



▲ Electric / Hydraulic Deluge Valve

The Model 115-1DV automatically opens to admit water through the main line when the solenoid valve is activated. **The Model 115-1DV can be used for fresh water or seawater applications according to the selected materials of construction.** Consult factory for UL listed deluge valves.

## SERIES FEATURES

- ▶ Simple design utilizes a 3-way solenoid valve that directly operates the main valve
- ▶ Opens quickly when the solenoid valve is activated (Specify energize-to-open or energize-to-close)
- ▶ Manual override to open the valve regardless of solenoid valve position
- ▶ Visual indicator for indication of valve position
- ▶ Large supply drain port to drain inlet side piping- globe only
- ▶ Pilot operated main valve
- ▶ No adjustments necessary
- ▶ Factory tested
- ▶ Sizes 1.25" (DN32) thru 4" (DN100). Consult factory for other sizes
- ▶ ANSI Flanged Class 150 or Class 300
- ▶ Wide range of materials available including those for **seawater service**
- ▶ Options available include opening and/or closing speed controls, limit switch assembly and pressure gauge(s). For other required options, consult factory.

## OPERATION

Pressure is relieved from the diaphragm chamber of the main valve by activating the solenoid valve. This action allows the main valve to open fully, admitting water through the main line. The valve closes when the solenoid valve is de-activated. The valve may also be opened by utilizing the manual override ball valve on the bonnet. This allows opening of the main valve regardless of solenoid pilot activation.

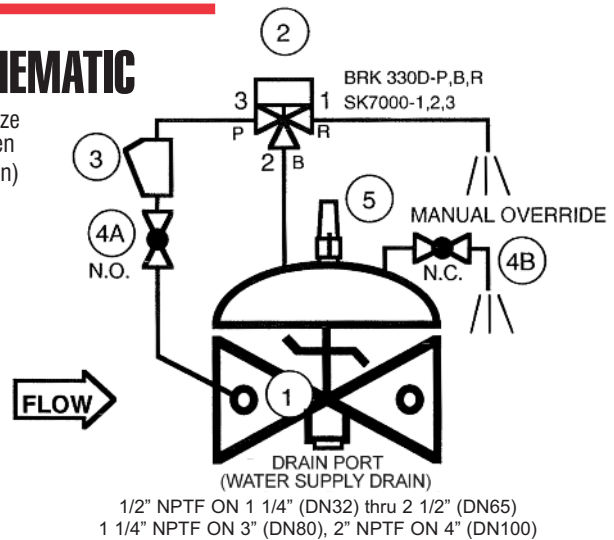
## COMPONENTS

The Model 115-1DV consists of the following components, arranged as shown on the schematic diagram:

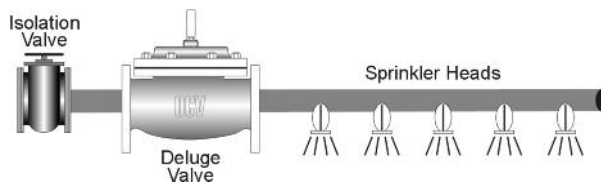
- 1.) **Model 65 Basic Control Valve**, a hydraulically-operated, diaphragm-actuated, globe or angle valve which closes with an elastomer-on-metal seal.
- 2.) **Model 452 Solenoid Valve**, a three-way universal, normally-closed or normally-open solenoid valve. Activating the solenoid valve relieves pressure from the main valve diaphragm chamber thus opening the main valve. "Energize to open" or "energize to close" may be specified.
- 3.) **Model 159 Y-Strainer**, protects the pilot system from solid contaminants in the line fluid.
- 4.) **Two Model 141-4 Ball Valves**-one serves as pilot supply side shutoff and is normally open. The other serves as a manual override and is normally closed.
- 5.) **Model 155 Visual Indicator Assembly**, useful for indication of valve position at a glance.

## SCHEMATIC

Energize to Open (shown)



## RECOMMENDED INSTALLATION



## FLOW CHARACTERISTICS

flow rate at maximum velocity =  
7.6 M/S (Sizes: 1.25" (DN32) - 4" (DN100))

VALVE SIZE	1.25"	1.5"	2"	2.5"	3"	4"
	DN32	DN40	DN50	DN65	DN80	DN100
FLOW @ 7.6 m/s M <sup>3</sup> /HR	26	26	59	84	129	227

## MAX. PRESSURE

Working pressures of solenoids vary greatly, consult factory on application of OCV Model 115-1DV valves.

VALVE SIZE	1.25"	1.5"	2"	2.5"	3"	4"
	DN32	DN40	DN50	DN65	DN80	DN100
GLOBE Cv	US	23	27	47	68	200
	Metric	5.5	6.5	11.3	16.3	47.9
ANGLE Cv	US	30	35	65	87	270
	Metric	7.2	8.4	15.6	20.8	64.7

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email: sales@controlvalves.com • website: www.controlvalves.com

## SIZES

Globe or Angle -

1.25" (DN32), 1.5" (DN40), 2" (DN50), 2.5" (DN65), 3" (DN80), 4" (DN100)

## MAX. WORKING PRESSURE

17.2 bar for 150# ANSI flanged Ductile Iron; 15.5 bar for Bronze; 19.6 bar for Steel and Stainless Steel; 300# ANSI flanges are available

## TEMPERATURE RANGE

(Buna-N Elastomers)

0°C - 82°C

Viton and EPDM are available

## SOLENOID VALVE VOLTAGE

24VDC explosion proof standard (all other standard voltages available, AC and DC)

## MATERIALS

### Body/Bonnet:

-Ductile Iron ASTM A536-epoxy coated (standard). Seawater coating optional.

-Cast Steel ASTM A216 Grade WCB-epoxy coated. Seawater coating optional.

-Stainless Steel ASTM A743 CF8M

-Cast Bronze

-Nickel Aluminum Bronze ASTM B148

Alloy C95800

-Duplex Stainless Steel

### Seat Ring:

-Bronze (standard)

-Stainless Steel ASTM A743 CF8M

(optional)

-Nickel Aluminum Bronze ASTM B148

Alloy C95800 (optional)

-Duplex Stainless Steel (optional)

### Stem:

Stainless Steel AISI 303 (standard)

Monel (optional)

### Spring:

Stainless Steel AISI 302 (standard)

Inconel (optional)

### Diaphragm:

Nylon Reinforced Buna-N

### Solenoid Valve:

-Stainless Steel AISI 430F (fresh water)

-Stainless Steel AISI 316 (seawater)

### Tubing/Fittings:

-Copper/Brass (standard, fresh water only)

-Stainless Steel (optional)

-Monel (optional)

OCV deluge valves can be mounted in the horizontal or vertical position. Space should be taken into consideration when mounting valves and their pilot systems.

A routine inspection & maintenance program should be established and conducted yearly by a qualified technician. Consult our factory @ **1-888-628-8258** for parts and service.

### When ordering your 115-1DV valve,

please provide:

Series Number - Valve size - Globe or

Angle - Flanged 150# or 300# ANSI -

Trim Material - Voltage - Special needs / or

Installation Requirements

# SPECIFICATIONS

The deluge valve shall function to admit water through the main line when the solenoid valve has been activated.

## DESIGN

The deluge valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These and other parts shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface nor shall pistons be used as an operating means. The pilot system shall be furnished complete, installed on the main valve and include a Y-strainer.

## MATERIALS OF CONSTRUCTION (Fresh Water)

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12 (or other. Refer to MATERIALS chart). All internal ferrous surfaces shall be coated with 4 mils of epoxy. External surfaces shall be coated with 4 mils of epoxy followed by a coat of fire red enamel paint. The main valve seat ring shall be bronze (or other. Refer to MATERIALS chart). Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N. The solenoid valve shall be stainless steel per AISI 430F and the control line tubing shall be copper (or other. Refer to MATERIALS chart).

## MATERIALS OF CONSTRUCTION (Seawater)

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12 (or other. Refer to MATERIALS chart). All internal ferrous surfaces shall be coated with a special Abranox seawater coating of 10-12 mils on the inside. External surfaces shall be coated with a special Dimetkote seawater coating followed by a coat of fire red enamel paint. The main valve seat ring shall be bronze (or other. Refer to MATERIALS chart). Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N (or other. Refer to MATERIALS chart). The solenoid valve shall be stainless steel per AISI 316 and the control line tubing shall be stainless steel (or other. Refer to MATERIALS chart).

## ACCEPTABLE PRODUCTS

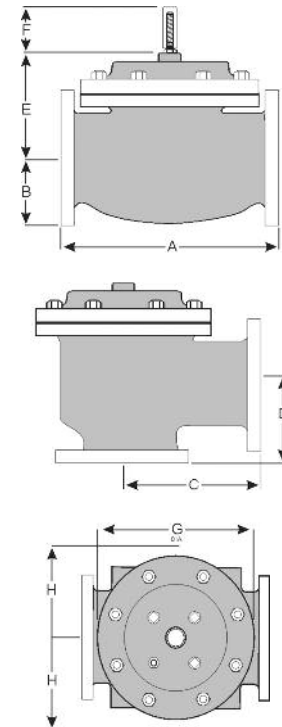
The deluge valve shall be a Model 115-1DV as manufactured by OCV Control Valves, Tulsa, OK, USA

U.S. DIMENSIONS - INCHES						
DIM	END CONN.	1 1/4-1 1/2	2	2 1/2	3	4
A	150# FLGD	8 1/2	9 3/8	10 1/2	12	15
	300# FLGD	8 3/4	9 7/8	11 1/8	12 3/4	15 5/8
B	150# FLGD	2 5/16-2 1/2	3	3 1/2	3 3/4	4 1/2
	300# FLGD	2 5/8-3 1/16	3 1/4	3 3/4	4 1/8	5
C	150# FLGD	4 1/4	4 3/4	6	6	7 1/2
	ANGLE 300# FLGD	4 3/8	5	6 3/8	6 3/8	7 13/16
D	150# FLGD	3	3 7/8	4	4	5 1/2
	ANGLE 300# FLGD	3 1/8	4 1/8	4 3/8	4 3/8	5 13/16
E	ALL	6	6	7	6 1/2	8
F	ALL	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8
G	ALL	6	6 3/4	7 11/16	8 3/4	11 3/4
H	ALL	10	11	11	11	12

\*GROOVED END NOT AVAILABLE IN 1 1/4"

METRIC DIMENSIONS - M.M.						
DIM	END CONN.	DN32-DN40	DN50	DN65	DN80	DN100
A	150# FLGD	216	238	267	305	381
	300# FLGD	222	251	283	324	397
B	150# FLGD	59-64	76	89	95	114
	300# FLGD	67-78	83	95	105	127
C	150# FLGD	108	121	152	152	191
	ANGLE 300# FLGD	111	127	162	162	198
D	150# FLGD	76	98	102	102	140
	ANGLE 300# FLGD	79	105	111	111	148
E	ALL	152	152	178	165	203
F	ALL	98	98	98	98	98
G	ALL	152	171	195	222	298
H	ALL	254	279	279	279	305

\*GROOVED END NOT AVAILABLE IN DN32



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