

# QUICK PRESSURE RELIEF VALVE, DOUBLE CHAMBER

## Model IR-13Q-DC

The BERMAD Model IR-13Q-DC is a double chambered, hydraulically operated, diaphragm actuated control valve designed to relief excessive line pressure when it rises above the preset maximum. It responds to rises in system pressure immediately, accurately and with high repeatability, by opening fully. The BERMAD Model IR-13Q-DC provides smooth drip tight closing.



- [1]** BERMAD Model IR-13Q-DC protects system from pressure spikes
- [2]** Pressure Reducing Valve
- [3]** Combination Air Valve
- [4]** Electromagnetic Water Meter
- [5]** Kinetic Air Valve

### Features and Benefits

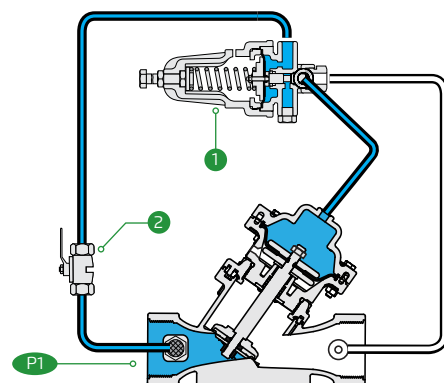
- Hydraulic Control Valve
  - Line pressure driven
  - Short response time
  - Long term drip tight sealing
- Engineered Plastic Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection sizes and types
  - Highly durable, chemical & cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity at Low pressure loss
- Double chamber
  - Full powered opening and closing
  - Decreased pressure loss
  - Low throttling noise
  - Non-slam closing characteristic
  - Protected diaphragm
- User-Friendly Design
  - Simple in-line inspection and service

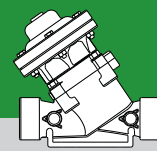
### Typical Applications

- System Burst Protection
- Momentary Pressure Peak Elimination
- System Failure Visual Indication
- Filter Burst Protection

### Operation:

The Pressure Relief Pilot **1** commands the valve to open immediately should the upstream pressure **PI** abruptly rise above pilot setting, and to close smoothly when it falls below pilot setting, sealing drip tight. The Cock Valve **2** enables manual operating test.





### IR-13Q-DC

### Technical Data

**Pressure Rating:**  
10 bar; 145 psi

**Operating Pressure Range:**  
0.5-10 bar; 7-145 psi

**Setting Range:**  
1-7 bar; 15-100 psi

Setting ranges vary according to specific pilot spring. Please consult factory

**Materials:**

**Body, Cover and Plug:**  
Polyamid 6 & 30% GF

**Diaphragm:**  
NR, Nylon fabric reinforced

**Seals:** NR

**Spring:** Stainless Steel

**Cover Bolts:** Stainless Steel

**Actuator:**  
Composite Material & Stainless Steel

### Control Accessories:

**Tubing and Fittings:**  
Polyethylene

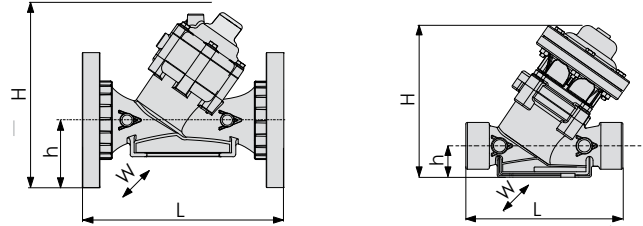
### Pilot Spring Range:

Spring	Spring color	Setting Range
V	Blue & White	1-10 bar

### Technical Specifications

#### Y Pattern Valves Dimensions & Weights

For [BERMAD](#) angle, dual & T pattern, Please see our full engineering page.



Size Inch; DN	1½"; 40	2"; 50	2"; 50	2"L; 50L	2½"; 50L	3"; 80	3"; 80		3"L; 80L		4"; 100		
End Connections	Rc (BSP.T), NPT	G (BSP.F)	Rc (BSP.T), NPT	Rc (BSP.T), NPT	G (BSP.F)	Rc (BSP.T), NPT	Universal Flanges		Rc 3 (BSP.T)	Universal Flanges		Universal Flanges	
							Metal	Plastic	3" NPT	Metal	Plastic	Metal	Plastic
L (mm)	200	200	230	230	230	298	308	308	298	308	308	350	350
H (mm)	194	196	196	220	220	232	277	277	356	395	395	407	407
h (mm)	40	40	40	43	43	55	100	100	60	100	100	112	112
W (mm)	126	126	126	135	135	135	200	200	210	210	210	224	224
CCDV (lit)	0.13	0.13	0.13	0.17	0.17	0.17	0.17	0.17	0.55	0.55	0.55	0.55	0.55
Weight (Kg)	1.7	1.7	1.7	2.2	2.2	2.3	5.1	3.2	5.95	7.35	6.45	9.45	7.55

CCDV = Control Chamber Displacement Volume • **BSP.T** = Internal Threaded • **BSP.F** = External Threaded  
 • Other End Connections are available on request. For dimensions and weights of adapters or valve with adapters please consult with customer service

### Flow Properties

Sizes	Inch DN	1½"	2"	2L"	2½"	3"	3"L	4"
		40	50	50L	65	80	80L	100
KV		50	50	100	100	100	200*	200*

### Valve Flow Coefficient

$$\Delta P = \left( \frac{Q}{Kv} \right)^2$$

$Kv = m^3/h @ \Delta P \text{ of } 1 \text{ bar}$   
 $Q = m^3/h$   
 $\Delta P = \text{bar}$

### Flow Chart

