

## Pressure Relief Valve

Model: FP 430-UF



### Description

The BERMAD Model FP 430-UF pilot operated valve prevents over pressure, maintaining a constant preset system pressure regardless of fluctuating demands.

UL-Listed (up to 175 psi) and FM-Approved according to NFPA-20.

The valve offers reliable performance in:

Refineries, petrochemical complexes, tank farms,  
high-rise buildings, aviation, marine and on-shore installations.

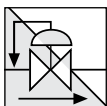
### Typical Applications



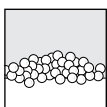
Pressure relief for individual diesel fire pump



Pump station pressure relief



Centralized thermal pressure relief



Foam recirculation; maintains required foam pressure



Zone safety relief

### Features and Benefits

- **Advanced Elastomeric Globe type** – Low pressure loss
- **One-piece molded elastomeric moving part** –  
No maintenance required
- **Simple design** – Cost effective
- **In-line serviceable** – Minimal down time

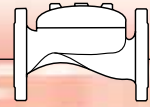
### Optional Features

- **Large control filter** (code: F)
- **Seawater service construction**
- **Valve Position Single/Double Limit Switches**

**Note:** Optional features can be mixed and matched.

Consult your local BERMAD representative for full details

# BERMAD Fire Protection

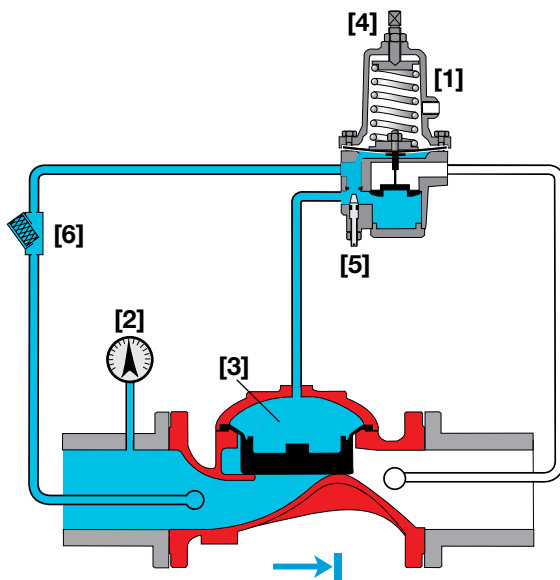


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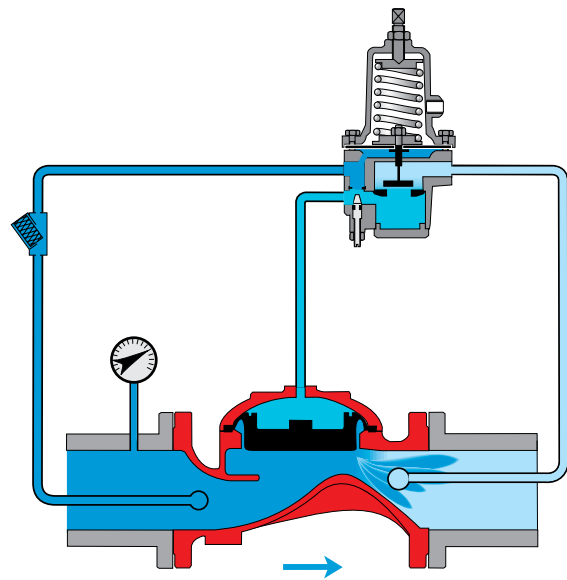
400 Series

## Operation

The BERMAD Model FP 430-UF remains closed as long as the sensed upstream pressure is lower than the adjustable set point. When the Pressure Relief Pilot [1] senses upstream pressure [2] that is higher than the pilot setting, it acts upon the control chamber [3] causing the main valve to modulate open, relieving excess pressure to either a reservoir or sump, thus preventing system over pressure. The Pressure Relief Pilot is equipped with an adjusting screw [4] to preset the desired upstream pressure, and an integral adjustable needle valve [5] to control the main valve closing speed. The valve's unique design provides quick reaction to system demand and keeps pressure loss at a minimum. The control system is equipped with a control strainer [6].



Valve Closed



Valve Open (pressure-relief)

## Engineer Specifications

The Pressure Relief Valve shall be UL-Listed, FM-Approved, and hydraulic pilot controlled. The main valve shall be an elastomeric type globe valve with a rolling-diaphragm.

Valve actuation shall be accomplished by a fully peripherally supported, one-piece balanced rolling-diaphragm, vulcanized with a rugged radial seal disk. The diaphragm assembly shall be the only moving part.

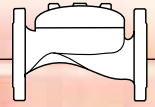
The valve shall have an **unobstructed flow path**, with no stem guide or **supporting ribs**.

The valve shall have a removable cover for quick in-line service enabling all necessary inspection and servicing.

The pilot system shall be field adjustable, with adjustable valve closing speed integrated into the main valve, hydraulically tested and supplied as an assembly consisting of:

- Relief pilot valve UL-Listed and FM-Approved as part of the assembly with built-in, internal needle valve
- "Y" strainer

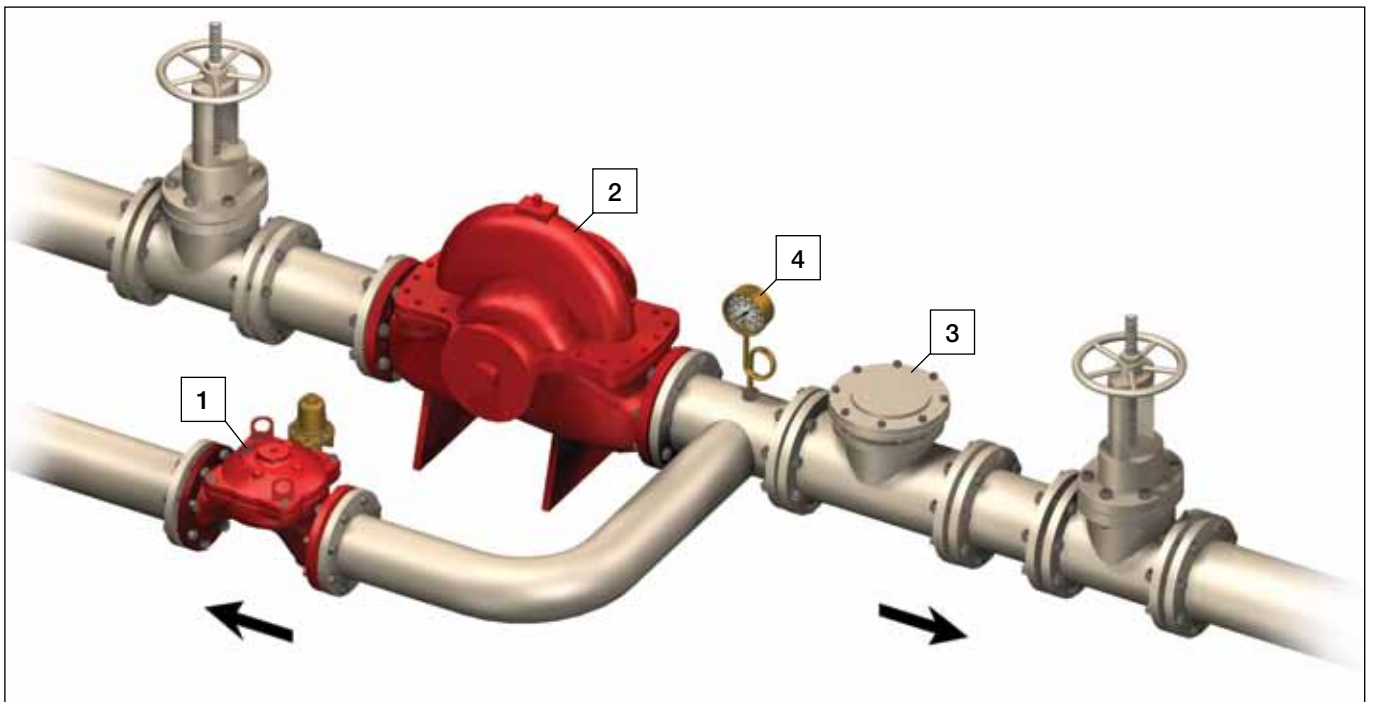
The control trim shall be supplied as an assembly, pre-assembled and hydraulically tested at an ISO 9000 and 9001 certified factory.



## Typical Installations

### **System Components**

- 1 - BERMAD Model FP 430-UF
- 2 - Fire Pump
- 3 - Check Valve
- 4 - Pressure Gauge

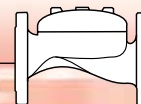


## Installation Considerations

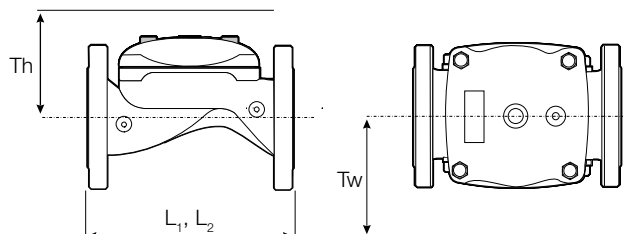
- Valve size should be no less than NFPA-20 requirements.
- Provide adequate clearance around valve for maintenance, ensuring that the actuator can be easily removed.
- Design installation with the valve cover up for best performance.
- Ensure that before the valve is installed, instructions are given to flush the pipeline at full flow.

## Approvals

The BERMAD Model FP 430-UF is UL-Listed and FM-Approved when installed as a unit.



## Technical Data



Size		2"		2½"		3"		4"		6"		8"		10"		12"	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Dimensions	L <sub>1</sub> <sup>(1)</sup>	205	8½	205	8½	257	10⅞	320	12⅞	415	16⅝	500	19⅞	605	23⅞	725	28½
	L <sub>2</sub> <sup>(2)</sup>	180	7⅞	210	8¼	255	10⅞	N/A	N/A	N/A	N/A	500	19⅞	N/A	N/A	N/A	N/A
	Tw	284	11⅜	284	11⅜	300	11⅜	313	12⅝	341	13⅞	415	16⅝	443	17⅞	481	18⅝
	Th	210	8¼	210	8¼	215	8⅞	243	9⅞	315	12⅜	350	13¾	382	15	430	6⅝

### Notes:

1. L<sub>1</sub> is for flanged valves.
2. L<sub>2</sub> is for threaded NPT or ISO-7-Rp.
3. Tw & Th are max. for pilot system.
4. Data is for envelope dimensions, component positioning may vary.
5. Provide space around valve for maintenance.

### Connection Standard

- Flanged: ANSI B16.42 (Ductile Iron), B16.5 (Steel & Stainless Steel), B16.24 (Bronze)
- ISO PN16
- Threaded: NPT or ISO-7-Rp for 2, 2½ & 3"
- Grooved: ANSI/AWWA C606 for 2, 3, 4, 6 & 8"

### Water Temperature

- 0.5 – 50°C (33 – 122°F)

### Available Sizes

- Globe: 2, 2½, 3, 4, 6, 8, 10 & 12"
- UL Listed and FM approved: 2, 2½, 3, 4 & 6"

### UL Listed / FM Pressure Rating

- Max. inlet: 175 psi (12 bar)
- Set: 30 - 175 psi (2 - 12 bar)
- Test: 365 psi (25 bar)

### Manufacturers Standard Materials

#### Main valve body and cover

- Ductile Iron ASTM A-536

#### Main valve internals

- Stainless Steel & Elastomer

#### Control Trim System

- Brass control components/accessories
- Stainless Steel 316 tubing & fittings

#### Elastomers

- Polyamide fabric reinforced Polyisoprene, NR

#### Coating

- Electrostatic Powder Coating Polyester, Red (RAL 3002)

### Optional Materials

#### Main valve body

- Carbon Steel ASTM A-216 WCB
- Stainless Steel 316
- Ni-Al-Bronze ASTM B-148

#### Control Trim

- Stainless Steel 316
- Monel® and Al-Bronze
- Hastelloy C-276

#### Elastomers

- NBR
- EPDM

#### Coating

- High Build Epoxy Fusion-Bonded with UV Protection, Anti-Corrosion

### Approvals

- UL Listed - Fire Pump Relief Valve (QXZQ)
- FM Approved - Water Relief Valve and Fire Pump Relief Valve
- ISO 9001 QA certified
- ABS approval 2-12"
- Lloyd's Registered 2-12"