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INTRAMICRON

# H<sub>2</sub>S Fuel Cell Sorbent Filter

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## Protect Your Fuel Cell Investment



# IntraMicron H<sub>2</sub>S Fuel Cell Sorbent Filter

## Why Risk Your Fuel Cell Investment?

Protect it with IntraMicron's patented Microfibrous Media Technology by Simply adding this filter inline to your fuel cell's hydrogen supply

### Description:

PEM fuel cells must use ultra high purity hydrogen to function at peak efficiency and achieve maximum useful life. Leading fuel cell manufacturers recommend using hydrogen with a purity of 99.99% or greater to realize these goals. Unfortunately hydrogen is "sold separately" and there are few means of ensuring that your fuel source is free from contaminants. A contaminated hydrogen fuel stream can do serious damage to the fuel cell in a short period of time and make waste of your investment without your knowledge. Hydrogen sulfide (H<sub>2</sub>S) is a common contaminant in industrial hydrogen that poisons the fuel cell anode catalyst. Because this poisoning mechanism is irreversible, even trace concentrations of H<sub>2</sub>S in your hydrogen can over time significantly degrade stack performance. IntraMicron's hydrogen sulfide filter is a simple, easy-to-install filter that operates effectively at low temperature using our own patented and highly efficient microfibrous sorption media technology. Simply place this filter inline between your hydrogen source and your fuel cell to get the necessary protection.

### Product Specifications

<b>Materials of Construction</b>	316 stainless steel housing and fittings
<b>Filter Description</b>	Commercial H <sub>2</sub> S adsorbent plus proprietary impregnated sintered Nickel fiber composite polishing sorbent
<b>Dimensions</b>	3" L x 3/4" W
<b>Connections</b>	1/4" Swagelok® inlet and outlet connections
<b>H<sub>2</sub>S Standoff Capability</b>	2820 minutes for a 1 kW fuel cell (15 liters H <sub>2</sub> per minute with a 1 ppm H <sub>2</sub> S background)
<b>Ultimate Hydrogen Purity</b>	≤ 0.01 ppm H <sub>2</sub> S
<b>Adsorption Capacity</b>	≥ 60 mg H <sub>2</sub> S

