



Fuel Cell Hydrogen Circulation Pump Test System



- Output characteristic/MAP curve test
- Flow/rotary speed test
- Power/efficiency test
- Inlet/exhaust pressure range test
- Durability/aging test
- Vibration/temperature monitoring (Optional)

Production Introduction

The system is designed to provide a stable test platform for fuel cell hydrogen circulation pump. Ideal for performance, durability, and functionality testing. It can be applied during the R&D process, EoL testing, and IQC (incoming quality control) of hydrogen circulation pump.

Product Advantages

- Versatile interfaces & functions; Convenient operation; Modular design for easy transportation & installation;
- Compatible with a variety of gas: Hydrogen/Nitrogen/Helium etc.;
- Complete safety protection measures;
- High precision data sampling & control;
- Temperature measurement precision $\pm 0.5^{\circ}\text{C}$; Pressure measurement precision $\pm 0.5\% \text{FS}$;
- High precision DC power supply featuring high control accuracy, fast response, & wide regulating range;
- Powerful monitoring software;
- Editable work steps & protection parameters;
- Superior data recording & analysis ability;
- Auto-measurement/recording/test report generation;
- Support unattended, automatic operation for a long time.

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Specifications & Parameters

Model	FCTS-HP-2		
Measurement	Flow detection range	50-2500NL/PM	
	Flow measurement precision	$\pm 1\% \text{FS}$	
	Temperature measurement precision	$\pm 0.5^{\circ}\text{C}$	
	Pressure measurement precision	$\pm 0.5\% \text{FS}$	
	Pressure control range	0-300Pa (G)	
High-voltage power supply	Rated power	3200W	
	Type	High precision DC power supply	
	Voltage range	24-800VDC	
	Voltage precision	0.1% \pm 0.1%FS	
	Voltage ripple (P-P)	80mV	
Low-voltage power supply	Voltage	12V	24V
	Rated power	450W	1000W
	Rated current	37.5A	42A
	Voltage precision	$\pm 1\% \text{FS}$	
	Voltage ripple (P-P)	150mV	200mV
General Specifications	Control system	NI	
	Human-computer interface	Upper computer	
	External communication	CAN	
	Internal communication	LAN	
	Power Supply	AC380V, three-phase five-wire	
	Ambient temperature	0-40 $^{\circ}\text{C}$	

Software Interfaces

- 1) Parameter Setting: Inlet/outlet pressure of hydrogen circulation pump; Output voltage of DC power supply; Cooling water temperature; Rotary speed/frequency of hydrogen circulation pump;
- 2) Data Display: Real-time display of operating data; Real-time data storage; Inlet/outlet temperature/pressure/flow/power of hydrogen circulation pump;
- 3) Alarm: Real-time alarm system & emergency processing; Trackable alarm history;
- 4) Data storage: The data from the specifications table above can be saved as ".csv"; Automatic generation of test reports; Installed with graphical data processing software.

