# HPEFV Series

Adjustable High Pressure Safety Excess Flow Valve



## Key Features

Controls high pressure excessive flows.

## Features

- Controlled Bleed Resets Automatically
- Field Adjustable
- Positive Shut-off Option
- Materials: 316SS
- Maximum Pressure 6000 PSIG
- Detects Excess Flows
- Output: Switch Contact (Optional)
- Function: Restricts or Shuts Off Flow

## Applications

- CNG Delivery
- High Pressure Plant Lines
- Hydraulic Systems


## 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 the auto reset model after actuation, the piston resets 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.

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 down-stream pipeline to equalize the pressure.

- Actuation points for air at 68°F and 14.7 PSIA.

Correction must be made for other fluids, line pressure and temperatures. Please consult your representative or the factory.

## Calibration Range

| Model | Adjustable Range Air SLPM (SCFM) | Adjustable Range Water LPM (GPM) | PORT FNPT |
|---|---|---|---|
| HPEFV-250 | 4 to 1132 (0.14 to 40) | 0.100 to15.1 (0.026 to 4) | 1/4" |
| HPEFV-500 | 142 to 2123 (5 to 75) | 1.9 to 37.8 (0.5 to 10) | 1/2" |
| HPEFV-750 | 425 to 3681 (15 to 130) | 3.8 to 75.7 (1 to 20) | 3/4" |

## Pressure Loss

| Model | Air SLPM (SCFM) | Water LPM (GPM) | ΔP to Atmosphere BARD (PSID) |
|---|---|---|---|
| HPEFV-250 | 4 (0.14)<br>500 (17.5)<br>1132 (39.62) | 0.1 (0.26)<br>5 (1.32)<br>15.1 (3.99) | 0.21 (3.0)<br>0.41 (6)<br>0.83 (12) |
| HPEFV-500 | 142 (4.97)<br>1000 (35)<br>2123 (74.31) | 1.9 (0.5)<br>25 (6.6)<br>37.8 (9.98) | 0.07 (1)<br>0.28 (4)<br>0.48 (7) |
| HPEFV-750 | 425 (14.88)<br>1800 (63)<br>3681 (128.84) | 3.8 (1)<br>4.7 (12.4)<br>75.7 (19.98) | 0.14 (2)<br>0.21 (3)<br>0.34 (5) |

## Temperature Operating Range

- 32° to 220°F (-0° to 104°C)
  For other temperature ranges consult factory.

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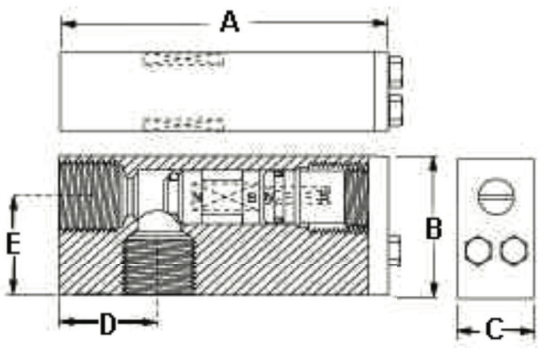
## ES - Option

| Switch Data | SPST UL File #E471070 | LEADS |
|---|---|---|
| Maximum Switching Voltage | |  |
| DC (V) | 250 | |
| AC (V) | 265 | |
| Contact Rating | | |
| DC (W) | 50 | leads 18 in. min. from body 22 AWG, TFE insulation |
| DC (VA) | 50 | |
| Maximum Switching Current (A) | | |
| DC (A) | 1.5 | |
| AC (A) | 1.1 | |




## Specifications

| Body Material | Max Working Pressure PSIG (barg) | Wetted Parts | Seal |
|---|---|---|---|
| 316SS | 6,000 (206.84) | 316SS, Epoxy | Viton ® |

## Installation

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

| Model | Weight | A | B | C | D | E |
|---|---|---|---|---|---|---|
| HPEFV-250 | 1.47 (0.667) | 3.75 (149) | 1.5 (38) | 1 (25) | 1 (25) | 1 (25) |
| HPEFV-500 | 2.625 (1.19) | 4.25 (108) | 2 (50) | 1.25 (32) | 1.25 (32) | 1.37 (35) |
| HPEFV-750 | 3.44 (1.56) | 5.25 (133) | 2.25 (57) | 1.25 (32) | 1.625 (45) | 1.625 (41) |

## How to Order

Sales@ChemTec.com | 800.222.2177

| Model | Size | Materials | Positive Shut-Off | Options |
|---|---|---|---|---|
| HPEFV | 200<br>500<br>750 | S 316SS<br><br>(Other Material available on request) | PSO<br>(Blank for controlled bleed model) | O2 Oxygen Cleaned<br>HT High Temperature Unit 340° F (171° C)<br>KZ FFKM Perfluoroelastomer<br>EPR EPR Seals<br>FP* Factory Presetting (State flow rate, medium and line pressure) Required W/ES Option<br>ESFP Normally Open Reed Switch Option Requires Factory Presetting |

*Consult Factory | Viton® - E.I. Dupont & Co | Teflon® - E.I. Dupont & Co | Kalrez® - E.I. Dupont & Co

All dimensions are subject to change for quality improvement. Not responsible for printing errors.