Solenoid Controlled Valve

Model MN-110

Hydraulically self-operated, diaphragm actuated, solenoid controlled valve that opens and shuts in response to an electric signal.

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

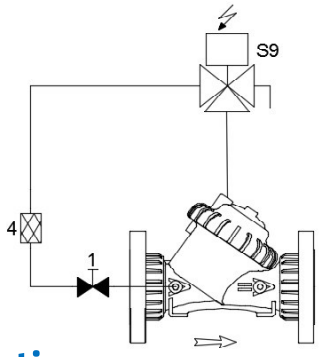
Features and Benefits

- Hydraulic Control Valve with Solenoid Control
  - ✓ Line pressure driven.
  - ✓ Electrically controlled On/Off.
- Designed to - stand up to the toughest conditions
  - ✓ Drip tight sealing.
- h**Y**flow "Y" Valve Body
  - ✓ Meets rough service conditions with high UV, 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 Flexible Super Travel (FST) Diaphragm and Guided Plug Assembly
  - ✓ Smooth closing.
  - ✓ Requires low actuation pressure.
  - ✓ Prevents diaphragm erosion and distortion.
- Engineered Plastic Valve with Industrial Grade Design:
  - ✓ Adaptable on-site to a wide range of end connections sizes and types.
- Flexible design - Easy addition of features
  - ✓ Simple in-line inspection and service.

Typical Application

- Flushing in Leaching. In order to:
  - ✓ Increase leaching efficiency.
  - ✓ Increase longevity of leaching equipment.
  - ✓ Prevent mechanical damage of drips.
  - ✓ Prevent clogging of drips.

Control Schematic (*)



Standard Configuration
1 2W Isolation Valve
4 Control Filter
S9 Solenoid

Additional Features (OPTIONAL)
6 Pressure Gauge
F Large Control Filter

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

Operation:

- ✓ The main valve is equipped with a 3-way solenoid pilot.
- ✓ To close the main valve, the solenoid S9 - applies upstream pressure to the upper control chamber, harnessing valve differential pressure to power the diaphragm actuator.
- ✓ To fully open the main valve, the solenoid S9 - vents control chamber pressure.

Electrical Data

Solenoid Data:

Voltage: (DC): 12

Power Consumption: (DC): 8W

BEC PM1 Controller Data:

Power Supply:
9 Volt Alkaline Battery

Control Options (for flushing):

- ✓ Single Valve Controller: BEC - PM1 (battery operated)
- ✓ Multiple Valve Controller: RTU BIC 2500 (solar panel operated)

Materials:

Components		Base Solutions Applications	Acid Solutions Applications (**)
Main Valve	Body & Cover	Nylon 6, Glass Filed	Polypropylene
	Internals	Stainless Steel 316	Stainless Steel 316
	Seals	NBR	Viton
Solenoid	Body	Nylon 6, Glass Filed	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 availiable end connections by sizes refer to Engineering Section

Notes:

- Inlet pressure, back pressure (if any) and flow rate are required for optimal sizing and cavitation analysis.
- Recommended maximum intermittent flow velocity: 15m/sec; 50ft/sec
- Minimum operating pressure: 0.7 bar / 10 PSI

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