



Flow

Two Stage Digital Control Valve

Two Stage Digital Control Valve specifically designed for liquid loading systems and performs the following functions:

- Rate of flow control – valve will modulate as necessary to prevent set point from being exceeded.
- Two-stage shutdown for perfect batching.



Function:

Vermont make Two-Stage Valve is normally closed and designed for precise, accurate control and shut-off of batching operation. The valve controls a predetermined amount of product to guarantee smooth, positive shut-off.

Principle of Operation:

Typical Control Systems consist of three primary pieces of equipment: Flowmeter, Preset Batch Controller, and two-stage digital shut-off valve. The meter is the primary flow measuring device. The preset batch controller is used to determine the volume of liquid to be controlled by the valve at predetermined batch quantity setting. The sequential logic of the batch controlling mechanism control the solenoid pilots of the control valve.

The control valve is designed to close in two distinct stages. As the preset counter reaches the pre-defined quantity, it doses the main valve & the first stage closure reduces the flow rate through the valve to minimum flow rate for safe stop at preset quantity.

Approximately 10 to 20 percent of the rated capacity of the meter. The preset trips the sequencing logic control output and the valve closes.

For instance, you may want one hundred Liters in a particular batch. You may also want a valve to close and slow down flow 25 Liters before the end. Your preset is 100, your Pre-warn is 25. When the start is activated, the valves energize simultaneously to start flow. When the totalizer reaches 75, the pre-warn solenoid valve drops out. When the totalizer reaches 100 the preset valve drops out. The preset values can be viewed or changed via the menu (when stopped).

Model Features:

- Opens on signal from preset Batch Controller
- Limits the flow rate to meter capacity (adjustable)
- Closes in two stages based on signals from preset Controller
- Can be maintained without removal from the line
- Factory tested and can be pre-set to your requirements
- Modular construction.
- Fail-safe mode of operation.

Applications:

Two-stage Digital control valves are suited for those applications which require precise shut-off, such as truck or railcar loading or similar process batching operations.

Specifications:

Model:	2 DCV-AV-50
Type:	2 Way Solenoid Valve-AVCON
Action on De-energization:	Normally Closed
Operation:	Pilot Operated, Diaphragm
Body Material:	CF 8M (SS316)
Internal Parts:	SS. 316
Diaphragm / Seat Material:	VITON
Magnetic Construction:	AISI430F Series
Body Size/Orifice:	2" / 50mm
Body Connection:	Screwed to BSP
Operating Pressure Range(Bar(g.):	0.5 - 10 Bar(g) 150 psi max.
Coil Voltage:	230 V AC 50 Hz
Operating Temp. Range(°C):	0.00 to 150.00°C
Coil Enclosure:	FLP-IIC Enclosure
Coil Class/Insulation:	H
Coil Type:	Molded
Coil Terminals:	Screwed
Coil Power Rating:	18 VA/12 Watts
Cable Entry / Material:	1/2" NPT
Coil Voltage:	230 V AC 50 Hz

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