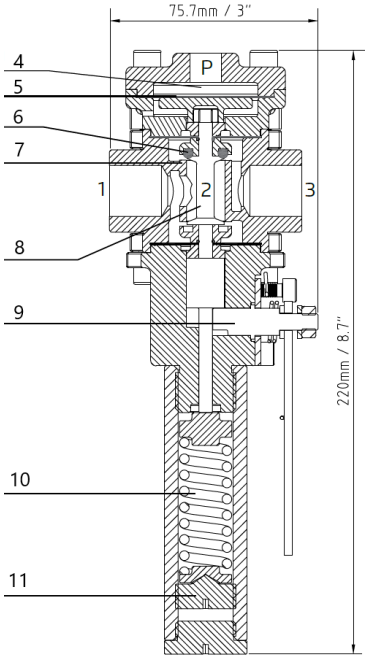
ADJUSTABLE LATCHING UNIVERSAL RELAY VALVE

Model URV-2-MA

The BERMAD URV-2-MA is a normally open, 2-way, balanced-poppet, pressure-operated, diaphragm-actuated latching relay pilot valve featuring an adjustable head-compensating return spring.
The URV transitions from open to closed when pressure is applied to its control chamber. Once actuated, the latching mechanism maintains its state regardless of subsequent control pressure changes. Resetting requires restoration of the control pressure and an on-site local manual reset, using the reset handle on the URV .
Designed for use with BERMAD Deluge Valves, the URV functions as a relay pilot, initiating main valve actuation upon the release of pressure from its control chamber.
The adjustable lower spring compensates for hydrostatic head pressure in wet pilot lines installed above the main valve, making the URV-2-MA suitable for elevations of 10 to 70 m (33 to 230 ft) above the valve.
Its balanced-poppet design provides accurate, reliable operation in a compact form. The friction-free internal mechanism enhances reliability, particularly in fire protection applications, and enables dependable operation with firewater, brackish water, and seawater.



Features

- Column Compensating: Adjustable spring allows wet pilot line height of up to 70 metres.
- Frictionless operation: Isolating membrane increases safety and reliability, well suited for use with sea-water and corrosive fluids
- Balanced Poppet Shaft: Enables a low control / pilot pressure regardless of the line supply pressure
- Heavy duty construction: Suitable for the harsh conditions of chemical and offshore facilities

Technical Data

Pressure Rating: 25 bar
Water Temperature Range: 80 °C
Flow Factor: Kv 1.5
Weight: 1.6 Kg

Standard Materials:

Body: St. St. 316
Cover: St. St. 316
Diaphragm & Seals: NBR
Internal Parts: St. St. 316
Spring: St. St. 316
*Other materials are available on request

Part	Description
4	Control chamber
5	Diaphragm
6	Seal
7	Seat
8	Balanced poppet shaft
9	Latch Shaft
10	Spring
11	Adjusting screw

Port	Size	Connections
1,2 or 3	½" NPT	Inlet / Outlet
P	¼" NPT	Valve Control Chamber

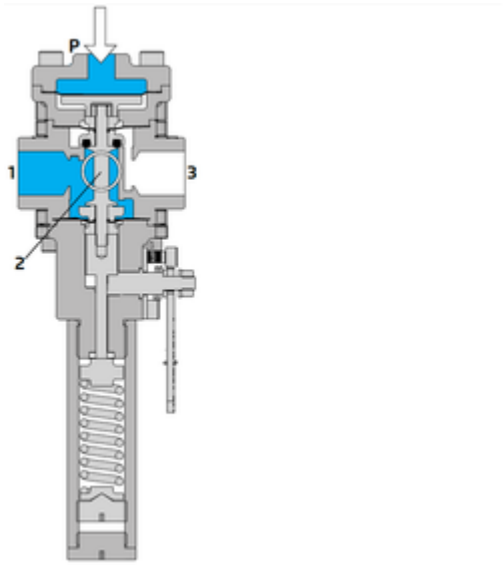
Ports 1 and 2 are shared/connected

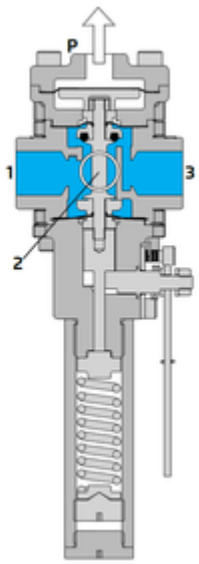
Flow can be ***Straight*** (from 1 to 3 or 3 to 1) or ***Angular*** (fom 2 to 3 or 3 to 2)

Operation

The URV-2-MA utilizes a control chamber (P) and three operational ports 1, 2 & 3 Actuation or position change is achieved by applying or releasing control pressure to the Control Chamber Port (P)
Releasing control pressure will open the URV-2-MA, and it will latch in this position. Resetting or de-latching the URV-2-MA (typically to reclose the main valve) requires that the latch handle be rotated as indicated on the handle and pressure to be returned to the control chamber.

Flow direction through the URV can be either:
"Straight" from port 1 to port 3 or vice versa from port 3 to port 1
"Angular" at 90° from port 2 to port 3 or vice versa from port 3 to port 2.

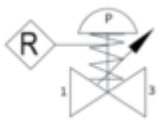
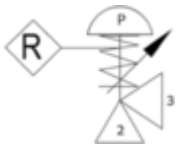




Closed: Control chamber pressurized

Open: Control chamber depressurized

Connections

Configuration	Function	Port	Schematic
Straight Flow	Inlet/Outlet	1 & 3	
	Control	P	
Angular Flow	Inlet/Outlet	2 & 3	
	Control	P	

The chart below shows the opening and closing and the transitional zone of the URV at two pilot line elevation heights 70m/230ft (ordering code M7) and at 35m/115ft (ordering code M6) Vs. varied supply pressures.

Opening and Closing Points Chart

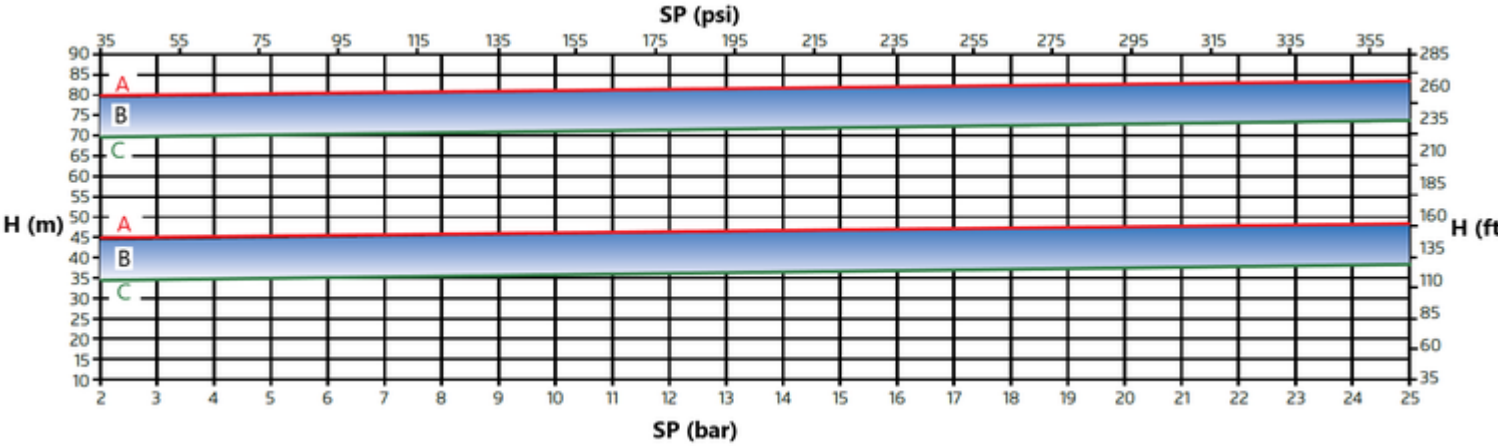


Chart Symbols:

Symbol	Description	Symbol	Description
A	Above this red line - URV Fully Closed	B	URV Closing or Opening Zone (transitional)
C	Below this green line - URV Fully Open	SP	Supply / System Pressure
H	Set Elevation Height		

Model Codes and Material Options

Model Code	Materials: Body & Shaft (wetted)	Materials: Actuator/Covers (dry)
URV-2-MA-N-N	Stainless Steel 316	Stainless Steel 316
URV-2-M-U-N	Ni.Aluminium Bronze (Monel shaft)	Stainless Steel 316

* for other material options contact BERMAD