

## **Flow Monitors - Flow Switches Excess Flow Valves - Flow Meters**



Welcome to CTE Chem Tec Equipment.

**Leading manufacturers of Flow Monitors, Flow Meters, Flow Switches, and Excess Flow Valves for 35 years.**

Flow Switches (also known as Flow Monitors and Flow Sensors) give switch contact at a predetermined flow rate. Flow Meters provide varying electrical output with fluid flow. Excess Flow Valves are normally open valves that close automatically at a predetermined flow rate.

We specialize in the lower flow ranges -- i.e. 120 SCFM air, 20 GPM water, or less. Flow Switches have fixed and adjustable models. All categories have a variety of flow ranges and pipe sizes.

CTE is the only manufacturer of all Teflon<sup>®</sup> Flow Switches and Flow Meters.

**Important Notice: All of our products containing reed switches are now available with digital solid state switching.**

**Please check out our exciting and innovative  
NEW PRODUCTS and ADD-ON's  
to our existing product line.**

**INSTALLATION & MAINTENANCE MANUALS are now  
available in PDF format.**



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# EXCESS FLOW VALVES

MANUAL RESET EFV

*With integral manual reset for preventing uncontrolled flows of gases and liquids.*



**UL** Recognized File E75356  
**CE** Recognized 73/23/EEC,93/68/EEC

KEY FEATURES	APPLICATIONS
Positive shut off with internal reset mechanism	Plant Lines Regulator Failure Fitting Failure Toxic Gases and Liquids Gas distribution systems Gas Analyzers Loss Control
Features	
<ul style="list-style-type: none"> <li>• Field Adjustable</li> <li>• Resets Manually</li> <li>• Materials: 316ss or Brass Body Standard</li> <li>• Detects Excess Flows</li> </ul>	<ul style="list-style-type: none"> <li>• Detects an Increase in Viscosity of Media</li> <li>• Function: Shuts Off Flow</li> <li>• Output: Switch Contact (Optional)</li> </ul>



## 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 PSIG.
- Corrections must be used for other gases, line pressures and temperatures.\*
- Please consult your representative or the factory.

## CALIBRATION RANGE

Model	Adjustable Range Air SLPM (SCFM)	Adjustable Range Water LPM (GPM)	Port Size 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		DP to Atmosphere BARD (PSID)
	Air SLPM (SCFM)	Water LPM (GPM)	
EFV-125	0.5 (0.018)	0.015 (0.004)	0.08 (1.2)
	75 (2.63)	2.65 (0.70)	0.11 (1.6)
	155.7 (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)	15.1 (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)

\*Consult Factory

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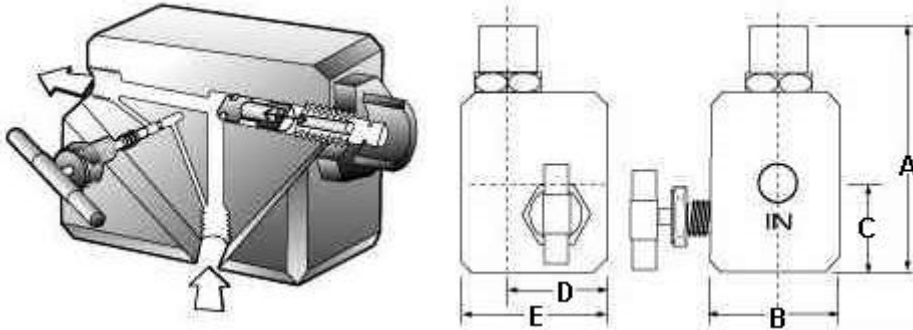
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# EXCESS FLOW VALVES

MANUAL RESET EFV

With integral manual reset for preventing uncontrolled flows of gases and liquids.



Patent No's 4,637,427; 4,630,799; 4,574,833 Others may apply.

### Switch Data

#### SPST

Hermetically Sealed Reed Switch

Max Switching Voltage  
DC (V) 200  
AC (V) 150

Contact Rating  
DC (W) 50  
AC (VA) 70

Max. Switching Current  
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.



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## Specifications

Unit	Max. Working Pressure PSIG (BARG)	Wetted Parts	Seals	Balancing Valves Packing
Brass	1500 (103.42)	Brass, Epoxy, Delrin**	Viton®	Teflon®
316ss	3000 (206.84)	316ss, Epoxy	Viton®	Teflon®
		** Brass Piston in 125 Unit		

**Fluid Ports:** Inlet/Outlet Ports - See Calibration Ranges

**Temperature Operating Range:** 32° to 220° F (0° to 104° C).

**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.

MODEL	WEIGHT Lbs (Grams)	DIMENSIONS Inches (mm)				
		A	B	C	D	E
EFV125	1.50 (0.68)	2.72 (69)	1.50 (38)	0.75 (19)	1.12(28)	1.62 (41)
EFV250	4.62 (2.095)	3.71 (95)	2.00 (50)	1.50 (38)	1.94 (49)	2.75 (70)
EFV375	4.62 (2.095)	3.71 (95)	2.00 (50)	1.50 (38)	1.94 (49)	2.75 (70)
EFV500	4.75 (2.152)	4.46 (114)	2.00 (50)	1.75 (45)	1.94 (49)	2.75 (70)
EFV750	7.06 (3.204)	5.34 (136)	2.00 (50)	2.13 (54)	2.13 (54)	3.00 (77)

  
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## How to Order

EFV Model	125 Size	B Material	MRS	ES Electric Switch Normally Open	OPTIONS Any of the following options may be added:																
	125 250 375 500 750	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">Brass</td> </tr> <tr> <td style="text-align: center;">S</td> <td style="text-align: center;">316ss</td> </tr> </table>	B	Brass	S	316ss	Manual Reset Model	(ES not available on 125 model)	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">O2</td> <td>Oxygen Cleaned</td> </tr> <tr> <td style="text-align: center;">HT</td> <td>High Temperature Unit 340° F (171° C)</td> </tr> <tr> <td style="text-align: center;">KZ</td> <td>Kalrez® Seals</td> </tr> <tr> <td style="text-align: center;">EPR</td> <td>EPR Seals</td> </tr> <tr> <td style="text-align: center;">Z</td> <td>Special Custom</td> </tr> <tr> <td style="text-align: center;">FP</td> <td>Factory Presetting (State trip point, medium, and line pressure) Welded Fittings *</td> </tr> </table>	O2	Oxygen Cleaned	HT	High Temperature Unit 340° F (171° C)	KZ	Kalrez® Seals	EPR	EPR Seals	Z	Special Custom	FP	Factory Presetting (State trip point, medium, and line pressure) Welded Fittings *
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\* Consult Factory

**Note:**

All dimensions and specifications are subject to change for quality improvement. Not responsible for typing errors.

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