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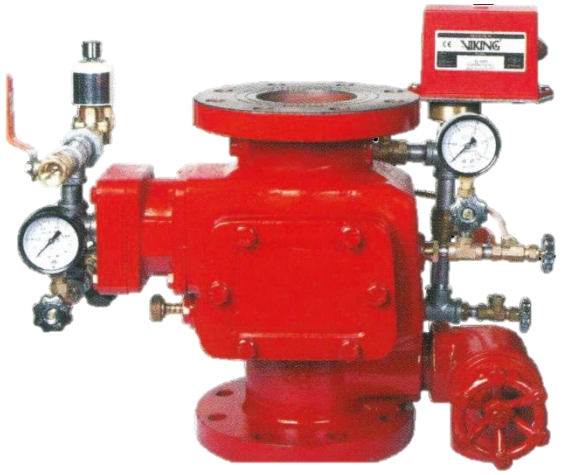
Datasheet

Deluge valve PPD 100(150)

General Description:

Safex 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 PPD valve provides easy resetting of a preaction system without opening the valve cover for manual repositioning of the clapper and latch mechanism. Actuation of electric system automatically releases the PPD valve by allowing water to flow into the sprinkler piping system and to be discharged from any sprinklers that is open.



PPD 100(150)

Standard material of construction:

Component	Material
Body/cover	Cast iron
OS&Y valve	Cast iron
Air control valve	Cast iron
Pressure switch	Cast iron
Water supply valve	Cast iron
Seat ring	Bronze
Solenoid valve	Cast iron
Drip check valve	Cast iron
Diaphragm	EPDM
PS test valve	Cast iron
PS single valve	Cast iron
Clapper seat	Viton
Manual valve	Cast iron

Component	Material
Housing/cover/rotor	Aluminium
Gong	Aluminium
Differential pressure required for operation kg/cm^2	Differential ratio- 50%
Type	Hydraulic ratio-50%
Water motor gong	Provided
Manual actuation with solenoid valve	Provided
Resetting type	Manual
Deluge valve approved by TAC, FM and UL listed	

Technical data:

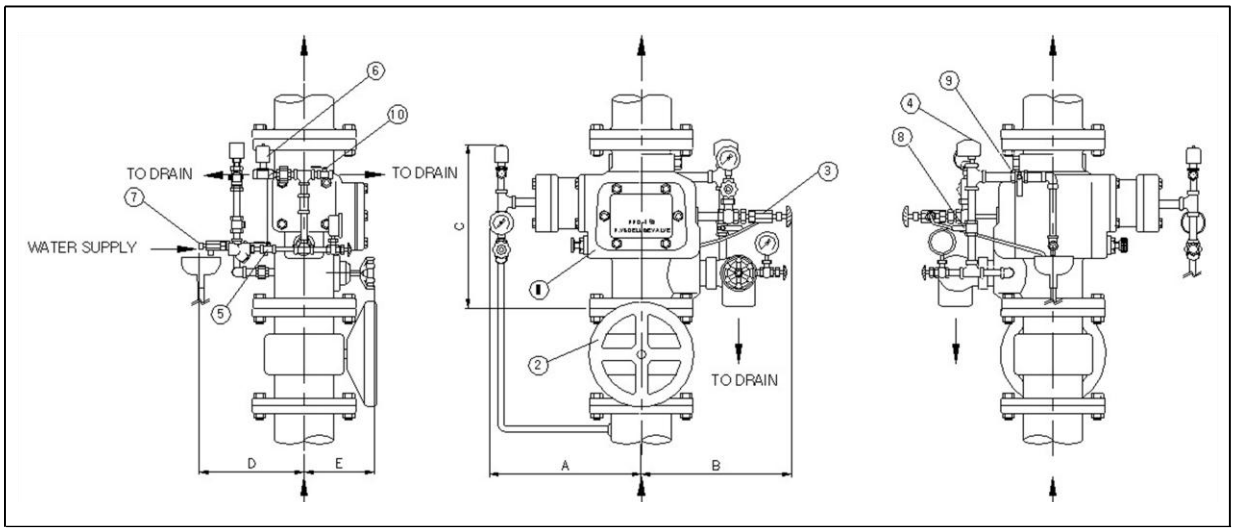
Model: PPD 100(150)

Model no.	PPD 100	PPD 150
Size	100NB	150NB
Approved standard	UL and FM	UL and FM
Working pressure (max)	175 PSI	175 PSI
Test pressure	350 PSI	350 PSI
Pressure loss	0.02MPa	0.02MPa
Direction	Vertical	Vertical
Flange size	ANSI 150lb FF type	ANSI 150lb FF type
Weight	59 kg	59 kg
Packing (Ea)	1	1
Approximate net weight (included trim)	59 kg	79 kg

FEATURES:

- Simple configuration for easy maintenance.
- Field replaceable diaphragm and clapper seat.
- No false alarm.
- Outstanding durability
- Anti-corrosive trim

Dimensions:



Model no	A	B	C	D	E
PPD 100	242	260	367	270	150
PPD 150	259	285	372	290	150

OPERATION:

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.

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 pressurised 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.

INSTALLATION:

Before Installation
Prepare sealing materials suitable for the PPD Preaction & Deluge Valve to be installed. When the installation is completed thoroughly, clean along inner side of the pipes. If possible, flush the pipe with water until it is completely rinsed out.

Preaction & Deluge Valve Installation
Once again, clean inner side of the valve body. Check the disc, disc seat and seat ring hole before the installation. Install the Preaction & Deluge valve, pressure gauge and pressure switch.

Setting procedure:

1. Close all the OS&Y valve. Open the main drain valve and close it when the flow of water has ceased.
2. Inspect and release if required or the detection system is subjected to “Actuate Condition”.
3. Open primary OS&Y valve for a while. And close the valve. Open main drain valve. At that time, “manual operation valve” is opened.
4. Push the “Reset Knob” inward to allow the clapper to reseat. Check the clapper to seat on the seat ring closely.
5. Close the “manual operation valve” and Open the “Water Supply Valve”. Allow time for full pressure to build up in the diaphragm chamber.
6. Push the “Drip Check Valve” inward to check any leaks.
7. Slowly open the OS&Y valve, and close the main drain valve.
8. Observe the main drain valve for any leaks. If there is leak, determine and correct the cause of the leakage problem. If there is no leak, the PPD Valve is ready to be placed in service condition.

MAINTENANCE:

To test operation of the PPD Preaction & Deluge Valve, open the inspector’s test connection which should activate mechanical and electric alarm. This test connection is usually located at the end or the top line of the system. PPD Preaction & Deluge Valve and associated equipment has to have proper inspection and test periodically. The NFPA 25 directs minimum inspection, test and maintenance requirement. PPD Preaction Deluge Valve shall be tested, operated, cleaned, inspected ,and parts need to be replaced as required at least annually.