

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® 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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(800) 576 -6308

For preventing uncontrolled flows of gases and liquids.

CTE
CHEM TEC



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

Controls high pressure excessive flows

CNG Delivery

High Pressure Plant Lines

Hydraulic Systems

Features

- | | |
|---|--|
| <ul style="list-style-type: none"> • Controlled Bleed Resets Automatically • Field Adjustable • Positive Shut-off option • Materials: 316ss • Maximum Pressure 6000 PSIG | <ul style="list-style-type: none"> • Detects Excess Flows • Detects Increases in Media Viscosity • Function: Restricts or shuts Off flow • Output: Switch Contact (Optional) |
|---|--|

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.

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In this auto reset model after actuation, the piston rests on a metal to metal seat that 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.
- 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 |
|-----------|-------------------------------------|-------------------------------------|-------------------|
| HPEFV-250 | 4 to 1132 (0.14 to 40) | 0.100 to 15.1 (0.026 to 4.0) | 1/4" |
| HPEFV-500 | 142 to 2123 (5.0 to 75) | 1.90 to 37.8 (0.50 to 10.0) | 1/2" |
| HPEFV-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) | |
| HPEFV-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) |
| HPEFV-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) |
| HPEFV-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) |

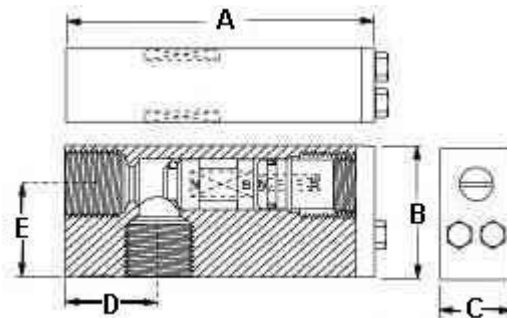
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For preventing uncontrolled flows of gases and liquids.



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.

Specifications

| Unit | Max. Working Pressure PSIG (BARG) | Wetted Parts | Seals |
|-------|--------------------------------------|--------------|--------|
| 316ss | 6000 (413.4) | 316ss, Epoxy | Viton® |

Fluid Ports: Inlet/Outlet Ports - See Calibration Ranges



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

Installation: The 250 series may be mounted in any position. 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 two to three times the 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 |
| EFV250 | 1.47 (0.667) | 3.75 (149) | 1.50 (38) | 1.00 (25) | 1.00 (25) | 1.00 (25) |
| EFV500 | 2.625 (1.190) | 4.25 (108) | 2.00 (51) | 1.25 (32) | 1.25 (32) | 1.37 (35) |
| EFV750 | 3.44 (1.560) | 5.25 (133) | 2.25 (57) | 1.25 (32) | 1.625 (41) | 1.625 (41) |

How to Order

| HPEFV Model | 250 Size | S Material | PSO Positive Shut-Off | ES Electric Switch | OPTIONS Any of the following options may be added: | | | | | | | | | | | | | | |
|-------------|--|--|-----------------------|--------------------|---|----------------|---|----|----------------|----|--|----|---------------|-----|-----------|---|-----------------------|----|--|
| | 250 500 750 | <table border="1"> <tr> <td>S</td> <td>316ss</td> </tr> </table> <p>Other material available upon request.</p> | S | 316ss | Blank for Controlled Bleed Model | Normally Open* | <table border="1"> <tr> <td>O2</td> <td>Oxygen Cleaned</td> </tr> <tr> <td>HT</td> <td>High Temperature Unit 340° F (171° C)</td> </tr> <tr> <td>KZ</td> <td>Kalrez® Seals</td> </tr> <tr> <td>EPR</td> <td>EPR Seals</td> </tr> <tr> <td>Z</td> <td>Special Custom Option</td> </tr> <tr> <td>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 Option | 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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