

**ENERGY INFRASTRUCTURE Ltd**  
**Eshel - Terminal**

**Electric Pressure Control on-off Deluge Valve**  
**(EPCDV- on/off)**

P <sup>0</sup>	14/1/2024	Preliminary	E. Kaganowski	E. Kaganowski	
<b>REV</b>	<b>DATE</b>	<b>DESCRIPTION</b>	<b>BY</b>	<b>CKD</b>	<b>APPROVED</b>

## **Electric PRESSURE CONTROL DELUGE VALVE**

This document covers the technical requirements for manufacture, assembly; testing, supply and delivery Electric Pressure Control On-Off Deluge valve to be operated in Energy Infrastructure at Eshel Terminal.

### **SITE CONDITIONS:**

1. The valves shall be installed indoor.
2. Site altitude is about 200 m' above sea level.
3. Ambient temperature varies between 0<sup>0</sup>C- 48<sup>0</sup>C.
4. Relative humidity varies between 45% - 85%.
5. Rain falls around 250 mm' / year.

### **TECHNICAL REQUIREMENTS:**

#### **Standards:**

The unit shall be UL listed, manufactured, tested and delivered in accordance with the requirements of UL demands for pressure control deluge valve.

#### **Engineer Specification:**

##### **General Requirements:**

The valve shall be elastomeric, hydraulic, line pressure operated deluge type, rigged type diaphragm. The diaphragm shall be fully supported at all area. The diaphragm shall be reinforced by a metal insert suitable for the fluid application.

The valve shall be activated by two parallel solenoids valves, latch open type, which opening and closing of the main deluge valve. Each solenoid valve can be control from to different control panels.

The valve shall be latched open in response to activation of the solenoid, reducing higher upstream pressure to a lower preset downstream pressure.

##### **Materials:**

Body: & Cover	Ductile Iron ASTM A-536.
Main valve internals:	Stainless Steel 304 & Cast iron.
Control Trim:	Brass.
Solenoid:	Brass.
Tubing and fitting:	Stainless Steel 316.
Elastomers:	NBR
Coating:	Electrical Powder epoxy polyester (Red)

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Connection Standard:

Flange: ANSI #150 RF.

Pressure settings:

Pressure regulating pilots can be readjust on site.

Factory pressure setting: 92.3 psi (4" water cooling system)

Factory pressure setting: 103.7 psi (12" tank foam system)

Factory pressure setting: 71.5 psi (12" contained area foam system)

Fitting Option:

Glycerin Pressure Gauge Assembly (2 x units, upstream/downstream)

Electrical solenoid valve – 2 unit (for 2 different control panel unit operation option)

The valve shall be fitted with explosion prof pressure switch.

2" drain valve

Emergency relief valve located on the valve cover install at metal box.

Pressure and Activation Monitoring:

The valve shall be fitted with downstream and upstream pressure gauging and a drip check shall be fitted to the valve downstream port.

Solenoid Valve:

The valve shall be fitted two (2) units of solenoids, latch open, so it can be operated from different control panels.

Solenoid Body Materials: Stainless steel 316

Solenoid standard specification: UL

The main valve shall be close when the solenoid de-energized.

The solenoid shall be watertight IP65, Class F explosion proof Ex.d.

Power: 24 VDC

**TAG AND MARKING:**

The unit shall bear name plate made of stainless steel.

The plate thickness shall be 1.5 mm'.

The plate shall contain the following data:

- Manufacturer name.
- Manufacturer country.

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- Equipment model.
- Manufacturer item number.
- Size.
- Pressure set parameters.
- All other parameters according to UL demand.

**QUANTITY TABLE:**

Item	Size	Quant.	Description.	Total price
1	4"	Acc', to BOM	EPCDV- on/of	
2	12"	Acc', to BOM	EPCDV- on/of	