



A LEADER OF PEM HYDROGEN

PRODUCTION INDUSTRY

SHANDONG SAIKESAISI HYDROGEN ENERGY CO.,LTD

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Enterprise Introduction

Shandong Saikesaisi Hydrogen Energy Co., Ltd. is the first national high-tech enterprise engaged in PEM hydrogen production equipment by electrolyzing pure water in China. The research and development team of the company in this field can be traced back to the 1980s, covering a history of more than 30 years. In January 2007, our company was officially established, opening a new chapter for the development of PEM hydrogen production by electrolyzing pure water.

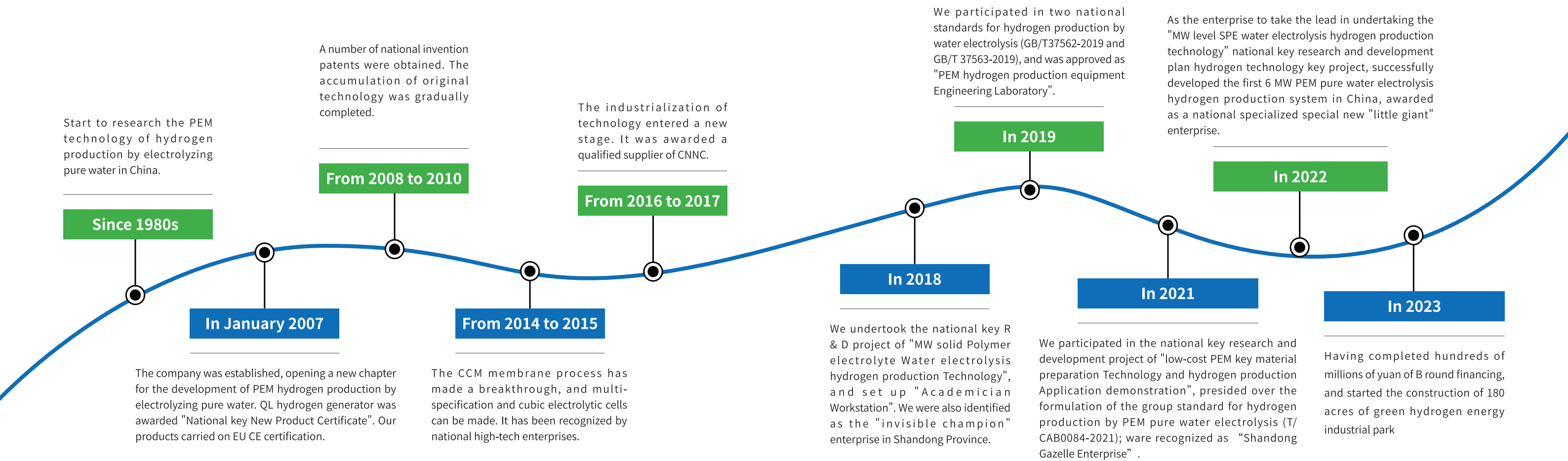
Our company ploughs the field of PEM hydrogen production. We always adhere to the market demand-oriented, technological innovation as the engine, break through and master a number of key core technologies and production processes, breaking the United States in the proton membrane, membrane electrodes, electrolytic stack and other key components and manufacturing process technology monopoly. The company has undertaken the key projects of the National Ministry of Science and Technology for many times, and has made great contributions to the breakthrough of key technologies and industrialization of hydrogen production from electrolytic water.



The company integrates R&D, design, manufacturing, sales and service, and takes the lead in realizing the full-model coverage of PEM hydrogen production stack in China, providing customers with the whole solutions. The products have been widely used in high-end laboratories, semiconductors, medicine, electric power, Wind and solar energy storage, metallurgy, environmental protection, chemical industry, inspection and quarantine, artificial diamonds and other fields. The ranking and market share of PEM hydrogen production products occupy the first place in the country. At present, our products have been exported to more than 30 countries and regions.

Our company has become State-level “little giant” firm with specialization, refinement, characteristics and innovation, Invisible Champion, Gazelle Enterprise in Shandong Province. The company participated in drafting a number of national standards and led the drafting of the first PEM hydrogen production technical group standard. It is a member of the National hydrogen Energy Standardization Technical Committee, of the National Industrial Gas Industry Association, and of the hydrogen Energy Technical Committee of the International Organization for Standardization.

The course of Enterprise Development





Efficient Team Advantage

Dedicated to the field of PEM pure water electrolysis hydrogen production for more than 30 years, we have built up a professional team with strong technical force and excellent operational capability. Team members have the courage to innovate and excellent quality, covering the underlying technology, R&D design, commercialization and engineering mass production, after-sales service, training consulting and so on, to provide customers with overall solutions. At present, technical personnel account for more than 25% of the total number of employees. Chief Scientist Dr. Xing Wei served as the Chairman of the Electrochemistry Committee of the Chinese Chemical Society; Ding Xiaotao, responsible for production quality, served as deputy chairman of National Industrial Gas Association Hydrogen Committee and was awarded the 2nd "Impact Jinan" scientific and technological figure.

Industrial Practice Advantage

The company has a domestic market share of over 80% in the PEM hydrogen production segment, and has accumulated rich industrial experience in hydrogen production with wind and solar energy, Electric power, semiconductor, environmental protection, medicine, laboratory and other fields, having served thousands of customers, and exported products to more than 30 countries. Diversified application scenarios and massive application cases make the company's products and technologies more adaptable in industrial applications.

Together with Changchun Institute of Applied Chemistry of CAS, Nankai University, Southern University of Science and Technology, North China Electric Power University, Beijing University of Chemical Technology, China Petroleum Research Institute and other universities and research institutes, the company has successfully applied for the key research and development plan of the Ministry of Science and Technology for many times, and continues to commit to the industrial transformation of scientific research results. The company has carried out technical research and continuous improvement in the core components and key processes such as proton exchange membrane, precious metal catalyst, anode and cathode plate, and modular integration, forming significant economic and social benefits, and contributing positive forces to the cultivation of the national hydrogen energy industry and the accelerated construction of the hydrogen energy industry chain.

Enterprise Advantages

Core Technology Advantages

The company broke through key technical barriers, focused on PEM hydrogen production by electrolyzing pure water, and mastered more than 50 core independent intellectual property rights. Products and technology won the National Key New Products, BCEIA Gold Medal, China Chemical Society Science and Technology Award 2nd prize, Shandong Province Small & medium enterprises Science and technology progress 3rd prize and other honors.

The major project undertaken by the National Ministry of Science and Technology "the first single electrolytic cell megawatt-level PEM hydrogen production system" has been evaluated as "domestic leading and international advanced". The "MW-level SPE hydrogen production technology" project led by the company was evaluated as "Key special major achievement of the Ministry of Science and Technology", and realized the coupling scale hydrogen production and energy storage technology of MW-level PEM hydrogen production station and fluctuating solar renewable energy. In November 2022, the company successfully developed the first set of 6MW PEM hydrogen production system in China, becoming the first set (1200 standard cubic meter) PEM hydrogen production equipment with wind and solar Energy in China, and also the largest industrialization project in China.



Enterprise honor and quality



Some patents



Electrode sealing frame for electrolyzer cell A PEM electrolyzer stack system An electrode sealing frame for electrolyzer cells



An anode frame and its supporting cathode frame for high-pressure electrolyzer cells An energy-saving and combustion supporting onboard hydrogen and oxygen generation system Preparation method of a ruthenium based multi metal oxygen precipitation catalyst



An internal circulation pressure swing adsorption hydrogen purifier An Internal Purge and Purification System for Hydrogen Generators A hydraulic air pump



The company will build first-class PEM hydrogen production equipment and PEM membrane electrode production base, owns the key core technologies and become a global leader in PEM hydrogen production industry , help the national energy transformation, and provide a solid guarantee for accelerating the construction of a clean, low-carbon, safe and efficient energy system.

Step forward in the field of hydrogen energy, drive the rapid development of China's hydrogen energy.

Hydrogen generator series

QL-type PEM Conventional hydrogen generators



QL-150/QL-300/QL-500



QL-1000/QL-2000



QL-3000

■ Features and Advantages

- ★ Hydrogen production by world advanced PEM technology which produce hydrogen by electrolysis pure water, no corrosion and no pollution.
- ★ Unnecessarily to use the dangerous and expensive hydrogen cylinders.
- ★ Higher hydrogen purity (99.999% to 99.9999%), stable flow, safe and easy to use, own several alarms. (over pressure alarm, water shortage alarm, water accumulated alarm)
- ★ Easy to operate, safe and reliable, produce hydrogen by electrolyzing pure water, switch on the power to produce hydrogen .(can be used for multiple sets of gas chromatography)
- ★ High electrolysis efficiency, long-term use, purity and flow rate do not decay.
- ★ High reliability, simple daily use and maintenance.
- ★ Can meet requirements of all kinds of GC .;

■ Products description / Application

Using PEM technology to produce high purity hydrogen by electrolysis pure water (avoid adding alkali).QL series hydrogen generator products is a kind of high-tech patented products with features of light weight, high efficiency, energy saving and environmental protection.
It can be used as flame gas and carrier gas for GC (gas chromatography) , reaction gas for ELCD (conductivity detector) , reaction gas for ED (atomic emission spectrometry detector) .

■ Technical Specification

QL PEM conventional hydrogen generator						
Model	QL-150	QL-300	QL-500	QL-1000	QL-2000	QL-3000
Output flow (ml/min)	0-160	0~310	0~510	0~1020	0~2020	0~3050
Output pressure (MPa)	0.02~0.4MPa(conventional) /0.02~0.7MPa(high pressure) stable pressure output					
Hydrogen purity (%)	>99.999					
Input power (W)	<100	<150	<200	<500	<1000	<2000
Power voltage (V)	AC 220V/110V 50~60Hz					
Dimension (LxWxH)mm	420×227×352			485×368×352	485×390×370	530×396×700
Water quality requirement	Water resistivity >1MΩ.cm					
Machine weight (kg)	<15			<25	<30	<50

QL PEM Non-conventional hydrogen generators



QL-150A/300A/500A



QL-150B/300B/500B

■ Features and Advantages

- ★ The higher purity QL type hydrogen generator produces higher purity hydrogen by physical adsorption and chemical treatment. Its purity is more than 99.9999%.
- ★ According to market research, when the output pressure of hydrogen used in chromatographic analysis exceeds 0.4MPa, the test data will be more stable and reproducible. In addition, high pressure hydrogen shows its superiority in hydrogen charging of hydrogen absorption equipment (such as hydrogen storage alloy). In order to meet the needs of users, our company has launched a higher pressure hydrogen generator, the pressure can reach 0.7MPa.



QLS-200/300/500/1000

■ Features and Advantages

- ★ The purity of hydrogen produced by SPE pure water electrolysis is more than 99.999%.
- ★ LCD display: flow / pressure / purity / running time / working status / alarm indication, etc.
- ★ Setting: the pressure and hydrogen production rate of the instrument can be set according to the user's requirements.
- ★ Alarm detection: lack of water alarm / stagnant water alarm / overpressure alarm / pressure shortage alarm / flow alarm / hydrogen leakage alarm, etc.
- ★ It can replenish water automatically to realize 24-hour unattended operation.
- ★ Signal output function, equipment operating state monitoring / alarm information transmission function / remote start and stop equipment and other reserved dry contact signals for users to use.
- ★ Hydrogen leakage detection can be added according to customer requirements to ensure that the equipment operating environment is safe and leak-free.

QLS-3000T/5000T hydrogen generator



Product Introduction

QLS-3000T/5000T hydrogen generator, is a class of high efficiency, energy saving, environmental protection high-tech patented products of PEM technology by electrolyzing pure water into high purity hydrogen (eliminate alkali). The core PEM electrode of the equipment is a highly active zero-pole distance catalytic electrode formed by the combination of a composite catalyst and a proton exchange membrane, which has high electrolytic efficiency. The whole machine has advanced design, reliable quality, integration of advanced electrolytic process and perfect electrical control system, high degree of automation, high purity of hydrogen produced, is the ideal equipment for all kinds of GC, thin layer chromatography gas distribution; It can also be used in chemical and medical hydrogenation process, reduction gas protection in electronics industry, semiconductor material purification, metal welding, heavy metal smelting purification, metal surface protection, space vehicle, submarine water decomposition, synthesis, atomic energy industry heavy hydrogen concentration and other aspects. This product can completely replace hydrogen cylinders, and it is safe and convenient to use.

Features and advantages

- ★ PEM technology, no corrosion, no pollution, high purity.
 - ★ the unit tank with low voltage, electrolytic cell internal resistance is small with no heat.
 - ★ TSA variable temperature adsorption purification, maintenance free.
 - ★ low power consumption, sufficient gas production, fast pressure boost (3~5 minutes).
 - ★ steady voltage, steady flow output, and with the load gas consumption changes automatically tracking, automatic protection technology is complete and reliable.
 - ★ with overpressure/water excessive/water shortage/underpressure/water quality/temperature/dew point/water flow alarm function, the machine automatically stops electrolyzing; Can realize remote start and stop; With S485 signal output.
 - ★ low noise.
- The internal gas circuit part of the machine is sealed with full card sleeve, which has good sealing performance and is safe and reliable.

Technical Specification

Model	QLS-3000T	QLS-5000T
Hydrogen Flow (ml/min)	0—3000	0-5000
Output Pressure (MPa)		
Purity (%)	> 99.9995	
Overpressure Protection (MPa)	2.0	
Voltage (V)	220V ~ 50—60Hz	
Power (W)	< 2000	< 3000
Alarm	Over/under pressure alarm;Water accumulation/shortage alarm; water quality alarm;temperature alarm;dew point alarm;water flow alarm;	
Control System	7 inch touch screen PLC One-click start	
Purification method	TSA variable temperature adsorption	
Water addition method	Connect pure water machine, automatic water supply	
Dew point temperature (°C)	-70	
Net weight (kg)	about 100	
Dimension (L*W*H mm)	650*550*1200	
environmental temperature (°C)	1-40	
relative humidity (%)	< 85	

SHC (alkaline) hydrogen generator



SHC-300/SHC-500



SHC-2000/ SHC-3000



SHC-5000/ SHC-7000

Features and Advantages

- ★ Simple operation, safe and reliable, one-time addition of alkali, daily use only need to supplement distilled water, instantly produce hydrogen after power on (can be used by multiple sets of gas chromatography).
- ★ This machine is equipped with a unique anti-alkali liquid backflushing device.
- ★ The cylindrical electrolytic cell is used, and the electrolytic cell is made of high-grade stainless steel 316L.
- ★ High electrolysis efficiency, long-term use purity, flow rate not decay.

Technical Specification

SHC (alkaline) Hydrogen Generator							
Model	SHC-300	SHC-500	SHC-1000	SHC-2000	SHC-3000	SHC-5000	SHC-7000
Output flow (ml/min)	0-300	0-500	0-1000	0-2000	0-3000	0-5000	0-7000
Output pressure (MPa)	0.02-0.4 Regulated output						
Hydrogen purity (%)	>99.999						
Power voltage (V)	AC 220V/110V 50-60Hz						
Input power (W)	<150	<300	<500	<1500	<2100	< 3200	< 4500
Dimension(LxWxH)mm	420×230×360		590×370×360		650×600×1050		550×910×850
Machine weight (kg)	<15	<17	<30	<100		<110	

Online hydrogen generator



QLU-ZX300/ SHCU-ZX300

Features and Advantages

- ★ QLU-ZX300 adopts international leading SPE (PEM) technology to produce hydrogen by electrolysis of pure water, eliminating the addition of alkali.
- ★ SHCU-ZX300 one-time addition of alkali, daily use only need to supplement distilled water, start the power supply to produce gas (used by multiple sets of gas chromatography)

Technical Specification

Model	QLU-ZX300	SHCU-ZX300
Output flow (ml/min)	0-300	
Output pressure (MPa)	0.02-0.4MPa	
Hydrogen purity (%)	>99.999	
Input power (W)	<150	
Power voltage (V)	AC220/110 50-60Hz	
Dimension (LxWxH)mm	482×430×215mm (Standard 5U)	
Water quality requirement	Water resistivity >1MΩ.cm	
Machine weight (kg)	20	

Pure air generator / purifier series

QL series pure air generator



QL-3/QL-5



QL-10



QLB

Product Introduction

Using a fully sealed mute compressor as the power, the natural air is purified to remove moisture, oil and impurities. The stable and clean air is output by the pressure stabilizing device with low noise.

Features and Advantages

- ★ The analysis accuracy is improved and the cleaning requirements of the detector are reduced.
- ★ Recommended and used for major brand GC and analytical column manufacturers at home and abroad.
- ★ Gas purity: the total hydrocarbon content is lower than 0.5ppm (such as methane)
- ★ Low noise, no blocking
- ★ Stable flow and higher pressure stability
- ★ QL-10/QLC60-30-D adopts imported oil-free compressor, which is durable, high air purity and absolutely oil-free.
- ★ QLC60-30-D adopts pressure swing adsorption purification technology. There is no need to change desiccant and it has low dew point.

Application

- ★ Auxiliary flame gas for hydrogen flame ion detector (FID), flame photometric detector (FPD), and nitrogen phosphorus detector (NPD)
- ★ Gas for total hydrocarbon analyzer
- ★ Liquid chromatography/mass spectrometry atomization gas and exhaust gas;
- ★ Atomic absorption and evaporation light scattering device;
- ★ Can be used by multiple chromatography simultaneously

Technical Specification

Pure Air Generator								
Model	QL-3	QL-5	QL-10	QLC60-30-D	QL-40	QL-50	QLB	
Output flow (L/min)	0-3	0-5	0-10	0-15	0-40	0-50	0-3	0-5
Output pressure (MPa)	0-0.4					0-0.7	0-0.4	
Output stability	<0.001Mpa						<0.001Mpa	
Input power (W)	<160	<180	<350	<550	<550	<750	<160	<180
Power voltage (V)	AC220 ±10%							
Dimension (LxWxH) (mm)	460×290×410		530×320×460		410×410×630		440×440×750	
Machine weight (Kg)	<28		<33		<25		<26	
							<24	

QL Zero Air Purifier



QL-Z500/Z1000/Z1500/Z3000

Features and Advantages

QL zero-stage air purifier (air hydrocarbon removal unit) adopts a new type of high-performance catalyst, which has better hydrocarbon removal effect, faster speed, 400 °C temperature and safer use.

Working Principles

After the compressed and dried air is entered into the air purifier, the stainless steel furnace full of precious metal catalysts is oxidized, and the pure air with less hydrocarbons and carbon monoxide less than 0.1ppm is obtained. The pure air enters a three-stage purification device equipped with molecular sieves, removing 99.99% of the air particles with a particle size of 0.5 microns, and finally forming dry, pure zero-level air.

Application

GC-FID, GC-NPD, GC-FPD, GC-TCD, and other equipment that require zero-level air.

Technical Specification

QL Zero Air Purifier				
Model	QL-Z500	QL-Z1000	QL-Z1500	QL-Z3000
Hydrocarbon input concentration (ppm)	<100			
Hydrocarbon output concentration (ppm)	<0.1			
Air Input pressure (Mpa)	0-0.6			
Air input flow (ml/min)	0-500	0-1000	0-1500	0-3000
Input power (W)	300			600
Dimension(LxWxH)mm	420×265×360	420×265×360	420×265×360	420×265×360
Instrument stabilization time (h)	<1			
Machine weight(kg)	<25			
Working environment humidity(%)	<85			
Working voltage(V)	AC220/50~60Hz			

On-line Oil-free Air Generator



QLU-ZX3

Features and Advantages

- ★ QLU on-line oil-free air generator is a gas source device for providing oil-free and dust-free compressed air.
- ★ The use of South Korean imported compressors, durable.

Technical Specification

On-line oil-free air generator		
Technical parameters	Model	QLU-ZX3
Output flow (L/min)		3
Output pressure (MPa)		0-0.4
Power voltage (V)		AC220V 50~60Hz
Input power (W)		<300
Dimension (L*W*H) mm		482x450x266
Net Weight of the whole machine (kg)		<25

On-line zero air purifier



3U

Technical Specification

On-line zero air purifier	
Model	QLU-Z1500
Hydrocarbon input concentration(ppm)	<100
Hydrocarbon output concentration(ppm)	<0.1
Air Input pressure(Mpa)	≥ 0.4
Max output flow(ml/min)	1500@0.4Mpa
Power(W)	300w
Dimension(L*W*H)mm	482×430×134(3U) 482×430×223(5U)
Instrument stabilization time(h)	<1h
Machine weight(kg)	<20
Working environment humidity(%)	<85%
Working voltage(V)	AV220/50~60Hz



5U

Features and Advantages

- ★ Accurate temperature control and stability system: the temperature control system adopts international advanced microprocessor chip and high sensitivity temperature sensor, which can make the temperature setting and control accuracy reach ±0.1 °C and be stable continuously. Ensure the accuracy of self-tuning function (PID) and real-time indication
- ★ Easy to operate: humanized interface design, such as double-window three-digit setting and LED highlighted digital tube display, touch button, and program timeout automatic return function, make temperature setting and control easy to operate and easier to master.
- ★ Heat rapidly and constant temperature system: this product is equipped with high-power heating elements and precious metal materials, which can make the constant temperature cavity reach the specified temperature and maintain stability in a short time.
- ★ Membrane dryer design: compact, maintenance-free, good drying effect, low cost.

QL Hydrogen & Air Generator



QL Hydrogen & Air Generator

Features and Advantages

- ★ Laboratory instrumentation can replace the traditional high-pressure steel cylinder. Hydrogen and air sources can be used alone or at the same time, can be used intermittently or continuously, and the purity of the produced gas does not decline.
- ★ Easy to operate, only need to start the power switch to produce gas, stable output flow, fully automatic tracking instrument gas consumption.
- ★ Hydrogen is produced by world's leading SPE (PEM) technology which electrolysis of pure water only the , without adding any alkali, avoiding the problem of alkali return.
- ★ The air is powered by fully enclosed mute compression, and the natural air is purified to remove moisture, oil and impurities in the air. The stable and clean air is output through the pressure stabilizing device.

Technical Specification

QL hydrogen & air generator						
Model	QL-HA200		QL-HA300		QL-HA500	
	hydrogen	air	hydrogen	air	hydrogen	air
Output flow (ml/min)	0-200	0-3000	0-300	0-3000	0-510	0-3000
Output pressure (MPa)	0-0.4					
Output stability	<0.001Mpa					
Power voltage (V)	AC220±15%V 50-60Hz					
Input power (W)	<250		<300		<450	
Machine weight (kg)	<45					
Dimension(L*W*H)mm	420×485×360					

Hydrogen & zero air Generator



QL-HZ300/HZ500

Features and Advantages

- ★ The operation is simple, only need to start the power switch to produce gas, the output flow is stable, fully automatic tracking equipment.
- ★ Hydrogen is produced by electrolysis of pure water using the world's leading SPE (PEM) technology, no need to configure lye, and put an end to the problem of alkali return.
- ★ The zero-stage air part (air hydrocarbon removal unit) uses a new type of high-performance catalyst, which has better hydrocarbon removal effect, faster speed, 350 °C temperature and safer use.

Technical Specification

Hydrogen & Zero Air Generator		
Technical parameters	models	
	QLU-HZ300	QLU-HZ500
Hydrogen output flow(ml/min)	0-310	0-510
Zero air output flow(ml/min)	0-1500	0-2000
HydrogenOutput pressure(MPa)	0.32	
Hydrogen purity(%)	≥ 99.999	
Hydrocarbon concentration of input air	<100	
Hydrocarbon concentration of output zero air	<0.1	
Zero air pressure(MPa)	≥ 0.4Mpa	
Maximum pressure of zero gas (MPa)	0.6Mpa	
Zero air working temperature(°C)	350	
Power voltage(V)	AC220±15%V 50~60Hz	
Input power(W)	<350	
Net weight of the whole machine(kg)	<30	
Dimension(L*W*H)mm	482×450×399	

Nitrogen Generator Series

QL Series Ultra Pure Nitrogen Generator



QL-N300A/QL-N500A

Product Introduction

The QL series nitrogen generator adopt PSA and advanced purification technology to produce continuous ultra purity nitrogen. After the compressed air is initially dried and filtered through the condensing tube and filter, it enters the CMS column in the purification mode and removes most of the O₂, CO₂, moisture and hydrocarbons to produce clean and dry high-purity nitrogen.

Features and Advantages

- ★ The nitrogen generator is the ideal ultra-pure nitrogen source for GC (gas phase), LC/MS (liquid mass coupling instrument) and thermal analyzer.
- ★ High purity nitrogen was produced continuously by PSA;
- ★ Labs no longer need to use inconvenient and dangerous high-pressure nitrogen cylinders;
- ★ The structure is small and takes up little valuable laboratory space.

Application

- ★ Carrier gas for all brands of GC and detector;
- ★ Supplementary gas source
- ★ GPC gas source.

Technical Specification

QL Ultra Pure Nitrogen Generator		
Model	QL-N300A	QL-N500A
Output flow (ml/min)	0-300	0-500
Output pressure (MPa)	0-0.4	
Output stability	<0.001Mpa	
Nitrogen purity	99.999	
Power voltage (V)	AC 220 50-60Hz	
Environmental conditions	0-40°C no large amount of dust pollution, corrosive gas	
Input power (W)	<680	<700
Machine weight (kg)	50	
Dimension(L*W*H)mm	520×286×700	

QL-PSA Nitrogen Generator



Product Introduction

The nitrogen generator uses air compressor to provide compressed air source, and this device uses PSA to separate nitrogen from air with MSC as adsorbent. And equipped with a complete set of dryers and filters to provide the purification of compressed air required for nitrogen production. The nitrogen generator requires 115 L/min of compressed air, the gas source is not included in the equipment, and needs to be provided by the customer.

Features and Advantages

- ★ The nitrogen generator is the ideal ultra-pure nitrogen source for GC (gas phase), LC/MS (liquid mass coupling instrument) and thermal analyzer.
- ★ High purity nitrogen was produced continuously by PSA;
- ★ Labs no longer need to use inconvenient and dangerous high-pressure nitrogen cylinders;
- ★ The structure is small and takes up little valuable laboratory space.

Technical Specification

QL-PSANitrogen Generator		
Item	Indicator	Notes
Nitrogen purity	>95-99.99%	Oxygen content ≤ 0.5%
Nitrogen flow	≥ 0-32L/min	20°C ,101.35KPa
Nitrogen output pressure	≥ 450-650KPa	The gas source is not included in this equipment and must be brought by the customer
Power supply	24V	DC
Start-up time	≤ 15min	When the purity reach 99.5%
Certification	CE,CSA	Customer specific, not generic
Noise	≤ 72Db(A)	One meter from the equipment
Weight	≤ 160Kg	Including package
Dimension (L*W*H) mm	850×920×1100mm	Including package

Application

- ★ Carrier gas for all brands of GC and detector;
- ★ Supplementary gas source
- ★ GPC gas source.

SHC Series Ultra Pure Nitrogen Generator



Features and Advantages

- ★ The output flow can be automatically adjusted according to the dosage;
- ★ Equipped with overpressure protection and anti-liquid device;
- ★ High gas production purity, purity does not decay;
- ★ One-time adding alkali, daily maintenance only need to add distilled water;
- ★ Long service life, easy maintenance;
- ★ Can be used for all model of brand Gas chromatography in home and abroad.

Technical Specification

SHC Ultra Pure Nitrogen Generator				
Model	SHC-N300	SHC-N500	SHC-N1000	SHC-N2000
Nitrogen flow (ml/min)	0-300	0-500	0-1000	0-2000
Air input pressure(MPa)	0.4			
Nitrogen purity (%)	99.999% oxygen content <3PPM, water dew point -56°C			
Power consumption(W)	150	150	300	1000
Dimension(L*W*H)mm	400×200×300	450×290×550	600×400×650	
Net weight (Kg)	8	30	40	

Silent Oil-free Air Compressor (match QL-PSA)



Technical Specification

Silent Oil-free Air Compressor(match QL-PSA)	
Silent oil-free air compressor	QLGA83XY
Model	QLGA83XY
Power(W)	2400
Power supply(V)	220±10% 50Hz±1%
Output flow(L/min)	465@0.6MPa
Max output pressure(Mpa)	0.8±10%
Volumn of gas storage tank(L)	90
Net weight(kg)	120
Dimension(L*W*H) mm	1100×600×870
Safety valve	When max pressure>0.90 MPa, open safety valve to release the gas.

SHC Nitrogen &Air Generator



Product Introduction

With compact design, simple operation, Nitrogen-Air generator, which has the characteristics of two machines in one, two gas output in one body, is an ideal laboratory instrument to replace the traditional cylinder gas. Widely applied to petroleum, chemical industry, pesticides, fertilizers, electricity, tobacco, drug testing, wine production, water quality testing, environmental monitoring, indoor environmental monitoring, CDC, universities and research institutes and other departments.

Features and Advantages

- ★ Start the switch instantly produce gas, safe and reliable
- ★ The output flow can be automatically adjusted according to the demand
- ★ Equipped with overpressure protection and anti-liquid device
- ★ LED digital display
- ★ One-time adding alkali, daily maintenance only need to add distilled water
- ★ Good pressure stability
- ★ Stainless steel gas storage tank system automatic drainage
- ★ High gas production purity, purity does not decay
- ★ Equipped with overpressure overheat protection device
- ★ Low noise, strong purification ability
- ★ Three-stage filtration system (oil-free)
- ★ Can be used 24 hours without interruption
- ★ Can meet the requirement of any model of GC from domestic and foreign supporting.
- ★ Long service life and easy maintenance

Technical Specification

Nitrogen & Air Generator	
Model	SHC-NA300/NA500
AirOutput flow(ml/min)	0~2000ml/min
Nitrogen output flow(ml/min)	0~300/500(ml/min)
Nitrogen stability (Mpa)	0~0.4Mpa
Nitrogen purity	99.999% oxygen content <3PPM, water dew point -56°C
Working voltage (V)	AC220±10% 50Hz
Rated power(W)	300W
Water tank capacity(L)	1.7L
Environmental temperature(°C)	5°C ~40°C
Water quality requirement	DI water or distilled water
Dimension(L*W*H)mm	500x320x380 (mm)
Machine weight (kg)	27kg

SHC Nitrogen-Hydrogen-Air Generator



Technical Specification

Nitrogen-Hydrogen-Air Generator		
Model	SHC-NHA300	SHC-NHA500
Nitrogen output flow (ml/min)	0-300	0-500
Hydrogen output flow (ml/min)	0-300	0-500
AirOutput flow (ml/min)	0-3000	0-5000
Hydrogen/Nitrogen output pressure (MPa)	0.4	
Air output pressure (MPa)	0~0.4Mpa (adjustable)	
Hydrogen/Nitrogen purity	99.999% oxygen content <3PPM, water dew point -56°C	
Working voltage (V)	AC220±10% 50Hz	
Max power (W)	450	
Water tank capacity (L)	2.4	
Environmental temperature (°C)	5~40	
Water quality requirement	DI water or distilled water	
Dimension(L*W*H)mm	500×440×380	
Machine weight (kg)	40	

Product Introduction

With compact design, simple operation, Nitrogen-Hydrogen-Air generator, which has the characteristics of three machines in one, three gas produced in one body, is an ideal laboratory instrument to replace the traditional cylinder gas. Widely applied to petroleum, chemical industry, pesticides, fertilizers, electricity, tobacco, drug testing, wine production, water quality testing, environmental monitoring, indoor environmental monitoring, CDC, universities and research institutes and other departments.

Features and Advantages

- ★ Start the switch can produce gas, safe and reliable
- ★ The output flow can be automatically adjusted according to the demand
- ★ Equipped with overpressure protection and anti-liquid device
- ★ LED digital display
- ★ Anti-impact anti-aging filter;
- ★ All gas pipe are made of high quality stainless steel;
- ★ Good pressure stability
- ★ High gas production purity, purity does not decay
- ★ Stainless steel gas storage tank system automatic drainage
- ★ Equipped with overpressure overheat protection device
- ★ Three-stage filtration system (oil-free)
- ★ Low noise, strong purification ability
- ★ Long service life and easy maintenance
- ★ One-time adding alkali, daily maintenance only need to add distilled water
- ★ Can be used 24 hours without interruption
- ★ Can meet the requirement of any model of GC from domestic and foreign supporting.

SHC Hydrogen-Air Generator



Features and advantages

Start the switch to produce hydrogen, safe and reliable.
The output flow rate can be automatically adjusted according to the dosage.
It is equipped with overpressure protection and anti-liquid device.
LED digital display.
Impact and aging resistant filter.
High hydrogen purity without decay.
All gas routes are made of high quality stainless steel.

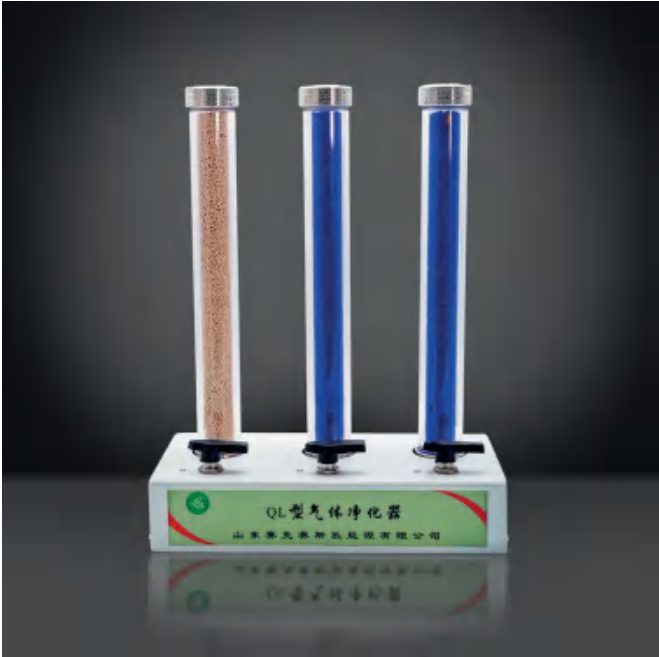
One-time alkali, daily maintenance only need to add distilled water.
Stainless steel gas tank system automatic drainage
Good pressure stability.
Low noise, strong purification ability
System three stage filtration (oil free)
Long service life, easy maintenance.
Can be used 24 hours without interruption.
Can match all GC models of domestic and foreign manufacturers.

Technical parameters

Hydrogen-Air Generator				
Model	SHC-HA300		SHC-HA500	
	Hydrogen	Air	Hydrogen	Air
Hydrogen Flow (ml/min)	0-300	0-2000	0-510	0-2000
Output Pressure (MPa)	0-0.4			
Pressure stability	<0.001Mpa			
Voltage (V)	AC220±15%V 50-60Hz			
Input Power (W)	<550		<600	
Weight (kg)	<45			
Dimension (L*W*H)mm	500×320×380			

Other Products

Gas Purifier



Product Introduction

The QL gas purifier has three purification devices, which can be used in series or parallel. It can be filled with various adsorption materials according to the needs of customers, and can meet the requirements of various analytical instruments and other equipment using high purity gas.

Multi-functional Hydrogen Generator



Features and Advantages

- ★ The unique antioxidant effect of hydrogen can effectively remove malignant free radicals in the body, repair damaged islet cells, and prevent diabetes complications;
- ★ The goal of hydrogen therapy for rheumatoid arthritis is to control systemic inflammation and improve immunity, thereby relieving symptoms and improving health.
- ★ Hydrogen inhibits tumor proliferation by removing reactive oxygen species, and can improve the quality of life of tumor patients during radiotherapy, while not affecting the radiotherapy effect of tumor;
- ★ Hydrogen has anti-radiation, anti-ultraviolet and cosmetic anti-wrinkle effect, can promote collagen synthesis of fiber cells, clear free radicals, inhibit keratinocyte death;
- ★ Hydrogen can selectively eliminate malignant free radicals, inhibit inflammation, and play a positive role in the treatment of cardiovascular system diseases;
- ★ Direct breathing of hydrogen, improve hydrogen intake, provide a more convenient and effective way for the health care of seriously ill people and people with water difficulties;
- ★ More suitable for families with many people, you can absorb hydrogen, you can make hydrogen water, a variety of choices.

Hydrogen-Oxygen Generator



Features and Advantages

- ★ Adopt world's leading SPE(PEM) technology which produce hydrogen by electrolysis pure water;
- ★ High hydrogen purity, stable flow, safe and easy to use, with a variety of alarm devices;
- ★ Simple operation, safe and reliable, pure water electrolysis hydrogen production;
- ★ High electrolytic efficiency, long-term use, purity, flow does not decay;
- ★ High reliability, simple daily use and maintenance.

Technical Specification

Hydrogen-Oxygen Generator			
Model	QL-HO-300	QL-HO-600	QL-HO-1000
Parameter			
Hydrogen output flow (ml/min)	300	600	1000
Power voltage (V)	AC220±15%V 50~60Hz		
Input power (W)	<150	<250	<500

Hydrogen-Oxygen Atomizer



Features and Advantages

- ★ The world's leading SPE(PEM) technology electrolytic pure water hydrogen production;
- ★ High hydrogen purity, stable flow, safe and easy to use, with a variety of alarm devices;
- ★ Simple operation, safe and reliable, pure water electrolysis hydrogen production;
- ★ High electrolytic efficiency, long-term use, purity, flow does not decay;
- ★ High reliability, simple daily use and maintenance.

Technical Specification

Hydrogen-Oxygen Atomizer		
Model	QL-HO-1500	QL-HO-3000
Parameter		
Hydrogen/Oxygen output flow (ml/min)	0-1500	0-3000
Hydrogen output flow (ml/min)	0-1000	0-2000
Oxygen output flow (ml/min)	0-500	0-1000
Power voltage (V)	AC220±15%V 50~60Hz	
Input power (W)	<500	<1000



Typical Customers

