

# TECHNICAL DATA SHEET

for use by Architects & Engineers

## Preaction & Deluge Valve

Model No: LF-DV100A & LF-DV150A



### Features

- Simple configuration for easy maintenance.
- No False Alarm
- Outstanding Durability
- Anti-corrosive Trim
- Reliable Operation
- Field replaceable diaphragm and clapper seat
- UL LISTED
- FM APPROVED

### Description

LIFECO Preaction & Deluge Valve with external resetting function is a differential latch type valve which designed for fire protection system.

The external resetting feature of the LF-DV valve provides easy resetting of a pre-action system without opening the valve cover for manual repositioning of the clapper and latch mechanism.

Actuation of electric system automatically releases the LF-DV valve by allowing water to flow into the sprinkler piping system and to be discharged from any sprinklers that is open.

#### Single Interlock Preaction System:

Single Interlock Preaction System is generally used to protect area where there is a danger of water damage that might result from malfunction of automatic sprinkler or piping. Typically, such areas include computer rooms, storage areas for valuable artifacts, libraries and archives.

Single Interlock Preaction System is also effectively used to protect properties where the pre-alarm might activate (fire) prior to sprinkler discharge that condition may allow time for fire extinguishment by alternate suppression.

When operation of the electrical detection device, heat sensitive detector and smoke detector, electrical manual control station signals the valve releasing panel to operate the solenoid valve. In turns, the operated solenoid valve opens to release water from the diaphragm chamber faster than when it replenished through the provided 3/8 restriction.

#### Deluge Valve Equipped with Trim:

When the deluge valve operates, it continually vents the diaphragm chamber to prevent the deluge valve from the resetting condition. Deluge valve can only be reset after the system is taken out of service and trim piping is depressurized and drained.

#### In Service Condition:

System pressure is supplied to the diaphragm chamber through the restricted priming line equipped with y-strainer. System water supply pressure which trapped in the diaphragm chamber holds the clapper on seat due to its area differential design.

#### In Activate Condition:

When the release system operates, pressure is released from the diaphragm chamber with the speed that is faster than when it is supplied through the setting pipeline. Water supply pressure forces the clapper off seat allowing water to flow through the outlet and into the system and alarm devices.

#### Electric Actuation Trim:

To actuate the Preaction & deluge valve electrically, the solenoid valve is provided to drain the water from the diaphragm chamber of the valve body. The pressure switch is provided to activate an electric alarm, to shut down the desired equipment or to give alarm signal to the panel.

#### Dry-Pilot/Wet-Pilot Actuation Trim:

Dry-pilot actuation trim provides for connection of a detection system consisting of dry-pilot line sprinkler (as a heat detectors) containing air under pressure. Wet-pilot actuation trim also wet-pilot line sprinkler containing pressurized water. Due to release of any one of the actuation devices, air pressure or water pressure of the pilot line is depressurized.

The pressure switch is provided to activate an electric alarm, to shut down the desired equipment or to give alarm signal to the panel.

### Technical & Environmental Specification

Model	LF-DV100A & LF-DV150A
Maximum working pressure	175 psi (12 bar)
Flange connection	ANSI B16.1 FF Class 150
Hydrostatic test pressure	25 bar (350psi)
Approximate net weight	4" (100A) – 59kg (included trim) 6" (150A) – 79kg (included trim)

### Materials

Body/Cover/Clapper	Gray cast iron
Seat ring	Bronze
Diaphragm	EPDM
Clapper seat	VITON

### Part List

1	Body/Cover	Cast iron
2	OS&Y valve	—
3	Air control valve	—
4	Pressure switch	—
5	Water supply valve	—
6	Solenoid valve	—
7	Drip check valve	—
8	PS test valve	—
9	PS signal control valve	—
10	Manual valve	—



# TECHNICAL DATA SHEET

for use by Architects & Engineers

## Preaction & Deluge Valve

Model No: LF-DV100A & LF-DV150A



### Electric Actuation Trim

