



## Flow Control and Pressure Reducing Valve

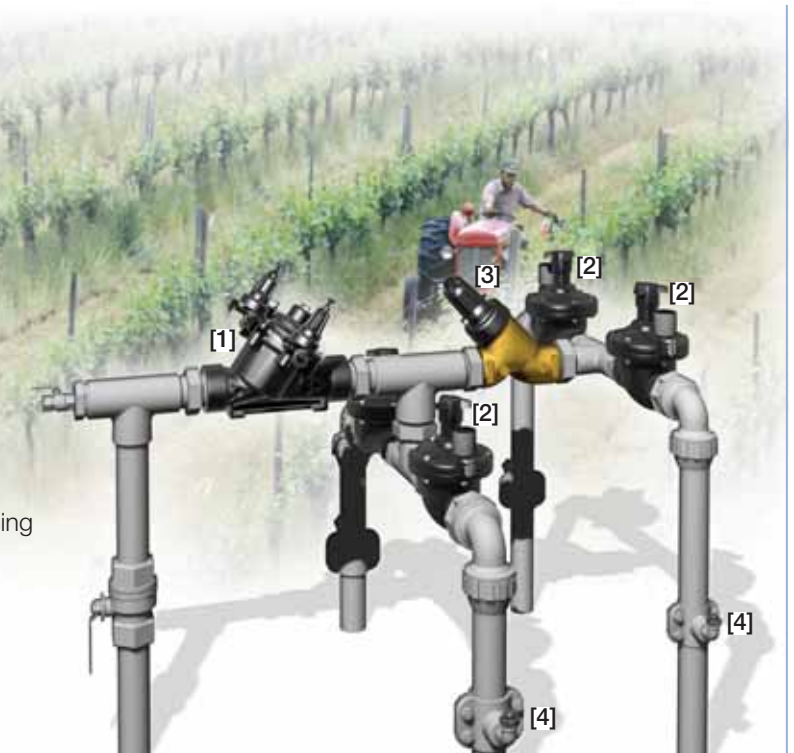
**IR-172-bDZ**

The BERMAD Flow Control and Pressure Reducing Valve is a hydraulically operated, diaphragm actuated control valve that limits system demand and reduces downstream pressure to constant preset maximum values.



### Features and Benefits

- Line Pressure Driven Hydraulic Flow Control
  - Limits fill-up rate and consumer over-demand
  - Protects downstream system
- Adjustable Servo Flow Pilot and 2-Way Pressure Reducing Pilot Controlled
  - Very low hysteresis
  - Easy flow and pressure setting
- Engineered Plastic Valve with Industrial Grade Design
  - Highly durable, chemical and cavitation resistant
- 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
  - Requires low actuation pressure
  - Prevents diaphragm erosion and distortion
- Internal "Differential Pressure Duct" Flow Sensor
  - No moving parts
  - Saves space and simplifies installation

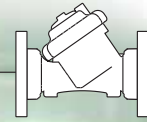


### Typical Applications

- Line Fill-Up Control
- Pressure Reducing Systems
- Multiple Independent Consumer Systems
- Systems Subject to Varying Supply Pressure

- [1] BERMAD Model IR-172-bDZ protects supply system from excessive flow, limits fill-up rate and consumer over-demand, and establishes reduced higher pressure zone.
- [2] BERMAD Solenoid Controlled Valve Model 210-N1
- [3] BERMAD Pressure Reducer Model 1½"-PRV
- [4] BERMAD Vacuum Breaker Model ½"-ARV

# BERMAD Irrigation



## IR-I72-bDZ

For full technical details, refer to Engineering Section.

## 100 Series hYflow

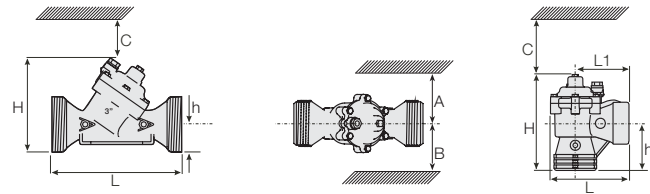
Flow Control & Pressure Reducing

### Technical Specifications

#### Dimensions and Weights

Pattern Size	DN Inch	Angle 80-T 3-T	Y (Oblique)			
			50-T 2-T	65-T* 21/2-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.



### 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

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

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

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

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

**Flow Setting Range:** ±20% from valve predetermined flow

The "Differential Pressure Duct" is pre-determined in accordance with the desired flow.

#### Materials:

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

**Diaphragm:** NR, Nylon Fabric Reinforced

**Seals:** NR

**Spring:** Stainless Steel

**Cover Bolts:** Stainless Steel

**Control Accessories:** Plastic

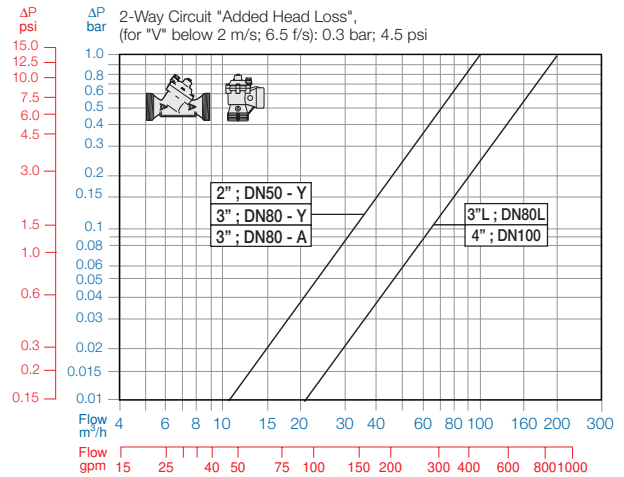
**Tubing and Fittings:** Plastic

### How to Order

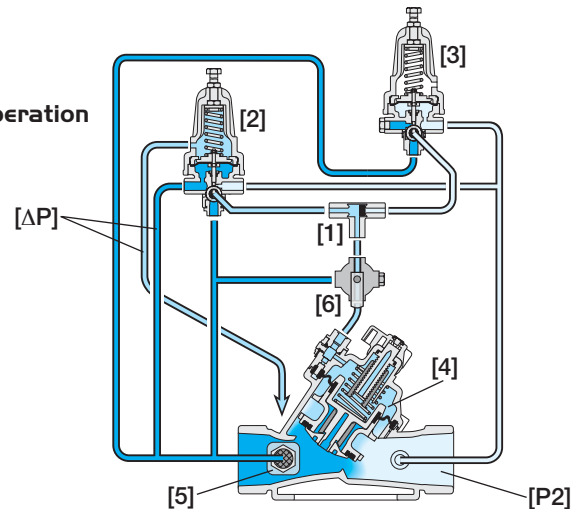
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

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>	172	00	Y	P	FF	2W/3W	-	bDZ
		Oblique Angle (3"; DN80 Only)	Y A		Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona")	BP NP FF CC	Servo Differential Pressure Duct Manual Selector Flow Stem Flow Stem with Position Indicator Low Preset Pressure (below 2 bar) Plastic Pressure Test Point		b D Z M MP 2 5
					* Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D				Other attributes available on request

### Flow Chart



### Operation



The Shuttle Valve [1] hydraulically connects the Flow Pilot (FP) [2] or the Pressure Reducing Pilot (PRP) [3] to the Valve Control Chamber [4]. Pressure Differential  $\Delta P$  across the Differential Pressure Duct [5] is in direct proportion to demand. The FP, continuously sensing  $\Delta P$ , commands the Valve to throttle closed should demand rise above setting. The PRP commands the Valve to reduce Downstream Pressure [P2] to pilot setting. The Manual Selector [6] enables local manual closing.



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