4.11 氢能教学/示范用具

Hydrogen fuel cell power generation demonstration system

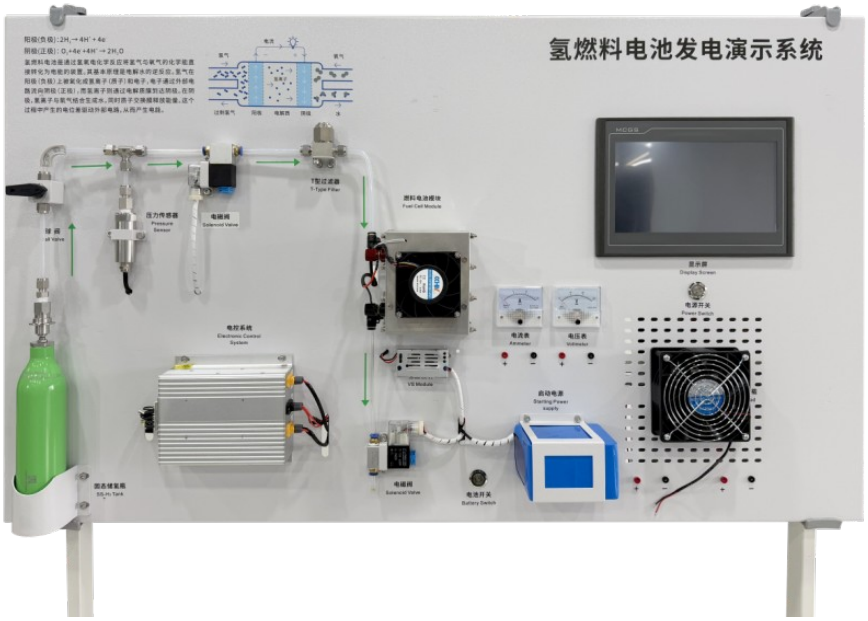
1、Product Overview

This system is a full-process teaching demonstration device for hydrogen fuel cell power generation designed for colleges and vocational schools. It integrates solid-state hydrogen storage, fuel cell power generation, power management and load application modules, and fully demonstrates the core technology of hydrogen energy conversion into electrical energy. The system is based on proton exchange membrane fuel cell (PEMFC) technology, combined with low-pressure solid-state hydrogen storage and intelligent monitoring system. It is safe and reliable, and is suitable for experimental teaching and scientific research exploration in new energy, chemical engineering, electrical automation and other disciplines.

4、Core technical parameters

equipment	name	unit	parameter
Solid state hydrogen storage tank	Bottle diameter	mm	60
	Bottle height	mm	258
	weight	kg	1.5
	Hydrogen storage capacity	g	>22
	Hydrogen filling pressure	Mpa	1.0
	Continuous hydrogen desorption pressure	Mpa	0.6
	Hydrogen release rate	L/min	>4
Fuel Cells	Rated voltage	V	19.8
	Rated current	A	10.2
	efficiency	%	≥45
	Hydrogen pressure	MPa	0.035~0.05
	Hydrogen purity	%	≥99.99 (CO≤1PPM)
	Theoretical hydrogen consumption at rated power	L/min	2.89
	Theoretical air consumption	L/min	114.6

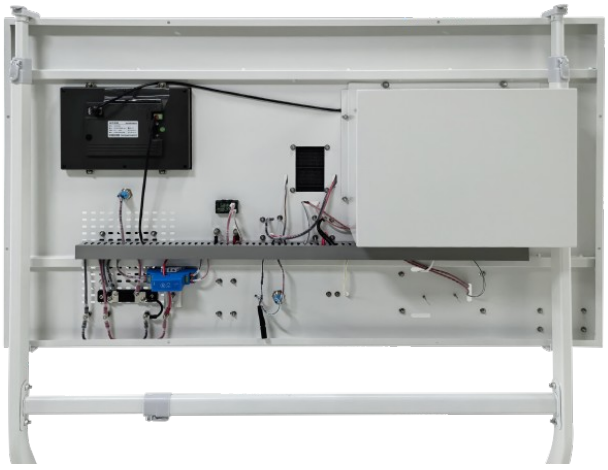
	at rated power		
	Fuel cell weight	kg	1.43
The weight of the system after packaging		kg	30
The dimensions after system packaging		mm	355×760×1260
The weight of the bracket after packaging		kg	10
The dimensions of the bracket after packaging		mm	75×550×1360



(System physical picture 1)



（ System physical picture 2 ）



（ System physical picture 3 ）