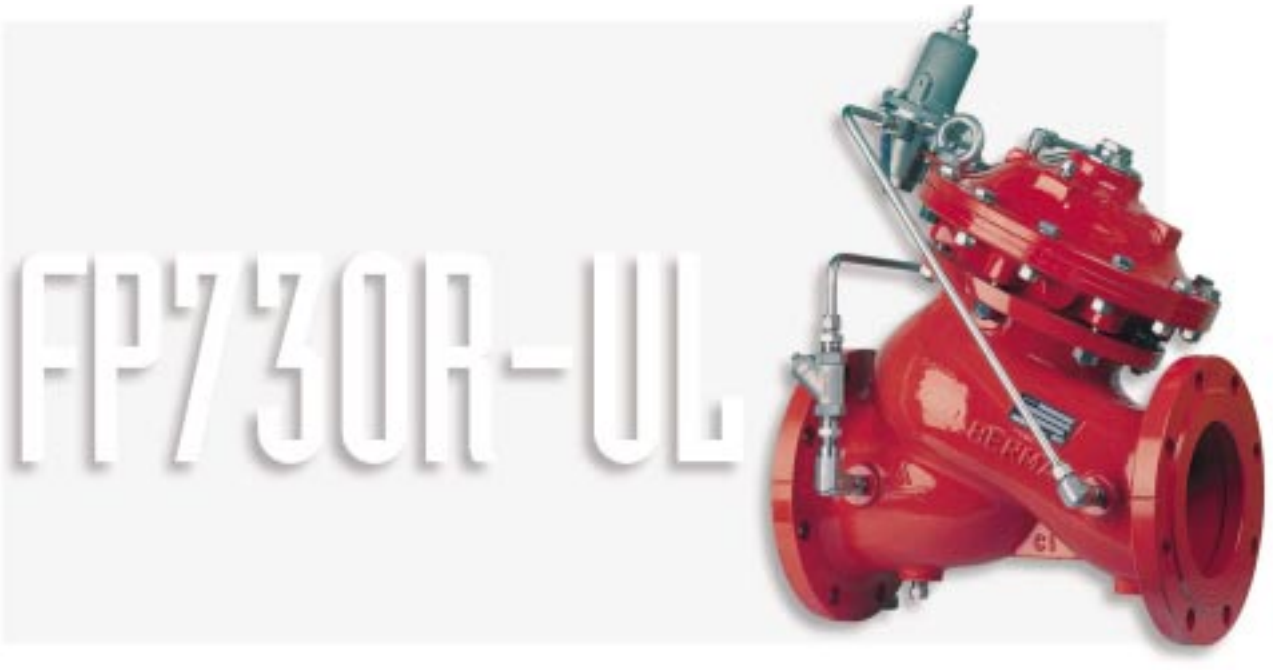
Pump Suction Control Valve

FP730R-UL



Description

The BERMAD Model 730R-UL is a pilot-operated, line-pressure driven valve that modulates to keep booster pump suction pressure above a preset net positive suction head (NPSH) required by the pump.
It is UL-listed according to NFPA standards.
This valve reliably fulfills its role in high-rise buildings, industrial complexes, refineries and power plants.

Typical Applications

- Fire water supplied from municipal source
- High-capacity fire pumps
- Flow-overload protection when filling drained systems

Features and Benefits

- Hydraulically-powered valve
  - **Fail-safe open valve –** automatically neutralized on abnormal condition
- **Hydro-efficient body design –** unrestricted flow path
  - Low head loss
- **Advanced pilot system –** with adjustable closing speed
  - **Eliminates pressure surges**
- Double-chambered unitized actuator
  - Easy, inline inspection ensures minimal down time
  - **Quick** and smooth valve action

Optional Features

- Large control filter (option code: F)
- Valve-position flow indicator
- Seawater Service (add FS as prefix to model)

Note: Optional features can be mixed and matched

Consult your local BERMAD representative for full details

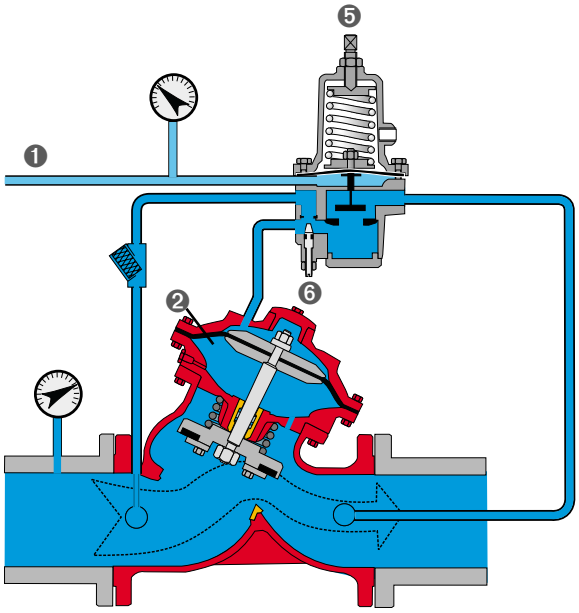
UL LISTED

FP730R-UL Pump Suction Control Valve

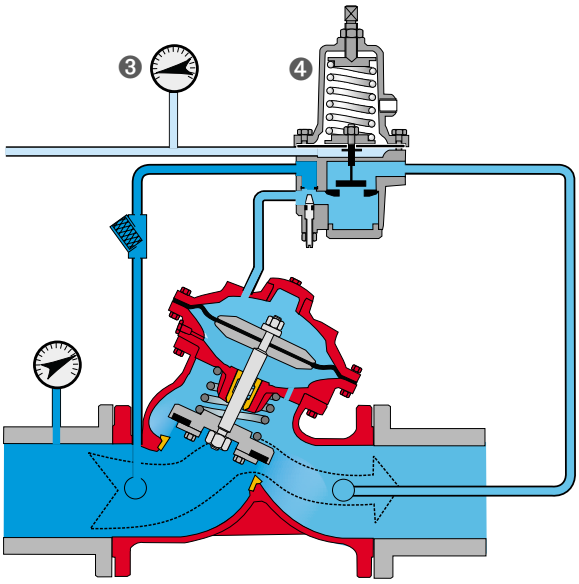
Operation

The BERMAD Model 730R-UL senses remote pressure at the fire-pump suction ❶ and modulates the upper control chamber ❷ causing the main valve to throttle, thus sustaining minimum net positive suction head (NPSH). When the pump-suction pressure falls below the pilot valve setting ❸, the pilot valve ❹ closes, pressure in the upper control-chamber increases, and the main valve modulates to create back-pressure on the pump and sustain pilot valve setting.

The pilot valve is equipped with an adjusting screw ❺ to preset the desired inlet pressure and an internal adjustable needle valve ❻ to control the main valve closing speed.



Valve Fully Open



Valve Modulating

Tender Specifications

The valve shall be UL-listed as a pump suction control valve, supplied as a unit, hydraulic-pilot controlled and intended for modulating service.

The main valve shall be globe design, angle or "Y" pattern. All necessary inspection and servicing of the main valve shall be possible in-line.

Valve actuation shall be accomplished by double-chambered actuator, which shall include a stainless steel stem and a flat seal-disk.

The valve seat shall be made of stainless steel and have an unobstructed flow-path, with no stem guide or supporting ribs.

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

- Remote sensing pilot valve, Type #3R (UL-listed) with built-in, internal needle valve
- "Y" strainer

The manufacturer shall be QA certified according to ISO 9001 standards.

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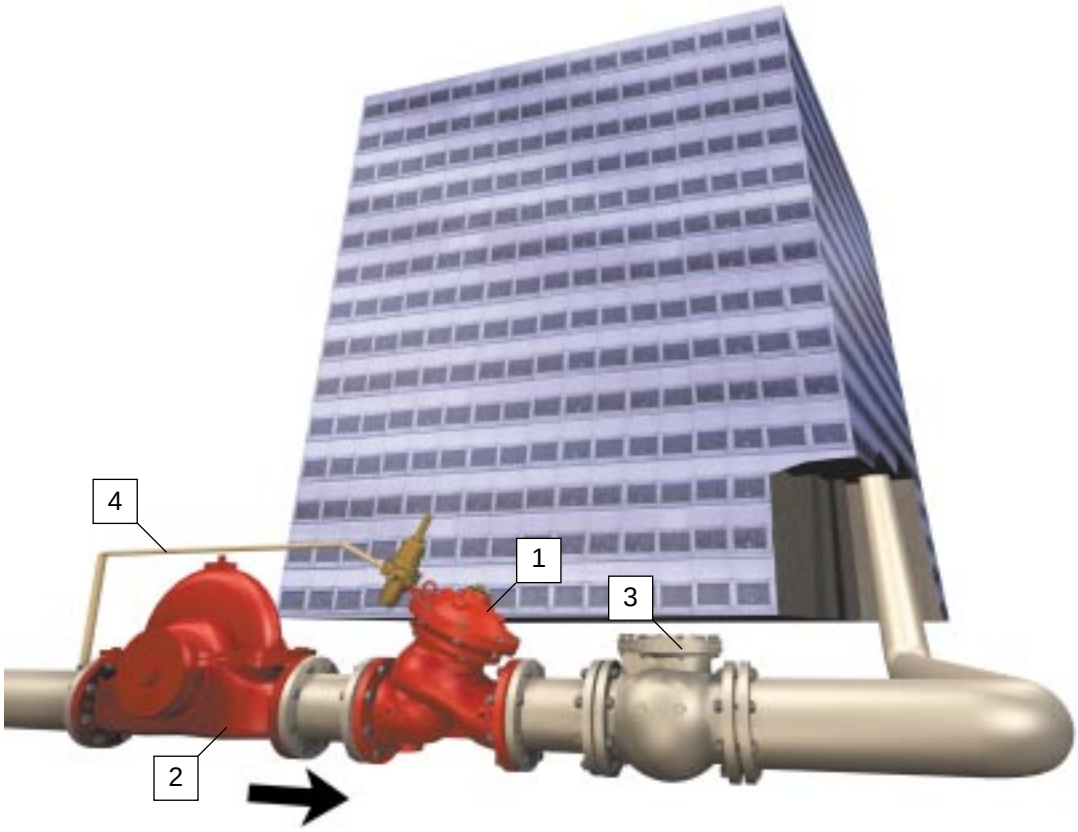
Typical Installation

BERMAD Model 730R-UL keeps booster pump suction pressure above a NPSH required by the pump. It is suited for booster pumps that use municipal or other public water supply systems as their source and must ensure adequate head so that the pump maximizes its pumping capability.



System Components

1. BERMAD 730R-UL Pump Suction Control Valve
2. Fire Booster Pump
3. Check Valve
4. Remote Sensing Line to Pump Suction

Installation Considerations

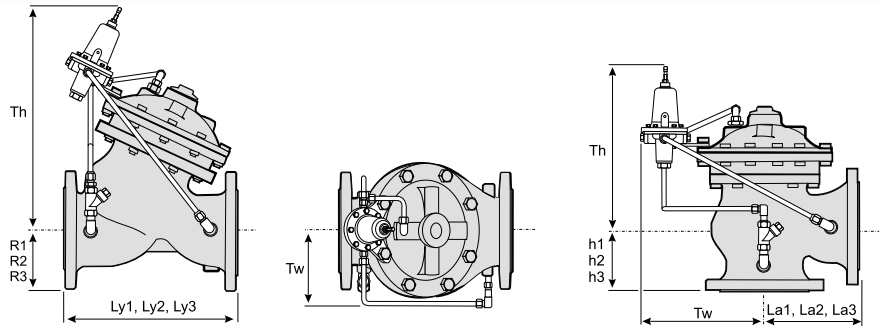
- Size the valve not less than the nominal pump discharge diameter.
- Design enough room around the valve assembly for any adjustments and future maintenance/disassembly work, ensuring that the actuator can be easily removed for future maintenance.
- Design installation of a ¾" pipe from the pump suction to the sensing port of the pilot valve.
- Design installation with the valve cover up for best performance.
- Design Installation of a UL listed pressure gauge on both the suction side and the discharge side of the pump (between the pump outlet and the Model 730R-UL).
- Ensure that before the valve is installed, instructions are given to flush the pipeline at full flow.

UL-Listed

Listed as per Underwriters Laboratory Inc. Directory for Fire Protection Equipment.

FP730R-UL Pump Suction Control Valve

Specifications



Valve Size		1½"		2"		2½"		3"		4"		6"		8"		10"	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Dimensions	(1)Ly1	205	8 1/16	205	8 1/16	209	8 1/4	250	9 7/8	320	12 5/8	415	16 3/8	500	19 11/16	605	23 13/16
	(2)Ly2	155	6 1/8	155	6 1/8	212	8 3/8	250	9 13/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	(3)Ly3	210	8 1/4	210	8 1/4	212	8 3/8	264	10 7/16	335	13 1/4	433	17 1/16	524	20 5/8	637	25
	(1)La1	121	4 3/4	121	4 3/4	140	5 1/2	152	6	190	7 1/2	225	8 7/8	265	10 7/16	320	12 5/8
	(2)La2	120	4 3/4	120	4 3/4	140	5 1/2	159	6 1/4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	(3)La3	127	5	127	5	149	5 7/8	159	6 1/4	200	7 7/8	234	9 3/16	277	10 7/8	336	13 1/4
	(1)h1	82	3 1/4	82	3 1/4	102	4	102	4	127	5	152	6	203	8	219	8 5/8
	(2)h2	82	3 1/4	82	3 1/4	102	4	114	4 1/2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	(3)h3	89	3 1/2	89	3 1/2	109	4 5/16	108	4 1/4	135	5 5/16	165	6 1/2	216	8 1/2	235	9 1/4
	(1)R1	75	2 15/16	82.5	3 1/4	92.5	3 5/8	100	3 15/16	114	4 1/2	140	5 1/2	171	6 3/4	203	8
	(2)R2	40	1 9/16	40	1 9/16	48	1 7/8	55	2I	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	(3)R3	78	3 1/16	83	3 1/4	95	3 3/4	108	4 1/4	127	5	159	6 1/4	191	7 1/2	222	8 3/4
	Tw	191	7 1/2	191	7 1/2	191	7 1/2	206.5	8 1/16	241.5	9 1/2	290	11 7/16	325	12 13/16	370	14 9/16
	Th	312	12 5/16	312	12 5/16	312	12 5/16	364	14 1/2	405	15 15/16	505	20	566	22 5/16	639	25 3/16

Notes:
1. Ly1, La1 & h1 are for flanged ANSI #150 and ISO PN16.
2. Ly2, La2 & h2 are for threaded female, NPT or BSP.
3. Ly3, La3 & h3 are for flanged ANSI #300 and ISO PN25.
4. Dimensions are maximum.
5. Provide adequate clearance around valve for maintenance.

Connection Standard
- Flanged: ANSI B16.42 (Ductile iron), B16.5 (Steel & Stainless), B16.24 (Bronze), ISO PN16
- Threaded: NPT or BSP 1½, 2, 2½ & 3"

Water Temperature
- 0.5 - 80°C (33 - 180°F)

Sizes ("Y" & Angle)
- Available: 1½ – 10"
- UL-listed: 2, 2½, 3, 4, 6 & 8"

Working Pressure
- Class #150: 30 – 175 psi (2 – 12 bar)
- Class #300: 100 – 350 psi (7 – 24 bar)

Manufacturers Standard Materials

Main valve body and cover
- Ductile iron ASTM A-536

Main valve internals
- Stainless steel, bronze and coated steel

Control Trim
- Brass Components/Accessories
- Forged brass fittings & copper tubing

Elastomers
- NBR (Buna-N)

Coating
- Electrostatic Powder Coating Polyester Red (RAL 3000)

Optional Materials

Main valve body/internals
- Carbon steel ASTM A-216-WCB
- Stainless steel 316
- Ni.Al. bronze
- Titanium
- Duplex
- Hastalloy

Control Trim
- Stainless steel 316
- Monel®
- Hastalloy C-276

Coating
- High Built Epoxy Fusion-Bonded with UV Protection (for Corrosive Materials)

Approvals
- UL-listed - Fire-Pump suction control Valve (QXZQ)
- ISO 9001 QA certified

Setting Pressure Range
- 5 to 75 psi (0.3-5 bar)

Cat # PC7PE23 ver 8/02
English
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