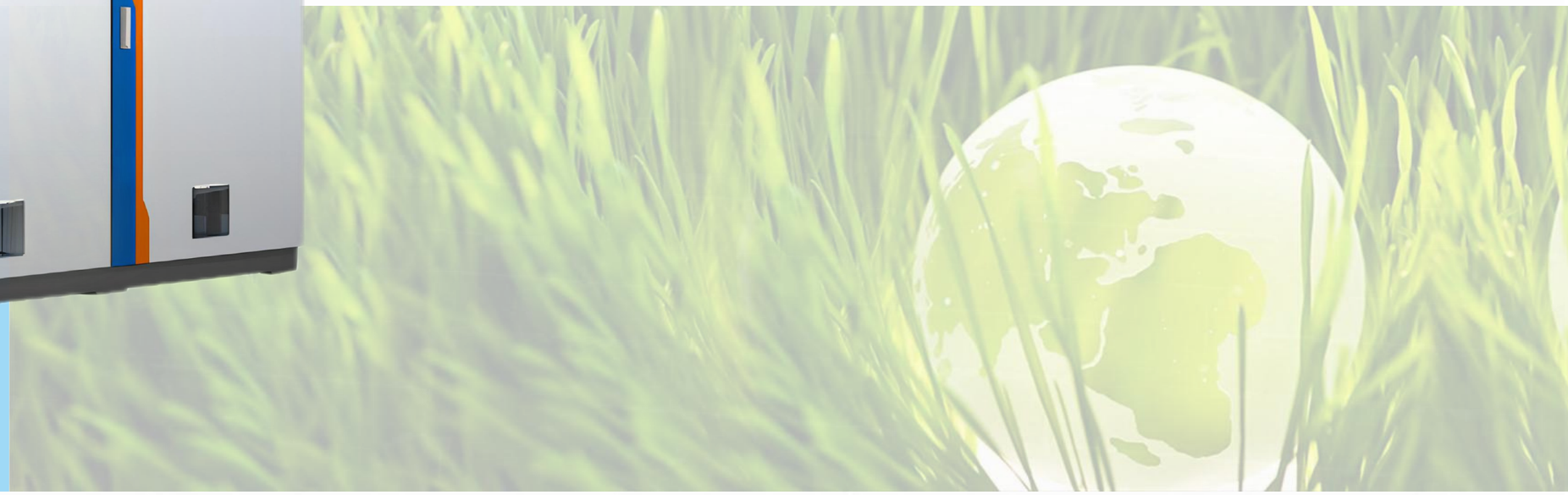
HOVOGEN

EMPOWER A GREENER FUTURE

Cutting-edge hydrogen generators and electrolysers for unparalleled efficiency and sustainability



COMPANY PROFILE

PRODUCTION BASE

Technical advantages

Master PEM water electrolysis hydrogenproductioncore technology.

Supply chain supporting

R&d, production, sales and service quality supply chain system to shorten the development cycle;

Service advantages

High Standard, high quality, high efficiency, high cost-effective customer-centric, according to demand professional customization.

20000 m^2/Production base
Lay the foundation for efficient production

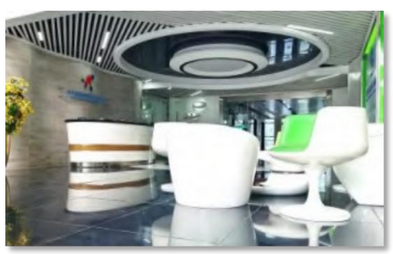
5500 m^2/Diversity office
High-quality technology development space

500 m^2/ Exhibition Hall
Provide the ultimate experience environment

PEM HYDROGEN ELECTROLYSER SUPPLIER

As a leading technology company in the hydrogen industry, we are driven by an unwavering commitment to the development and research of PEM (Proton Exchange Membrane) hydrogen electrolyzers and cutting-edge products. By leveraging our technical expertise, we are paving the way for a sustainable future.

HOVOGEN is a state-level high-tech enterprise dedicated to the advancement of the hydrogen energy industry. It operates research and development, production, and operational facilities in both the Songshan Lake Hi-Tech Industrial Development Zone and the Zhuzhou Hi-Tech Industrial Development Zone.



After 10 years of product development, testing, technology reserves and market docking, investment of more than 60 million yuan, has a complete independent intellectual property system, he has obtained many national invention patents in the field of PEM hydrogen production by water electrolysis and participated in the formulation of two national standards, have Rich Technical Research, product development, industrial production experience.

CORPORATE HONOR

To participate in the formulation of national standards

The company has participated in the formulation of two hydrogen production industry standards: technical requirements for hydrogen production system by pressure water electrolysis (GB/T 37562-2019) and safety requirements for hydrogen production system by pressure water electrolysis (GB/T37563-2019)

Passed ISO14001 Environmental Management System certification

Through ISO9001 Quality Management System certification

Occupational Health and Safety Management System certification

Obtained AAA Credit Rating Qualification CertificateCredit-abiding enterprises

model units of credit management, quality service units of credit, Credit Enterprises, credit suppliers, credit enterprises

HOVOGEN obtained a number of PEM hydrogen electrolysis invention patents

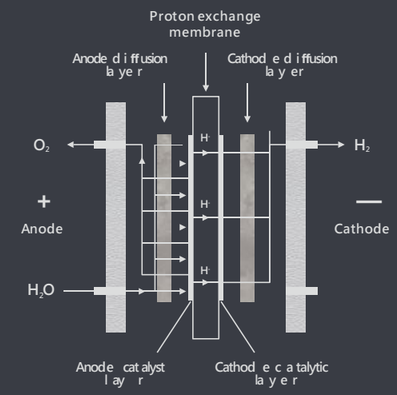
Patent certificate

Authoritative Product Inspection Reports

Technology and products

Master PEM water electrolysis hydrogen production core technology

Compared with other water electrolysis technology, PEM can work at high current density, small size, high efficiency, the purity of hydrogen generated by up to 99.999% , is considered as the most promising water electrolysis technology. HOVOGEN hydrogen can improve the quality of PME water electrolysis cell by fine work, and strict process requirements, committed to become the world's leading PEM water electrolysis hydrogen production equipment provider.



- A series of high-efficiency membrane electrode preparation and production technology
- Preparation and production technology of super corrosion resistant collector
- High performance bipolar plate design technology and processing technology
- High energy efficiency and high pressure resistance
- Series PEM water electrolytic reactor design and integrated test technology
- PEM hydrogen production system design and system integration technology

Self-developed PEM water electrolysis hydrogen production core products

- Hydrogen production equipment
- Hydrogen industrial PEME
- Hydrogen PEME for consumer product

Generator System

PEM water electrolysis hydrogen production system

Can be customized according to application requirement

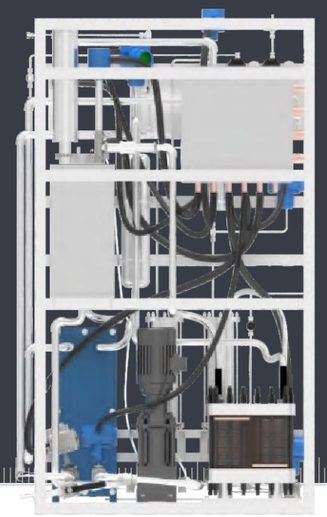
Application area

Application fields of PEM hydrogen production system by water electrolysis

Can be customized according to application requirement

Applications

Petroleum refining / semiconductor manufacturing / glass making
metals smelting / food processing / chemical space technology
transportation / agriculture ••••••



Product line	S series	H series	C series	M series
Range of hydrogen production	0.01-1Nm3/h	1-10Nm³/h	10-50Nm³/h	50-300Nm³/h
Regulation	0-120%	0-120%	0-120%	0-120%
Hydrogen pressure	0.1-3.5Mpa	0.1-3.5Mpa	0.1-3.5Mpa	0.1-3.5Mpa
Hydrogen purity DC power	99.999%	99.999%	99.999%	99.999%
Consumption	< 4.4kW·h/Nm3	< 4.4kW·h/Nm3	< 4.4kW·h/Nm3	< 4.4kW·h/Nm3
Power supply mode	220V/380V	220V/380V	220V/380V	220V/380V
Major applications	Lifestyle hydrogen-rich water machines, hydrogen absorption machines, laboratory hydrogen production equipment, mobile hydrogen refueling stations, etc.	Fuel cells, multi-energy complementary independent microgrids, power plants, semiconductor industry, etc.	Fuel hydrogen refueling station, polysilicon, chemical industry, semiconductor, electronics/optoelectronics industry, etc.	Hydrogen production and refueling stations, energy storage power stations, abandoned power firefighting, wind and solar hydrogen production, etc.

Big Health sector

Medical Industry, endowment industry, beauty industry real estate industry, smart home, endowment club.

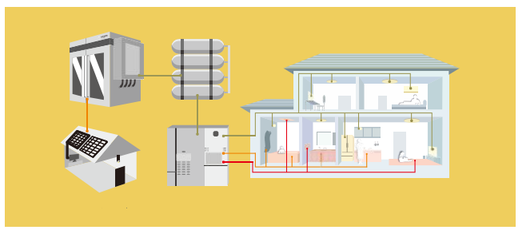
Energy storage

Using wind or solar energy to convert into hydrogen, the stored hydrogen will be used in fuel cells to generate electricity, and the hydrogen energy will be converted into electricity again.

Military industrial field military station

Based on PEM hydrogen electrolysis and oxygen generation technology, combined with photovoltaic.

Construction



Combined with photovoltaic power generation system, hydrogen storage system and fuel cell

Generator System

PEM water electrolysis hydrogen production system 200Nm³/h

Can be customized according to application requirement

- High pressure hydrogen production
  Producing high purity hydrogen
- Hydrogen leak detection
  Safety protection function
- Product performance is efficient
  Load Adaptability
- Single-chamber voltage measurement
  Accurate monitoring of hydrogen
- Cold/hot start
  High efficiency and low energy consumption

CH-200Nm³/h PEM hydrogen production system

Gas production	Nm3/h	300
Hydrogen production	Nm3/h	200
Operating temperature	℃	5-70
Hydrogen purity	%	99.999
Dew point	℃	-74 ASTM D1193 Type
Water quality demand	/	Type I deionized wate（r ＞10MΩ·CM)
Maximum stress	Mpa	3.5
Supply voltage	V	380/10K
Water consumption	L/h	200
Size Direct current	mm	6100×2400×2600
consumption	kW·h/Nm3H2	4.4
Load regulation range	%	5-120
Application area	Photovoltaic off-grid hydrogen production, wind hydrogen production, cogeneration, semiconductor, multi-energy complementary micro-network and other industrial enviornment	

Generator System

PEM water electrolysis hydrogen production system 50Nm³/h

Can be customized according to application requirement

- High pressure hydrogen production
  Producing high purity hydrogen
- Hydrogen leak detection
  Safety protection function
- Product performance is efficient
  Load Adaptability
- Single-chamber voltage measurement
  Accurate monitoring of hydrogen
- Cold/hot start
  High efficiency and low energy consumption

CH-50Nm³/h PEM hydrogen production system

Gas production	Nm3/h	75
Hydrogen production	Nm3/h	50
Operating temperature	℃	5-70
Hydrogen purity	%	99.999
Dew point	℃	-74 ASTM D1193 Type
Water quality demand	/	Type I deionized wate（r ＞10MΩ·CM)
Maximum stress	Mpa	3.5
Supply voltage	V	380
Water consumption	L/h	50
Size Direct current	mm	3000×12000×2700
consumption	kW·h/Nm3H2	4.4
Load regulation range	%	5-120
Application area	Photovoltaic off-grid hydrogen production, wind hydrogen production, cogeneration, semiconductor, multi-energy complementary micro-network and other industrial enviornment	

Generator System

PEM water electrolysis hydrogen production system 10Nm³/h

Can be customized according to application requirement

- High pressure hydrogen production
  Producing high purity hydrogen
- Hydrogen leak detection
  Safety protection function
- Product performance is efficient
  Load Adaptability
- Single-chamber voltage measurement
  Accurate monitoring of hydrogen
- Cold/hot start
  High efficiency and low energy consumption

CH-10Nm³/h PEM hydrogen production system		
Gas production	Nm3/h	15
Hydrogen production	Nm3/h	10
Operating temperature	℃	5-70
Hydrogen purity	%	99.999
Dew point	℃	-74 ASTM D1193 Type
Water quality demand	/	Type I deionized wate （r ＞10MΩ·CM)
Maximum stress	Mpa	3.5
Supply voltage	V	380
Water consumption	L/h	10
Size	mm	3000×1400×2100
Direct current consumption	kW·h/Nm3H2	4.4
Load regulation range	%	5-120
Application area	Photovoltaic off-grid hydrogen production, wind hydrogen production, cogeneration, semiconductor, multi-energy complementary micro-network and other industrial enviornment	

Generator System

PEM water electrolysis hydrogen production system 6Nm³/h

Can be customized according to application requirement

- High pressure hydrogen production
  Producing high purity hydrogen
- Hydrogen leak detection
  Safety protection function
- Product performance is efficient
  Load Adaptability
- Single-chamber voltage measurement
  Accurate monitoring of hydrogen
- Cold/hot start
  High efficiency and low energy consumption

CH-6Nm³/h PEM hydrogen production system		
Gas production	Nm3/h	9
Hydrogen production	Nm3/h	6
Operating temperature	℃	5-70
Hydrogen purity	%	99.999
Dew point	℃	-74 ASTM D1193 Type
Water quality demand	/	Type I deionized wate （r ＞10MΩ·CM)
Maximum stress	Mpa	3.5
Supply voltage	V	380
Water consumption	L/h	6
Size	mm	1800×1100×2000
Direct current consumption	kW·h/Nm3H2	4.4
Load regulation range	%	5-120
Application area	Photovoltaic off-grid hydrogen production, wind hydrogen production, cogeneration, semiconductor, multi-energy complementary micro-network and other industrial enviornment	

Generator System

PEM water electrolysis hydrogen production system 1Nm³/h

Can be customized according to application requirement

- High pressure hydrogen production
  Producing high purity hydrogen
- Hydrogen leak detection
  Safety protection function
- Product performance is efficient
  Load Adaptability
- Single-chamber voltage measurement
  Accurate monitoring of hydrogen
- Cold/hot start
  High efficiency and low energy consumption

CH-1Nm³/h PEM hydrogen production system

Gas production	Nm3/h	1.5
Hydrogen production	Nm3/h	1
Operating temperature	℃	5-70
Hydrogen purity	%	99.999
Dew point	℃	-74 ASTM D1193 Type
Water quality demand	/	Type I deionized wate（r ＞10MΩ·CM)
Maximum stress	Mpa	3.5
Supply voltage	V	380
Water consumption	L/h	1
Size Direct current	mm	1800×1100×2000
consumption	kW·h/Nm3H2	4.4
Load regulation range	%	5-120
Application area	Photovoltaic off-grid hydrogen production, wind hydrogen production, cogeneration, semiconductor, multi-energy complementary micro-network and other industrial enviornment	

Generator System

PEM water electrolysis hydrogen production system 0.6Nm³/h

Can be customized according to application requirement

- High pressure hydrogen production
  Producing high purity hydrogen
- Hydrogen leak detection
  Safety protection function
- Product performance is efficient
  Load Adaptability
- Single-chamber voltage measurement
  Accurate monitoring of hydrogen
- Cold/hot start
  High efficiency and low energy consumption

CH-0.6Nm³/h PEM hydrogen production system

Gas production	Nm3/h	0.9
Hydrogen production	Nm3/h	0.6
Operating temperature	℃	5-70
Hydrogen purity	%	＞99.99 ASTM D1193 Type
Water quality demand	/	Type I deionized wate（r ＞10MΩ·CM)
Maximum stress	Mpa	1
Supply voltage	V	220
Water consumption	L/h	0.6
Size Direct current	mm	700×550×1100
consumption	kW·h/Nm3H2	4.4
Load regulation range	%	5-120
Application area	Preparation of high-purity antimony, lab-grown diamond, metal smelting, semiconductor, hydrogen generator and other environment.	

Generator System

PEM water electrolysis hydrogen production system 1Nm³/h

Can be customized according to application requirement

- Remote monitoring function, automatic system control, 24-hour unattended safe and dynamic operation
- Adjustable operating conditions, allows prefabricated conditions
- hydrogen production pressure can reach 1.6Mpa
- Power supply output voltage, current, power monitoring and protection
- Temperature and pressure monitoring and protection
- Can be stacked in multiple units

Generator System

PEM water electrolysis hydrogen production system 0.6Nm³/h

Can be customized according to application requirement

- Remote monitoring function, automatic system control, 24-hour unattended safe and dynamic operation
- Adjustable operating conditions, allows prefabricated conditions
- Hydrogen production pressure can reach 1.6Mpa
- Power supply output voltage, current, power monitoring and protection
- Temperature and pressure monitoring and protection
- Can be stacked in multiple units

LH Series Hydrogen Generator (200-4000 ml/min)

Hydrogen flow rate	ml/Min	200, 400, 600, 800, 1200, 1600, 2000, 2500, 3000, 4000
Oxygen flow rate	ml/Min	0-2000
Hydrogen Purity	%	**>99.998**
Dimensions	mm	500 X 400 X 505
Operating Temperature	ml/Min	5-60
Operating Pressure	MPaG	≤1.6
Electrolyzed water inlet pressure	Barg	1-4
Supply Voltage (AC)	V	110-220
Startup Time	Sec	12
Electrolysis Efficiency	ml/Min	>77.7% HHV
Dew Point	℃	< -45
Stackable Configurations		✓
Application area	Photovoltaic off-grid hydrogen production, wind hydrogen production, cogeneration, semiconductor, multi-energy complementary micro-network and other industrial enviornment	

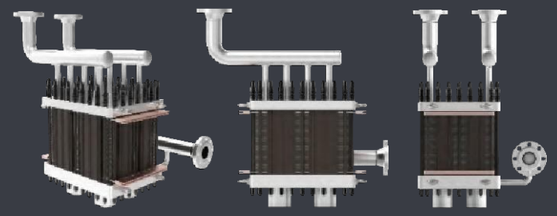
LX Series Hydrogen Generator (200-4000 ml/min)

Hydrogen flow rate	ml/Min	200, 400, 600, 800, 1200, 1600, 2000, 2500, 3000, 4000
Oxygen flow rate	ml/Min	0-2000
Hydrogen Purity	%	**>99.9998**
Dimensions	mm	500 X 400 X 505
Operating Temperature	ml/Min	5-60
Operating Pressure	MPaG	≤1.6
Electrolyzed water inlet pressure	Barg	1-4
Supply Voltage (AC)	V	110-220
Startup Time	Sec	12
Electrolysis Efficiency	ml/Min	>77.7% HHV
Dew Point	℃	< -45
Stackable Configurations		✓
Application area		

MW class electrolysor

PEME 200Nm³/h

Can be customized according to application requirement



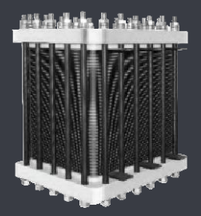
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

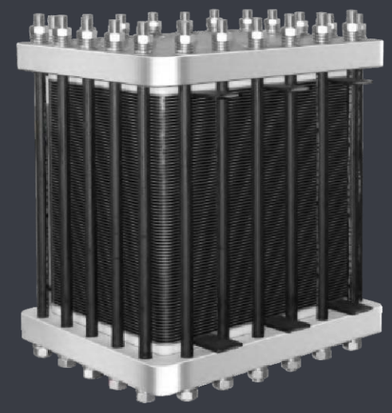
CH-200Nm³/h type PEME				
Oxygen production		Nm³/h	300	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	200	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	200	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	4000-4500	
Dimensions (without lugs)		mm	970×805×1205	
Dimensions (including lugs and fittings)		mm	970×905×1205	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

MW class electrolysor

PEME 60Nm³/h

Can be customized according to application requirement





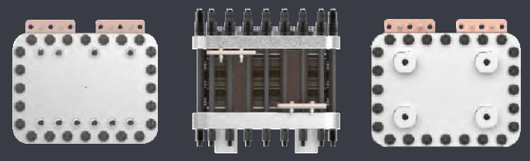
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

CH-60Nm³/h type PEME				
Oxygen production		Nm³/h	90	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	60	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	60	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	4000-4500	
Dimensions (without lugs)		mm	970×805×855	
Dimensions (including lugs and fittings)		mm	970×905×855	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

Medium size electrolysor

PEME 10Nm³/h

Can be customized according to application requirement



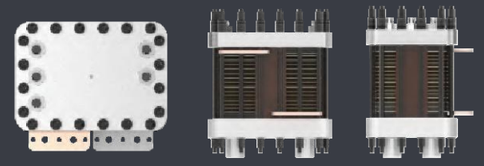
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

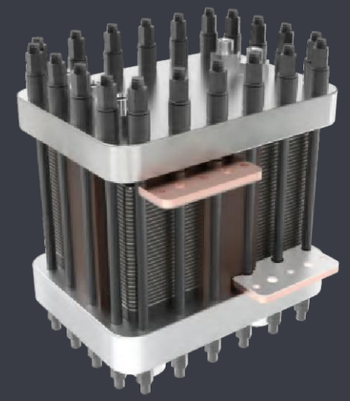
CH-10Nm³/h type PEME				
Oxygen production		Nm³/h	15	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	10	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	10	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	355	
Dimensions (without lugs)		mm	442×335×430	
Dimensions (including lugs and fittings)		mm	442×375×430	
Weight		kg	120	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

Medium size electrolysor

PEME 5Nm³/h

Can be customized according to application requirement





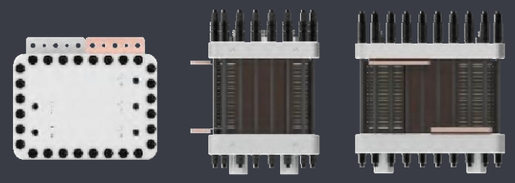
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

CH-5Nm³/h type PEME				
Oxygen production		Nm³/h	7.5	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	5	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	5	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	355	
Dimensions (without lugs)		mm	382×280×431	
Dimensions (including lugs and fittings)		mm	382×324.5×431	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

Medium size

PEME 4Nm³/h

Can be customized according to application requirement



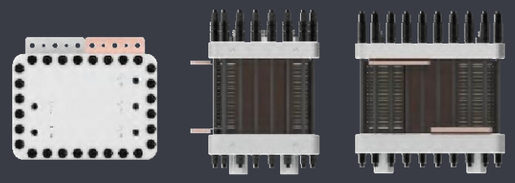
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

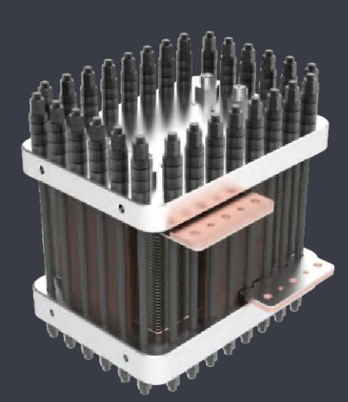
CH-4Nm³/h type PEME				
Oxygen production		Nm³/h	6	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	4	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	5	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	355	
Dimensions (without lugs)		mm	382×280×396	
Dimensions (including lugs and fittings)		mm	382×324.5×396	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

Medium size

PEME 3Nm³/h

Can be customized according to application requirement





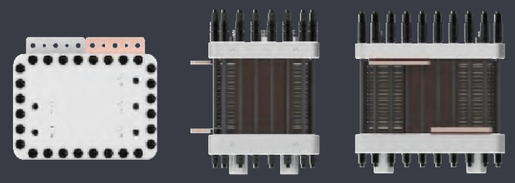
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

CH-3Nm³/h type PEME				
Oxygen production		Nm³/h	4.5	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	3	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	3	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	355	
Dimensions (without lugs)		mm	382×280×357	
Dimensions (including lugs and fittings)		mm	382×324.5×357	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

Medium size

PEME 2Nm³/h

Can be customized according to application requirement



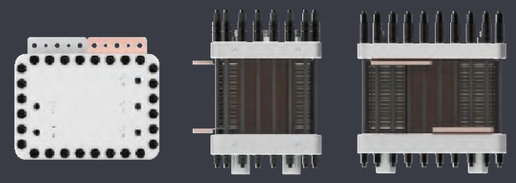
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

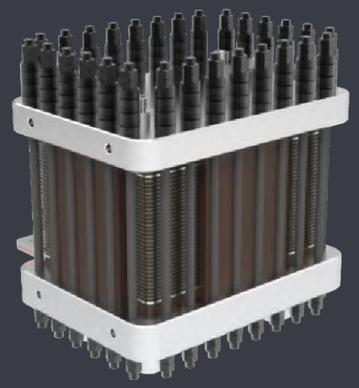
CH-2Nm³/h type PEME				
Oxygen production		Nm³/h	3	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	2	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	2	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	355	
Dimensions (without lugs)		mm	382×280×321	
Dimensions (including lugs and Þttings)		mm	382×324.5×321	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

Medium size

PEME 1Nm³/h

Can be customized according to application requirement





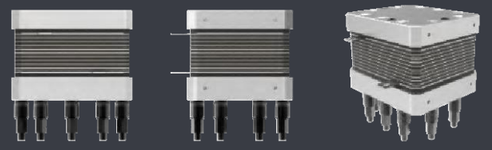
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability
- It can adapt to wide power fluctuation

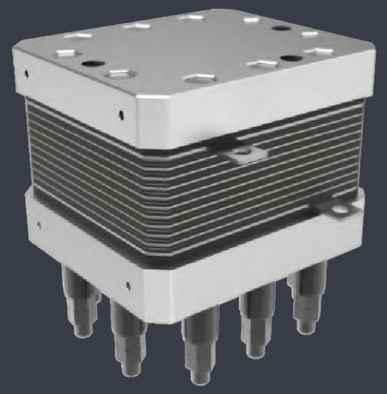
CH-1Nm³/h type PEME				
Oxygen production		Nm³/h	1.5	Hydrogen is mixed with oxygen
Hydrogen production		Nm³/h	1	Pure hydrogen, single out
Temperature of circulating water		℃	25-70	
Water consumption		L/h	1	Pure Water, deionized water
Circular manner		/	Pump circulation	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	3.5	
TDS	Anode water	PPM	≤ 1	Pure water system
	Cathode water	PPM	/	
Constant current		A	355	
Dimensions (without lugs)		mm	382×280×290	
Dimensions (including lugs and Þttings)		mm	382×324.5×290	
Weight		kg	/	
Application area		On-site hydrogen production in large scale energy storage, chemical industry, fuel cell system, hydrogen production-hydrogenation station, medicine and other industries		

small and medium-size

PEME 7000mL/min

Can be customized according to application requirement





- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CHL7-7000mL/min type PEME			
Oxygen production	ml/min	10500	Hydrogen is mixed with oxygen
Hydrogen production	ml/min	7000	Pure hydrogen, single out
Temperature of circulating water	℃	25-70	
Water consumption	ml/min	≤2300	Pure Water, deionized water
Circular manner	/	Natural circulation	
Hydrogen purity	%	99.99	After drying
Water electrolysis method	/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress	Mpa	3.5	
TDS — Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
TDS — Cathode water	PPM	/	
Single cell voltage	V	1.75-2.5	
Power supply — Constant current	A	80	
Power supply — Constant current voltage	V	40	
Dimensions (without lugs)	mm	136×135×150	
Dimensions (including lugs and Þttings)	mm	156×149×220	
Weight	kg	/	
Application area	Small hydrogen production-hydrogenation machine, fuel cell backup power supply, semiconductor, electron/photoelectron, multi-energy Complementary Independent micro-network, pharmaceutical and other industries on-site hydrogen production.		

Product Advantage

Laser-focused on technical quality, Hovogen elevates its PEM water electrolysis equipment to new heights of unparalleled efficiency and reliability. Leveraging innovations, the company empowers large-scale clean hydrogen supply, a cornerstone in the global transition to sustainability.

Driven by green "Carbon Neutral" commitments and a client-centric approach, Hovogen delivers exceptional service and customized solutions that unlock unparalleled value for customers. Redefining corporate responsibility, they power a cleaner, more sustainable future.

PEM water electrolyzer advantages

Produce high-purity hydrogen

The purity of the produced hydrogen is greater than 99.999%, and the dew point is less than -74° C.

High* pressure *hydrogen production

Hydrogen production pressure can reach 3.5Mpa

High performance

Excellent stability, conductivity, robust quality, and superior thermal stability, allow high current densities while offering minimal proton conduction resistance, leading optimised energy consumption.

High Purity & High Pressure

Adjustable hydrogen output ensuring a fully sealed system for enhanced purity. High-pressure hydrogen, making it a versatile and efficient solution for a wide range of applications.

Customisable specifications

Patented product, can be customised according to specific requirement

Consumer application of PEM water electrolytic cell

Hydrogen-rich water machine

Hydrogen health products

Small size

PEME 5000mL/min

Can be customized according to application requirement

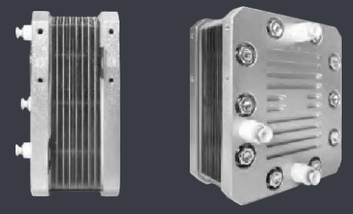
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CHL13-1 type PEME				
Oxygen production		ml/min	> 7500	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 5000	Pure hydrogen, single out
Temperature of circulating water		℃	25-50	
Water consumption		ml/min	≮2500	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.55	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	55	
	Constant current voltage	V	39	
Dimensions (without lugs)		mm	136×87×156	
Dimensions (including lugs and fittings)		mm	157×104×156	
Weight		kg	/	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 3200mL/min

Can be customized according to application requirement



- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CHL8-1 type PEME				
Oxygen production		ml/min	>7500	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	>3200	Pure hydrogen, single out
Temperature of circulating water		℃	25-50	
Water consumption		ml/min	≮1400	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.55	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	55	
	Constant current voltage	V	39	
Dimensions (without lugs)		mm	136×87×156	
Dimensions (including lugs and Þttings)		mm	157×104×156	
Weight		kg	/	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 2000mL/min

Can be customized according to application requirement

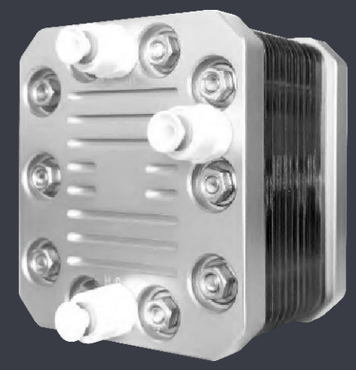
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CHL5-1 type PEME				
Oxygen production		ml/min	> 3000	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 2000	Pure hydrogen, single out
Temperature of circulating water		℃	25-50	
Water consumption		ml/min	≤500	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.55	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	55	
	Constant current voltage	V	15	
Dimensions (without lugs)		mm	136×53×156	
Dimensions (including lugs and Þttings)		mm	157×68×156	
Weight		kg	/	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 2000mL/min

Can be customized according to application requirement



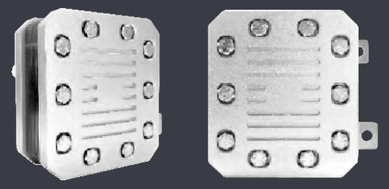
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

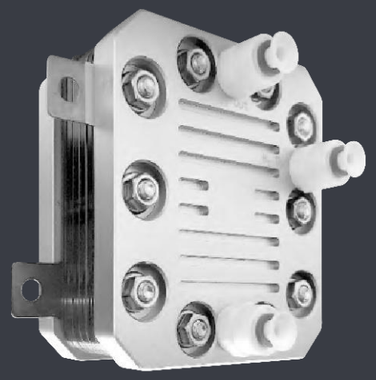
CH11-1 type PEME				
Oxygen production		ml/min	>3000	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	>2000	Pure hydrogen, single out
Temperature of circulating water		℃	25-50	
Water consumption		ml/min	≤350	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	25	
	Constant current voltage	V	33	
Dimensions (without lugs)		mm	94×75×106	
Dimensions (including lugs and Þttings)		mm	109×92×106	
Weight		kg	1.75	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 1200mL/min

Can be customized according to application requirement





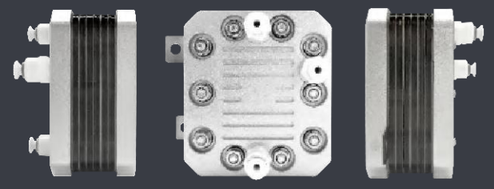
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

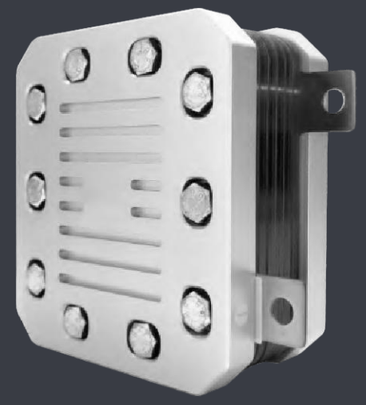
CH7-1 type PEME				
Oxygen production		ml/min	> 1800	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 1200	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮350	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	25	
	Constant current voltage	V	21	
Dimensions (without lugs)		mm	94×58×106	
Dimensions (including lugs and Pttings)		mm	109×73×106	
Weight		kg	1.33	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 1000mL/min

Can be customized according to application requirement





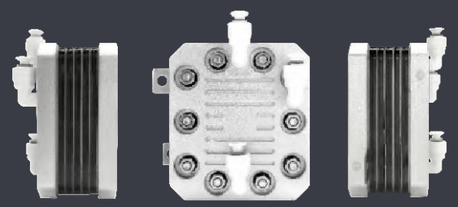
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CH6-1 type PEME				
Oxygen production		ml/min	> 1500	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 1000	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮200	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	25	
	Constant current voltage	V	18	
Dimensions (without lugs)		mm	94×52×106	
Dimensions (including lugs and Pttings)		mm	109×68×106	
Weight		kg	1.3	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 800mL/min

Can be customized according to application requirement



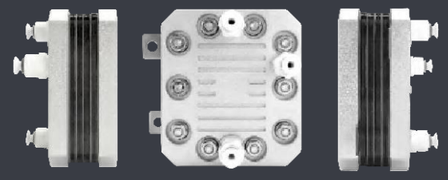
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

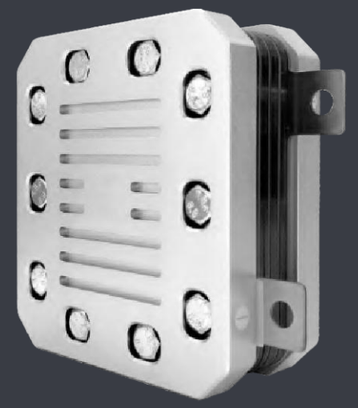
CH5-1 type PEME				
Oxygen production		ml/min	> 1200	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 800	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮200	Pure Water, deionized water
Circular manner		/	The water cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	25	
	Constant current voltage	V	15	
Dimensions (without lugs)		mm	94×48×106	
Dimensions (including lugs and Þttings)		mm	109×64×106	
Weight		kg	1.2	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 600mL/min

Can be customized according to application requirement





- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CH4-1 type PEME				
Oxygen production		ml/min	> 900	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 600	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮150	Pure Water, deionized water
Circular manner		/	Gravity cycle/pump cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	20	
	Constant current voltage	V	12	
Dimensions (without lugs)		mm	94×43×106	
Dimensions (including lugs and Þttings)		mm	109×62×106	
Weight		kg	1.15	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 300mL/min

Can be customized according to application requirement

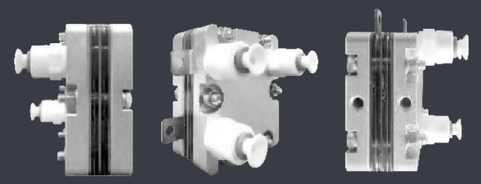
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

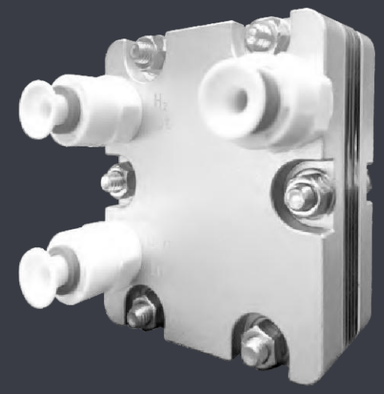
CH2-1 type PEME				
Oxygen production		ml/min	> 450	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 300	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮80	Pure Water, deionized water
Circular manner		/	Gravity cycle/pump cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	20	
	Constant current voltage	V	6	
Dimensions (without lugs)		mm	94×34×106	
Dimensions (including lugs and Þttings)		mm	109×53×106	
Weight		kg	0.9	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 200mL/min

Can be customized according to application requirement





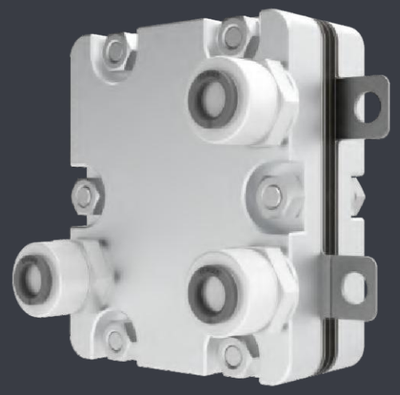
- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CH02-1 type PEME				
Oxygen production		ml/min	> 300	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 200	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮60	Pure Water, deionized water
Circular manner		/	Gravity cycle/pump cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	15	
	Constant current voltage	V	6	
Dimensions (without lugs)		mm	60×30.8×70	
Dimensions (including lugs and Þttings)		mm	72×46.5×70	
Weight		kg	0.7	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

Small size

PEME 100mL/min

Can be customized according to application requirement



- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

Small size

PEME 60mL/min

Can be customized according to application requirement

- Independent R & D and production
  Excellent material and fine workmanship
- High purity of hydrogen production
  Long service life
- High pressure resistance
  High pressure hydrogen can be produced
- High current density
  Low power consumption, voltage stability

CH01-1 type PEME				
Oxygen production		ml/min	> 150	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 100	Pure hydrogen, single out
Temperature of circulating water		℃	25-45	
Water consumption		ml/min	≮60	Pure Water, deionized water
Circular manner		/	Gravity cycle/pump cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.5	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	15	
	Constant current voltage	V	3	
Dimensions (without lugs)		mm	60×26×70	
Dimensions (including lugs and Þttings)		mm	72×41.9×70	
Weight		kg	0.6	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		

CH60-1 type PEME				
Oxygen production		ml/min	> 90	Hydrogen is mixed with oxygen
Hydrogen production		ml/min	> 60	Pure hydrogen, single out
Temperature of circulating water		℃	25-40	
Water consumption		ml/min	≮60	Pure Water, deionized water
Circular manner		/	Gravity cycle/pump cycle	
Hydrogen purity		%	99.99	After drying
Water electrolysis method		/	Water electrolysis	Proton exchange membrane electrolysis
Maximum stress		Mpa	0.3	
TDS	Anode water	PPM	≤ 1	Recommended Ion-exchange resin for circulating water
	Cathode water	PPM	/	
Single cell voltage		V	1.75-2.5	
Power supply	Constant current	A	8	
	Constant current voltage	V	3	
Dimensions (without lugs)		mm	50×38.8×60	
Dimensions (including lugs and Þttings)		mm	65×71.6×60	
Weight		kg	0.244	
Application area		GC (gas phase) gas and carrier gas, ELCD (conductivity detector) reaction gas, Ed (atomic emission spectrum detector) reaction gas, hydrogen-rich water machine, hydrogen absorber, etc.		