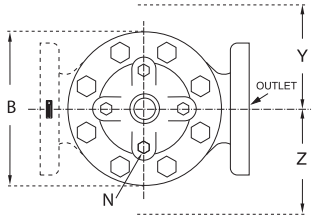
Functional Data

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

Pilot System Specifications

Temperature Range

Water: to 180°F

Fluids

Air, water, light oils

Rubber Parts

Buna-N® Synthetic Rubber

Solenoid Control*

Body:

Brass ASTM B283

Enclosure:

NEMA Type 1, 2, 3, 3S, 4, 4X general purpose watertight

NEMA Type 6, 6P, 7, 9 watertight

Explosion Proof available at extra cost

Voltages:

110, 220 -50Hz AC

24, 120, 240, 480 - 60Hz AC

6, 12, 24, 120, 240 - DC

Others available at extra cost

Max. operating pressure differential: 200 psi

Coil:

Insulation molded Class	F
Watts AC	6
AC Volt Amps Inrush	30
AC Volt Amps Holding	16
Watts DC	10.6

Solenoid Manual operator included.

UL / ULC Listed 100G/2100G

Hytrol Main Valve: 3" - 12"

*Optional material available for Seawater Service

When Ordering, Please Specify

1. Catalog No. 134-05
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded, Flanged or Grooved
6. Material Desired
7. Energized or De-energized to Open Main Valve
8. Solenoid Enclosure, Voltage & Hertz
9. When Vertically Installed

CLA-VAL 1701 Placentia Avenue • Costa Mesa CA 92627 • Phone: 949-722-4800 • Fax: 949-548-5441 • E-mail: info@cla-val.com • Website cla-val.com
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CERTIFICATE OF COMPLIANCE

Certificate Number	20180815-EX15267
Report Reference	EX2834-19890405
Issue Date	2018-AUGUST-15
Issued to:	CLA-VAL CANADA CORP 4687 CHRISTIE DR BEAMSVILLE ON L0R 1B4 CANADA
This is to certify that representative samples of	SPECIAL SYSTEM WATER CONTROL VALVES, DELUGE TYPE CERTIFIED FOR CANADA See Addendum Page for Models
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	ULC/ORD-C260 , Deluge Valves for Fire-Protection Service
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

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CERTIFICATE OF COMPLIANCE

Certificate Number 20180815-EX15267
Report Reference EX2834-19890405
Issue Date 2018-AUGUST-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

The following valves are intended for use in controlling water flow to deluge, pre-action, and foam water sprinkler systems and water spray systems when installed in accordance with the manufacturer's installation instructions.

Listing	Model	Body Type	Nominal Pipe Size, NPS	System Type	End Configuration	Installed
CNL	100G	Globe	3,4,6,8, 10 and 12	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line and Manual	F by F- Class 150*, F by F- Class 300	V or H
CNL	100G	Globe	3,4,6 and 8	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	Grooved	V or H
CNL	2100G	Angle	3,4,6,8, 10 and 12	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line and Manual	F by F- Class 150*, F by F- Class 300	V or H

V- Vertical installation.
H- Horizontal installation.

Class 150 flanges shall be installed on systems not exceeding working capabilities of flange class.

The basic valves are combined with the following accessories, suitable for a maximum working pressure of 2068 kPa:

Flow Control Valve - Model CV
Flow Clean Strainer - Model X46A
Check Valves - Model 81, Nominal Pipe Size 3/8
- Model CDC, Nominal Pipe Size 3/8 and 1/2
- Model CSC, Nominal Pipe Size 3/4

Bruce Mahrenholz, Director North American Certification Program

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CERTIFICATE NUMBER

14-HS1080136-PDA

DATE

27 February 2014

ABS TECHNICAL OFFICE

Houston OED - Equipment

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of

CLA-VAL COMPANY - COSTA MESA

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **Valve, Deluge**

MODEL: **100G/2100G and 100GS/2100GS**

This Product Design Assessment (PDA) Certificate 14-HS1080136-PDA, dated 27/Feb/2014 remains valid until 26/Feb/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Tim Kimble
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

CLA-VAL COMPANY
1701 PLACENTIA AVENUE
COSTA MESA
CA 92627
United States
Telephone: 949-722-4800
Fax: 949-548-9900
Email: dalexander@cla-val.com
Web: cla-val.com

Tier: 2

Product: **Valve, Deluge**

Model: **100G/2100G and 100GS/2100GS**

Intended Service:
Marine and offshore Application - used to control water flow to Sprinklers in Deluge, Pre-Action, or Foam-Water Type Systems.

Description:
The model 100G-2100G is a hydraulically-operated, diaphragm-actuated, global or angle pattern Deluge valve. The model 100GS-2100GS are the seawater version. Sizes: 3" to 10".
All ferrous parts are internally and externally coated with Fusion Epoxy for Protection against Corrosive Environments.

Ratings:
Maximum Allowable Working Pressure: 250 psi (Ductile Iron), 150 Class; 285 psi (Cast Steel), 150 Class; 400 psi, 300 Class;
Maximum Temperature: 180°F (water);

Refer to attached Manufacturer's Data Sheet for all Technical Data of Specific Models.

Service Restrictions:
Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
The subject deluge valves may be constructed from any of the following materials: ASTM A 536 Ductile Iron, ASTM A216 Gr. WCB Cast steel, ASTM B148 Nickel aluminum bronze, ASTM A890 Gr. 5A Super Duplex SST, ASTM B367 Gr. C2 Titanium.
The deluge valves are installed in a safe area.

Notes / Drawings / Documentation:
Supporting Data:
UL 260 Test Report dated 23 May 1972;
UL Test Report with File No. Ex2834, Project No. 75NK2728 dated Nov. 13, 1975;
UL Test Report with File No. Ex2834, Project No. 72NK1400 dated May 23, 1975;
UL Test Report with File No. Ex2834, Project No. 79NK6456 dated Nov. 17, 1981;
UL Certificate of Compliance Number EX2834-2008-07-21 dated 21 July 2008;
Technical Specification Sheet E-100G & 100GS (R-2007), 2 shts;

Term of Validity:
This Product Design Assessment (PDA) Certificate 14-HS1080136-PDA, dated 27/Feb/2014 remains valid until 26/Feb/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the

CLA-VAL COMPANY
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Web: cla-val.com

ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:
2014 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/5.11; 2012 MODU Rules 4-2-2/9;

National:
UL 260, latest version.

International:
NA

Government Authority:
NA

EUMED:
NA

Others:
NA

CERTIFICATE OF COMPLIANCE

Certificate Number	20180815-EX2834
Report Reference	EX2834-19720524
Issue Date	2018-AUGUST-15
Issued to:	GRISWOLD INDUSTRIES, DBA CLA-VAL CO 1701 PLACENTIA AVE COSTA MESA CA 92627-4416
This is to certify that representative samples of	SPECIAL SYSTEM WATER CONTROL VALVES, DELUGE TYPE See Addendum Page for Models Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL260, Dry Pipe and Deluge Valves for Fire-Protection Service.
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

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CERTIFICATE OF COMPLIANCE

Certificate Number 20180815-EX2834
Report Reference EX2834-19720524
Issue Date 2018-AUGUST-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

The following valves are intended for use in controlling water flow to deluge, pre-action, and foam water sprinkler systems and water spray systems when installed in accordance with the manufacturer's installation instructions.

Listing	Model	Body Type	Nominal Pipe Size, NPS	System Type	End Configuration	Installed
USL	100G	Globe	3,4,6,8,10 and 12	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	F by F- Class 150*, F by F- Class 300	V or H
USL	100G	Globe	3,4,6 and 8	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	Grooved	V or H
USL	100GS	Globe	3,4,6,8,10 and 12	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	F by F- Class 150*, F by F- Class 300	V or H
USL	100GS	Globe	3,4,6 and 8	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	Grooved	V or H
USL	2100G	Angle	3,4,6,8,10 and 12	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	F by F- Class 150*, F by F- Class 300	V or H
USL	2100GS	Angle	3,4,6,8,10 and 12	Non Interlock Pre-action w/ Electric Release, Wet (Hydraulic) Pilot Line, pneumatic and Manual	F by F- Class 150*, F by F- Class 300	V or H

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CERTIFICATE OF COMPLIANCE

Certificate Number 20180815-EX2834
Report Reference EX2834-19720524
Issue Date 2018-AUGUST-15

USL, CNL	134-83, 134-83KX	Globe	4,6	Electric Release w/ pressure reducing feature	F by F- Class 150*, F by F- Class 300, Grooved	V or H

V - Vertical installation
H - Horizontal installation.

* - Class 150 flanges shall be installed on systems not exceeding working capabilities of flange class.

Bruce Mahrenholz, Director North American Certification Program

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