▲ Electric / Hydraulic Deluge Valve

The Model 115-4DV automatically opens to admit water through the main line when the solenoid valve is activated. **The Model 115-4DV is principally designed for seawater applications utilizing the appropriately selected materials but can be used for fresh water applications as well.**
Consult factory for UL Listed deluge valves.

SERIES FEATURES

- 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 16" (DN400)
- 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

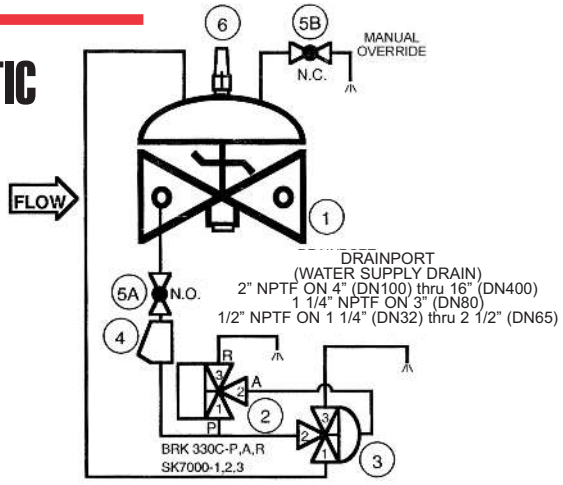
Activating the solenoid valve pressurizes the diaphragm chamber of the three-way auxiliary pilot valve, which then shifts to relieve pressure from the diaphragm chamber of the main valve. This action allows the main valve to open fully, admitting water through the main line. The valve closes when the 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

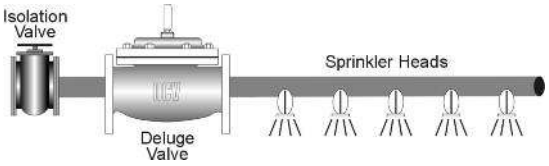
The Model 115-4DV consists of the following components, arranged as shown on the schematic diagram:
1.) **Model 65 Basic Control Valve**, a hydraulically-operated, diaphragm-actuated, globe or angle valve which closes with an elastomer-on-metal seal.
2.) **Model 452 Solenoid Valve**, a three-way universal, normally-closed or normally-open solenoid valve. The solenoid valve acts to pressurize the diaphragm chamber of the three-way auxiliary pilot valve when activated thus opening the main valve. "Energize to open" or "energize to close" may be specified.
3.) **Model 330P or Model 3600S Three-Way Auxiliary Pilot Valve**, a three-way, hydraulically-operated valve. Pressurizing its diaphragm chamber causes the main valve to open.
4.) **Model 159 Y-Strainer**, protects the pilot system from solid contaminants in the line fluid.
5.) **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.
6.) **Model 155 Visual Indicator Assembly**, useful for indication of valve position at a glance.

SCHEMATIC

Energize to Open (shown)



RECOMMENDED INSTALLATION



MAX. PRESSURE

Working pressures of solenoids vary greatly, consult factory on application of OCV Model 115-4DV valves.

VALVE SIZE		1.25" DN32	1.5" DN40	2" DN50	2.5" DN65	3" DN80	4" DN100
GLOBE Cv	US	23	27	47	68	120	200
	Metric	5.5	6.5	11.3	16.3	28.7	47.9
ANGLE Cv	US	30	35	65	87	160	270
	Metric	7.2	8.4	15.6	20.8	38.3	64.7

VALVE SIZE		6" DN150	8" DN200	10" DN250	12" DN300	14" DN350	16" DN400
GLOBE Cv	US	450	760	1250	1940	2200	2850
	Metric	108	182	299	465	527	683
ANGLE Cv	US	550	1000	1600	2400	--	4000
	Metric	132	240	383	575	--	958

(The pressures listed here are maximum pressures at 37.78°C.)

FLOW CHARACTERISTICS

flow rate at maximum velocity = 7.6 m/s (Sizes 1.25" (DN32) - 16" (DN400))

VALVE SIZE IN DN	1.25" (32)	1.5" (40)	2" (50)	2.5" (65)	3" (80)	4" (100)	6" (150)	8" (200)	10" (250)	12" (300)	14" (350)	16" (400)
FLOW @ 7.6 m/s M^3/HR	26	26	59	84	129	227	511	886	1397	1976	2385	3134

TOLL FREE 1.888.628.8258 ● **phone:** (918)627.1942 ● **fax:** (918)622.8916 ● 7400 East 42nd Place, Tulsa, Ok 74145
email: sales@controlvalves.com ● **website:** www.controlvalves.com

Model 115-4DV Electric / Hydraulic Deluge Valve METRIC

Model 115-4DV METRIC

SIZES
Globe or Angle: 1.25" (DN32), 1.5" (DN40), 2" (DN50), 2.5" (DN65), 3" (DN80), 4" (DN100), 6" (DN150), 8" (DN200), 10" (DN250), 12" (DN300), 16" (DN400)
Globe only: 14" (DN350)
MAX. WORKING PRESSURE (at 37.78°C)
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.
FLUID OPERATING TEMPERATURE RANGE
Buna-N 0°C to 82.22°C*
EPDM 0°C to 110°C*
SOLENOID VALVE VOLTAGE
24VDC explosion proof standard (all other standard voltages available, AC and DC)
MATERIALS
Body/Bonnet:
-Ductile Iron - epoxy coated (standard). Seawater coating optional.
-Cast Steel - epoxy coated. Seawater coating optional.
-Stainless Steel
-Cast Bronze
-Nickel Aluminum Bronze
-Duplex Stainless Steel
Seat Ring:
Bronze (standard)
Stainless Steel (optional)
Nickel Aluminum Bronze (optional)
Duplex Stainless Steel (optional)
Stem:
Stainless Steel (standard)
Monel (optional)
Spring:
Stainless Steel (standard)
Inconel (optional)
Diaphragm:
Nylon Reinforced Buna-N*
EPDM*
Solenoid Valve:
-Stainless Steel (fresh water)
Stainless Steel (seawater)
Tubing/Fittings:
Copper/Brass (standard, fresh water only)
Stainless Steel (optional)
Monel (optional)

*Others available upon request

OCV deluge valves can be mounted in the horizontal or vertical position, however 8" (DN200) and larger valves are best suited to be mounted horizontally. 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 115-4DV 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 (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 control pilot shall be bronze (or other. Refer to MATERIALS chart). The solenoid valve shall be stainless steel. 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 (or other. Refer to MATERIALS chart). All internal ferrous surfaces shall be coated with a special Abranon 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 materials refer to MATERIALS). The control pilot shall be bronze (or other. Refer to MATERIALS chart). The solenoid valve shall be stainless steel. The control line tubing shall be stainless steel (or other. Refer to MATERIALS chart).
ACCEPTABLE PRODUCTS
The deluge valve shall be a Model 115-4DV as manufactured by OCV Control Valves, Tulsa, OK, USA

U.S. DIMENSIONS - INCHES

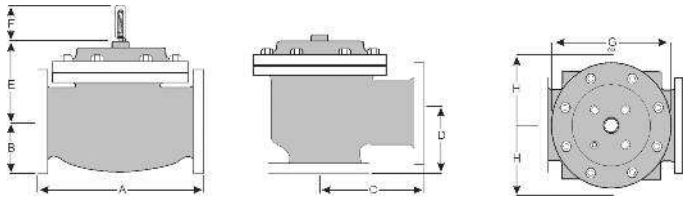
DIM	END CONN.	1 1/4-1 1/2	2	2 1/2	3	4	6	8	10	12	16
A	150# FLGD	8 1/2	9 3/8	10 1/2	12	15	17 3/4	25 3/8	29 3/4	34	40 3/8
	300# FLGD	8 3/4	9 7/8	11 1/8	12 3/4	15 5/8	18 5/8	26 3/8	31 1/8	35 1/2	42
B	150# FLGD	2 5/16-2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4	8	9 1/2	11 3/4
	300# FLGD	2 5/8-3 1/16	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2	8 3/4	10 1/4	12 3/4
C	150# FLGD	4 1/4	4 3/4	6	6	7 1/2	10	12 11/16	14 7/8	17	20 13/16
ANGLE	300# FLGD	4 3/8	5	6 3/8	6 3/8	7 13/16	10 1/2	13 3/16	15 9/16	17 3/4	21 5/8
D	150# FLGD	3	3 7/8	4	4	5 1/2	6	8	11 3/8	11	15 11/16
ANGLE	300# FLGD	3 1/8	4 1/8	4 3/8	4 3/8	5 13/16	6 1/2	8 1/2	12 1/16	11 3/4	16 1/2
E	ALL	6	6	7	6 1/2	8	10	11 7/8	15 3/8	17	19
F	ALL	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	3 7/8	6 3/8	6 3/8	6 3/8	6 3/8
G	ALL	6	6 3/4	7 11/16	8 3/4	11 3/4	14	21	24 1/2	28	34 1/2
H	ALL	10	11	11	11	12	13	14	17	18	20

*GROOVED END NOT AVAILABLE IN 1 1/4"

METRIC DIMENSIONS - M.M.

DIM	END CONN.	DN32-DN40	DN50	DN65	DN80	DN100	DN150	DN200	DN250	DN300	DN400
A	150# FLGD	216	238	267	305	381	451	645	756	864	1026
	300# FLGD	222	251	283	324	397	473	670	791	902	1067
B	150# FLGD	59-64	76	89	95	114	140	171	203	241	298
	300# FLGD	67-78	83	95	105	127	159	191	222	260	324
C	150# FLGD	108	121	152	152	191	254	322	378	432	529
ANGLE	300# FLGD	111	127	162	162	198	267	335	395	451	549
D	150# FLGD	76	98	102	102	140	152	203	289	279	398
ANGLE	300# FLGD	79	105	111	111	148	165	216	306	298	419
E	ALL	152	152	178	165	203	254	302	391	432	483
F	ALL	98	98	98	98	98	98	162	162	162	162
G	ALL	152	171	195	222	298	356	533	622	711	876
H	ALL	254	279	279	279	305	330	356	432	457	508

*GROOVED END NOT AVAILABLE IN DN32



QUALITY SYSTEM REGISTERED TO ISO 9001

Represented by:

TOLL FREE 1.888.628.8258 • **phone:** (918)627.1942 • **fax:** (918)622.8916 • 7400 East 42nd Place, Tulsa, Oklahoma 74145
email: sales@controlvalves.com • **website:** www.controlvalves.com