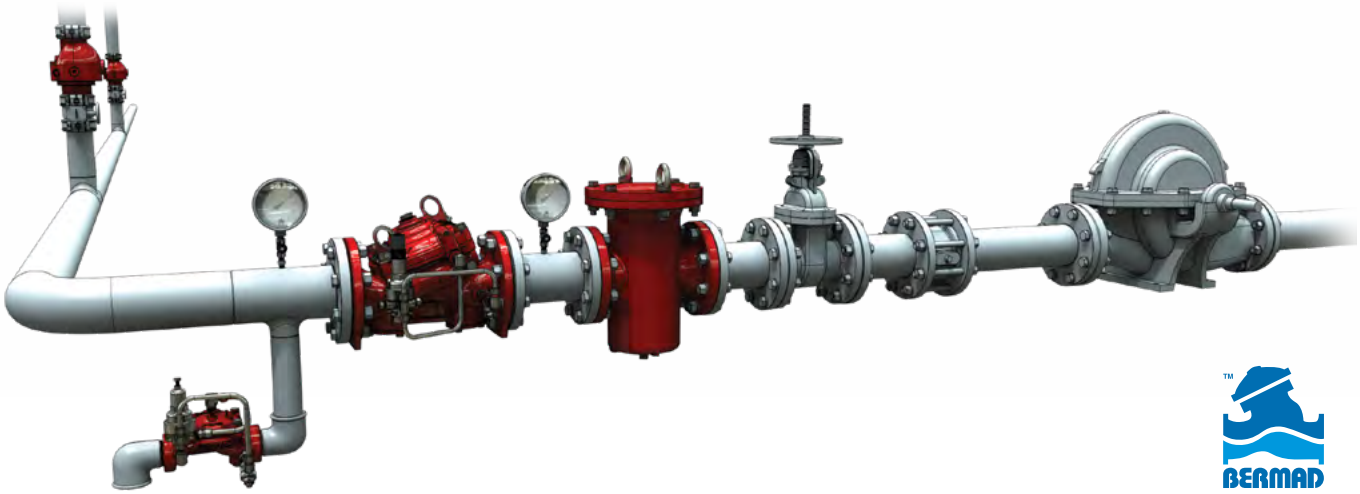
Potable Water

Fire Protection

HVAC Systems

Treated Water



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400Y - TORRENT SERIES

HIGH FLOW CAPACITY VALVE WITH A PERIPHERALLY SUPPORTED ROLLING DIAPHRAGM AND A RIGID SEAL DISK

ROBUST AND SIMPLE CONSTRUCTION

Direct Access to diaphragm actuator

short maintenance downtime

Integrally sprung normally closed diaphragm

Eliminates the need for additional metallic spring

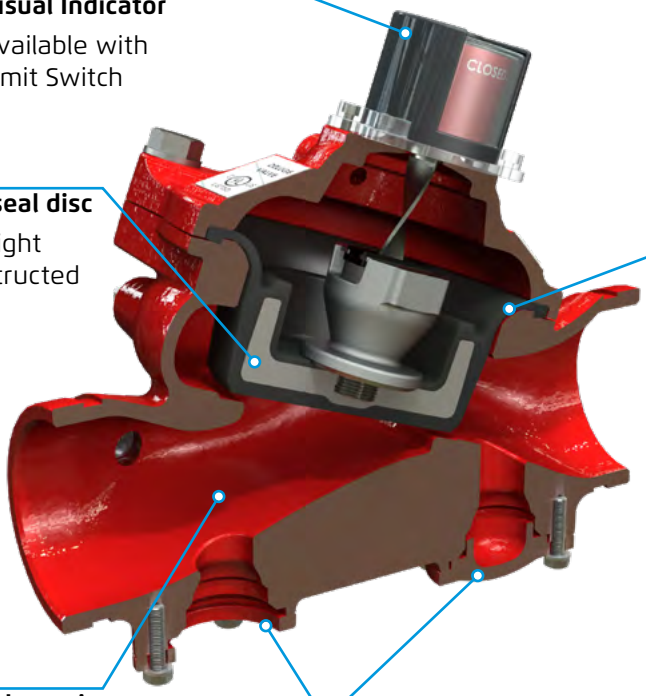
DESIGNED SPECIFICALLY FOR THE FIRE PROTECTION INDUSTRY

Optional Rotating Visual Indicator

Available with Limit Switch

Rugged radial seal disc

Allowing a straight through unobstructed flow path



Unique peripherally supported rolling seal diaphragm

Effortless friction free actuation provides outstanding reliability

Efficient Hydrodynamic Y pattern design

Supreme flow capacity with minimal pressure loss

Optional inlet and outlet drain

Compacting installations

TECHNICAL DATA-400Y

General:

End connections:

- Grooved: DN40-DN200; 1½"-8"
- Flanged: DN40-DN400; 1½"-16"
- Threaded: DN40, DN50; 1½", 2"

Pressure Rating: PN25; 365 psi
Valve Pattern: Y (Oblique)

Main Valve Materials:

Body and Cover:

- Ductile Iron - ASTM A536 Grade 65-45-12

Bolts: Stainless Steel - 316 ASTM A276
Diaphragm & Seal:

- NBR: 80°C; 175°F
- EPDM: 90°C; 194°F

Coating:

- Standard: Red Polyester Electrostatic Powder Coating
- Optional: Red Fusion bonded epoxy with UV protection

Limit Switch / Position Indicator:

- Wetted internal parts - AISI 316

Bermad provides a wide variety of construction materials with extended resistance to corrosion.
See publications under the Petroleum and Gas Fire Protection division for more details.

Control Trim Materials:

Control Accessories:

- Stainless Steel / Bronze & Brass
- NBR / EPDM

Tubing: Stainless Steel / Copper
Fittings: Stainless Steel / Brass
Solenoid:

- **Body**: Stailness Steel / Brass
- **Elastomer**s: NBR, EPDM or FPM
- **Enclosure**: Molded Epoxy

End Connection and Pattern Availability:

Oblique (Y) Pattern

	1½"	2"	2½"	3"	4"	6"	8"	10"	12"	14"	16"
Grooved	•	•	•	•	•	•	•				
Threaded	•	•									
Flanged	•	•	•	•	•	•	•	•	•	•	•

Dimensions, Weights and Flow Data >

400E SERIES

HIGH PERFORMANCE SUPPORTED ROLLING DIAPHRAGM WITH A RIGID INSERT

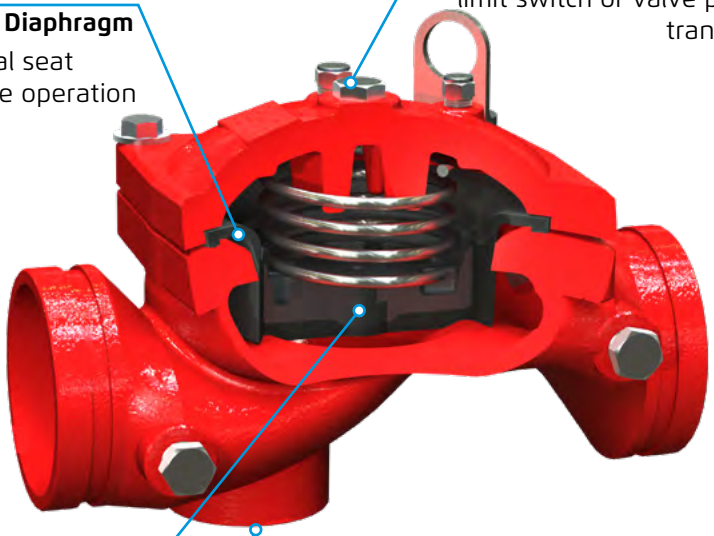
CUTTING-EDGE DESIGN

Unique Rolling Seal Diaphragm

Supported by conical seat allowing friction free operation

Multi Purpose Cover Plug

For optional indicator, electric limit switch or valve position transmitter



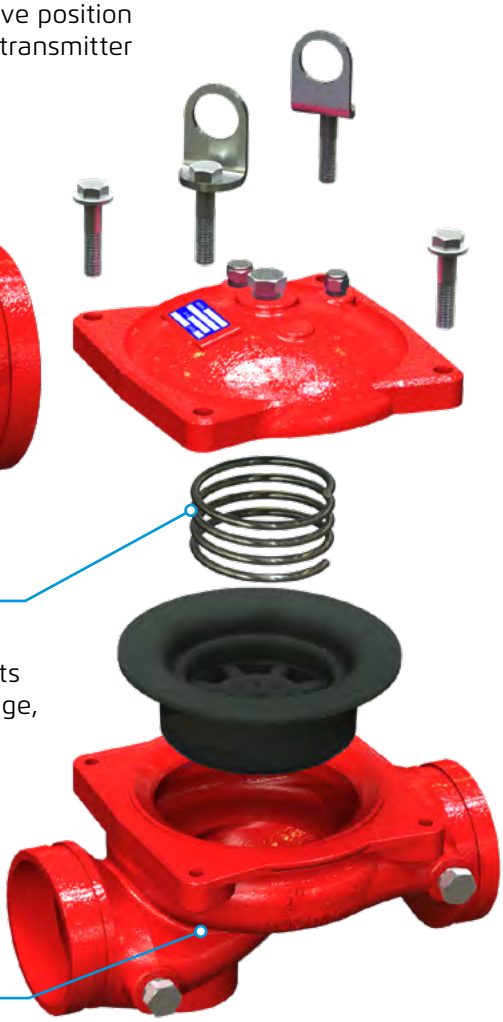
One Piece Elastomeric Assembly

With embedded vulcanized rugged radial seal disk for dynamic regulation and rigid drip-tight seal

Optional inlet drain

Compacting installation

SIMPLE ASSEMBLY



One Single Spring

Fully meets valve requirements for full operating pressure range, ensuring both low pressure opening and secure closing

Hydro-Dynamic Globe

Designed for efficient unobstructed flow with minimal pressure loss and excellent resistance to cavitation

TECHNICAL DATA-400E

General:

End connections:

- Grooved: DN50,DN80-DN200; 2", 3"-8"
- Flanged: DN40-DN350; 1½"-14"
- Threaded: DN40-DN80; 1½"-3"

Pressure Rating: 250 psi; PN16
Valve Pattern: G (Globe)

Main Valve Materials:

Body and Cover:

- Ductile Iron - ASTM A536 Grade 65-45-12

Bolts: Stainless Steel - 316 ASTM A276
Internal Spring: Stainless Steel 302
Diaphragm & Seal:

- NR (Standard): 50°C; 122°F
- NBR: 80°C; 175°F
- EPDM: 90°C; 194°F

Coating:

- Standard: Red Polyester Electrostatic Powder Coating
- Optional: Red Fusion bonded epoxy with UV protection

Bermad provides a wide variety of construction materials with extended resistance to corrosion.
See publications under the Petroleum and Gas Fire Protection division for more details.

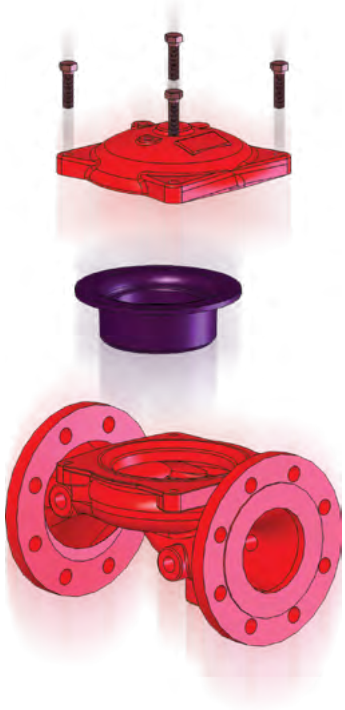
Control Trim Materials:

Control Accessories:

- Stainless Steel / Bronze & Brass
- NBR / EPDM

Tubing: Stainless Steel / Copper
Fittings: Stainless Steel / Brass
Solenoid:

- **Body**: Stailness Steel / Brass
- **Elastomer**s: NBR, EPDM or FPM
- **Enclosure**: Molded Epoxy



End Connection and Pattern Availability:

Globe Pattern

	1½"	2"	2½"	3"	4"	6"	8"	10"	12"	14"
Grooved		•		•	•	•	•			
Threaded	•	•	•	•						
Flanged	•	•	•	•	•	•	•	•	•	•

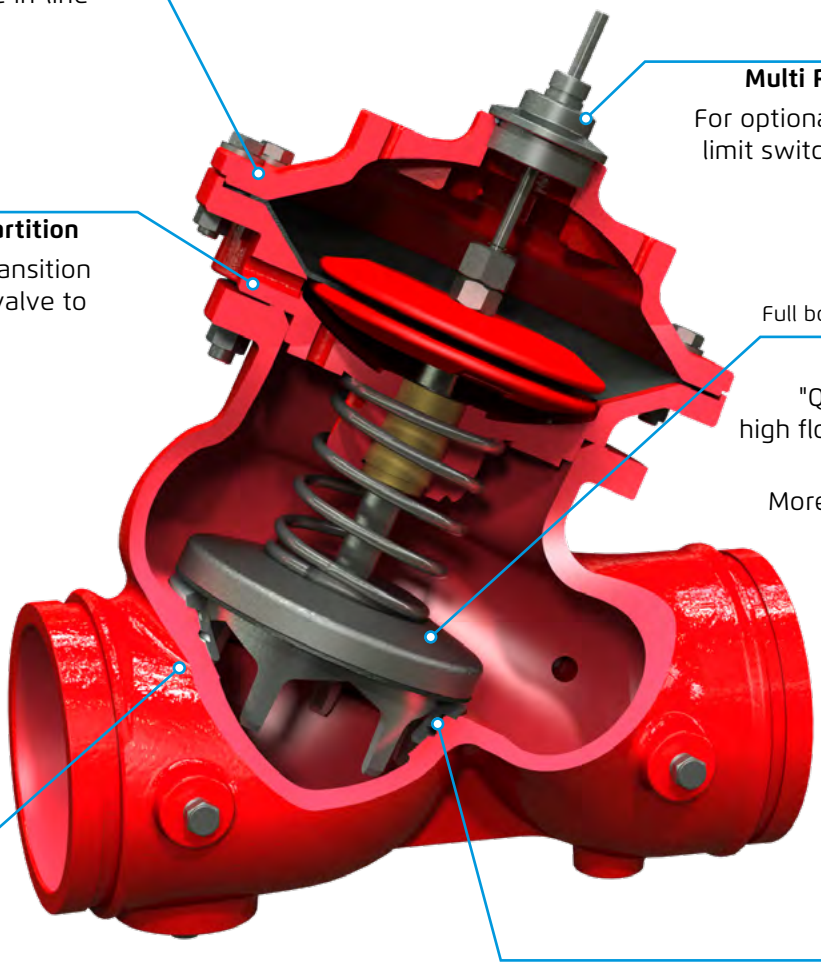
Dimensions, Weights and Flow Data >

700E SERIES

HIGH PERFORMANCE DOUBLE CHAMBERED BERMAD CONTROL VALVE FOR FIRE PROTECTION IN TOUGH CONDITIONS

Unitized Actuator Assembly
Allows fast and simple in-line maintenance.

Integral Separation Partition
Allows easy on-site transition from single chamber valve to double chamber



Multi Purpose Cover Plug
For optional indicator, electric limit switch or valve position transmitter

Seal Disk Assembly
Full bore, no ribs, no stem guide

Flat Disk
"Quick Opening Plug" for high flow and quick response

V-Port
More accurate and smooth response for pressure regulation

"Y" Pattern Body
Minimal pressure loss and excellent resistance to cavitation

Stainless Steel Seat
Raised from the body for improved cavitation resistance, replaceable in-line and on site

TECHNICAL DATA-700E

General:

End connections:

- Grooved: DN40-DN200; 1½"-8"
- Flanged: DN40-DN600; 1½"-24"
  (Up to DN1200; 48" avaliable for Water Works applications)
- Threaded: DN40-DN80; 1½"-3"

Pressure Rating: PN25; 400 psi
Valve Pattern: Y (Oblique) / Angle
Working Temperature: Cold Water up to 60°C; 140°F

Main Valve Materials:

Body, Cover and Partition:

- Standard: Ductile Iron to ASTM A536 65-45-12

Spring: Stainless Steel
Internals: Stainelss Steel, Bronze and Coated Steel
Bolts, nuts & studs: Stainless Steel
Diaphragm: NBR / EPDM - Nylon Fabric-Reinforced
O-rings and seal: NBR/ EPDM
Coating:

- Standard: Red Polyester Electrostatic Powder Coating
- Optional: Red Fusion bonded epoxy with UV protection

Control Trim Materials:

Control Accessories:

- Stainless Steel / Bronze & Brass
- NBR / EPDM

Tubing: Stainless Steel / Copper
Fittings: Stainless Steel / Brass
Solenoid:

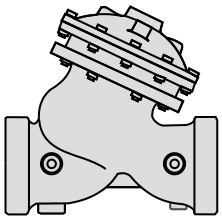
- **Body**: Stailness Steel / Brass
- **Elastomer**s: NBR, EPDM or FPM
- **Enclosure**: Molded Epoxy

Bermad provides a wide variety of construction materials with extended resistance to corrosion.
See publications under the Petroleum and Gas Fire Protection division for more details.

End Connection and Pattern Availability:

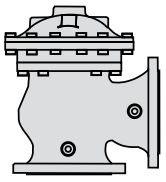
Oblique (Y) Pattern

	1½"	2"	2½"	3"	4"	6"	8"	10"	12"
Grooved	•	•	•	•	•	•	•		
Threaded	•	•	•	•					
Flanged	•	•	•	•	•	•	•	•	•



Angle Pattern

	1½"	2"	2½"	3"	4"	6"	8"	10"	12"
Grooved									
Threaded	•	•	•	•					
Flanged	•	•	•	•	•	•	•	•	•



Dimensions, Weights and Flow Data >

PRESSURE AND FLOW CONTROL

AUTONOMOUS PILOT OPERATED AND LINE PRESSURE DRIVEN VALVES FOR PRESSURE RELIEF AND PRESSURE REDUCTION.

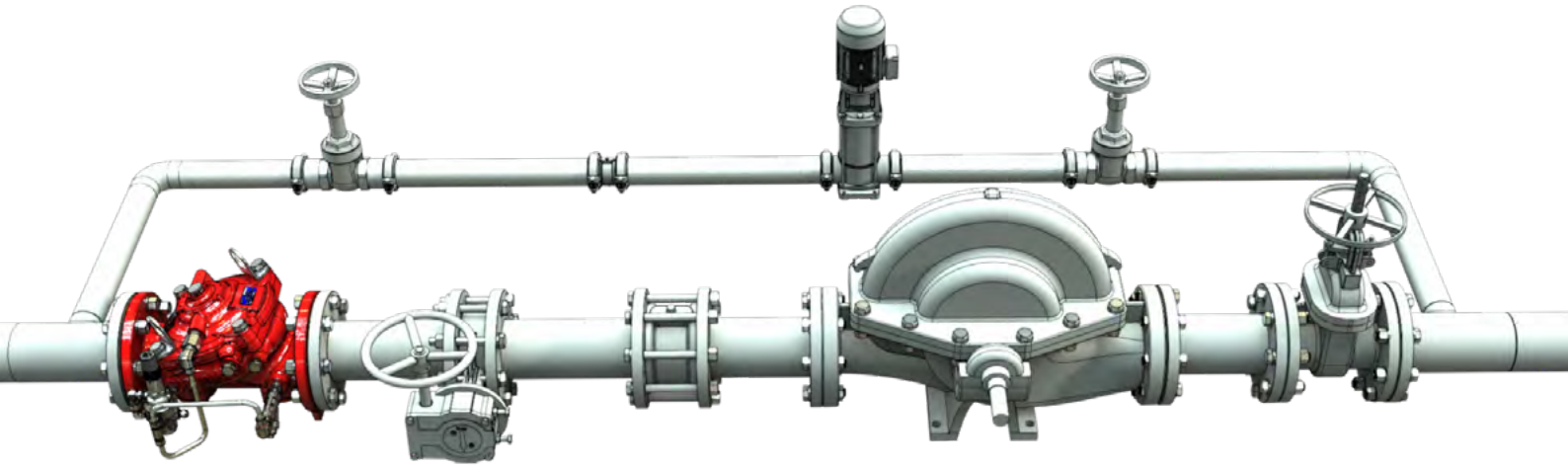
BERMAD pressure control valves are autonomous line pressure driven, and do not require any external energy source for operation.
This group includes fire pump relief valves, pressure reducing, pressure-differential sustaining for dosing, proportioning systems, and breach containment valves.
Our pressure-reducing solutions help control and balance high system pressures by reducing and stabilizing pressure throughout the system.

BERMAD pressure relief and fire pump relief valves can also be tailored for specific conditions including extreme pressure spikes caused by aggressive pump start ups;
Our differential pressure valves can be used to maintain optimal performance for foam and foam concentrate pump systems. BERMAD offers 3 valve series for pressure control applications: 400E 400Y and 700E.

400E Series presents a cost effective solution where the high quality and reliability of a BERMAD valve is required.

400Y Series the latest addition to the fire protection family, the 400Y inherits in its design principles all the advantages of the tried and tested 400E series. In addition it carries a wider range of operation and standard approvals, including FM and UL.

700E Series The flagship valve of BERMAD is suited to more intensive operation at harsh hydraulic conditions.

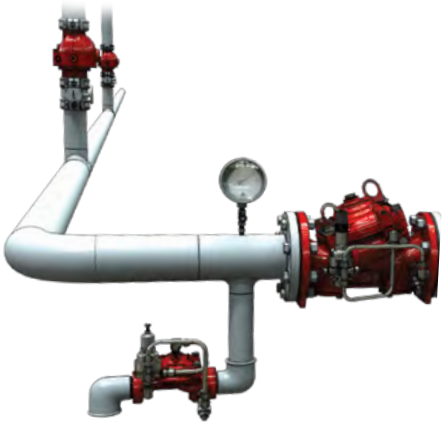


BERMAD Buildings & Construction

Pressure Reducing

PRESSURE REDUCING VALVES

BERMAD pressure reducing valves are hydraulically and pilot operated. They keep the outlet pressure at the reduced value regardless of fluctuating flow or inlet pressures including at no -flow static conditions



Typical Applications:

- Hose station feeds
- Sprinkler feed systems
- Fire hydrant supply
- Deluge systems with over pressure
- Foam systems

Pressure Reducing Valve

400Y Series

42T

Model 42T is a valve that has designed from the ground up, specifically for the fire protection industry and as such holds approvals to the most relevant and up to date standards. It is also available in a wide range of sizes and pressure ratings.

- UL Listed 1½"-10" (365 psi), 12"-16" (300 psi)
- FM Approved 1½"-8" (365 psi), 10" (300 psi)

Optional additions:

- 20 – check and pump surge prevention feature
- 06 – Differential pressure control

Pressure Reducing Valve

700E Series

720

Model 720 is designed for more intensive use at a wide range of hydraulic conditions and pressure ratings.

- UL Listed 2"-6" (300 psi), 8" (175 psi)
- For intencive operation conditions and high pressure reduction requirments

Pressure Reducing Valve

400E Series

420

Model 420 has a reinforced elastomeric diaphragm and presents an ideal cost effective solution providing accuracy and reliability.

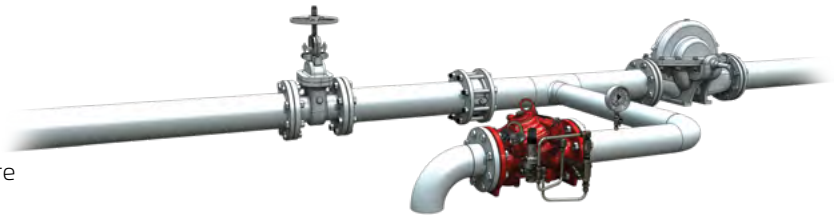
- Available in sizes from 1½" to 12"
- For inlet pressure up to 250 psi

PRESSURE RELIEF VALVES

BERMAD pressure Relief valves are hydraulically and pilot operated. Relieving damaging excessive pressure in systems and fire pumps or for sustaining a minimum back pressure, prioritizing pressure zones and preventing line emptying.

Typical Applications:

- Pressure relief for individual diesel fire pumps
- Pump station pressure relief
- Centralized thermal pressure relief
- Foam recirculation; maintains required foam pressure
- Zone safety relief



Pressure Relief Valve

400Y Series

43T

Model 43T is an elastomeric, pilot operated pressure-relief valve. The BC-43T-FB prevents damage from over-pressure in piping systems, maintaining a preset upstream pressure limit regardless of pressure peaks and fluctuating conditions. It dependably relieves excess pressure to sump or atmosphere, meeting all NFPA, UL, and FM requirements for fire pump service.

- UL Listed 1½"-10" (365 psi), 12"-16" (300 psi)
- FM Approved 1½"-8" (365 psi), 10" (300 psi)

Optional additions:

- PS – Fire Pump Suction Pressure Control
- 06 – Differential pressure sustaining

Pressure Relief Valve

700E Series

730

Model 730 pilot operated pressure relief valve for higher pressure ratings. It prevents overpressure, maintaining a constant preset system pressure regardless of fluctuating conditions.

- UL Listed 2"-6" (350 psi), 8" (175 psi)
- FM Approved 2"-8" (200 psi)
- Designed for more intensive use at a wide range of hydraulic conditions

Pressure Relief Valve

400E Series

430

Model 430 Elastomeric pilot operated pressure relief valve prevents over pressure, maintaining a constant preset system pressure regardless of fluctuating conditions

- UL Listed 2"-6" (175 psi)
- FM Approved 2"-6" (175 psi)

LEVEL CONTROL

CONTROL VALVES FOR CONTROLLING THE WATER LEVEL IN TANKS AND RESERVOIRS, INCLUDING VALVES FOR " ALWAYS FULL" OR BI-LEVEL FILLING, FLOAT, ELECTRONIC OR WATER HEAD PRESSURE SENSING.

BERMAD level control valves combine smooth and reliable operation with the simplicity of a float, electric , electronic or level control pilot, maintaining correct water levels in firewater reservoirs or tanks.

All BERMAD valves are hydraulically actuated enabling the option of installing the valve outside the tank or the reservoir, streamlining maintenance and giving easy access to the valve for scheduled servicing.

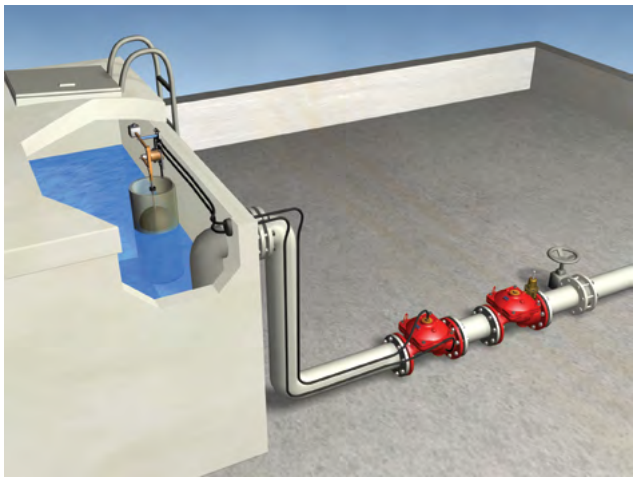
BERMAD level control valves offer "always full" variation with a 2 way valve and float configuration, where the water level is kept exactly full at all times. The advantage being that the it fully exploits the tank volume, but the valve will be constantly opening and closing "topping up" the tank to keep it 100% full at all times.

The alternative more conservative option is a Bi-Level arrangement using a float, electric or head sensing. With this arrangement the valve will fill the tank and will only start to refill when the level has fallen a few centimeters below the full level. Where possible this Bi – Level filling is preferable as the valve will be working only occasionally to refill the tank, saving wear on the valve and system as a whole.

LEVEL CONTROL - MODULATING 400E SERIES

BERMAD Modulating Level Control Valves provide extra safety and ease of operation and maintenance by being installed outside of the water reservoir and sensing the water level with a separate float pilot or altitude pilot.
The main valve will respond to the 2-way pilot water level sensing by opening when water level drops slightly, thus maintaining full reservoir and fire water readiness for emergency events.

The 400E series simple diaphragm design ensures operation after long standby periods.



Level Control Valve

with Modulating Horizontal Float

450-60

The Model 450-60 Level Control Valve with Modulating Horizontal Float is a control valve that controls reservoir filling to maintain constant water level, regardless of fluctuating demand.

Typical Applications:

- Low volume reservoirs
- Large surface area reservoirs

Level Control Valve

with Modulating Vertical Float

450-67

The Model 450-67 Level Control valve for controlling the level in firewater reservoirs. The 2 way vertical float modulates the valve to keep the reservoir full or at a preset level at all times.

Typical Applications:

- "Always Full" Firewater Reservoir
- Automatic Self Operation
- Suitable for systems with poor quality water

Level Control Valve

with Modulating Altitude Pilot

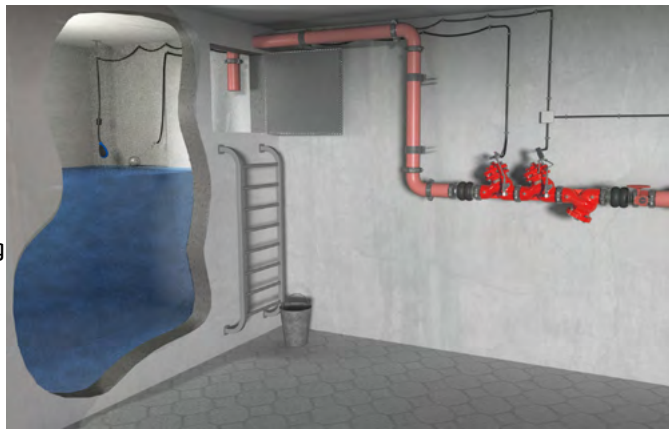
450-82

The Model 450-82 Level Control Valve is a automatic control valve that shuts at pre-set high reservoir level and opens in response to slight level drop, keeping the reservoir full.
The water level is maintained by the use of a highly accurate pilot valve that precisely senses the water level head from a sensing point at the bottom of the reservoir and controls the main filling valve accordingly.

Typical Applications:

- "Always Full" Firewater Reservoir
- Ideal for High level reservoirs & water towers
- Self operation with No Float
- Suitable for horizontal or vertical installation

LEVEL CONTROL - MODULATING 700E SERIES



BERMAD Modulating Level Control Valves provide extra safety and ease of operation by being installed outside of the water reservoir and sensing the water level with a separate float pilot or altitude pilot.
The main valve will response to the 2-way pilot water level sensing by opening when water level drops slightly, thus maintaining full reservoir and fire water readiness for emergency events.

The 700E is more suitable for intense pressure conditions and can also be supplied with a variety of potable water standards if needed.

Level Control Valve

with Modulating Horizontal Float

750-60

The Model 750-60 Level Control Valve with a Modulating Horizontal Float is a control valve that controls reservoir filling to maintain constant water level, regardless of fluctuating demand.

Typical Applications:

- Low volume reservoirs
- Large surface area reservoirs

Level Control Valve

with Modulating Vertical Float

750-67

The Model 750-67 Level Control valve for controlling the level in firewater reservoirs. The 2 way vertical float modulates the valve to keep the reservoir full or at a preset level at all times.

Typical Applications:

- "Always Full" Firewater Reservoir
- Automatic Self Operation
- Suitable for systems with poor quality water

Level Control Valve

with Modulating Altitude Pilot

750-82

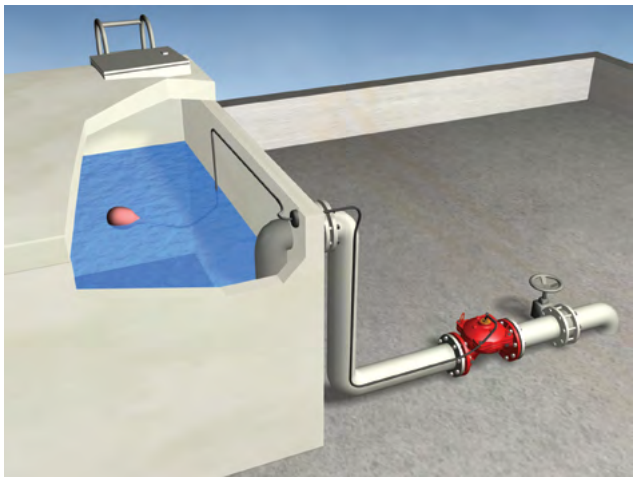
The Model 750-82 Level Control Valve is a automatic control valve that shuts at pre-set high reservoir level and opens in response to slight level drop, keeping the reservoir full.
The water level is maintained by the use of a highly accurate pilot valve that precisely senses the water level head from a sensing point at the bottom of the reservoir and controls the main filling valve accordingly.

Typical Applications:

- "Always Full" Firewater Reservoir
- Ideal for High level reservoirs & water towers
- Self operation with No Float
- Suitable for horizontal or vertical installation

LEVEL CONTROL - BI-LEVEL & BACK-UP 400E SERIES

BERMAD Bi-Level Control Valves senses water level with a float pilot or with electric control.
The main valve, which is installed outside of the reservoir, will response to a 3-way pilot or solenoid command and open fully when water is below set low level, it will shut-off when a set high level is reached.
This "two position" operation allows it to perform as a back-up valve - remaining fully open as long as the main level control valve function properly.



Level Control Valve

with Bi-Level Electric Float

450-65

The Model 450-65 Level Control Valve with Bi-Level Electric Float is hydraulically operated and controled by an electric float switch signal. The valve fully opens at a pre-set low level and closes at a pre-set high level.

Typical Applications:

- Very low supply pressure
- Systems with poor water quality
- Back-up valve to a modulating level control valve
- Optional control from any electric controller connected to a variety of level sensors.

Level Control Valve

with Bi-Level Vertical Float

450-66

The Model 450-66 Level Control Valve controls reservoir filling in response to a hydraulic command from a Bi-Level Vertical Float. The valve is open when water level is below the low setting and closes at a set high level making it ideal as a backup valve.

Typical Applications:

- Very low supply pressure
- Systems with poor water quality
- Back-up valve to a modulating level control valve

Pressure Sustaining Feature - Level Control and Pressure Control capabilities imbedded in one single valve

All Bermad Control valves are versatile so they can accommodate several flow control features in a single valve. Our level control valves can be fitted with a pressure sustaining feature to protect upstream consumers from pressure drops associated with high flows when filling reservoirs.

Typical Applications:

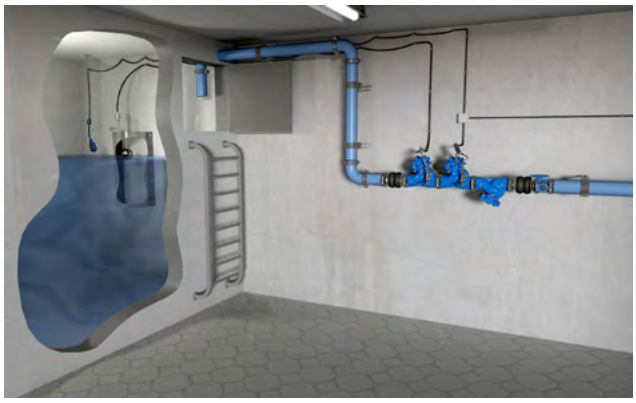
- Preforming all reservoir level control features as regular models.
- Protect upstream consumers from pressure drops.
- Providing priority for upstream consumers over reservoir intake.

Common models with pressure sustaining feature:

- 453-65
- 453-66

LEVEL CONTROL - BI-LEVEL & BACK-UP 700E SERIES

BERMAD 700E Bi-Level control valve is the valve of choiced for potable water and can be used in firewater application when needed or when the systems are combined.
The double chamber 700E valves commanded by a 3-way solenoid or 4-way pilot can operate at extremely low inlet pressures –sealing drip tight and reaching full opening without any external power source.
The "two position" operation achieved with the Bi-Level sensing floats allows them to perform as back-up valves - remaining fully open as long as the main level control valve functions properly.



750-67-P and 750-65-P in a dual-purpose firewater and potable water installation.

Level Control Valve

with Bi-Level Electric Float

750-65

The Model 750-65 Level Control Valve with Bi-Level Electric Float is a hydraulically operated and controled by an electric float switch signal. The valve fully opens at a pre-set low level and closes at a pre-set high level.

Typical Applications:

- Very low supply pressure
- Systems providing water to both firewater and potable water
- Back-up valve to a modulating level control valve
- Optional control from any electric controller connected to a variety of level sensors.

Level Control Valve

with Bi-Level Vertical Float

750-66

The Model 750-66 Level Control Valve controls reservoir filling in response to a hydraulic command from a Bi-Level Vertical Float. The valve is open when water level is below his low setting and closes at a set high level making it ideal as a backup valve.
With a double chamber command, it can operate at pressures as low as 0.7 bar (10 psi).

Typical Applications:

- Very low supply pressure
- Systems with poor water quality
- Systems providing water to both firewater and potable water
- Back-up valve to a modulating level control valve

Pressure Sustaining Feature - Level Control and Pressure Control capabilities imbedded in one single valve

All Bermad Control valve are versatile so they can accommodate several flow control features in a single valve. Our level control valves can be fitted with a pressure sustaining feature that protects upstream consumers from pressure drops associated with high flows when filling reservoirs.

Typical Applications:

- Preforming all reservoir level control features as regular models.
- Protect upstream consumers from pressure drops.
- Providing priority for upstream consumers over reservoir intake.

Common models with pressure sustaining feature:

- 753-65
- 753-66

CONTROL VALVES

PREACTION VALVES , DRY PIPE VALVES, DELUGE VALVES WITH AND WITHOUT LOCAL RESET AND OR PRESSURE CONTROL

The BERMAD deluge valve range includes valves that from inception, were designed by our development engineers specifically for the unique requirements of fire protection systems.

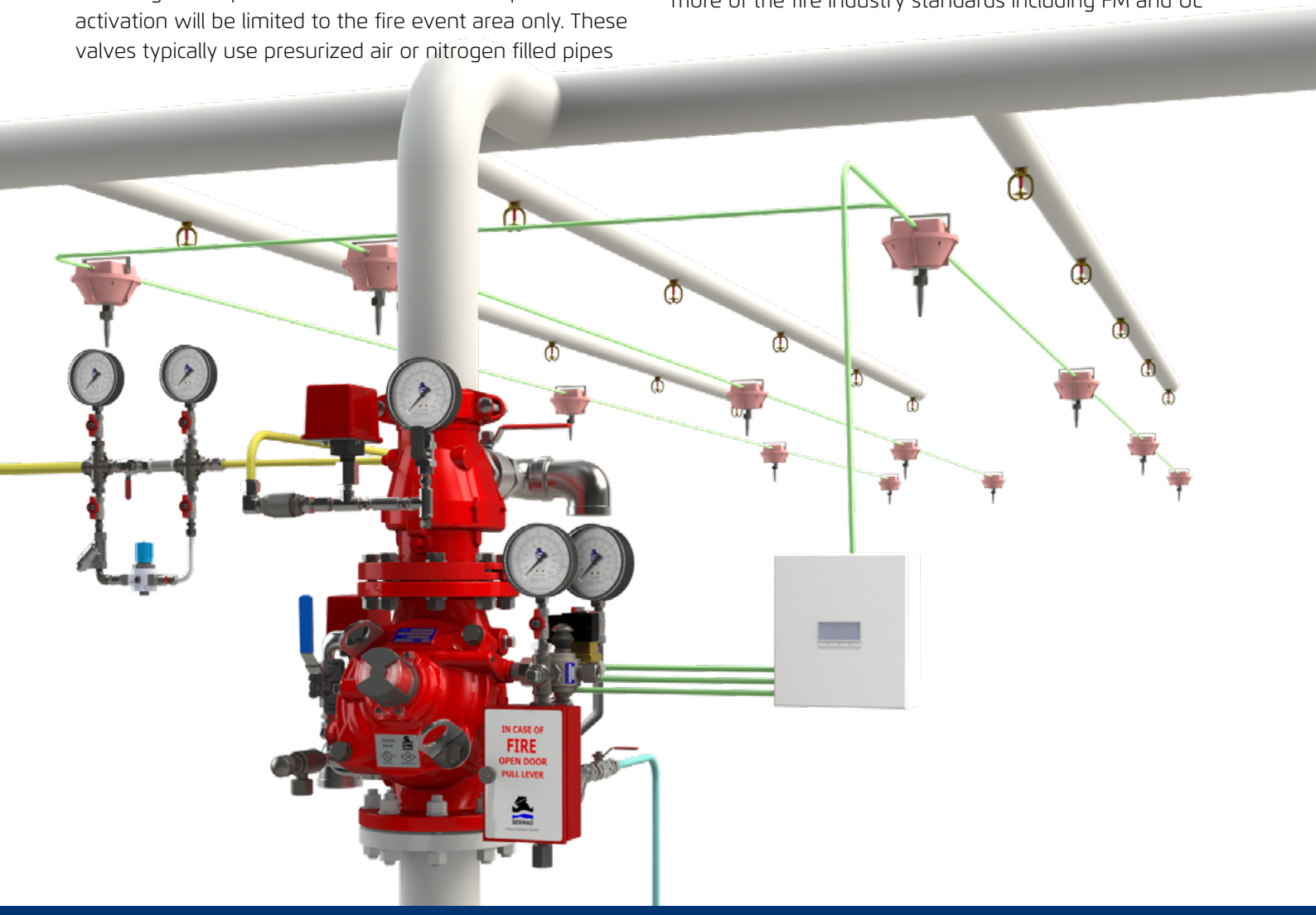
Recognized for their on-demand reliability, robustness, high flow and fast-opening for use in deluge, pre-action and on/off water spray or foam systems, our valves set the standard in modern fire protection valve design.

Control Valves include Pre-Action and Dry Pipe Valves for use where water damage can be costly. Pre-Action valves are designed to prevent false actuation and sprinkler activation will be limited to the fire event area only. These valves typically use presurized air or nitrogen filled pipes in the protected area and are therefore also suited for protected areas where freezing conditions occur.

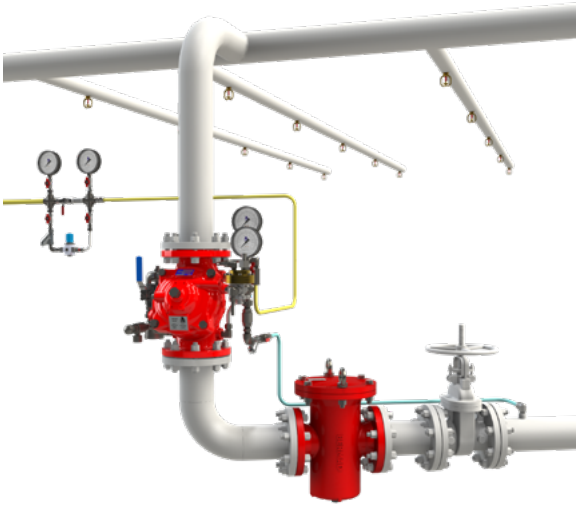
BERMAD offers 2 series with differing attributes

The **400E series** for a cost effective solution where the quality and reliability if a BERMAD valve is required

The **400Y** retains the high reliability characteristics of the 400E Designed specifically for advanced fire protection systems and the latest industry standards. The 400Y operates at a wider pressure range and is approved by more of the fire industry standards including FM and UL



DRY-PIPE AND PRE ACTION VALVES 400Y SERIES



in a closed fusible plug sprinklers system air pressure is supplied to the sprinklers piping system while pressurized water is kept at bay behind a control valve, thus prevent from water to leak, burst or freeze in the sprinklers pipeline.
In the case of an emergency a set of events and conditions will allow the control valve to open, and only then will water be admitted to the closed nozzle sprinklers system, discharging only through sprinklers that have been opened due to excessive heat.

BERMAD 400Y series are well prepared for the task of long closed waiting time and rapid water delivery when needed.

Single Interlock Pre-Action Valve

Electric Actuation

400Y-7M

Model 400Y-7M admits water into the sprinkler piping upon activation of a sensor in the fire detection system. Single Interlock enables a shorter firewater deliverance than double interlock.

- UL listed 1½"-10" (365 psi), 12"-16" (300 psi)
- FM Approved 1½"-8" (235 psi)

Typical Applications:

- Water sensitive material storage
- Water damage sensitive areas such as computer & electronics rooms / Libraries / Archives

Double Interlock Pre-Action Valve

Electric + Electric Actuation

400Y-7BM

Model 400Y-7BM Pre-Action System admits water into the sprinkler piping only when both the detection device and the air pressure supervised systems simultaneously signal the control panel to trigger the solenoid valve.

- UL listed 1½"-10" (365 psi), 12"-16" (300 psi)
- FM Approved 1½"-8" (235 psi)

Typical Applications:

- Water sensitive material storage
- Water damage sensitive areas such as computer & electronics rooms / Libraries / Archives
- Freezing conditions

Dry-Pipe Control Valve

400Y-DP

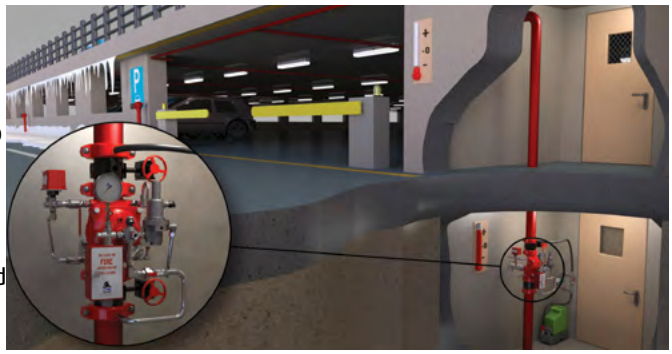
The 400Y-DP admits water into the sprinkler system piping when there is a drop in air pressure in the piping due to the opening of one or more fusible head sprinklers.

- UL listed 1½"-10" (365 psi)
- FM Approved 1½"-8" (365 psi)

Typical Applications:

- Sprinkler systems exposed to freezing weather conditions
- Unheated Warehouses
- Cold storage rooms

DRY-PIPE AND PRE ACTION VALVES 400E SERIES



in a closed fusible plug sprinklers system air pressure is supplied to the sprinklers piping system while pressurized water is kept at bay behind a control valve, thus prevent from water to leak, burst or freeze in the sprinklers pipeline.
In the case of an emergency a set of events and conditions will allow the control valve to open, and only then will water be admitted to the closed nozzle sprinklers system, discharging only through sprinklers that have been opened due to excessive heat.

BERMAD 400E series is a more economical solution to the 400Y in dry-pipe and pre actions applications.

Single Interlock Pre-Action Valve

Electric Actuation

400E-7M

Model 400E-7M admits water into the sprinkler piping upon activation of a sensor in the fire detection system. Single Interlock enables a shorter firewater deliverance than double interlock.

- UL listed 1½"-10" (250 psi)

Typical Applications:

- Water sensitive material storage
- Water damage sensitive areas such as computer & electronics rooms / Libraries / Archives

Double Interlock Pre-Action Valve

Electric + Electric Actuation

400E-7BM

Model 400E-7BM Pre-Action System admits water into the sprinkler piping only when both the detection device and the air pressure supervised systems simultaneously signal the control panel to trigger the solenoid valve.

- UL listed 1½"-10" (250 psi)

Typical Applications:

- Water sensitive material storage
- Water damage sensitive areas such as computer & electronics rooms / Libraries / Archives
- Freezing conditions

Dry-Pipe Control Valve

400E-DP

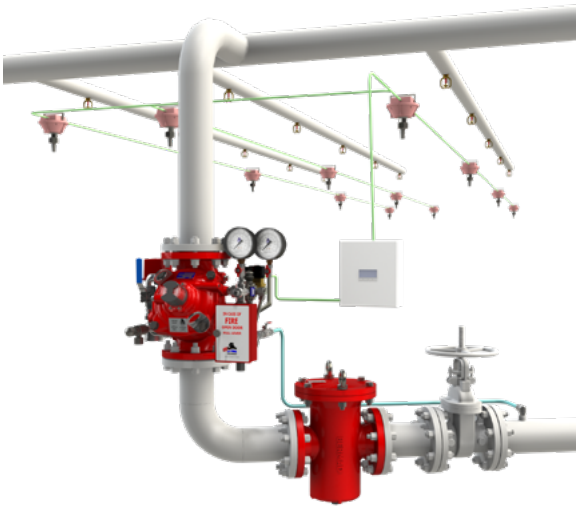
The 400E-DP admits water into the sprinkler system piping when there is a drop in air pressure in the piping due to the opening of one or more fusible head sprinklers.

- UL listed 1½"-10" (250 psi)

Typical Applications:

- Sprinkler systems exposed to freezing weather conditions
- Unheated Warehouses
- Cold storage rooms

DELUGE ON/OFF VALVES 400Y SERIES



Deluge sprinklers system must disperse large quantities of water and fast. Bermad 400Y on/off deluge valves are the most suitable to the task – designed specifically for fire protection in high-risk areas such as the petroleum and gas industry the 400Y has superior flow capacity with a quick opening characteristic, low friction loss and the ability to operate without hesitation after long shut-off periods.
We cover here only the most common deluge application and actuation methods available with the 400Y series. Deluge applications less common in the buildings and construction sector can be found in the BERMAD petroleum and gas division web page.

Hydraulically Controlled Deluge Valve

with Local Reset

400Y-1M

The model 400Y-1M is hydraulically activated by a pressure drop in a fusible plug wet pilot line. Once open, the valve latches open until locally reset.

- UL listed 1½"-10" (365 psi), 12"-16" (300 psi)
- FM Approved 1½"-8" (235 psi)

Typical Applications:

- Hydraulic remote controlled systems
- Automatic water spray
- Foam applications

Electrically Controlled Deluge Valve

with Local Reset

400Y-2M

The 400Y-2M is activated by a 2-way solenoid valve making it ideal for automatic electric controlled fire supervision systems.
Once open, the valve latches open until locally reset.

- UL listed 1½"-10" (365 psi), 12"-16" (300 psi)
- FM Approved 1½"-8" (235 psi)

Typical Applications:

- Electric fire detection systems with control panels
- Automatic water spray
- Foam applications
- Car parks

Electrically Controlled On-Off Deluge Valve

400Y-3D

The 400Y-3D is activated by a 3-way solenoid valve, suitable for electric fire detection systems. The valve can be opened and closed remotely.

- UL listed 1½"-10" (365 psi)

Typical Applications:

- Electric fire detection systems with control panels
- Remote control water spray systems
- Foam applications
- Flammable materials storage

DELUGE ON/OFF VALVES 400E SERIES

The 400E series deluge on/off valves are suitable for open sprinkler systems where there is a need for fast and reliable water supply once the indication of a fire risk is given.
The simple robust design of a single part rolling diaphragm allows the 400E valves to remain in closed stationary position for long periods and react to open when needed with high reliability.

Hydraulically Controlled Deluge Valve

with Local Reset

400E-1M

The model 400E-1M is hydraulically activated by a pressure drop in a fusible plug wet pilot line.
Once open the valve will remain in the open position until locally and manually reset.

- UL listed 1½"-10" (250 psi)

Typical Applications:

- Hydraulic remote controlled systems
- Automatic water spray
- Foam applications

Electrically Controlled Deluge Valve

with Local Reset

400E-2M

The 400E-2M is activated by a 2-way solenoid valve making it ideal for automatic electric controller fire supervision systems.
Once open the valve will remain in the open position until locally and manually reset.

- UL listed 1½"-10" (250 psi)

Typical Applications:

- Electric fire detection systems with control panels
- Automatic water spray
- Foam applications
- Car parks

Electrically Controlled On-Off Deluge Valve

400E-3D

The 400E-3D is activated by a 3-way solenoid valve, suitable for electric fire detection systems.
The valve can be opened and closed remotely.

- UL listed 1½"-10" (250 psi)

Typical Applications:

- Electric fire detection systems with control panels
- Remote control water spray systems
- Foam applications
- Flammable materials storage

DELUGE, ON/OFF AND PRESSURE CONTROL VALVES 400Y & 400E SERIES

In deluge systems with open nozzle sprinklers high supply pressure means excessive water flow to the fire zone that can deplete emergency fire water reservoirs before emergency forces arrive on site. In addition, some sprinklers systems of low-pressure rating require supply pressure to be regulated.
BERMAD deluge valves, activated by a variety of triggers can be fitted with a pressure reduction feature to maintain required system pressure regardless of flow or fluctuating inlet pressure.

Electric Pressure Control Deluge Valve with Local Reset

400Y-2MC

The 400Y-2MC is activated by a 2-Way solenoid valve, that actuates a latching relay valve opening the main valve. Once open, the valve will regulate the outlet pressure to the pre determined set pressure value, in both static and dynamic conditions and regardless of fluctuations in flow or inlet pressure. The valve will not close until locally reset.

- UL listed 1½"-10" (365 psi), 12"-16" (300 psi)

Typical Applications:

- Electric fire detection with control panels
- Automatic water spray
- Foam applications
- High pressure water supply

Electric Pressure Control On-Off Deluge Valve

400Y-2DC

The 400Y-2DC is activated by a 2-Way solenoid valve. Once open, the valve will regulate the outlet pressure to the pre determined set pressure value, in both static and dynamic conditions and regardless of fluctuations in flow or inlet pressure.

- UL listed 1½"-10" (365 psi), 12"-16" (300 psi)

Typical Applications:

- Remote control water spray systems
- Foam applications
- Zonal pressure control
- High pressure water supply

Electric Pressure Control Deluge Valve with Local Reset

400E-2MC

The 400E-2MC is activated by a 2-Way solenoid valve, that actuates the Easy-lock Manual Reset opening the main valve. Once open, the valve will regulate the outlet pressure to the pre determined set pressure value, in both static and dynamic conditions and regardless of fluctuations in flow or inlet pressure. The valve will not close until locally reset.

- UL listed 1½"-10" (250 psi),

Typical Applications:

- Electric fire detection systems with control panels
- Automatic water spray
- High pressure water supplyCar parks

Electric Pressure Control, On-Off Deluge Valve

400E-3DC

The 400Y-3DC is activated by a 3-way solenoid valve by which opening and closing of the deluge valve may be controlled remotely.An integrated pressure reducing pilot ensures a precise and stable pre-set downstream water pressure.

- UL listed 1½"-10" (250 psi),

Typical Applications:

- Remote control water spray systems
- Zonal pressure control
- High pressure water supply

ACCESSORIES

Control valves are usually accompanied by supplementary accessories designed to actuate, indicate and/or protect the valve and the piping system. BERMAD supplies a variety of accessories for flow and pressure control. The most commonly found in fire protection systems in buildings are presented here.

Direct Acting Pressure Relief Valve / Fire Pump Casing Relief Valve

3HC

Features:

- Tight closing with accurate pressure control
- Fast immediate response to pressure rise
- Easy in-field pressure setting adjustment
- FM Approved ½", ¾" (365 psi)

Typical Applications:

- Pressurized sprinkler systems
- Fusible plug pilot lines
- Thermal release for wet piping systems
- Pressure relief for pressure control valves
- Fire pump casing relief
- Jockey pump overpressure

Diaphragm Actuated Sprinkler Relief Valve

3PB

Features:

- Fast immediate response to pressure rise
- Easy in-field pressure setting adjustment
- Tight closing and accurate pressure control
- FM Approved ¼ ",½" (365 psi)

Typical Applications:

- Wet sprinkler piping safety relief
- Wet Fusible plugs line safety relief
- Thermal release for piping systems
- Dry Fusible plugs line safety relief

Fire Line Basket Strainer

60F

Features:

- Low-pressure drop
- Easy in-line maintenance
- Suitable to prevent clogging
- Large screen basket
- Suitable for installation in any position
- Suitable for Foam Systems
- UL listed 3"-12" (200 psi),

Typical Applications:

- Automatic water spray systems
- Deluge systems
- Automatic sprinkler systems
- Foam proportioner/generator provided in the water line
- Upstream of Pressure Control valves
- Upstream of a Sensitive System Devices

Air Maintenance Device with Adjustable Regulator

AMD

Air Maintenance Device (AMD) is a pressure control unit that automatically regulates the supplied air pressure to a constant preset value. It is suited for use with dry pilot actuated Deluge systems as well as Dry Pipe and Pre-Action systems.

Pressure Range and Settings:

- Maximum Inlet supply Pressure Air (or Nitrogen): 12 bar / 175 psi
- Field-Adjustable Outlet Pressure Range: 1.0 to 7.0 bar / 15 to 100 psi

CONTACTS

AMERICAS

USA

VICTAULIC BERMAD Technologies, LLC
9424 West Little York Road
Houston, Texas 77040
phone: 800 821 6825
fax: 713 856 1720
info@vbtech.com
www.vbtech.com

BRAZIL

BERMAD Brasil
Rua Anhaia, 1180 - 3º andar
Bom Retiro – CEP: 01130-000
São Paulo/SP
TEL: +55 11 3074 1199
FAX: +55 11 3074 1190
bermad.br@bermad.com
www.bermad.com.br

MEXICO

BERMAD Mexico SA de CV
Carretera Mexico Toluca Km 53.5
Boulevard Doña Rosa,No 2C
Lerma, Mexico
Mexico, 52000
TEL: +52-728-1021600
01800 2 BERMAD
FAX: +52-728-400747
sales@bermad.com
www.bermad.com

EMEA

UNITED KINGDOM

BERMAD UK Ltd
Unit 8 Hungerford Trading Estate
Smitham Bridge Road
Hungerford - Berkshire RG17 0QP
TEL: +44 1488 681713
FAX: +44 1488 684692
sales@bermad.co.uk
www.bermad.com

EUROPE

Spain

BERMAD Europe S.L.
Calle Comercio, 1 – Nave 22
08780 Pallejà, Barcelona
SPAIN
TEL: +34 932 225 125
FAX: +34 936 633 134
Bermad.eu@bermad.com
www.bermad.com

France

BERMAD France S.A.S.
141 Quai de Bonneuil
La Varenne Saint Hilaire
94210
phone: 0 800 100 308
phone: +34 932 225 125
bermad.srl@wanadoo.fr

ISRAEL

IL (RBC) BERMAD
Kibbutz Evron 22808
TEL: +972 4 985 5311
FAX: +972 4 985 7651
sales@bermad.com
www.bermad.com

ASIA & SEA

SINGAPORE

BERMAD Singapore
CITILINK Warehouse Complex
102E, Pasir Panjang Road, #06-02,
Singapore 118529
phone: +65 96921102
David.Sg@bermad.com
keidar@bermad.com
www.bermad.com

CHINA

BERMAD China Co. Ltd.
Plant B, Number 98
Lane 1971, Lianhua South Road
Minhang District, Shanghai 201108
TEL: +86 21 544 09950
FAX: +86 21 544 09960
info.cn@bermad.com
www.bermad.com.cn

AUSTRALIA

BERMAD Water Technologies Pty
26 Brand Dr
Thomastown VIC 3074
TEL: +61 3 9464 5949
FAX: +61 3 9464 2382
bob@bermad.com.au
www.bermad.com.au

BERMAD STANDARD INTERNATIONAL LIMITED WARRANTY

BERMAD CS LTD. ("**BERMAD**") warrants that, for a period of 12 months from the day of delivery of the product by BERMAD to its customer (the "Warranty Period"), each component of the product shall be free from defects in material or workmanship and shall meet in all material respects the products specifications as defined by BERMAD.

GENERAL CONDITIONS

This warranty shall be valid only if the product is installed, handled and maintained in accordance with BERMAD's written or verbal instructions and/or recommendations, if such has been provided.

This Warranty does not cover defects or damages resulting from accident, inappropriate physical or operational environment, failure of electrical power, improper installation, maintenance, service, repair, transportation, storage, modification, operation, use, negligence or fault by any party other than BERMAD.

This Warranty shall run solely to and in favor of the customer that purchased the defective product directly from BERMAD, and it does not extend to any other purchaser or user of the product.

CLAIMS, NOTIFICATIONS AND COMPENSATION

Every warranty claim must be notified in writing to BERMAD as soon as reasonably possible after the discovery of the defective product, enclosing the original sales receipt and this warranty.

The claimant must allow BERMAD to inspect the product involved and the installation site itself while the product is still in its original position and has not been removed or altered in any way and/or return the Product to BERMAD for testing. BERMAD reserves the right to investigate independently the cause of any failure.

If a claim under this Warranty is properly notified within the Warranty Period and found to be justified by BERMAD, then BERMAD, at its sole option, shall: (i) replace such product; or (ii) repair such product; or (iii) repay to the BERMAD customer any amounts actually paid to BERMAD for such product.

In any way, BERMAD's liability shall not exceed the amounts actually paid by the BERMAD customer to BERMAD for the defective Products.

LIMITATIONS

This Warranty is the sole warranty in respect to the Products.

Under no circumstances shall BERMAD be liable for any indirect, special or consequential damages, and including, without limitation, for any loss of profit, loss in connection with business interruption, loss of use, loss of revenues or damage to business or reputation.

This warranty does not cover any costs and expenses of removal and installation of the product or shipping cost or taxes or any other direct or indirect loss(es) which may result from the Product failure and BERMAD shall not be liable for such costs and expenses.

OTHER THAN HAS BEEN SPECIFICALLY STATED IN THIS WARRANTY, ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED SO FAR AS THE LAW PERMITS.

GENERAL TERMS

- Payment by irrevocable letter of credit
- Prices stated are in USD, EXW
- Standard export packaging included
- Prices are subject to change without prior notice
- Pictures and drawings are for purposes of general illustration only
- Products are subject to change without prior notice
- Price list and information may contain errors and omissions
- Availability of products is not guaranteed
- For further price details, please see the BERMAD Buildings & Construction Catalogue

www.bermad.com

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Mar 2019