

**Application note: Malema M-VF Series Adjustable Velocity Fuse  
(Safety Excess Flow Valve)**

Malema's M-VF Series adjustable velocity fuse is a safety device used in tubes and pipe lines carrying hazardous and expensive fluids. A rupture or leak in these tubes/pipes causes the velocity of the fluid to increase beyond a predetermined set level causing the fuse to shut off the line.

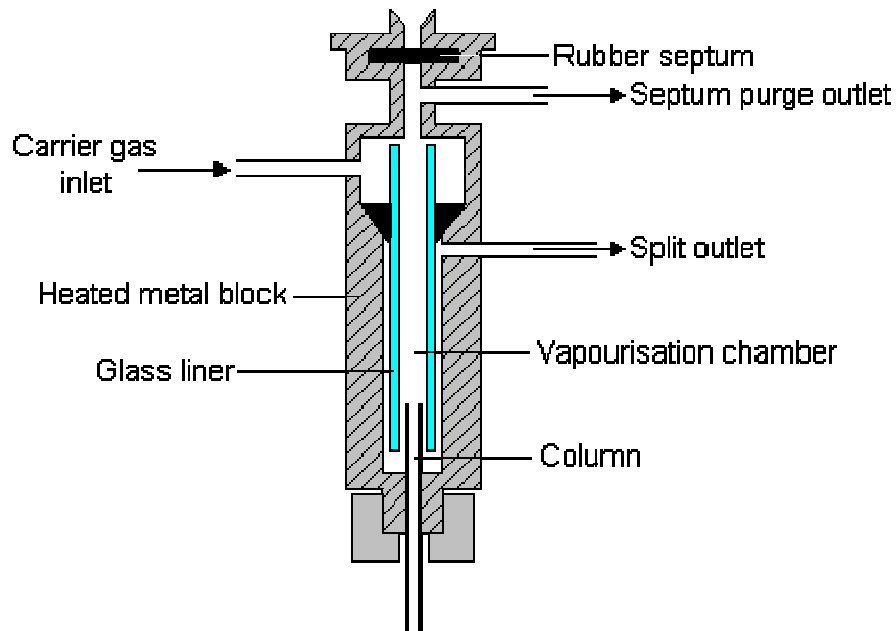


**Application: Hydrogen carrier lines in refineries and petrochemicals**

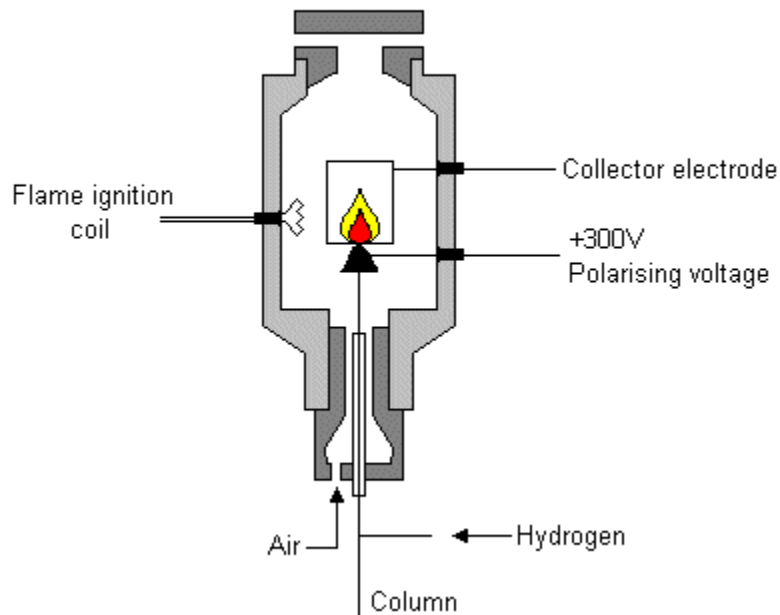
All refineries and various petrochemical and chemical plants use process gas analyzers such as gas chromatographs and TOC analyzers. Hydrogen is used as a carrier gas in gas chromatography and in various analytical instrument applications, most commonly as a fuel component of combustion gases for Flame Ionization (FID) and Flame Photometric (FPD) detectors. Spark discharge analyzers, total hydrocarbons measurements also use hydrogen mixtures. Using hydrogen as a carrier gas speeds up the process of analyzing the component.



### The split / splitless injector



### The Flame Ionisation Detector



Malema Sensors

Headquarters: 1060 S. Rogers Cir., Boca Raton, FL, USA 33487. (800)-637-6418

Malema West Coast: 3350 Scott Blvd, Suite # 6102, Santa Clara, CA, USA 95054. (408)-970-3419

Malema Singapore: 10 Ang Mo Kio Street 65, Techpoint #02-14, Singapore 569059. +65 6482-3533



**malema sensors**

Hydrogen is supplied via tubes from a bank of cylinders and a back up generator system to the analyzer cabin/room located inside the plant where analysis is done. Hydrogen used for this purpose is of very high purity (99.99999% pure). Hydrogen is one the most hazardous fluids which is flammable and will cause asphyxiation or unconsciousness if inhaled by humans.

Hence any rupture or leaks in the transfer lines have to be arrested thereby avoiding catastrophic accidents.

Installing VF's in these transfer line would prevent such accidents thus saving valuable human lives and property.

Many gas analyzer and analyzer system manufacturers use our VF's in their system. References can be produced on request.

For more information please feel free to contact us at [sales@malema.com](mailto:sales@malema.com).

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