

EFV Series ADJUSTABLE EXCESS FLOW VALVE

For Preventing Uncontrolled Flows of Liquids and Gases

FEATURES

- Controlled Bleed, Resets Automatically
- Field Adjustable
- Positive Shut-off
- Attitude Variable Mounting
- Function: Restricts or Shuts Off Flow
- Output: switch contact optional
- Materials: 316SS or Brass Body

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.

In this auto reset model after actuation, the piston rests on a metal to metal seat which allows a controlled bleed. To reset the unit, pressure must be equalized on both sides of the piston. If the source is turned off, either upstream or downstream, the bleed will equalize the pressure and the valve will automatically reopen by magnetic repulsion from the fixed magnet located in the valve body.

For positive shut-off an elastomer is used on the nose of the piston. When it comes to rest on the seat it provides a bubble tight closure. To reopen the valve there are two options.

1. The upstream pipeline must be bled to atmosphere if the line downstream is at atmosphere.
2. A by-pass line with an on/off valve must be installed to port the upstream pressure to the downstream pipeline to equalize the pressure.

Our MRS series is available with the by-pass system as an integral part of the unit.

- Actuation points for air at 68° F and 14.7 PSIG.
- Corrections must be used for other gases, line pressures 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.

KEY FEATURES

Controls excessive flows.

APPLICATIONS

- Fitting Failure
- Regulator failure
- Hydraulic control
- Gas Analyzers
- Toxic Gas and Liquid Releases

Patent No's:
4,858,647
4,905,844
5,033,311

Others may apply.



CALIBRATION TABLE

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
 TMA Recognized File E75356

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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)

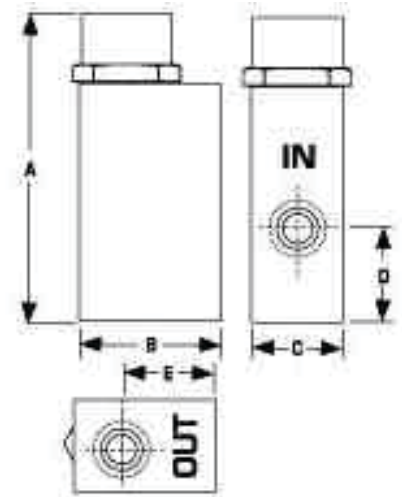
DC (A)	1.0
AC (A)	0.7

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
Brass	1500 (103.42)	Brass, Epoxy, Delrin**	Viton®
316SS	3000 (206.84)	316SS, Epoxy	Viton® **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 normal flow rate 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	WEIGHT	A	B	C	D	E
EFV125	0.25 (113.4)	2.5 (64)	1.00 (25)	0.75 (19)	0.70 (17)	0.63 (16)
EFV250	0.50 (226.8)	3.3 (84)	1.50 (38)	1.00 (25)	1.00 (25)	1.00 (25)
EFV375	0.50 (226.8)	3.3 (84)	1.50 (38)	1.00 (25)	1.00 (25)	1.00 (25)
EFV500	1.00 (453.6)	4.0 (102)	2.00 (50)	1.25 (31)	1.25 (31)	1.38 (35)
EFV750	1.50 (680.4)	4.9 (124)	2.2 5(57)	1.25 (31)	1.63 (41)	1.63 (41)

HOW TO ORDER (Sales@ChemTec.com | (800) 222-2177)

Model	Size	Materials	Positive Shut-Off	Electrical Switch	Options
EFV	125 250 375 500 750	B Brass S 316SS (Other material available on request)	PSO Blank for Controlled Bleed 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)

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*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.

