EFV MRS SERIES

MANUAL RESET ADJUSTABLE EXCESS FLOW VALVE

With Integral Manual Reset For Preventing Uncontrolled Flows of Gases and Liquids

KEY FEATURES

Controls high pressure excessive flows.

FEATURES

- Field Adjustable
- Resets Manual
- Materials: 316ss
- Detects Excess Flows
- Detects Increases in Media Viscosity
- Function: Shuts Off Flow
- Output: Switch Contact (Optional)

APPLICATIONS

- Plant Lines
- Regulator Failure
- Fitting Failure
- Toxic Gases and Liquids
- Gas Distribution Systems
- Gas Analyzers
- Loss Control

Patent No's 4,858,647 • 4,905,844 • 5,033,311
Others may apply.

OPERATION

Flow enters the unit and makes a right angle to the outlet port across the nose of a magnetic piston. The piston is held in place by attraction to an adjusting screw magnet. A pressure differential is created by flow across the piston. When the differential is great enough, the piston slides to a seat at the outlet port. The flow rate at which the piston actuates can be changed externally by turning the adjusting screw, thereby changing the piston's relationship with the flow stream.

The piston makes a bubble tight seal when it comes in contact with the seat. To reopen the unit, turn the balancing valve handle on the side. This ports the upstream pipeline to the downstream pipeline. When the pressure is equalized on each side of the piston, it will reset. The unit is returned to normal operation by closing the balancing valve.

- Actuation points for air at 68° F and 14.7 PSIA.
- Corrections must be used for other gases, line pressure and temperatures.*

Please consult your representative or the factory.

TEMPERATURE OPERATING RANGE

- 0° to 220° F (-17° to 104° C)

For other temperature ranges consult factory.

CALIBRATION POINTS

MODEL	ADJUSTABLE RANGE AIR SLPM (SCFM)	ADJUSTABLE RANGE WATER LPM (GPM)	PORTS FNPT
EFV-125	0.5 to 155.70 (0.018 to 5.5)	0.015 to 4.5 (0.004 to 1.2)	1/8"
EFV-250	4 to 1132 (0.14 to 40)	0.100 to 15.1 (0.026 to 4.0)	1/4"
EFV-375	85 to 1840 (3.0 to 65)	0.380 to 15.1 (0.100 to 4.0)	3/8"
EFV-500	142 to 2123 (5.0 to 75)	1.90 to 37.8 (0.50 to 10.0)	1/2"
EFV-750	425 to 3681 (15.0 to 130)	3.80 to 75.7 (1.0 to 20.0)	3/4"

PRESSURE LOSS TABLE

MODEL	SET POINT AIR SLPM (SCFM)	WATER LPM (GPM)	ΔP TO ATMOSPHERE BARD (PSID)
EFV-125	0.50 (0.018)	0.015 (0.004)	0.08 (1.2)
	75 (2.63)	2.65 (0.70)	0.11 (1.6)
	155 (5.5)	4.50 (1.20)	0.21 (3.0)
EFV-250	4 (0.14)	0.1 (0.26)	0.21 (3.0)
	500 (17.50)	5.0 (1.32)	0.41 (6.0)
	1132 (39.62)	5.1 (3.99)	0.83 (12.0)
EFV-375	85 (2.98)	0.38 (0.10)	0.10 (1.5)
	900 (31.50)	10.0 (2.64)	0.28 (4.0)
	1840 (64.40)	15.1 (3.99)	0.83 (12.0)
EFV-500	142 (4.97)	1.9 (0.50)	0.07 (1.0)
	1000 (35.00)	25.0 (6.60)	0.28 (4.0)
	2123 (74.31)	37.8 (9.98)	0.48 (7.0)
EFV-750	425 (14.88)	3.8 (1.00)	0.14 (2.0)
	1800 (63.00)	4.7 (1.24)	0.21 (3.0)
	3681 (128.84)	75.7 (19.98)	0.34 (5.0)

CE Recognized 73/23/EEC/93/68/EEC
Recognized File E75356

CTE CHEM TEC

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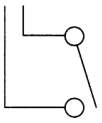
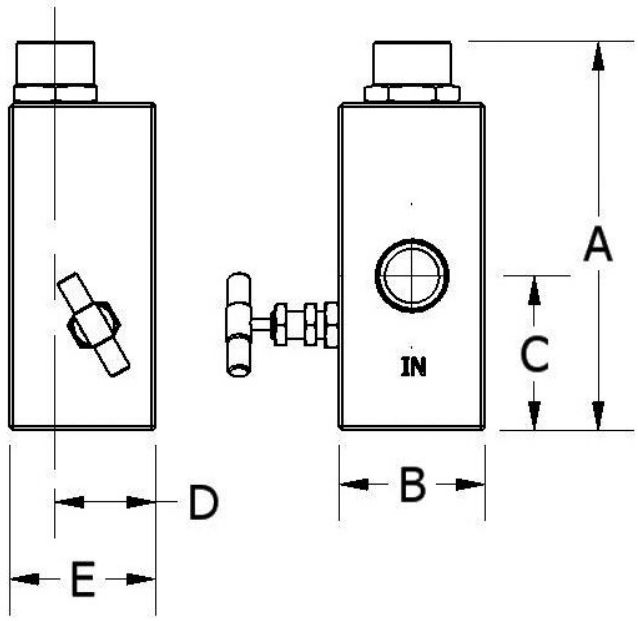
SWITCH DATA	SPST
Maximum Switching Voltage	
DC (V)	200
AC (V)	150
Contact Rating	
DC (W)	50
AC (VA)	70
Maximum Switching Current (A)	
DC (A)	1.0
AC (A)	0.7

LEADS SPST



leads 18 in. min. from body 22 AWG, TFE insulation

Above values for resistive loads only. For inductive loads, surge current and rush current - contact protection is required, consult your local representative. SPDT UL Recognized (E47258).



SPECIFICATIONS

BODY MATERIAL	MAX WORKING PRESSURE PSIG (barg)	WETTED PARTS	SEAL	BALANCING VALVE PACKAGING
Brass	1500 (103.42)	Brass, Epoxy, Delrin**	Viton®	Teflon®
316ss	3000 (206.84)	316ss, Epoxy	Viton ®	Teflon®

**Brass Piston in 125 Unit.

INSTALLATION

The 125, 250 and 375 series can be mounted in any position. The 500 and 750 series can be mounted in any position except with the outlet port down. We suggest the unit be calibrated in the attitude in which it will be installed. An actuation point approximately 3 or 4 times the normal Maximum flow rate at the lowest line pressure should be chosen to avoid the valve actuating from initial pressurization of the system and normal surges. If flow is kept constant, an actuation point 10% above the normal rate may be used.

DIMENSIONS INCHES (MM)

Model	316ss Weight (lbs/gm)	Brass Weight (lbs/gm)	A	B 316ss	B Brass	C	D	E
EFV125	1.5 (680)	1.6 (726)	2.72 (69)	1.50 (38)	1.50 (38)	0.95 (24)	1.12 (28)	1.62 (41)
EFV250	0 (0)	3.2 (1452)	3.71 (95)	2.00 (50)	1.75 (45)	1.50 (38)	1.38 (35)	2.00 (51)
EFV375	0 (0)	0 (0)	3.71 (95)	2.00 (50)	1.75 (45)	1.50 (38)	1.38 (35)	2.00 (51)
EFV500	3.8 (1724)	0 (0)	4.46 (114)	2.00 (50)	1.75 (45)	1.75 (45)	1.38 (35)	2.00 (51)
EFV750	0 (0)	0 (0)	5.35 (136)	2.00 (50)	1.75 (45)	2.13 (54)	1.38 (35)	2.00 (51)

HOW TO ORDER *(Please see Custom Page for Special Options.)*

Model	Size	Materials	Manual Reset Model	Electrical Switch	Options
EFV	125 250 375 500 750	B Brass S 316ss (Other material available on request)	MRS Manual Reset Model	ES Normally Open (ES not available on 125 model) Factory Preset Required	Any of the following options may be added. O2 Oxygen Cleaned HT High Temperature Unit 340˚ F (171˚ C) KZ Kalrez® Seals EPR EPR Seals FP Factory Presetting (State flow rate, medium and line pressure)

*Consult factory
®Viton - E.I. Dupont & Co
®Kalrez - E.I. Dupont & Co
Note: All dimensions and specifications are subject to change for quality improvement. Not responsible for printing errors.

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