

120 Vac Series MagnaValve

Magnetic Media Valve for Air Blast Machines

Model	Flow Rate Range
578	3 - 30 lbs/min (1 - 10 kg/min)
579	10 - 100 lbs/min (5 - 50 kg/min)
580	20 - 200 lbs/min (10 - 100 kg/min)
590	30 - 300 lbs/min (15 - 150 kg/min)

Features

- $\pm 10\%$ full-scale accuracy*
- Normally closed
- No moving parts
- Meets SAE AMS 2430 and 2432 specifications

Description

The MagnaValve™ is a normally closed magnetic valve that regulates the flow of steel shot and cut wire media in air blast machines. The MagnaValve's built-in sensor measures flow rate and, together with the FC Controller (sold separately), provides accurate and repeatable flow rates. The MagnaValve can be factory calibrated for various media types and sizes.

The MagnaValve's maintenance-free construction includes a strong and stable rare earth permanent magnet for normally closed operation and an electromagnet for controlling shot flow rates. When no power is applied to the MagnaValve, the permanent magnet stops all flow. With power applied, the magnetic field is neutralized and shot is allowed to flow through the valve. If the power is interrupted for any reason, the permanent magnet in the valve securely holds the shot. The valve is factory calibrated and results are supplied upon request.

The MagnaValves provides reliable, repetitive, and consistent media flow rates for shot peening and blast cleaning applications. The MagnaValve makes it easy to document flow rates and establish or repeat a good set-up. The valve meets the requirements of SAE AMS 2430, AMS 2432 and other aerospace and commercial specifications.

Clear and comprehensive installation manuals simplify installation for the 120 Vac Series MagnaValves and the FC Controller. In addition, the products are supported by the Electronics Inc. application engineering staff.

Note: The power input signal to this family of MagnaValves is 50 Vdc using PWM, Pulse Width Modulation, provided by the FC Controller which operates from 120 Vac mains. Also see the [24Vdc MagnaValves](#) for low voltage installations.

*Higher accuracy available upon request

[FC Controller datasheet](#) in PDF is available for download at www.electronics-inc.com

MagnaValve is a trademark of Electronics Inc.



The 120 Vac MagnaValve (left) and FC Controller (right) work together to provide accurate and repeatable ferrous media flow rates.

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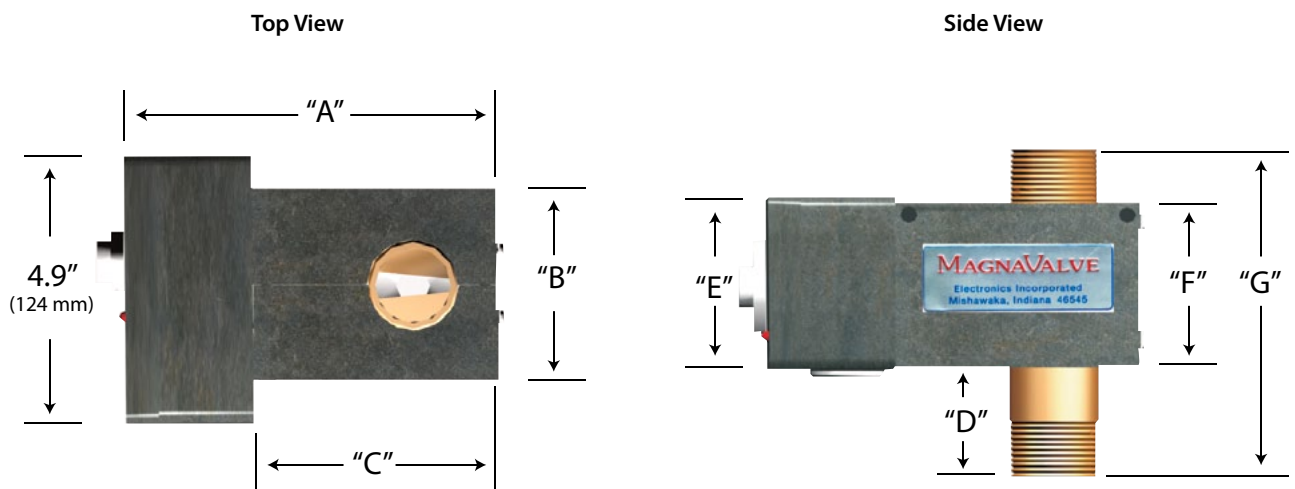
Valve Specifications

Power from FC Controller	±12 Vdc @ 100 mA maximum
Media	All ferrous media except Cast Stainless Steel
Maximum Pressure	100 PSI
Mode	Normally Closed
Temperature Range	32 - 122° F (0 -50° C)
Servo Command Input	PWM 50 Vdc*
Flow Sensor Output	0 - 5 Vdc

FC Controller (sold separately)

Flow Sensor Input from MagnaValve	0 - 5 Vdc into 100K
Flow Enable Input	120 Vac
Servo Command Output	PWM 50 Vdc*
Remote Setpoint Input	0 - 10 Vdc

* PWM - Pulse Width Modulation 8 Hertz frequency with 0-100% duty cycle, 50Vdc power signal



Model Number	Pipe Size	"A"	"B"	"C"	"D"	"E"	"F"	"G"
578	1.25" NPT	7.3" (185 mm)	3.5" (88.9 mm)	4.5" (114.3 mm)	2.0" (50.8 mm)	3.1" (78.8 mm)	3.0" (76.2 mm)	6.0" (152.4 mm)
579	1.25" NPT	7.3" (185 mm)	3.5" (88.9 mm)	4.5" (114.3 mm)	4.0" (101 mm)	3.1" (78.8 mm)	3.0" (76.2 mm)	8.0" (203.2mm)
580	2.0" NPT	8.4" (214 mm)	4.0" (101.6 mm)	5.5" (139.7 mm)	3.5" (88.9 mm)	3.5" (88.9 mm)	3.5" (88.9 mm)	8.0" (203.2mm)
590	2.0" NPT	8.4" (214 mm)	4.0" (101.6 mm)	5.5" (139.7 mm)	3.5" (88.9 mm)	3.5" (88.9 mm)	3.5" (88.9 mm)	8.0" (203.2mm)