

3-WAY LATCHING UNIVERSAL RELAY VALVE

Model URV-3 -M

The BERMAD URV-3-M Latching Universal Relay Valve is a 3-Way spring return frictionless balanced poppet type, pressure operated and diaphragm actuated latching relay pilot valve. The URV latching relay valve is designed for use with BERMAD deluge water control and foam concentrate valves, the URV will actuate the BERMAD main valve upon control pressure release from the URV control chamber (the main valve will be "pressure to close") Once opened, the URV remains latched in the open position even if control pressure inadvertently returns and can only be reset manually after control pressure has been re-established. Its balanced poppet design provides reliable operation at low control pressures, while the frictionless isolation membrane design greatly enhances reliability and durability. This makes it particularly well suited for use with firewater, brackish water, seawater, and other corrosive fluids.

Features and Benefits

3-Way control: No continuous release from main valve control trim, suitable for foam systems and pit installations

Frictionless operation: Isolation membrane improves safety and reliability

Latching design: Stays open until manually reset

Balanced poppet shaft: Low control pressure independent of line pressure

Heavy-duty construction: Suitable for onshore and offshore applications

Corrosion-resistant materials: For harsh environments and corrosive media

Technical Data

Pressure Rating: 25 bar / 360 psi

Minimum Recommended Control / Pilot Line Pressure: 2.5 bar / 36 psi

Temperature Rating: 80°C / 180°F

Flow Factor: Kv 1.5 / Cv 1.7

Port Connections: Line pressure ½" NPT Control ¼" NPT

Weight: 1.4 kg / 3 lbs

Standard Materials*

Body: Stainless Steel 316, CF8M

Wetted Parts: Stainless Steel 316

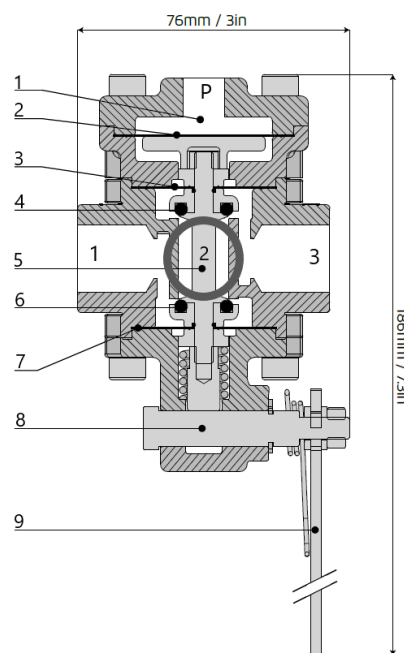
Covers (dry parts): Stainless Steel 316, CF8M

Elastomers: NBR (Buna-N)

Bolts: Stainless Steel 316

Spring: Stainless Steel 316

*for duplex and NAB material options see "Models Codes and Material Options" on last page



Part	Description
1	Control chamber
2	Diaphragm
3&7	Isolation membrane
4&6	Seal
5	Balanced poppet shaft
8	Latch Shaft
9	Latch Handle

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

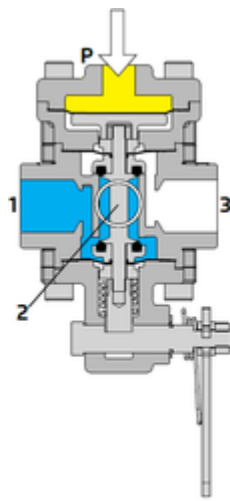
Operation & Connections

The URV-3-M utilizes a control chamber and three operational ports.

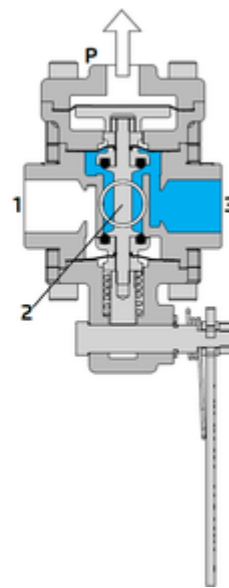
Actuation or position change is achieved by applying or releasing a relatively low control pressure (air or water) to the Control Port (P)

When control pressure is applied to the control chamber (P) the pressure overcomes the spring force pushing the balanced poppet shaft to open the passage between ports 1 and 2, and closing passage between ports 2 and 3. Releasing pressure from the control chamber opens the passage between ports 2 and 3 and closes the passage between ports 1 and 2.

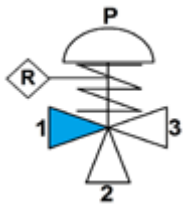
For the deluge valve to be Normally Open "pressure to close" Connect the supply line pressure to Port 1
Connect the deluge valve control chamber to port 2 (common) Port 3 will be the vent



Closed: Control chamber pressurized



Open: Control chamber depressurized

Configuration	Function	Port	Schematic
N.C. (pressure to close main valve)	Supply	1	
	Common	2	
	Release	3	
	Control	P	

Control / Pilot Line Pressure Chart - Standard Control Pressure Version

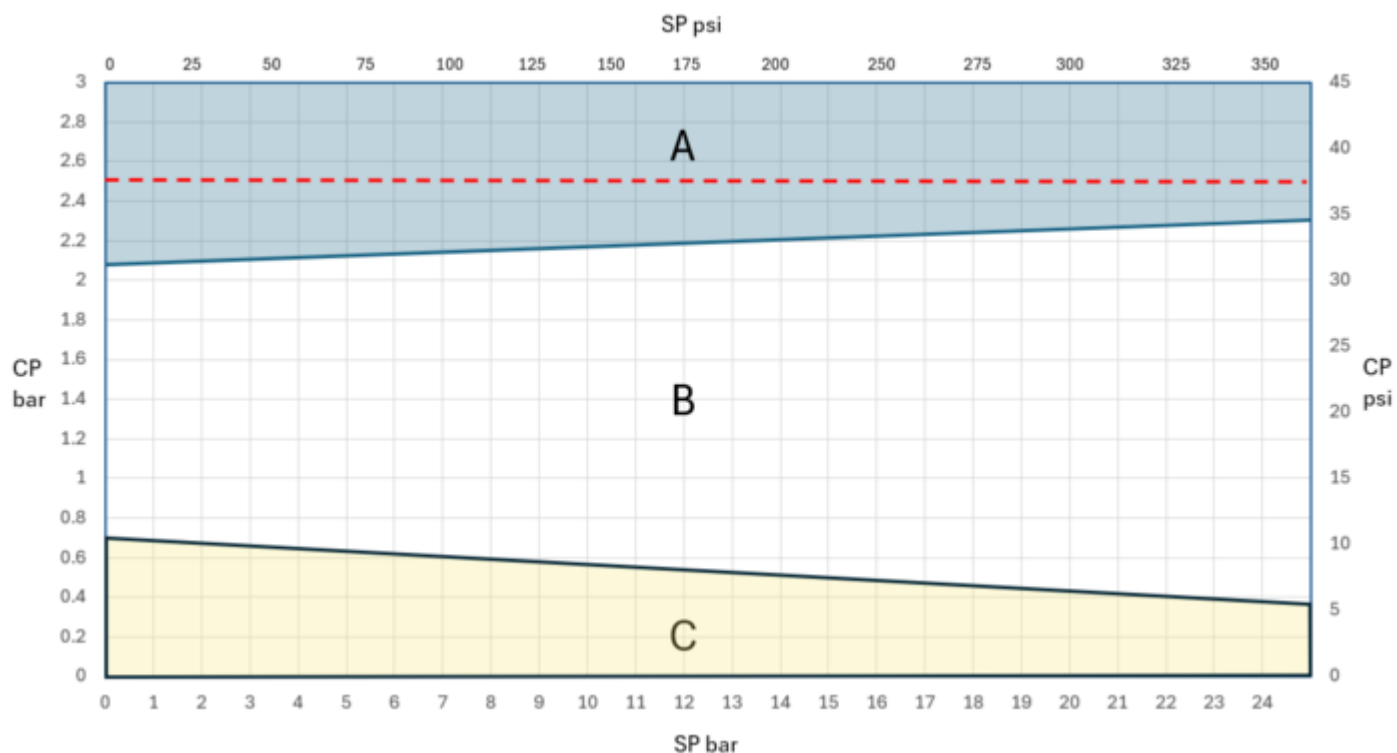


Chart Symbols:

Symbol	Description	Symbol	Description
A	Passage between 1 - 2 open Passage between 2 - 3 closed		Recommended Control Pressure
B	URV Closing or Opening Zone (transitional)	SP	Supply / System Pressure
C	Passage between 2 - 3 open Passage between 2 - 1 closed	CP	Control Pressure



SS316



NAB/SS316



Duplex/Titanium/SS316

Model Codes and Material Options

Standard Actuator: Recommended Pilot Line / Control Pressure 2.5 bar / 36 psi		
Model Code	Materials: Body & Wetted Parts	Materials: Actuator/Covers
URV-3-M-N-N	Stainless Steel 316	Stainless Steel 316
URV-3-M-U-N	Ni.Aluminium Bronze (Monel shaft)	Stainless Steel 316
URV-3-M-U-U	Ni.Aluminium Bronze (Monel shaft)	Ni.Aluminium Bronze
URV-3-M-D-N	Super-Duplex	Stainless Steel 316
URV-3-M-D-D	Super-Duplex	Super-Duplex

* for other material options contact BERMAD