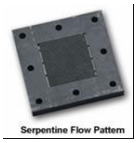
ElectroChem, Inc.

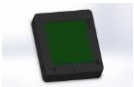
PEM Fuel Cell Hardware

ElectroChem's FC01, FC05, FC25, FC50 and FC100 Series Fuel Cell Hardware are rugged pieces of hardware designed to be built and re-built by researchers for advanced research in the area of catalyst, electrode, gas diffusion layer, and membrane electrode assembly development.


Column Flow Pattern


Serpentine Flow Pattern


Straight Channel Flow Pattern



Part No	Active Area	Application	Reference Electrode	Weight	Operation Pressure	Operation Temperature	Connection
Column Flow Field							
FC-05-01	5 cm2	PEM		1.34 Kg	Max 60 psig	Max 150 C	1/4" Swagelok
FC-25-01	25 cm2	PEM					
FC-25-01-REF		PEM	Yes				
FC-05-01-DM	5 cm2	DMFC					
FC-25-01-DM	25 cm2	DMFC					
Serpentine Flow Field							
FC-01-02	1 cm2	PEM		1.34 Kg	Max 60 psig	Max 150 C	1/4" Swagelok
FC-05-02	5 cm2	PEM					
FC-05-02-REF		PEM	Yes				
FC-05-02-H2R		PEM	Yes				
FC-25-02	25 cm2	PEM					
FC-25-02-REF		PEM	Yes				
FC-50-02	50 cm2	PEM					
FC-01-02-DM	1 cm2	DMFC					
FC-05-02-DM	5 cm2	DMFC					
FC-25-02-DM	25 cm2	DMFC					
FC-50-02-DM	50 cm2	DMFC		2.50 Kg			
Straight Flow Field							
FC-50-03	50 cm2	PEM		2.50 Kg	Max 60 psig	Max 150 C	1/4" Swagelok
FC-100-03	100 cm2	PEM		3.62 Kg			
Interdigitated Flow Field							
FC-25-04	25 cm2	PEM		1.34 Kg	Max 60 psig	Max 150 C	1/4" Swagelok
FC-50-04	50 cm2	PEM		2.50 Kg			

Power generation from a fuel cell is depended on cell's active area and current density at a cell voltage.
For example, when a fuel cell with 25 cm2 actie area provides 0.5 A/cm2 currentr density at a cell voltag of 0.7 v,
the power of the fuel cell is 25 (cm2) x 0.5 (A/cm2) x 0.7 (V) = 8.75 watt

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