



## ChemTec HPEFV: Hydrogen Fuel Cell Energy

### About Hydrogen Fuel Cell Energy

Hydrogen is high in energy, yet it produces almost no pollution – making it a greener alternative! Since the 1970's NASA has used liquid hydrogen to power their shuttles and rockets. Hydrogen fuel cells power the shuttles electrical systems, producing a clean by-product – pure water, which the shuttle crew can then use to drink. – *Renewable Energy World 2013*

### Growth in Hydrogen Fuel Cells

As noted above, the use of hydrogen fuel cells is not new to us – but it is expected to become more popular in the upcoming years. Honda, Toyota, GM and Hyundai (to name a few) are committed to putting hydrogen-fueled fuel-cell cars on limited sale in Europe by 2015. With expected increase in hydrogen powered cars, comes the construction of hydrogen fueling stations – In the US there are currently 10 (most residing in California). Gov. Jerry Brown of California recently provided more than \$2 billion in funds for clean-vehicle incentives – with a goal of 100 publicly accessible stations in next few years. – *According to Green Car Report 2013*

### ChemTec's High Pressure Excess Flow Valve



#### Product Features:

- ◆ Controls high pressure excessive flows
- ◆ Controlled bleed resets automatically
- ◆ Field adjustable
- ◆ Positive shut-off option
- ◆ Maximum pressure 6000 PSIG
- ◆ Detects excess flows
- ◆ Detects increase in media viscosity
- ◆ Function: Restricts or shuts off flow

### How HPEFV is Used for Hydrogen Fuel Cell Energy

- ◆ If broken line, ChemTec's High Pressure Excess Flow Valve would prevent continuous flow of hydrogen.
- ◆ ChemTec's High Pressure Excess Flow Valve features an auto shutdown, so if pressure in the line changes the HPEFV will shutdown automatically to prevent hydrogen from escaping into the atmosphere.



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For more information call us at 1.800.222.2177 or contact the ChemTec sales department at [info@chemtec.com](mailto:info@chemtec.com).



## ChemTec: Wastewater Treatment

### Wastewater Industry

Municipal, residential and industrial wastewater is a hot topic. Whether regarding the cleanliness and safety concerns for potable water used for farming, wastewater as a source of energy, dangerous bi-products of fracking wastewater; wastewater applications seem endless. Before wastewater can be reused, it must be treated. Deodorization, disinfection, scrubbing, separation, de-ionization, degasification, reoxidization are just a few of the treatments used. These applications, in addition to liquid chromatographs, wastewater deodorization & disinfection machines, odor scrubbers, cooling towers, lift stations, pump houses, ozone generators, and more can all use ChemTec's durable line of flow meters and flow monitors.

### ChemTec's Related Products: MAO Series



#### Applications:

- Wet Benches
- Cooling Systems
- Corrosive Chemical Dispensing
- Materials Consumption Measurement
- Process Controls

#### Features:

- No bearings
- Single moving part
- In-line metering
- No rotating internals
- Measures low flows
- PVC available

  
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## ChemTec: Hydraulics

### Hydraulic Technology: Shredding Trucks

When it comes to the waste industry, efficiency is a priority. With hydraulics, speed is proportional to flow, and torque is proportional to pressure, so you can easily control torque and speed by regulating pressure and flow. To remain efficient, owners and operators of trucks with hydraulics should be aware of common hydraulic problems like cavitation, aeration and overpressurization.



### Industry Growth

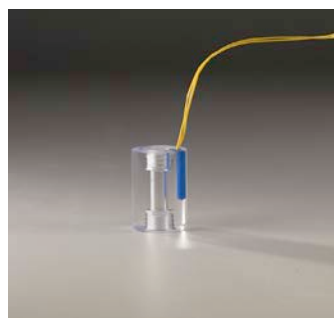
Taking paper waste to an offsite shredding facility can be inconvenient and expensive. Mobile paper shredding trucks offer a way to insure the security of important shredding documents. Mobile shredders are contracted by high-volume paper consuming facilities like banks, hospitals and schools to dispose of sensitive files and information on site. With paper fraud accounting for 25% of reported data breaches for the first half of 2009, mobile shredders provide a quick answer to a critical but otherwise tedious at-home ritual. –Identity Theft Resource Center 2009

### Related ChemTec Products



EFV Series

- ◆ Controls excessive flows
- ◆ Controlled bleed, Resets automatically
- ◆ Field adjustable
- ◆ Positive shut-off
- ◆ Materials: 316ss or Brass body
- ◆ Attitude variable mounting
- ◆ Function: Restricts or Shuts off flow
- ◆ Output: Switch contact optional



LPH Series

- ◆ Compact size
- ◆ Most economical
- ◆ Close on/off differential
- ◆ Materials: Acrylic, Brass, 316ss or Teflon



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