

# BERMAD

*Fire Protection  
Control Valves*



# The BERMAD Company

Since its foundation in 1965, Bermad has focused its emphasis on innovation, quality and reliability.

Consequently, Bermad is acknowledged today as one of the world's foremost suppliers of control valves for water-based fire protection systems.

Bermad control valves can be found throughout the world in fire protection systems in high risk areas such as petroleum and other flammable material installations, power stations etc.. The USA, Australia, South Africa, New Zealand, Thailand, Italy, Brazil, Mexico, UK, Far East, Middle East, Western Europe and Offshore installations in the North Sea are but some of the locations where Bermad products are regularly employed.

Widely diversified, Bermad designs and manufactures automatic control valves and other water management equipment for many applications in municipal waterworks, industry, fire protection systems and the petroleum industry.

Its versatility and reliability, starting with sophisticated R&D and engineering, and ending with dependable service and maintenance, have resulted in engineers, consultants, authorities and others, specifying Bermad valves exclusively.

Quality assurance & control at Bermad are ISO 9002 certified and are maintained by its highly trained and experienced staff, using the most modern materials, production processes and sophisticated hydraulic testing facilities.

The Bermad models, which have received UL listing and FM approvals, undergo periodic inspection by UL and FM representatives.

As a result, several of Bermad's products constitute an entirely new concept and approach to various fire protection handling problems.









# Special Hazard Solutions

## **Fire Protection Systems for Power Plants, Oil and Petrochemical, Aviation and Marine, Offshore Oil and Gas Installations**

In installations with high fire risk, heavy damage can be prevented by fast and effective response of the fire protection system. The use of remote controlled Bermad valves enables immediate control, through simple means, of an extensive fire extinguishing system. It reduces the need to risk lives to fight fires in the vicinity of flammable liquids and dangerous gases, at the same time allowing quick control of the blaze. Bermad has the knowledge and capacity to provide control solutions for special or dangerous environments.







## Foam System Control Valve

Various foam systems have specific requirements, each demanding a different solution with regard to operational logic, valve type and valve construction material.

Bermad's experienced engineering staff tailors each solution to the needs of your particular system.

## Sea Water Service

The use of sea water in fire fighting requires that special attention be paid to the control valve construction materials. Bermad offers a complete line of Sea Water Service valves, constructed from a range of materials to meet specific system requirements.

Bermad provides free pre-sale service to determine the appropriate construction materials with regard to the liquid involved, the corrosion environment and specific application.



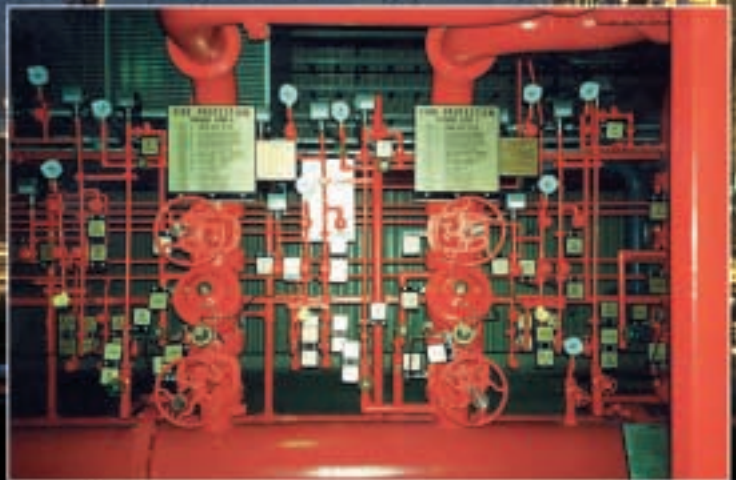
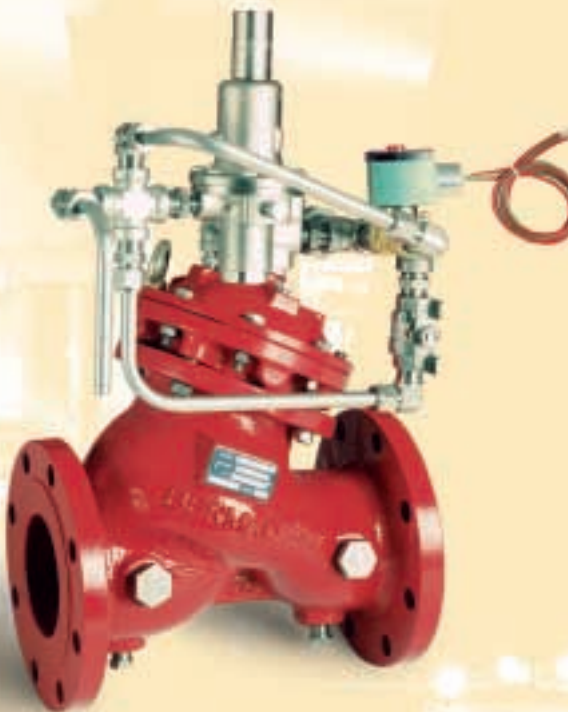


# Deluge Valve

## *Bermad Models 400E and 700E*

Bermad Deluge Valve is an automatically resetting, fast-opening valve of high quality and dependability intended for use in deluge, preaction or ON-OFF spray or foam systems. Bermad Deluge Valve has greater ability to withstand pressure variation and false tripping than latch-type mechanical deluge valves.

Bermad Deluge Valve can be reset automatically, installed either horizontally, vertically, or in an angle formation, and does not require dismantling in order to service it. The valve is operated by means of an actuator with a single moving part.







Bermad Deluge Valve is available in seven UL-LISTED Types, either electrically, hydraulically or pneumatically actuated, which can be utilized in various applications when provided with the appropriate operating system and accessories.

### **Bermad Deluge Valve Types**

Type 1: Hydraulically Controlled Deluge Valve

Type 2: Electric Actuation Deluge Valve

Type 3: Electric Actuation with PORV

Type 4: Pneumatically Controlled Deluge Valve

Type 5: Hydraulically Controlled with PORV

Type 6: Combination Dry Pilot and Electric Deluge Valve

Type 7: Pre-Action Valve





# Remote Control Shutoff Valves

## *Bermad Models FP410 and FP710*

Bermad Self Operated Electric or Hydraulic Remote Control valves are intended for use in remotely controlled automatic or semi-automatic systems such as:

- Remote-control Monitors,
- Remote control isolating applications,
- Water Spray Systems,
- Foam-water Sprinkler Systems,
- or other Foam applications.

Bermad solenoid-controlled valves require minimal electric power and reduce costs of electric installations.

Optional accessories include: manual override device, a visual indicator, electrical limit switch, and a valve opening/closing speed adjustment device.

Available sizes: 1 1/2" - 20".

A combination remote control shut-off valve with a regulation feature is available.

UL Listed models are available for all applications.







## **BERMAD 700 Series**

### **Superior Hydraulic Control Valves for Fire Protection Systems**

Bermad hydraulic control valves provide superior performance in On-Off operation or regulation of fire protection systems, waterworks and industrial installations.

Bermad line of Fire Protection hydraulic valves consists of valves for a wide range of applications and constitutes a product line of impressive completeness. Its unsurpassed reliability has been well proven over many years of use throughout the world.

Bermad valves are complemented by a comprehensive range of control pilot valves and other control accessories for total flexibility of application.

Advanced features include a unique valve body, hydrodynamically designed for high flow capacity and low pressure loss, and an optional heavy duty Double-Chambered actuator, which provides positive, immediate response with accurate control, and smooth valve action, without causing water hammer.





# Fire Hydrants and Monitor Valves

## *Bermad Model FP405-Z*

The fast response of a fire protection system is critical to its effectiveness. The minutes required for full opening of a mechanical valve can be costly.

Bermad's Hydraulic Hydrant enables fast local operation by a single twist of a control handle.

The valve can be utilized for operating a water/foam monitor or shutting off water lines. It can be easily installed to replace a manual hydrant valve.

## **Dependability**

Bermad Hydraulic Hydrant Valve does not jam, even after remaining closed over a long period of time. There is no need to remove the valve from the line for servicing. The robust elastomers used for seals and diaphragm ensure long life cycle.





## Pressure Regulating Hydrant

### *Bermad Model FP420*

Bermad Pressure Regulating Hydrant is designed to protect the fire hose system against excess pressure by limiting maximum outlet pressure to a preset point, not exceeding 100PSI (6.9 Bar), according to NFPA-14 standard.

The Hydrant Valve maintains a fully controlled opening speed and flow capacity.



# Fire Pump Control Applications

## Fire Pump Pressure Relief Valve

### *Bermad Model 730-UL/FM*

Bermad high performance Pump Relief valve is specifically designed and UL/FM approved for fire protection systems. The valve opens quickly to relieve excess pressure in the system and maintains a constant pressure in the fire pump discharge, regardless of flow rate throughout the system.

A unique hydrodynamic design gives Bermad's valve a higher relief capacity than any competing relief valve on the market.

The hydraulic pilot system maintains a fixed relief pressure with high accuracy and dependability, eliminating the typical leakage and jamming problems found in mechanical, spring-loaded relief valves.

## Pump Suction Control Valve

### *Bermad Model 730-R*

Bermad UL listed Pump Suction Control Valve was designed especially for pressure control of fire pump suction in municipal or other water supply applications.

The valve operates automatically and ensures that the suction pressure will not fall below a pre-set minimum.

## Pressure sustaining & Back Pressure valve for in-line applications

### *Bermad Model FP730*

Bermad Pressure Sustaining & Back Pressure Valve accurately maintains a constant pre-set upstream pressure, regardless of changing upstream potential or system demand.

## Main Applications:

- Supplies available pressure above set point to low altitude areas.
- Modulates or closes to maintain minimum pressure in high altitude areas.
- Closes to prevent line drainage during power failure or flow stoppage.





## Water Hammer and Surge Control

The Surge Effect is very common in advanced fire fighting systems requiring extremely rapid fire pump activation in order to provide high water pressure and flow.

Bermad supplies proven solutions to protect pumps, instrumentation and pipelines from dangerous surges and pressure waves formed by flow changes. For this purpose, Bermad's Control Valve product line contains a number of models which are especially adapted for use in fire fighting systems.

### Pump Control Valve

*Bermad Model FP740*

When installed at the fire pump outlet, Bermad's Pump Control Valve inhibits start-up pressure surges and eliminates unexpected shut-off surges.

### Non-Slam Check Valve

*Bermad Model FP760*

Bermad Non-Slam Check Valve inhibits start-up pressure surge in fire pumps by controlling the opening of the hydraulic check valve and provides non-slam operation during pump shutoff with drip-tight sealing.

### Pump Relief with Surge Anticipating Feature

*Bermad Model FP730-55*

Combines fire pump pressure release feature with pre-opening feature to anticipate start up surge.

This combination is suitable for use with large volume electric and diesel-powered fire pumps.

Other combinations of features are available.





# Pressure Reducing Valve

## *Bermad Model 720-UL*

Bermad UL Listed Pressure Reducing Valve functions automatically to reduce a high, unstable supply pressure and maintain a precise, stable, pre-set pressure regardless of changing upstream pressure or flow.

An optional unique V-port plug improves the valve's capacity to cope with flow ranges far below today's norm.

The valve's unique design endows it with quick reaction to system demands, and keeps pressure loss at the minimum.

### **Main applications:**

- **Hose station feeds** where fire header pressure is over 100 PSI (6.9 bar), according to NFPA-14 standard .
- **Sprinkler systems** where supply pressure is above optimal.
- **Deluge systems:** in pulsing pressure, or where supply pressure is above system pressure rating, the valve will eliminate excessive flow rates and surge damage.
- **Foam systems:** Bermad PRV will maintain the precise water foam pressure designed for the nozzles.
- **Fire hydrant water supply:** prevents hose over-pressure hazards, allowing the operator to work safely in pressure ranges below 100 PSI (6.9 bar), as specified by NFPA standards.





# Water Reservoir Applications

## Reservoir Float Valves

### *Bermad Models 750-66/67*

Bermad Float Valves open to fill reservoirs, tanks etc. When water rises to a predetermined level, float action will cause the pilot to close the main valve.

For cases in which a fully opened valve is required during low supply pressure, a special model has been designed with a 4-Way operation, enabling full opening and complete closure at two defined, adjustable levels.

## Altitude Valves

### *Bermad Model 780-AX*

Bermad Altitude Valves control water level in reservoirs to prevent spills, without using external control devices such as floats etc.

An Altitude Valve will remain fully open until a closing command is transmitted by an Altitude Pilot Valve.



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