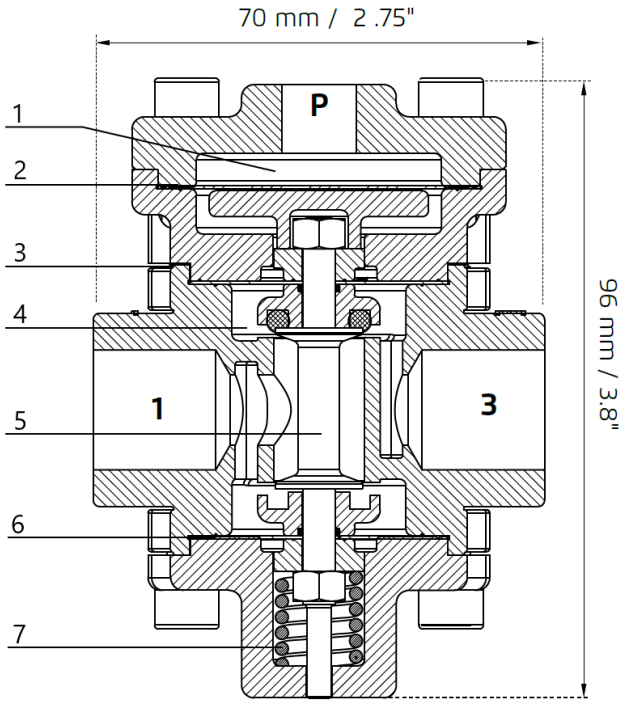
2-WAY HYDRAULIC RELAY VALVE

Universal Relay Valve (URV)

Model URV-2-0

The BERMAD URV-2-0 is a Normally Open 2-Way Spring return, balanced poppet type, pressure operated, and diaphragm actuated pilot valve. The URV changes its position from open to close in response to pressure being supplied to its control chamber. The URV pilot valve is a relay device designed for use with BERMAD Deluge and Remote Control Monitor Valves. Its function is to actuate the BERMAD main valve upon pressure release (pressure to close). The URV's balanced-poppet design enables safe reliable operation with a low control pressure whilst using compact dimensions. The URV is specifically designed for Fire Safety systems in that it has no mechanical friction of the internal parts, greatly increasing reliability. This also makes it ideal for use with corrosive fluids such as firewater, brackish water or seawater.



Features

- 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
- Low control pressure regardless of system pressure: Standard 2.5bar/36psi. Low pressure version 1.2bar/17.4psi

Technical Data

Pressure Rating: 365 psi
Water Temperature Range: 180 °F
Flow Factor: Cv 1.7
Weight: 2.4 Lbs

Standard Materials:

Body: St. St. 316
Cover: St. St. 316
Diaphragm & Seals: NBR
Internal Parts: St. St. 316
Spring: St. St. 316

Optional Materials:

Body: Stainless Steel, Nickel Aluminum Bronze, Duplex, Hastalloy, Titanium
Cover: Stainless Steel, Nickel Aluminum Bronze, Duplex, Hastalloy, Titanium
*Other materials are available on request

Part	Description
1	Control chamber
2	Diaphragm
3 & 6	Isolation membrane
4	Seat
5	Balanced poppet shaft
7	Spring

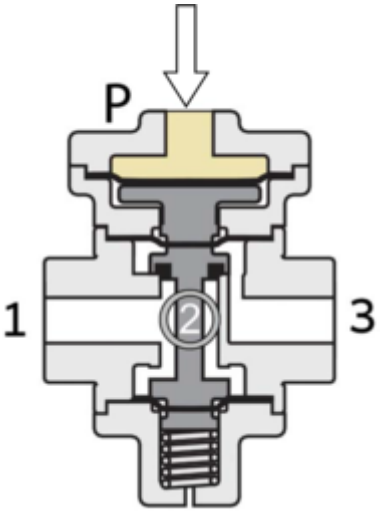
Port	Size	Connections
1 or 3	½" NPT	Inlet / Outlet
P	¼" NPT	Valve Control Chamber

Operation

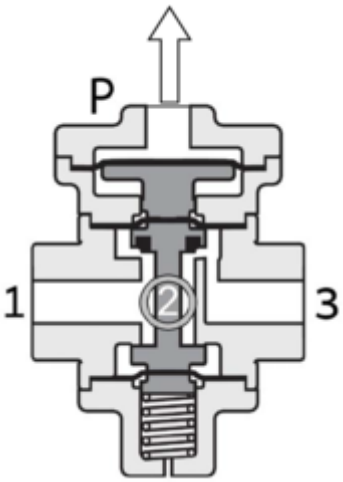
The URV-2-0 utilizes a control chamber and three operational ports.
Actuation or position change is achieved by applying or releasing a relatively low control pressure (air or water) to the Control Port (P)

Connections

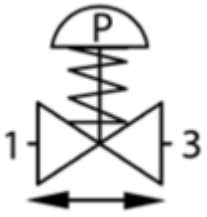
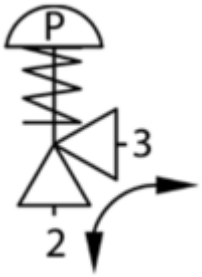
The flow can be in either direction and interchangeable, angular or straight. Ports 1 and 2 are interconnected.
Connect between ports 1 to 3 or 3 to 1 for straight flow and between ports 2 to 3 or 3 to 2 for angular flow.



Closed: Control chamber pressurized



Open: Control chamber depressurized

FLOW	FUNCTION	PORT	SYMBOL
STRAIGHT	Inlet/Outlet	1&3	
	Control	P	
ANGULAR	Inlet/Outlet	2&3	
	Control	P	

Control / Pilot Line Pressure Chart - for Standard Control Pressure Version

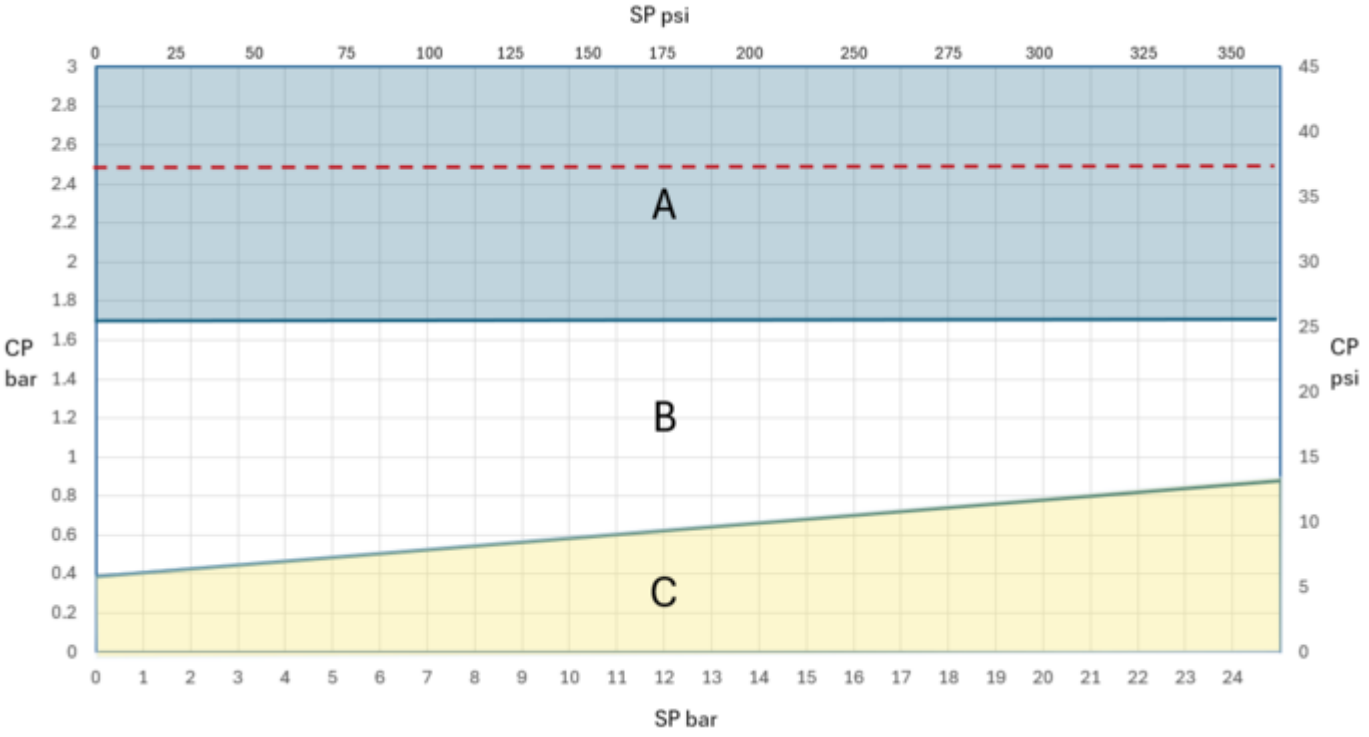


Chart Symbols:

Symbol	Description	Symbol	Description
- - - - -	Recommended Control Pressure	A	URV Fully Closed Zone
SP	Supply / System Pressure	B	URV Closing or Opening Zone
CP	Control Pressure	C	URV Fully Open Zone

SS316

NAB/SS316

Duplex / Titanium

Model Codes Selection Tables

Standard Model

Standard Actuator: Recommended Pilot Line / Control Pressure 2.5 bar / 36 psi		
Model Code	Materials: Body & Wetted Parts	Materials: Actuator
URV-2-0-N-N	Stainless Steel 316	Stainless Steel 316
URV-2-0-U-N	Ni.Aluminium Bronze (Monel shaft)	Stainless Steel 316
URV-2-0-U-U	Ni.Aluminium Bronze (Monel shaft)	Ni.Aluminium Bronze
URV-2-0-D-N	Super-Duplex	Stainless Steel 316
URV-2-0-T-N	Titanium	Stainless Steel 316

Low Control Pressure Model

Low Pressure Actuator: Recommended Pilot Line / Control Pressure 1.2 bar / 17.4 psi			
Model Code	Materials: Body & Wetted Parts	Materials: Actuator	Additional Function
URV-2-L-N-N	Stainless Steel 316	Stainless Steel 316	-
URV-2-L-U-N	Ni.Aluminium Bronze (Monel shaft)	Stainless Steel 316	-
URV-2-V-N-N	Stainless Steel 316	Stainless Steel 316	Latching Device
URV-2-V-U-N	Ni.Aluminium Bronze (Monel shaft)	Stainless Steel 316	Latching Device