

## Pressure Reducing Valve

Normally Closed with Relief Override

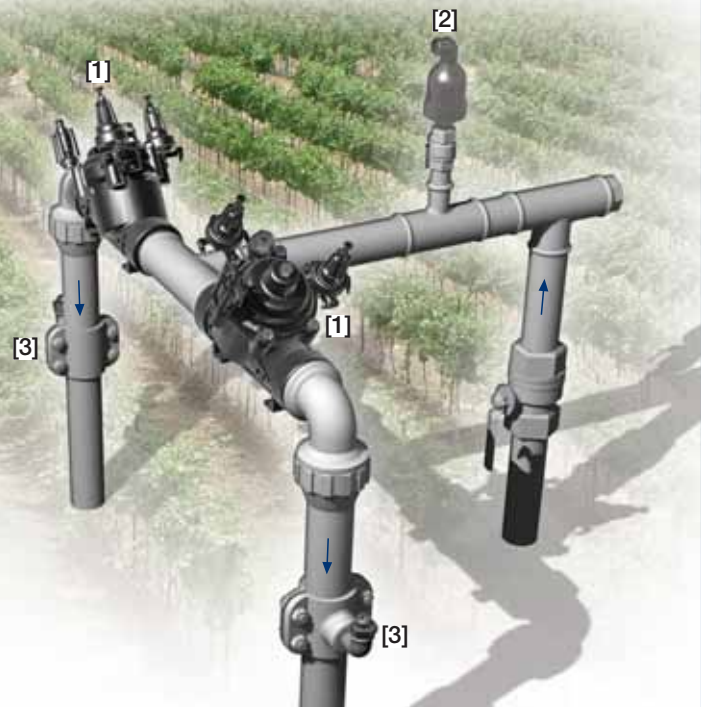
IR-120-54-3Q-X

The BERMAD Model IR-120-54-3Q-X is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower and stable preset downstream pressure. It is a Normally Closed valve that opens in response to a remote pressure drop command and shuts in the absence of that command. The BERMAD Model IR-120-54-3Q-X also serves as a Pressure Relief Valve protecting the system even when in closed position.



### Features and Benefits

- Normally Closed PRV with Relief Override Feature
  - Protects downstream and upstream systems
  - Closes upon control failure
  - Amplifies and relays weak remote command
- 3-Way Pilot Controlled
  - Opens fully upon line pressure drop
- Engineered Plastic Valve with Industrial Grade Design
  - Highly durable, chemical and cavitation resistant
  - No internal bolts and nuts
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity – Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and Guided Plug
  - Accurate and stable regulation with smooth closing
  - Prevents diaphragm erosion and distortion

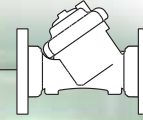


### Typical Applications

- Computerized Irrigation Systems
- Systems Subject to Varying Supply Pressure
- Energy Saving Irrigation Systems
- Remote and/or Elevated Plots
- Distribution Centers

- [1] Bermad Model IR-120-54-3Q-X opens upon pressure rise command, establishes reduced pressure zone, and relieves supply pressure peaks even when in closed position.
- [2] BERMAD Air Valve Model ARA-A-P-P
- [3] BERMAD Vacuum Breaker Model ½"-ARV

# BERMAD Irrigation



## IR-I20-54-30-X

For full technical details, refer to Engineering Section.

## 100 Series hYflow

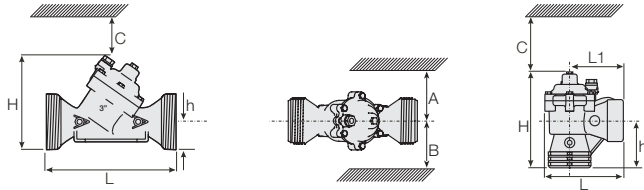
Pressure Reducing Standart

### Technical Specifications

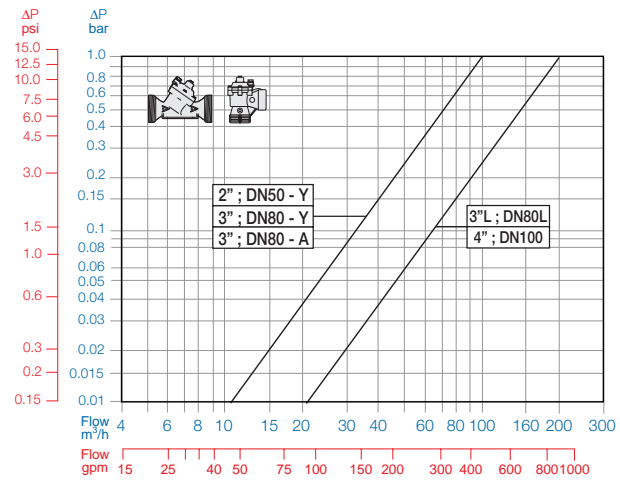
#### Dimensions and Weights

Pattern Size	DN Inch	Angle		Y (Oblique)			
		80-T 3-T	50-T 2-T	65-T* 2 1/2-T*	80-T 3-T	80L-T 3L-T	
L (L1)	mm	187 (130)	230	230	298	300	
	inch	7.4 (5.1)	9.1	9.1	11.7	11.8	
H (Hf)	mm	235 (245)	170 (185)	170 (185)	180 (195)	240	
	inch	9.3 (9.6)	6.7 (7.3)	6.7 (7.3)	7.1 (7.7)	9.5	
C	mm	53	140	140	140	180	
	inch	2.1	6	6	6	8	
h	mm	117	40	40	50	60	
	inch	4.6	1.6	1.6	2.0	2.4	
A; B	mm	320	135	135	190	190	
	inch	12.6	6	6	8	8	
Weight	Kg	1.6	1.35	1.4	1.6	3.0	
	lb.	3.5	3.0	3.1	3.5	6.6	

\* 2 1/2"; DN65 Male Thread BSP-F, for PVC glue Unions.



#### Flow Chart



### Technical Data

#### Valve Configurations & Size:

Oblique: 2, 2 1/2, 3, 3L, 4 & 6"; DN50, 65, 80, 80L, 100 & 150

Angle: 3"; DN80

#### End Connections:

Threaded: 2, 2 1/2, 3 & 3"L; DN50, 65, 80 & 80L

Flanged: 3, 3L, 4, & 6"; DN80, 80L, 100 & 150

Grooved: 6"; DN150

**Operating Pressure Range:** 0.35-10 bar; 5-145 psi

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

Relief: 1-7 bar; 15-100 psi

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

#### Materials:

**Body, Cover and Plug:** Glass-Filled Nylon

**Diaphragm:** NR, Nylon fabric reinforced

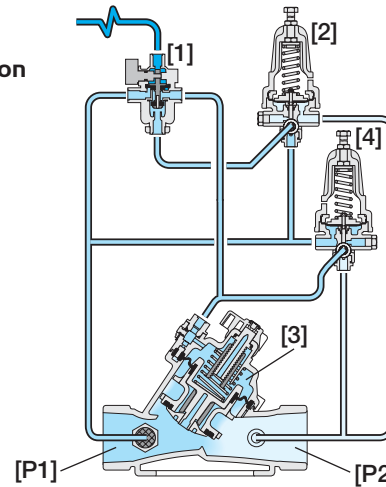
**Seals:** NR

**Spring:** Stainless Steel

**Control Accessories:** Plastic

**Tubing and Fittings:** Plastic

#### Operation



The 3-Way Hydraulic Relay Valve (3W-HRV) [1] hydraulically connects the Pressure Reducing Pilot (PRP) [2] to the Valve Control Chamber [3]. The PRP commands the Valve to throttle closed should Downstream Pressure [P2] rise above setting and to open fully when [P2] is below setting. The 3W-HRV switches upon pressure drop command, causing the main Valve to shut. Should Upstream Pressure [P1] rise above setting, the Relief Pilot [4] opens, thereby opening the Valve to relieve excessive pressure.

### How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes
IR	2-4" <small>Other sizes available on request</small>	120	54-3Q	Y	P	BP	3W	-	X
	Oblique Angle (3"; DN 80 Only)		Y A	BSP BSP-F (Male Threads 2 1/2"; DN65 only) NPT Plastic Flanges* Metal Flanges* ("Corona")		BP BS NP FF CC	3-Way Control Loop Flow Stem Flow Stem with Position Indicator Other attributes available on request		X M MP

Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D



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