

Pressure Reducing Valve

Model MN-120

Hydraulically self-operated, pressure reducing control valve which uses the hydraulic forces of the line pressure to reduce upstream pressure to lower constant downstream pressure, regardless of varying upstream pressure.

The valve's hydrodynamic body is designed for unobstructed flow path and provides excellent and highly effective modulation capacity for high differential pressure applications.

The valve controls the pressure to be applied to the module leaching system in order to control a constant leaching rate inside the module. The local control of each module results in significant leaching solution savings.



Features and Benefits

- Designed to - stand up to the toughest conditions
 - ✓ High stability and accuracy
 - ✓ Drip tight sealing
- hYflow "Y" Valve Body
 - ✓ Meets rough service conditions with high chemical and cavitation resistance.
 - ✓ End-to-end "look-through" design and full bore seat with unobstructed flow path.
 - ✓ Free of any in-line ribs, supporting cage or shafts.
 - ✓ Enables ultra-high flow capacity with minimal head loss.
- In-line serviceable - Easy maintenance
 - ✓ No bolts in the cover. Its cover ring fastens valve cover to body, stiffening and strengthening the valve body.
- Unitized Plug Assembly
 - ✓ Flexible Super Travel (FST) plug assembly with a long travel guided valve plug.
 - ✓ Peripherally replaceable supported diaphragm
- Flexible design - Easy addition of features

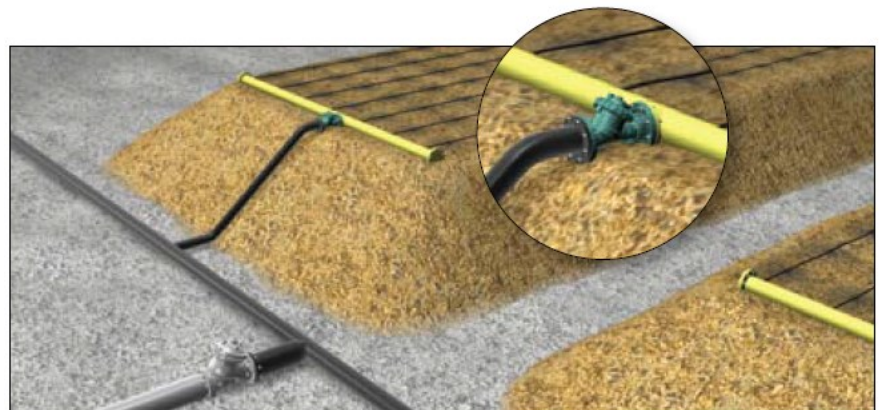
Major Additional Features

- 3 - Way control - **120 - X**
- ON/OFF Solenoid Control - **120 - 55**
- Electrically selected multi-level setting - **120 - 45**

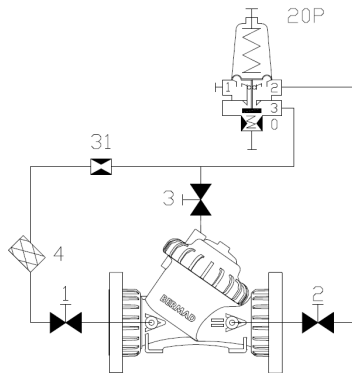
See relevant BERMAD publication

Typical Application

- Leaching rate control in heap leach systems



Control Schematic (*)



Standard Configuration

- 1 Upstream Isolation Valve
- 2 Downstream Isolation Valve
- 3 Control Chamber Isolation Valve
- 4 Large Control Filter
- 31 Restriction Orifice
- 20P 2W Pressure Reducing Pilot

Additional Features (OPTIONAL)

- 6 Pressure Gauge

(*) As a reference only. Components may vary based on valve's size and class

Operation:

- ✓ Model MN-120 is equipped with an adjustable pressure reducing pilot, which senses downstream pressure.
- ✓ Should this pressure rises above pilot setting, pilot throttles, enabling pressure in the control chamber to accumulate, causing the main valve to throttle closed, decreasing downstream pressure to pilot setting.
- ✓ Should downstream pressure falls below pilot setting, the pilot releases accumulated pressure, and the main valve modulates open.

Pilot Options:

Various calibration springs are available. Select according to valve size and operation conditions. For more details check pressure reducing pilots product page



Spring	Setting Range		
	bar	psi	
L	0.8-6	12-85	Standard
U/Y	0.5-3	7-43	

Materials

Components		Base Solutions Applications	Acid Solutions Applications (**)
Main Valve	Body & Cover	Nylon 6, Glass Filled	Polypropylene
	Internals	Stainless Steel 316	Stainless Steel 316
	Seals	NBR	Viton
Pilot	Body	Nylon 6, Glass Filled	Polypropylene
	Internals	Stainless Steel	Stainless Steel 316
	Elastomers	NBR	Viton
Control Loop Accessories	Accessories	PVC / Stainless Steel 316	PVC / Stainless Steel 316
	Tubing & Fittings	Polypropylene / Stainless Steel 316	Polypropylene / Stainless Steel 316

(**) For highly aggressive acid solutions: Hastelloy C-276 internal parts (instead of St.St.316) is optional. Others by request.

Pressure Rating and End Connections:

	Nylon Body			Polypropylene Body		
Max. Recommended Pressure	150 PSI			90 PSI		
Available End Connection (***)	Flanged ANSI #150	Grooved ANSI/AWWA C606	Threaded	Flanged ANSI #150	Grooved ANSI/AWWA C606	Threaded

(***) For more details about available end connections by sizes refer to Engineering Section

Notes:

- Inlet pressure, outlet pressure and flow rate are required for optimal sizing and cavitation analysis.
- Recommended continuous flow velocity: 0.1-3.5m/sec; 0.3-10ft/sec
- Minimum operating pressure: 0.7 bar / 10 PSI

