



### PS-R™ Reformate Option

### Fuel Cell Testing For Reformer Based Applications

Simulate the Most Complex Reactant Gas Mixtures

Six Independent Gas Lines

ElectroChem's PS-R™ gas management unit enables fuel cell and Electrochemical testing of complex variable reactant gas mixtures for PEM, alkaline, and phosphoric acid fuel cells. It provides capacity for single cells and fuelcell stacks. Fully integrated with the Power Station™, it allows total control of input and output gas for all your fuel cell testing needs.

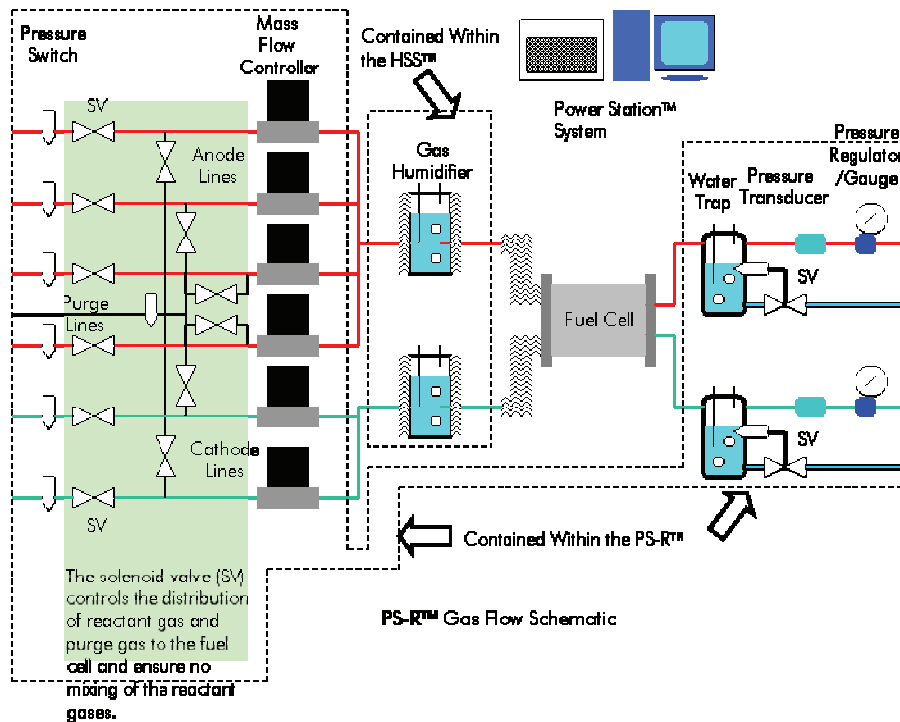


#### Key Features

- Precision automated gas supply, product water collection and effluent management.
- Convenient front panel access to manual controls, and output and return gas fittings.
- Safety designed in through hardware features and software control.
- 4 fuel and 2 oxidant gas lines.

For further detailed specifications please check the PowerStation paragraph (page 3-12).

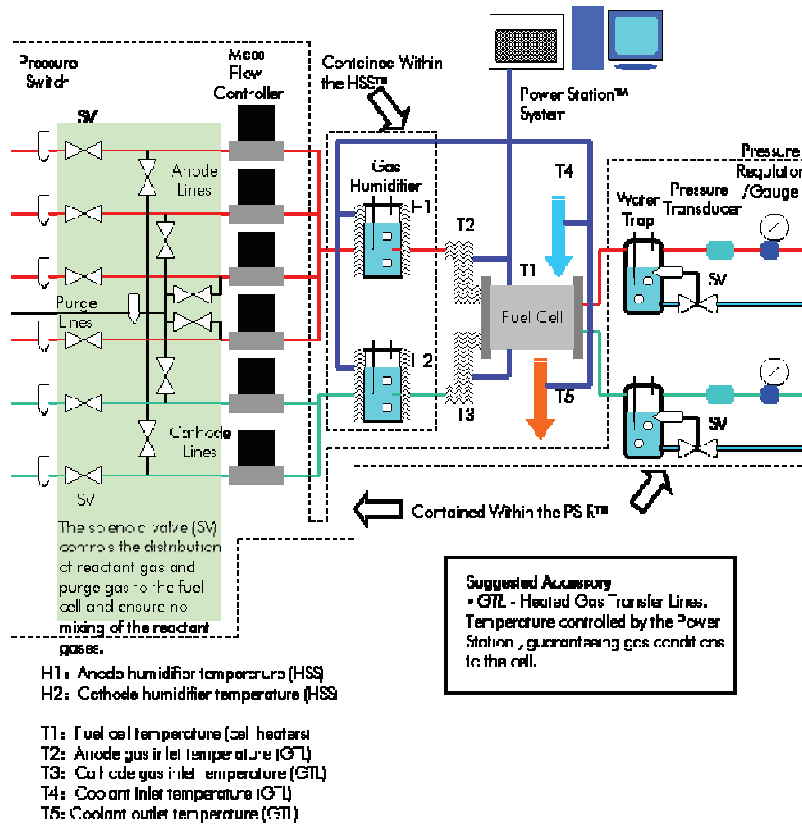
#### Gas Flow control



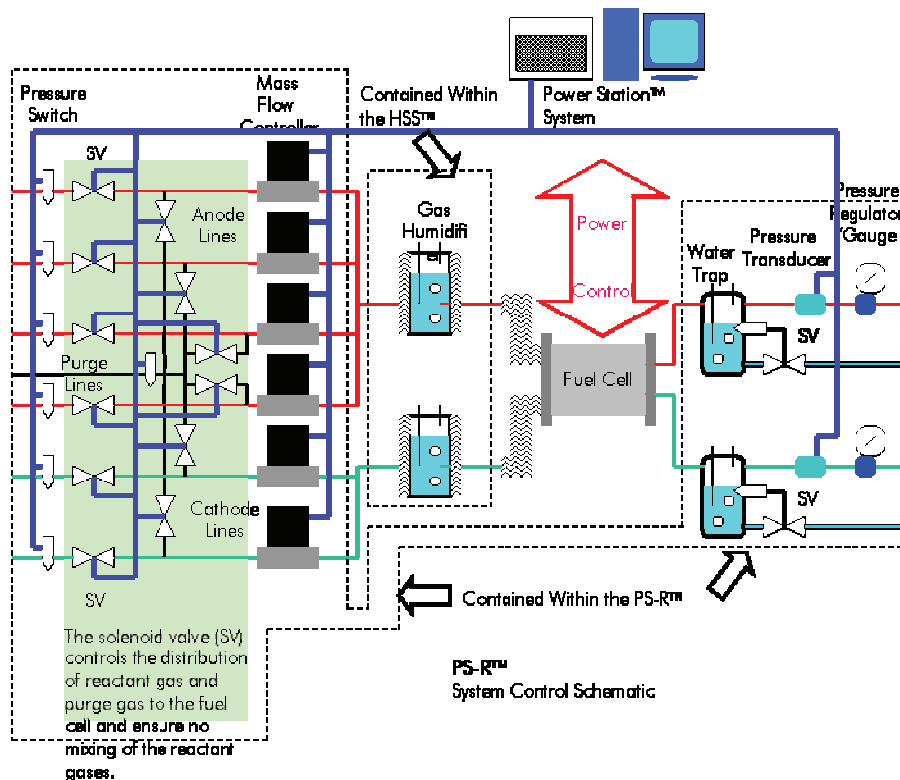


### Temperature Control Schematic

(Temperature control is not an explicit function of the PS-R™. It is a function of the Power Station™ System Controller, the optional HSS™ humidifier and optional GTL™ gas transfer lines. Details of a typical configuration is shown below.)






### System Control Features





Typical Power Station™  
Configuration with PS-R™  
Gas Management Unit

Specifications:															
Pressure:	Maximum Operating Pressure 50 psig (4.5 Bar)														
Mass Flow Controllers	<table border="0"> <tr> <td>Full Scale Ranges Available</td> <td>10 to 20000 sccm</td> </tr> <tr> <td>Control Range</td> <td>2% to 100% of Full Scale</td> </tr> <tr> <td>Accuracy</td> <td>+/-1% of Full Scale</td> </tr> <tr> <td>Repeatability</td> <td>+/-0,2% of Full Scale</td> </tr> <tr> <td>Resolution</td> <td>0,1% of Full Scale</td> </tr> <tr> <td>Wetted Materials</td> <td>316L SS, Viton™, Nickel</td> </tr> </table>	Full Scale Ranges Available	10 to 20000 sccm	Control Range	2% to 100% of Full Scale	Accuracy	+/-1% of Full Scale	Repeatability	+/-0,2% of Full Scale	Resolution	0,1% of Full Scale	Wetted Materials	316L SS, Viton™, Nickel		
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Wetted Materials	316L SS, Viton™, Nickel														
Physical Characteristics	17 1/2" W x 12 1/4" H x 18 1/2" D (44 cm x 31 cm x 47 cm) 110 lbs. (50 kg)														
Gas Connections	1/4" Swagelok™ Tubing Connectors Front Panel <table border="0"> <tr> <td>Output Reactant Gases to Fuel Cell</td> <td>(6)</td> </tr> <tr> <td>Reactant Return Gases from Fuel Cell</td> <td>(2)</td> </tr> <tr> <td>Ports for Refill of Humidifier Bottles</td> <td>(2)</td> </tr> </table> Rear Panel <table border="0"> <tr> <td>Input Reactant Gases</td> <td>(6)</td> </tr> <tr> <td>Input Purge Gas</td> <td>(1)</td> </tr> <tr> <td>Output Venting of Reactant Gases</td> <td>(2)</td> </tr> <tr> <td>Output Product Water to Drain</td> <td>(2)</td> </tr> </table>	Output Reactant Gases to Fuel Cell	(6)	Reactant Return Gases from Fuel Cell	(2)	Ports for Refill of Humidifier Bottles	(2)	Input Reactant Gases	(6)	Input Purge Gas	(1)	Output Venting of Reactant Gases	(2)	Output Product Water to Drain	(2)
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Electric Requirements	All power and control connections provided by Power Station™ Control Unit*														

