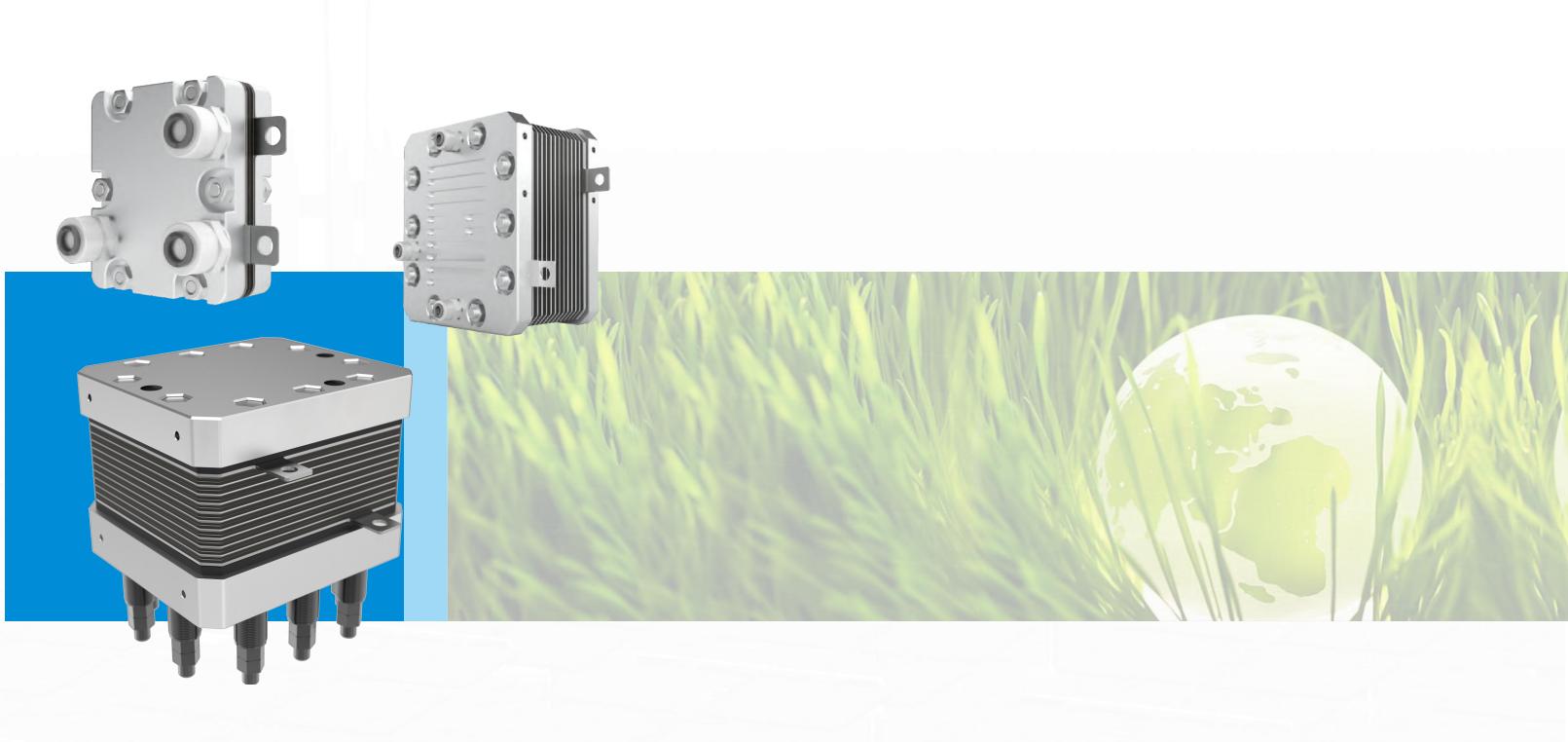


EMPOWER A GREENER FUTURE

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



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 p | oroduction | ml/min | 10500 | Hydrogen is mixed with oxygen |
| Hydrogen | production | ml/min | 7000 | Pure hydrogen, single out |
| Temper circulati | ature of ng water | °C | 25-70 | |
| Water cor | nsumption | ml/min | ≮2300 | Pure Water, deionized water |
| Circular | manner | / | Natural circulation | |
| Hydrog | en purity | % | 99.99 | After drying |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis |
| Maximu | m stress | Мра | 3.5 | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water |
| 103 | Cathode water | PPM | / | |
| Single ce | ll voltage | V | 1.75-2.5 | |
| Device events | Constant current | А | 80 | |
| Power supply | Constant current voltage | V | 40 | |
| Dimensions | (without lugs) | mm | 136×135×150 | |
| | nsions gs and Þttings) | mm | 156×149×220 | |
| We | eight | kg | / | |
| Application area | | supply, semiconductor | , electron/photoelectro | machine, fuel cell backup powe on, multi-energy Complementar cal and other industries on-sit |

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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 High pressure hydrogen production Hydrogen production pressure can reach 3.5Mpa **High Purity & High** Customisable specifications Pressure Excellent stability, conductivity, robust Adjustable hydrogen output ensuring a fully Patented product, can be customised sealed system for enhanced purity. High-

Produce high-purity hydrogen

The purity of the produced hydrogen is greater than 99.999%, and the dew point is less than -74 $^{\circ}$ C.

High performance

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

pressure hydrogen, making it a versatile and efficient solution for a wide range of applications.

Consumer application of PEM water electrolytic cell



Hydrogen-rich water machine

Hydrogen health products

according to specific requirement









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 Ø

- High current density Low power consumption, voltage stability



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

| CHL13-1 type PEME | | | | | | | | |
|---|--------------------------------|--------|-------------------------|---|--|--|--|--|
| Oxygen p | production | ml/min | > 7500 | Hydrogen is mixed with oxygen | | | | |
| Hydrogen | production | ml/min | > 5000 | Pure hydrogen, single out | | | | |
| Temper circulati water | rature of ng | °C | 25-50 | | | | | |
| Water co | nsumption | ml/min | ≮2500 | Pure Water, deionized water | | | | |
| Circular | manner | / | The water cycle | | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | | |
| Water electrolysis method | | / | Water electrolysis | Proton exchange membrane electrolysis | | | | |
| Maximum stress | | Мра | 0.55 | | | | | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water | | | | |
| 103 | Cathode water | PPM | / | | | | | |
| Single ce | ell voltage | V | 1.75-2.5 | | | | | |
| Device everyty | Constant current | A | 55 | | | | | |
| Power supply | Constant current voltage | V | 39 | | | | | |
| Dimensions | (without lugs) | mm | 136×87×156 | | | | | |
| Dimensions (including lugs and fittings) | | mm | 157×104×156 | | | | | |
| We | ight | kg | / | | | | | |
| Application area | | | trum detector) reaction | ctivity detector) reaction gas, gas, hydrogen-rich water | | | | |

| | CHL8-1 type PEME | | | | | | | | |
|-------------------------|-----------------------------|--|---------------------------|--|--|--|--|--|--|
| Oxygen p | oroduction | ml/min | >7500 | Hydrogen is mixed with oxygen | | | | | |
| Hydrogen | production | ml/min | >3200 | Pure hydrogen, single out | | | | | |
| Temper circulati | ature of ng water | °C | 25-50 | | | | | | |
| Water cor | nsumption | ml/min | ≮1400 | Pure Water, deionized water | | | | | |
| Circular | manner | / | The water cycle | | | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | | | |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis | | | | | |
| Maximu | m stress | Мра | 0.55 | | | | | | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water | | | | | |
| 103 | Cathode water | PPM | / | | | | | | |
| Single ce | ll voltage | V | 1.75-2.5 | | | | | | |
| Power supply | Constant current | A | 55 | | | | | | |
| | Constant current voltage | V | 39 | | | | | | |
| Dimensions | (without lugs) | mm | 136×87×156 | | | | | | |
| Dimer (including lug | nsions gs and Þttings) | mm | 157×104×156 | | | | | | |
| W | eight | kg | / | | | | | | |
| Application area | | GC (gas phase) gas and Ed (atomic emission sp machine, hydrogen ab | ectrum detector) reaction | uctivity detector) reaction gas, n gas, hydrogen-rich water | | | | | |











High pressure resistance High pressure hydrogen can be produced



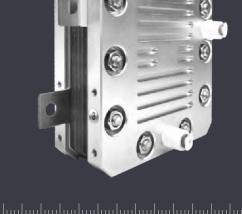


PEME 2000mL/min

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 hydrogen can be produced

High pressure resistance High current density Low power consumption, voltage stability

| | | CHL5-1 t | уре РЕМЕ | |
|--|-----------------------------|----------|---------------------------|--|
| Oxygen p | production | ml/min | > 3000 | Hydrogen is mixed with oxygen |
| Hydrogen | production | ml/min | > 2000 | Pure hydrogen, single out |
| Temper circulati | ature of ng water | °C | 25-50 | |
| Water coi | nsumption | ml/min | ≮500 | Pure Water, deionized water |
| Circular | manner | / | The water cycle | |
| Hydrog | en purity | % | 99.99 | After drying |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis |
| Maximu | m stress | Мра | 0.55 | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water |
| 103 | Cathode water | PPM | / | |
| Single ce | ll voltage | V | 1.75-2.5 | |
| Power supply | Constant current | А | 55 | |
| | Constant current voltage | V | 15 | |
| Dimensions | (without lugs) | mm | 136×53×156 | |
| Dimensions (including lugs and Þttings) | | mm | 157×68×156 | |
| We | eight | kg | / | |
| Application area | | | ectrum detector) reaction | uctivity detector) reaction gas, n gas, hydrogen-rich water |

Small size

PEME 2000mL/min

Can be customized according to application requirement





- Independent R & D and production Excellent material and fine workmanship \checkmark
- High purity of hydrogen production Long service life

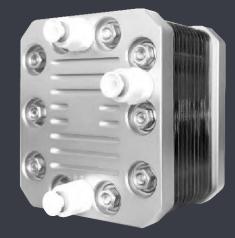
| | | CH11-1 t | уре РЕМЕ | |
|-------------------------|-----------------------------|--|---------------------------|--|
| Oxygen p | production | ml/min | >3000 | Hydrogen is mixed with oxygen |
| Hydrogen | production | ml/min | >2000 | Pure hydrogen, single out |
| Temper circulati | ature of ng water | °C | 25-50 | |
| Water cor | nsumption | ml/min | ≮350 | Pure Water, deionized water |
| Circular | manner | / | The water cycle | |
| Hydrog | en purity | % | 99.99 | After drying |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis |
| Maximu | m stress | Мра | 0.5 | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water |
| 103 | Cathode water | PPM | / | |
| Single ce | ll voltage | V | 1.75-2.5 | |
| Power supply | Constant current | A | 25 | |
| Power supply | Constant current voltage | V | 33 | |
| Dimensions | (without lugs) | mm | 94×75×106 | |
| Dimer (including lug | nsions gs and Þttings) | mm | 109×92×106 | |
| We | eight | kg | 1.75 | |
| Application area | | GC (gas phase) gas and Ed (atomic emission spe machine, hydrogen abs | ectrum detector) reaction | ictivity detector) reaction gas, gas, hydrogen-rich water |



machine, hydrogen absorber, etc.







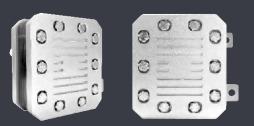


High pressure resistance High pressure hydrogen can be produced

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 resistance High pressure hydrogen can be produced
- High current density Low power consumption, voltage stability

Small size

PEME 1000mL/min

Can be customized according to application requirement



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|----|-------|-----|------|------|-------|------|----|-----|-----|------|---|--|--|-------|--|
| | Inde | pen | der | nt F | 8 8 1 | Da | nd | pro | duc | tior | 1 | | | | |

Excellent material and fine workmanship

High purity of hydrogen production Long service life

| | CH7-1 type PEME | | | | | | | |
|--|-----------------------------|--|--------------------|---|--|--|--|--|
| Oxygen p | production | ml/min | > 1800 | Hydrogen is mixed with oxygen | | | | |
| Hydrogen | production | ml/min | > 1200 | Pure hydrogen, single out | | | | |
| Temper circulati | ature of ng water | °C | 25-45 | | | | | |
| Water co | nsumption | ml/min | ≮350 | Pure Water, deionized water | | | | |
| Circular | manner | / | The water cycle | | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | | |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis | | | | |
| Maximu | m stress | Мра | 0.5 | | | | | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water | | | | |
| 103 | Cathode water | PPM | / | | | | | |
| Single ce | ll voltage | V | 1.75-2.5 | | | | | |
| Power supply | Constant current | A | 25 | | | | | |
| Power suppry | Constant current voltage | V | 21 | | | | | |
| Dimensions | (without lugs) | mm | 94×58×106 | | | | | |
| Dimensions (including lugs and Þttings) | | 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. | | | | | | |

| | | CH6-1 ty | /pe PEME | |
|--|-----------------------------|----------|--------------------------|---|
| Oxygen p | production | ml/min | > 1500 | Hydrogen is mixed with oxygen |
| Hydrogen | production | ml/min | > 1000 | Pure hydrogen, single out |
| Temper circulati | ature of ng water | °C | 25-45 | |
| Water cor | nsumption | ml/min | ≮200 | Pure Water, deionized water |
| Circular | manner | / | The water cycle | |
| Hydrog | en purity | % | 99.99 | After drying |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis |
| Maximu | m stress | Мра | 0.5 | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water |
| 103 | Cathode water | PPM | / | |
| Single ce | ll 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 Þttings) | | mm | 109×68×106 | |
| We | eight | kg | 1.3 | |
| Applica | tion area | | ctrum detector) reaction | ctivity detector) reaction gas, gas, hydrogen-rich water |







High pressure resistance High pressure hydrogen can be produced





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 hydrogen can be produced

High current density Low power consumption, voltage stability

Small size

PEME 600mL/min

Can be customized according to application requirement



Independent R & D and production

 \checkmark Excellent material and fine workmanship

High purity of hydrogen production Long service life

| | CH5-1 type PEME | | | | | | | |
|---------------------|-----------------------------|--|--------------------|--|--|--|--|--|
| Oxygen p | production | ml/min | > 1200 | Hydrogen is mixed with oxygen | | | | |
| Hydrogen | production | ml/min | > 800 | Pure hydrogen, single out | | | | |
| Temper circulati | ature of ng water | °C | 25-45 | | | | | |
| Water co | nsumption | ml/min | ≮200 | Pure Water, deionized water | | | | |
| Circular | manner | / | The water cycle | | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | | |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis | | | | |
| Maximu | m stress | Мра | 0.5 | | | | | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water | | | | |
| 103 | Cathode water | PPM | / | | | | | |
| Single ce | ell voltage | V | 1.75-2.5 | | | | | |
| Power supply | Constant current | A | 25 | | | | | |
| | Constant current voltage | V | 15 | | | | | |
| Dimensions | (without lugs) | mm | 94×48×106 | | | | | |
| | nsions gs and Þttings) | mm | 109×64×106 | | | | | |
| We | eight | 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. | | | | | | |

| | | CH4-1 t | ype PEME | |
|--|-----------------------------|--|-----------------------------|--|
| Oxygen p | production | ml/min | > 900 | Hydrogen is mixed with oxygen |
| Hydrogen | production | ml/min | > 600 | Pure hydrogen, single out |
| Temper circulati | ature of ng water | °C | 25-45 | |
| Water cor | nsumption | ml/min | ≮150 | Pure Water, deionized water |
| Circular | manner | / | Gravity cycle/pump cycle | |
| Hydrog | en purity | % | 99.99 | After drying |
| Water electrolysis method | | / | Water electrolysis | Proton exchange membrane electrolysis |
| Maximum stress | | Мра | 0.5 | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water |
| 103 | Cathode water | PPM | / | |
| Single ce | ll voltage | V | 1.75-2.5 | |
| Power supply | Constant current | A | 20 | |
| rower supply | Constant current voltage | V | 12 | |
| Dimensions | (without lugs) | mm | 94×43×106 | |
| Dimensions (including lugs and Þttings) | | mm | 109×62×106 | |
| We | eight | kg | 1.15 | |
| Application area | | GC (gas phase) gas anc Ed (atomic emission sp machine, hydrogen ab | ectrum detector) reaction (| tivity detector) reaction gas, gas, hydrogen-rich water |







High pressure resistance High pressure hydrogen can be produced



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

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- High pressure resistance High pressure hydrogen can be produced

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High current density Low power consumption, voltage stability

Small size

PEME 200mL/min

Can be customized according to application requirement

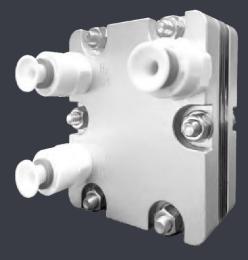


- Independent R & D and production Excellent material and fine workmanship
- High purity of hydrogen production Long service life

| | CH2-1 type PEME | | | | | | | |
|-------------------------|-----------------------------|--------|---------------------------|---|--|--|--|--|
| Oxygen p | production | ml/min | > 450 | Hydrogen is mixed with oxygen | | | | |
| Hydrogen | production | ml/min | > 300 | Pure hydrogen, single out | | | | |
| Temper circulati | ature of ng water | °C | 25-45 | | | | | |
| Water coi | nsumption | ml/min | ≮80 | Pure Water, deionized water | | | | |
| Circular | manner | / | Gravity cycle/pump cycle | | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | | |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis | | | | |
| Maximu | m stress | Мра | 0.5 | | | | | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water | | | | |
| | Cathode water | PPM | / | | | | | |
| Single ce | ll voltage | V | 1.75-2.5 | | | | | |
| Power supply | Constant current | A | 20 | | | | | |
| | Constant current voltage | V | 6 | | | | | |
| Dimensions | (without lugs) | mm | 94×34×106 | | | | | |
| Dimer (including lug | nsions gs and Þttings) | mm | 109×53×106 | | | | | |
| W | eight | kg | 0.9 | | | | | |
| Application area | | | ectrum detector) reaction | ctivity detector) reaction gas, gas, hydrogen-rich water | | | | |

| | | CH02-1 t | уре РЕМЕ | |
|---------------------------|-----------------------------|--|-----------------------------|--|
| Oxygen p | production | ml/min | > 300 | Hydrogen is mixed with oxygen |
| Hydrogen | production | ml/min | > 200 | Pure hydrogen, single out |
| Temper circulati | ature of ng water | °C | 25-45 | |
| Water cor | nsumption | ml/min | ≮60 | Pure Water, deionized water |
| Circular | manner | / | Gravity cycle/pump cycle | |
| Hydrog | en purity | % | 99.99 | After drying |
| Water electrolysis method | | / | Water electrolysis | Proton exchange membrane electrolysis |
| Maximu | m stress | Мра | 0.5 | |
| TDS | Anode water | PPM | ≤ 1 | Recommended Ion-exchange resin for circulating water |
| 103 | Cathode water | PPM | / | |
| Single ce | ll voltage | V | 1.75-2.5 | |
| Power supply | Constant current | A | 15 | |
| rowei suppiy | Constant current voltage | V | 6 | |
| Dimensions | (without lugs) | mm | 60×30.8×70 | |
| | nsions gs and Þttings) | mm | 72×46.5×70 | |
| We | eight | kg | 0.7 | |
| Applica | tion area | GC (gas phase) gas and Ed (atomic emission spe machine, hydrogen abs | ectrum detector) reaction c | tivity detector) reaction gas, gas, hydrogen-rich water |







High pressure resistance High pressure hydrogen can be produced



Small size

PEME 100mL/min

Can be customized according to application requirement



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- 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 p | oroduction | ml/min | > 150 | Hydrogen is mixed with oxyge | | | |
| Hydrogen | production | ml/min | > 100 | Pure hydrogen, single out | | | |
| Temper circulati | ature of ng water | °C | 25-45 | | | | |
| Water cor | nsumption | ml/min | ≮60 | Pure Water, deionized water | | | |
| Circular | manner | / | Gravity cycle/pump cycle | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis | | | |
| Maximum stress | | Мра | 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 | | | | |
| Dimer (including lug | nsions gs and Þttings) | mm | 72×41.9×70 | | | | |
| We | eight | 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. | | | | | |



PEME 60mL/min

Can be customized according to application requirement



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|------|-----|---|------|------------|------|------|------|-----|-----|------|------|-----|------|-----|-----|--|------|--|
| | | | , Ir | nde | pen | der | nt R | 8. | Dai | nd p | orod | duc | tion | | | | | |
| | | V |) Е | nde xce | ller | nt m | nate | ria | lan | d fi | ne v | vor | kma | ans | hip | | | |

- Excellent material and fine workmanship
- High purity of hydrogen production Long service life

| | | CH60-1 | type PEME | | | | |
|------------------------|-----------------------------|--|--------------------------|--|--|--|--|
| Oxygen p | production | ml/min | > 90 | Hydrogen is mixed with oxyge | | | |
| Hydrogen | production | ml/min | > 60 | Pure hydrogen, single out | | | |
| Temper circulati | ature of ng water | °C | 25-40 | | | | |
| Water co | nsumption | ml/min | ≮60 | Pure Water, deionized water | | | |
| Circular | manner | / | Gravity cycle/pump cycle | | | | |
| Hydrog | en purity | % | 99.99 | After drying | | | |
| Water electro | olysis method | / | Water electrolysis | Proton exchange membrane electrolysis | | | |
| Maximu | m stress | Мра | 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 | | | | |
| Dime (including lug | nsions gs and Þttings) | mm | 65×71.6×60 | | | | |
| We | eight | kg | 0.244 | | | | |
| Applica | tion 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. | | | | | |







High pressure resistance High pressure hydrogen can be produced

