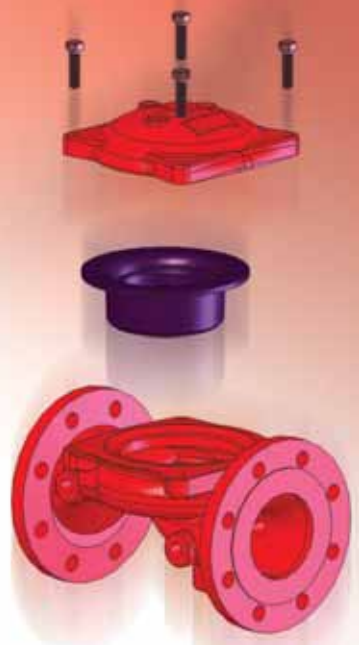
Fire Protection


# BERMAD Fire Protection

## Deluge Valves

BERMAD

# 400E Deluge Valve



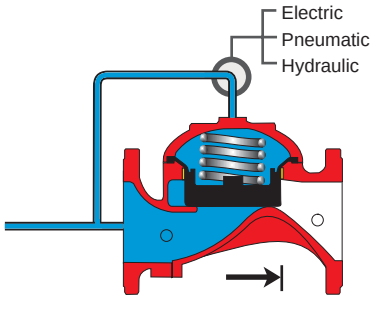
## Description

BERMAD 400E Deluge Valves are elastomeric type globe valves that are rolling-diaphragm actuated, with an integral, solid, resilient seal. These automatic water control valves are designed for vertical or horizontal installation and are available in diameter sizes from 2” to 12”; DN50 to DN300.

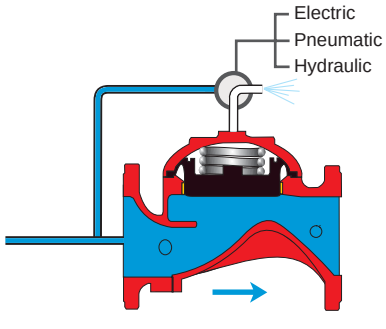
The 400E Deluge Valve is held closed by system water pressure trapped in the control chamber. When the releasing system operates, pressure is released from the control chamber, and the seal disk opens to allow water to flow into the system. The 400E valve body includes a single, full bore seat with unobstructed flow path, free of any in-line ribs, supporting cage, or shafts.
The internal design of the 400E valve is based on innovative technology using advanced rubber-based materials to achieve a solid, one-piece, elastomeric assembly including flexible fiber reinforced diaphragm, vulcanized with a rugged radial seal disk, and together providing resilient, drip tight sealing. The elastomeric assembly is carefully balanced and peripherally supported to avoid tension and protect the elastomer, resulting in long-life and controlled actuation even under harsh conditions. The elastomeric assembly can be easily removed from the valve body with no need for disassembling the valve from the line.

## Approvals

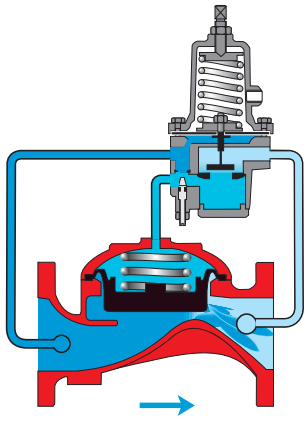
- UL Listed to UL 260 from 5 to 250 psi; 0.3 to 17.2 bar WP, 2” through 8”; DN50 through DN200
- VdS Certified to 16 bar WP, 2 through 8”; DN50 through DN200
- ABS Approved for 250 psi; 17.2 bar WP, 2” through 12”; DN50 through DN300
- Lloyd’s Register Type Approval for 250 psi; 17.2 bar WP, 2” through 12”; DN50 through DN300.
  Fire Test Certified to ISO 6182 part 5, 2” through 12”; DN50 through DN300




**Valve Closed (Set Position)**
Line pressure applied to the control chamber of the valve creates a superior force that moves the valve to the closed position and provides drip tight sealing.




**Valve Open (Operating Conditions)**
Discharging the pressure in the control chamber to atmosphere or some other lower pressure zone causes the line pressure acting on the seal disk to move the valve to the open position.



**Valve Modulating**
The pilot valve senses pressure changes and opens or closes accordingly. It controls the accumulated pressure in the valve control chamber, causing main valve to modulate to an intermediate position and maintain the preset value.

# Classic Deluge Valves

These BERMAD Classic Deluge Valves include Manual EasyLock Reset for latching the valve open in response to an electric, hydraulic, pneumatic, or electro-pneumatic signal. The Deluge Valve resets to the closed position only upon local manual reset activation.


## Typical Applications

- Automatic spray or foam systems
- Water curtain systems
- Shopping centers & public buildings
- Flammable materials & gas storage
- Roads & rail tunnels
- Power plants & transformers
- Aviation & airports
- Petrochemical facilities

## Features and Benefits

- PORV – Enables pneumatic actuation
- One-piece molded single moving part – No maintenance required
- Simple design – Cost effective
- Obstacle free, full bore – Free flow pass
- Factory pre-assembled trim – Out-of-box quality
- In-line serviceable – Minimal downtime

### Electrically Controlled BERMAD Deluge Valve with EasyLock Manual Reset — FP 400E-2M

The BERMAD Model FP 400E-2M is suitable for systems that include electric fire detection. The Deluge Valve latches open in response to an electric signal.

### Electro-Pneumatically Controlled BERMAD Deluge Valve with EasyLock Manual Reset — FP 400E-3M

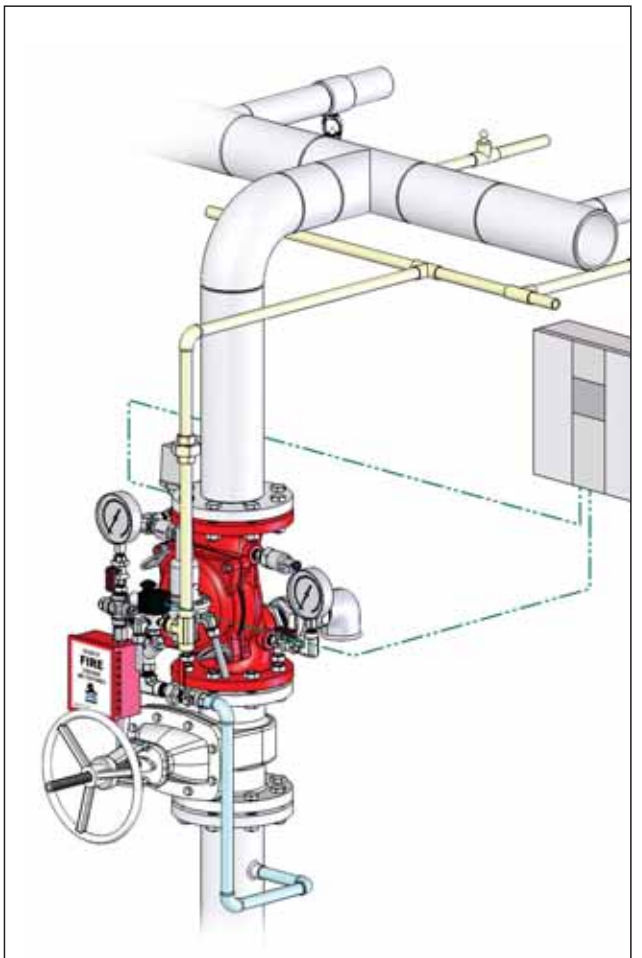
The BERMAD Model FP 400E–3M is suitable for systems that include electric or electric-pneumatic fire detection. The Deluge Valve latches open in response to an electric signal and/or pneumatic pressure drop in the dry pilot line.

### Pneumatically Controlled BERMAD Deluge Valve with EasyLock Manual Reset — FP 400E-4M

The BERMAD Model FP 400E–4M is suitable for systems that include dry pilot lines with closed pneumatic fusible plugs.
The Deluge Valve latches open in response to pneumatic pressure drop in the dry pilot line.

### Hydraulically Controlled, Anti-Columning BERMAD Deluge Valve with EasyLock Manual Reset — FP 400E-5M

The BERMAD Model FP 400E–5M is suitable for systems that include wet pilot lines with closed fusible plugs. Providing boosted local opening, it is recommended for systems with elevated fusible plugs. The Deluge Valve latches open in response to hydraulic pressure drop in the wet pilot line.



Electro-Pneumatically Controlled
BERMAD Deluge System with Manual Reset

# On-Off Deluge Valves

The BERMAD On-Off Deluge Valves are intended for use in industrial remote resetting systems. The Deluge Valves can be remotely controlled electrically, hydraulically, pneumatically or electro-pneumatically to open and to reset closed.

## Typical Applications

- Remote operated deluge spray or foam systems
- Petrochemical facilities
- Offshore platforms
- Power plants & transformers
- Roads & rail tunnels
- Flammable materials & gas storage
- Remote operated monitors

## Features and Benefits

- Remote reset – Shut-off upon remote command
- Dry solenoid – Suitable for corrosive water or foam
- PORV – Enables pneumatic actuation
- One-piece molded single moving part – No maintenance required
- Obstacle free, full bore – Free flow pass
- In-line serviceable – Minimal downtime

### Electrically Controlled, On-Off BERMAD Deluge Valve — FP 400E-3D

The BERMAD Model FP 400E-3D is suitable for systems that include electric fire detection. The Deluge Valve opens and closes drip tight in response to an electric signal.

### Electro-Pneumatically Controlled, On-Off BERMAD Deluge Valve — FP 400E-6D

The BERMAD Model FP 400E–6D is suitable for systems that include electric or redundant (electric and pneumatic) fire detection. It opens in response to an electric signal and/or pneumatic pressure drop in the dry pilot line. It closes in response to cessation of the electric signal, as long as the dry pilot line is pressurized.

### Pneumatically Controlled, On-Off BERMAD Deluge Valve — FP 400E-4D

The BERMAD Model FP 400E–4D is suitable for systems that include dry pilot lines with closed pneumatic fusible plugs. The valve is closed as long as the dry pilot line is pressurized. It opens in response to a pneumatic pressure drop in the dry pilot line.

### Hydraulically Controlled, On-Off BERMAD Deluge Valve — FP 400E-5D

The BERMAD Model FP 400E–5D is suitable for systems that include wet pilot lines with closed fusible plugs. Providing boosted local opening, it is recommended for systems with elevated fusible plugs. The valve is closed as long as the wet pilot line is pressurized. It opens in response to a hydraulic pressure drop in the wet pilot line.

Electrically Controlled, On-Off
BERMAD Deluge System

# Combination Pressure Control Deluge Valves

The BERMAD Pressure Control Deluge Valves are suitable for flow control in large scale firewater systems. The valves can be activated in response to an electric, hydraulic, pneumatic, or electro-pneumatic signal. When open, the valves continuously reduce higher upstream pressure to a lower pre-set downstream pressure, maintaining flow per system design.


## Typical Applications

- Flow control in large scale firewater systems
- Offshore platforms & installations
- Tunnels with long supply lines
- Petrochemical facilities
- Power plants & transformers

## Features and Benefits

- Pressure control function – Preserves designed flow
- Remote reset – Shut-off on remote command
- PORV – Enables pneumatic actuation
- One-piece molded single moving part – No maintenance required
- Obstacle free, full bore – Free flow pass
- In-line serviceable – Minimal downtime

### Electric Pressure Control BERMAD Deluge Valve with Manual Reset — FP 400E-2MC

The BERMAD Model FP 400E-2MC is suitable for flow control in firewater systems that include electric fire detection.
It latches open in response to an electric signal, reducing the pressure to maintain maximum flow per system design.

### Electric Pressure Control, On-Off BERMAD Deluge Valve — FP 400E-3DC

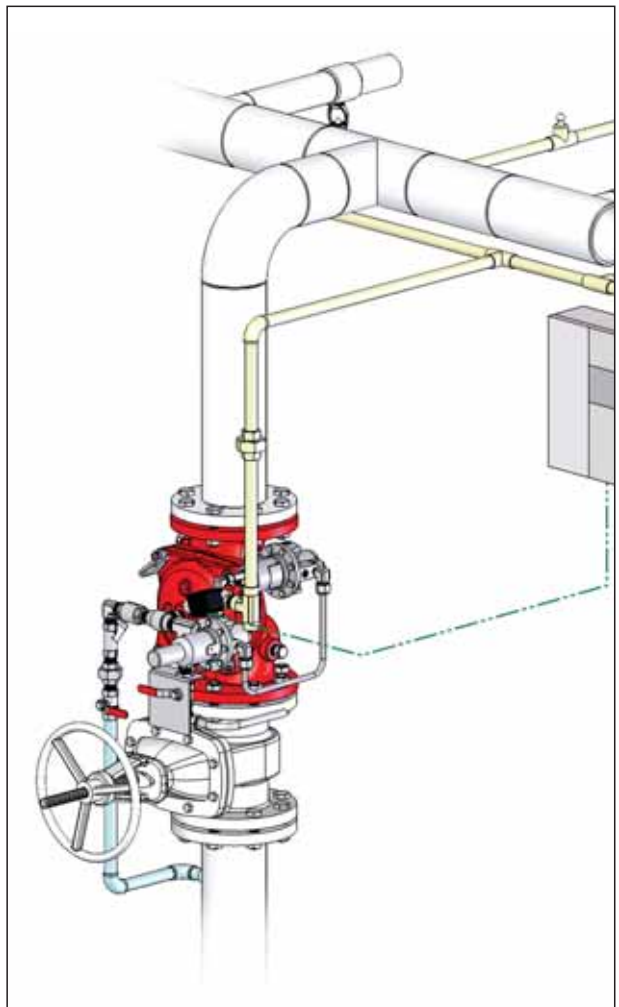
The BERMAD Model FP 400E-3DC is suitable for flow control in firewater systems that include electric fire detection. It opens and closes in response to an electric signal. When open, it reduces the pressure to maintain the maximum flow per system design.

### Electro-Pneumatic Pressure Control, On-Off BERMAD Deluge Valve — FP 400E-6DC

The BERMAD Model FP 400E–6DC is suitable for flow control in firewater systems that include electric or reduntant (electric and pneumatic) fire detection. It opens, maintaining flow per system design, in response to an electric signal and/or a pneumatic pressure drop in the dry pilot line. It closes in response to cessation of the electric signal, as long as the dry pilot line is pressurized.

### Pneumatic Pressure Control, On-Off BERMAD Deluge Valve — FP 400E-4DC

The BERMAD Model FP 400E–4DC is suitable for flow control in firewater systems that include dry pilot lines with closed fusible plugs. It opens, maintaining flow per system design, and closes in response to pneumatic flow per system design,



Electro-Pneumatic, On-Off Pressure Control
BERMAD Deluge System

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Water Control Solutions

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