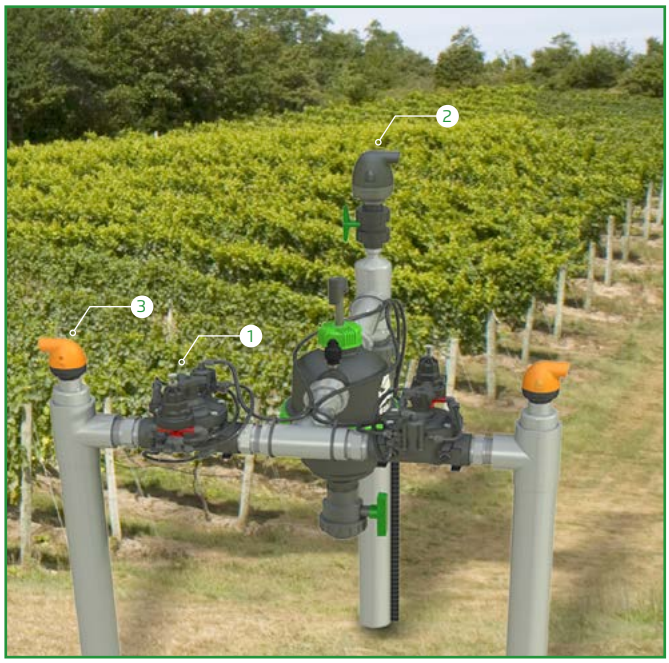
PRESSURE REDUCING VALVE

NORMALLY CLOSED WITH HYDRAULIC CONTROL

Model IR-220-54-3W-X

The BERMAD Normally Closed, Pressure Reducing Valve with Hydraulic Control, is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand, and opens fully upon line pressure drop. It is a Normally Closed valve, which opens in response to a remote pressure command and shuts in the absence of that command.



[1] BERMAD Model IR-220-54-X opens upon pressure rise command, and establishes reduced pressure zone protecting laterals and distribution line.
[2] BERMAD Combination Air Valve Model IR-C10
[3] BERMAD Automatic AIR Valve model IR-A10

Features & Benefits

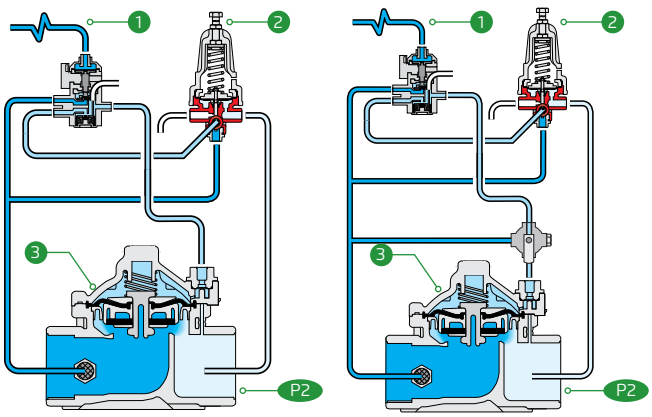
- Line Pressure Driven, Hydraulically Controlled
  - Hydraulic Pressure Control, Normally Closed
  - Closes upon control failure
- Protects downstream systems
  - Amplifies and relays weak remote command
  - Opens fully upon line pressure drop
- Plastic Globe Hydro-Efficient Valve
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
  - Highly durable, chemical and cavitation resistant
- Unitized Flexible Diaphragm and Guided Plug
  - Excellent low flow regulation performance
  - Prevents diaphragm erosion and distortion
- Fully Supported & Balanced Diaphragm
  - Requires low actuation pressure
- User-Friendly Design
  - Simple in-line inspection and service

Typical Applications

- Computerized Irrigation Systems
- Drip Systems
- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Energy Saving Irrigation Systems

Operation:

The 3-Way Hydraulic Relay Valve (3W-HRV) ❶ hydraulically connects the Pressure Reducing Pilot (PRP) ❷ to the Valve Control Chamber ❸. The PRP commands the Valve to throttle closed should Downstream Pressure P2 rise above pilot setting and to open fully when it drops below pilot setting. The 3W-HRV switches upon pressure drop command, directing line pressure into the control chamber, and thereby causing the main Valve to shut. The 3W-HRV also features local manual closing.



All images in this catalog are for illustration only

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: NBR

Seals: NBR

Spring: Stainless Steel

Cover Bolts: Stainless Steel

Control Accessories:

Tubing and Fittings:
Plastic

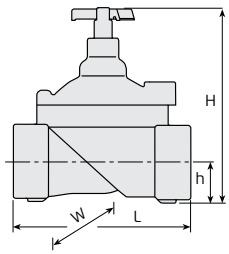
Pilot Spring Range:

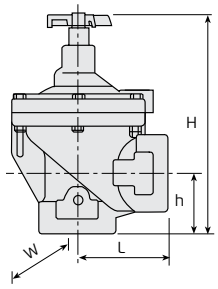
Spring	Spring color	Setting Range
J	Green	0.2-1.7 bar
K	Gray	0.5-3.0 bar
N	Colorless	0.8-6.5 bar

Technical Specifications

Dimensions & Weights

For more details of BERMAD 200 series
Please see our full engineering page.





Sizes Inch ; DN	1½" ; 40		2" ; 50	
Pattern	Globe	Angle	Globe	Angle
L (mm)	160	80	170	85
H (mm)	180	190	190	210
W (mm)	125	125	125	125
h (mm)	35	40	38	60
Weight (kg)	1	0.95	1.1	0.91

Flow Properties

Sizes Inch / DN	1½" 40	1½" 40	2" 50	2" 50
Pattern	G	A	G	A
KV	37	41	47	52

Valve Flow Coefficient

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

Kv = m^3/h @ ΔP of 1 bar
Q = m^3/h
ΔP = bar

Flow Chart