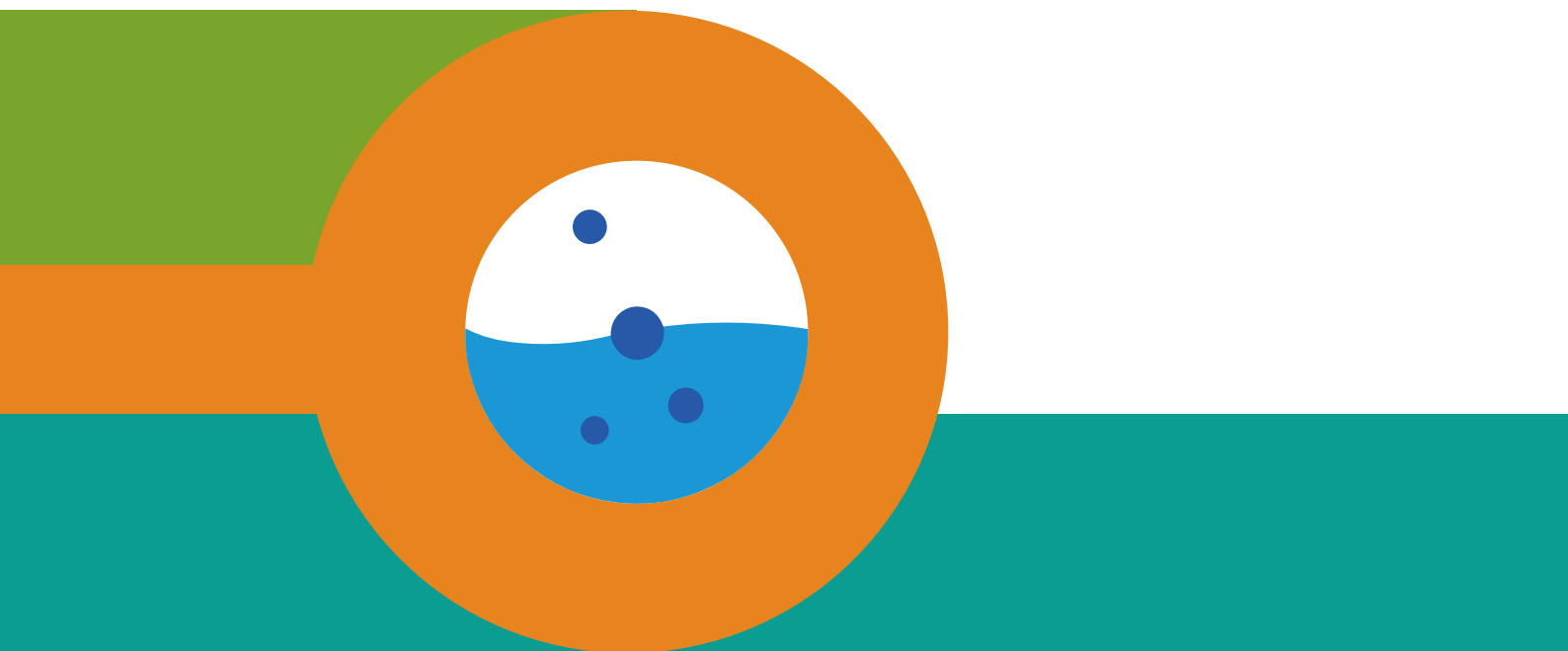


Professional
Laboratory
Solution Provider



LABOAO
www.laboao.com



| ABOUT US

Zhengzhou Laboao Instrument Equipment Co., Ltd (LABOAO) is a high-tech enterprise integrating R&D, production, sales, import and export, and is a leading laboratory equipment solution provider in China. LABOAO is headquartered in Zhengzhou, China. It has a group of excellent management and technical personnel who strive for excellence and constantly pursue progress and innovation. After fifteen years of hard work, it has achieved sustained and steady development, and its products are exported to Europe, America, Southeast Asia, the Middle East, South Africa, etc. 150 countries, we are working hard to establish a global regional service agency to provide better services and products for global customers.

The company has always adhered to the corporate tenet of "innovative technology, life first", focusing on laboratory research, life science, biomedical engineering and other fields, focusing on continuous innovation and development, improving the technical content of products, enriching product categories, realizing product upgrades, and gradually strengthening the enterprise. Core competitiveness, LABOAO regards product quality as the vitality of the enterprise, all our products have undergone strict testing and quality inspection, and have established a set of strict internal quality control system in accordance with international quality standards, and meet strict international standards. So far, the company has passed ISO9001 quality management system certification, EU CE, SGS, TUV, CNAS and other certifications.

LABOAO's main business involves laboratory instruments/consumables, life science instruments, chemical analysis instruments, optical instruments, medical equipment, drug inspection instruments, agricultural instruments, food inspection instruments and other industry-related instruments. Our products are widely used in laboratories, scientific research institutions, universities, chemical companies, hospitals, new energy, agriculture, food, metallurgy and mining, construction, petroleum and other industries.

The company introduces world-class automated production equipment and production technology, and continuously expands production capacity to meet customer needs. The investment of advanced production equipment and software facilities makes the enterprise more international standardization and standardization. LABOAO actively carries out various cooperations such as OEM and ODM with world-renowned enterprises. In continuous practice and application, LABOAO will continue to provide high-quality products and services to global customers.



| Our Culture

LABOAO's vision: To become a professional international technology driven laboratory supplier

LABOAO's values: Focus, Quality, Innovation, Environmental Protection

LABOAO's mission: Adhere to "innovative technology" as the company's development purpose, promote the progress of global laboratory research, and serve the beautiful and healthy life of mankind.



16^{YRS}

Laboratory Solution



86^{PPL}

Research & Design



20000^{SQM}

Industrial Plant



7X24^{HRS}

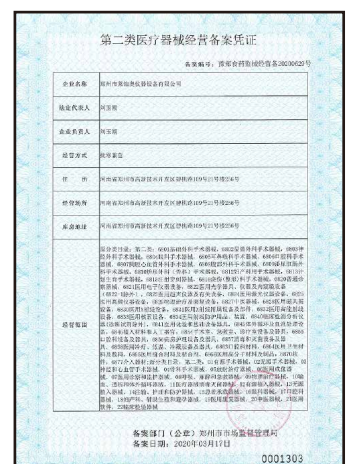
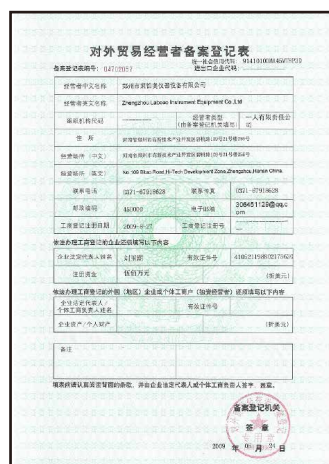
Technical Support



Qualification

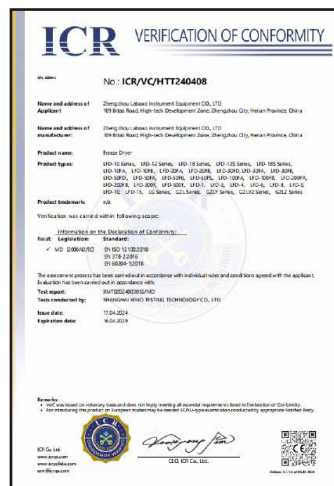
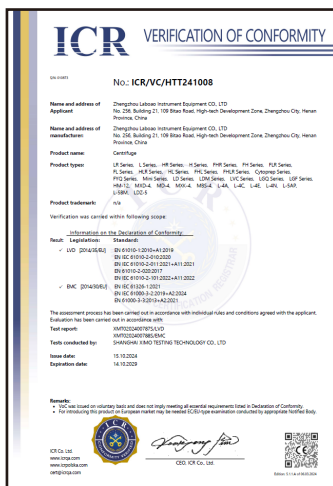
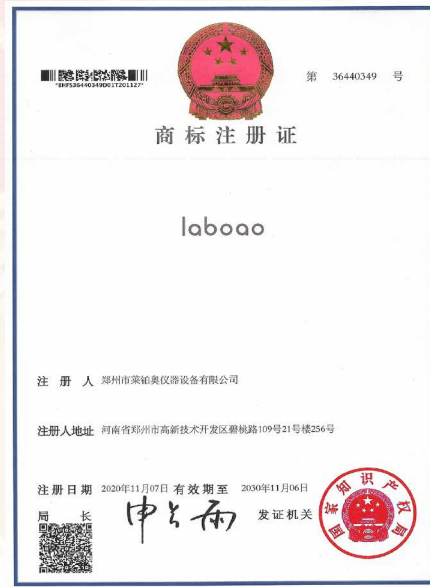
Since its establishment, LABOAO has always adhered to the "quality first" production philosophy. It is our tireless pursuit to provide customers with high-quality products. In the past few years, the company has obtained a variety of qualification certificates, which reflect our strict requirements for products and the The affirmation of our products.

In order to ensure that each product can operate normally and be delivered to customers in good condition, we have very strict internal quality control and factory testing. We have passed ISO, CE, SGS and other certificates successively for exporting to all parts of the world. A solid foundation has been laid for laboratories, enterprises, hospitals, research institutes, universities and other places.



Quality is Always Our First Principle

We strive to provide high quality products and sincere and professional services to customers around the world, has been highly recognized by customers in more than 200 countries and regions.



Our Workshop

We have a standard production workshop and a complete production team. They always produce a serious and responsible attitude to produce each product.

Our R&D team is made up of multi-aspects professional engineers such as design engineer, technology specialist, qualified specialist and process control manager, etc.





Standardized Production Line

We have 5 main production lines, which are laboratory equipment, distillation and extraction equipment, biological treatment equipment, optical analysis equipment, and low-temperature storage equipment production lines.

Our qualified specialists strictly realize the process comprehensive supervision based on our quality process control system, which contains products design, research and development, test, production, quality inspection and packaging.

We guarantee the quality and functionality of our products and will continue to help you quickly and efficiently whenever something does not operate to your satisfaction.

I Product Warehouse



I Market Area

We strive to provide high quality products and sincere and professional services to customers around the world, has been highly recognized by customers in more than 120 countries and regions.

Up to now, we have provided more than 80,000 instruments and devices to more than 25,000 users worldwide.



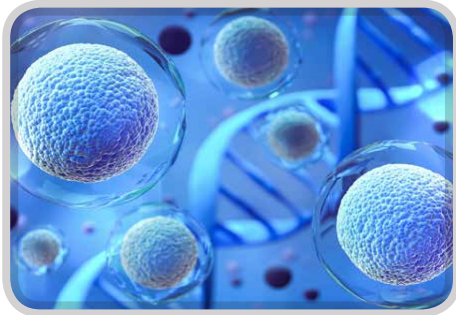
Packing & Shipping

Our supply chain management team will fulfill each order and ensure on-time delivery. Sales item by item, usually shipped within 1 to 3 weeks.

Our product packaging has been proven over the long term and we usually have plywood boxes or cartons with trays. In order to save you transportation costs, we usually use cardboard boxes (small goods) or wooden boxes (large or heavy goods). We will arrange the appropriate packaging according to the weight and size of the goods. Of course, you can also choose the packaging form.



I Application



Biopharmaceuticals



Petrochemicals



Food Beverage



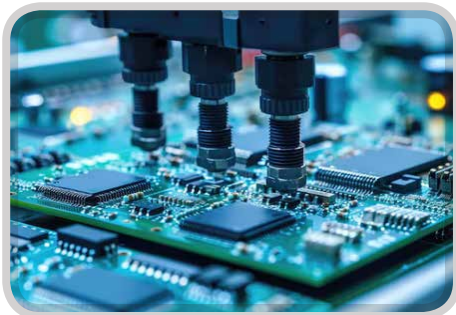
Plant Agriculture



Environmental Analysis



Medical Research



Industrial Electronics



New Materials New Energy

LABOAO Worry Free Service



Pre-sale Service

- 24 hours pre-sales consultant support.
- Professional technical consultation, providing support from technical solutions to installation and use.
- Product selection by customer demands.



Sale Service

- Track your order production progress and keep you informed.
- Timely production and on time delivery.
- Send package drawings and videos before shipment, product acceptance..
- Relevant guidance, installation, debugging, trial operation, etc.



After-sale Service

- One year warranty period and all life maintenance.
- Free replacement of accessories during the warranty period.
- Remote technical support, technical engineers can conduct overseas training.
- Regular return visits, immediate response to usage problems and repair notifications.



Quality Guarantee

- Each piece of equipment will be strictly tested before leaving the factory to ensure qualified.
- Standardized production line, high-standard quality management system, experienced production workers.



Transportation Guarantee

- Professional personnel packing, professional masters load the equipment on the vehicle to ensure that it will not be damaged during transportation.
- Scaled production, sufficient supply, to ensure timely delivery.
- debugging, trial operation, etc.



Technical Guarantee

- Technical support provided by a team of engineers with many years of industry experience.
- Professional after-sales team, 7*24 hours after-sales service to make customers more worry-free.

OEM Service

- Provide "private label" or "common brand" versions of LABOAO standard products. We can print your company's logo and stick it on the product.
- Provide product printed materials, such as catalogs and user manuals, with your company logo, name and other information you want to display.
- Based on our original products, we can customize products that meet your requirements according to your specific needs (such as size, color, function, accessories, etc.)

04

BIOREACTOR FERMENTER

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0.1L-1L Mini Bioreactor

0.1 L to 1L mini bioreactor is suitable for initial strain screening, greatly saving time and material costs. Tanks with working volumes of 0.1L,0.3L,0.5L,0.6L,0.7L and 1L are available for selection, culture tanks are interchangeable.

Features

- Stirring system
- Temperature detection and control
- pH detection and control
- DO detection and control
- Feed control
- Antifoam control
- Intake control (air)
- Pressure detection and control



Specification

Model	LBR-0.1GC	LBR-0.2GC	LBR-0.3GC/GI	LBR-0.5GC/GI	LBR-0.6GC/GJ	LBR-0.7GC/0.7GI	LBR-1GC/1GI
Volume	0.1L	0.2L	0.3L	0.5L	0.6L	0.7L	1L
Working volume	70%						
Vessel Material	6(stir port,temperature measure port,liquid port, solid port,vacuum port,spare port)						
The high ratio	0-400rpm						
Mixing method	304 stainless steel						
Sterilization method	Double layer push type						
Control system	Frequency						

Multiple Parallel Mini Bioreactor

Multiple mini bioreactor is a set of laboratory glass fermentation equipment, easy to operate, powerful, and can meet various purposes of fermentation, such as bath, batch feeding, and even animal cell culture. Tanks with working volumes of 0.1L, 0.5L, 0.6L, 0.7L and 1L are available for selection, culture tanks are interchangeable.

Features

- Tank: a combination of high temperature, acid and alkali resistant, corrosion resistant silicon borosilicate glass cylinder and 316L stainless steel.
- Ventilation: Rotameter display, adjust gas flow according to process requirements.
- Fermentation pH control function: intelligent PID control, Mettler PH electrode.
- Fermentation dissolved oxygen degree control function: intelligent PID control, Mettler DO electrode.
- Temperature control: intelligent PID control, jacket electric heating, water cooling
- Feeding: a complete feeding system (acid, alkali, foaming enemy, culture agent), which can be fed regularly and quantitatively.
- Sterilization: Ex-situ sterilization; inoculation with species: alcohol flame inoculation.



Specification

Model	LBR-GCM/GIM Series
Volume	0.2/0.3/0.4/0.5/0.7/0.9/1L
Multiple	2/4/5/8/10/12 (can be customized)
Working volume	70% optimum
Vessel Material	glass body and stainless steel lid and bottom
The high ratio	1:2-3
Mixing method	Magnetic drive or Mechanical agitation drive
Stiring speed	50~1000rpm accuracy: +1pm
PH control	using itelligent PID control, automatic acid/alkali replenishment; range: 2~12ph; control accuracy: +0.02ph
DO control	Intelligent PID control, which an be associated with the feed speed; range: 0~100%, control accuracy: *3%
Temperature control	inelligent PID control; electric heating water cooling; range: cooling water temperature +5-60°C; accuracy: +0.1°C
Foam control	electrode detection, peristaltic pump replenishing defoamer, automatic control
Ventilation	manual adjustment, flow meter display
Tank pressure	manual adjustment, pressure gauge display; range: 0~0.20Map
Steriliation method	Off-site sterilization or In-situ sterilization
Control system	Siemens PLC, industrial LCD touch computer control, parameters can be set to store, can be remotely connected to the computer through the USB interface, the data

Stainless Steel Jacketed Temperature Control Off-site Sterilization Glass Fermenter

Off-site sterilization glass fermenter after suitable fittings are installed, it can be suitable for culture of cells of mammals and insects. The semi-circular bottom stainless steel jacket and built-in serial inner heat exchange baffles are conducive to temperature control of hot and cold water and fast heat transfer. Tanks with working volumes of 1 L, 2L, 3L, 5L, 7L and 10L are available for selection, culture tanks are interchangeable.

Features

- The tank is a combination of high temperature, acid and alkali resistant, corrosion resistant silicon borosilicate glass cylinder and stainless steel
- Rotameter display, adjust the flow of gas according to process requirements
- The jacket ensures sufficient heat exchange and sterilization, and the cooling water temperature is +5~55°C; accuracy: $\pm 0.1^{\circ}\text{C}$; resolution: 0.1°C ;
- Electrode detection, peristaltic pump replenishing defoamer, automatic foam control
- Perfect feeding system (acid, alkali, foaming enemy, culture agent), can feed regularly and quantitatively.



Specification

Model	LBR-XGC			LBR-XGJ			
Volume	0.3L/0.5L/14/2L/3L/5L/7L/10L/15L						
Material	316 stainless steel bottom jacketed WS+ high boronglass						
Stirring method	Magnetic coupling at the bottom drive mechanical stirring at the top			Shaft coupling drive top mechanical agitation			
Sterilization method	Off-position autoclave sterilization (sterilization pot size: 1L/2L/3L/5L/7L/φ350*520, 10L, 15L φ388*650)						
Tank volume	1L	2L	3L	4L	5L	7L	10L
Tank size	φ90*155	φ100*260	φ150*210	φ150*260	φ150*310	φ150*710	φ174*458
Maximum sterilization size	φ150*300	φ160*380	φ180*420	φ180*470	φ180*521	φ180*620	φ260*630
Tank weight with culture medium	5kg	6.5kg	9.5kg	13.5kg	15.5kg	18.5kg	21.5kg
Basic configuration	Temperature, speed, PH, dissolved oxygen, replenishment, defoaming, air flow (manual), tank pressure (manual)						
Power	220V/0.8KW						
Shape space	800*500*600mm						
Net weight	40kg						
Application	Magnetic drive is suitable for products with low medium viscosity, long fermentation period and high requirements for biological safety			Shaft drive is suitable for high-density, high-viscosity, high-oxygen-consumption microbial cultivation, and has strong versatility			

All-glass Tank Off-site Sterilization Fermenter

The all-glass tank off-site sterilization fermenter is an all-glass tank body, with good overall structure, safe and reliable, easy to use, easy to learn and easy to use. Tanks with working volumes of 2L, 3L, 5L, 7L and 10L are available for selection, culture tanks are interchangeable.

Features

- The tank is a combination of high temperature, acid and alkali resistant, corrosion resistant silicon borosilicate glass cylinder and 316L stainless steel
- Rotameter display, adjust the flow of gas according to process requirements
- The large-area stainless steel jacket ensures sufficient heat exchange and sterilization, and the cooling water temperature is +5~55°C; accuracy: ±0.1°C; resolution: 0.1°C
- Electrode detection, peristaltic pump replenishing defoamer, automatic foam control
- Perfect feeding system (acid, alkali, foaming enemy, culture agent), can feed regularly and quantitatively



Specification

Model	LBR-XGJG		LBR-XGJGG
Volume	X=1/2/3/5/7/10/15L		
Material	316 stainless steel + high boron glass		
	Single wall all glass		Double wall all glass
Sterilization method	Off-position autoclave sterilization		
Basic configuration	Temperature, speed, PH, dissolved oxygen, replenishment, defoaming, air flow (manual), tank pressure (manual)		
Control System	LBR-B biological process controller		
Power	220V/2KW		
Scalable configuration	Liquid level control, feeding and weighing system, two-way feeding, online detection of methanol and ethanol content, exhaust O2 and CO2 detection, etc.		

Desktop Two Conjoined Sterilization Glass Bioreactor Fermenter

The desktop dual off-site sterilization bioreactor is a classic product in parallel comparison bioreactors, and is the first choice for strain screening and process research and development. It is cost-effective, small in space, easy to use, and ready to use.

Features

- German Siemens PLC control system +10" touch screen display and operation, full Chinese menu and interface
- Data analysis, saving, curve display can be carried out, data can be saved for many years, data can be exported with USB flash drive, tank data can be sampled and displayed, system data can be browsed and analyzed, and settings can be read.
- It can control the stirring speed, the temperature of the medium in the tank, the Ph value, and the DO value
- The inner parts of the tank are all installed on the tank lid, which is very convenient for maintenance and cleaning; the stepless speed regulation range with automatic setting control is 50-1200rpm±5rpm
- Rotameter display, adjust gas flow according to process requirements



Specification

Model	LBR-XGC-2-A	LBR-XGJ-2-A	LBR-XGJG-2-A	LBR-XGJGG-2-A
Capacity	0.5L/0.6L/0.7L/0.8L/1L/2L/3L/5L/7L/10L/15L			
Material	316L stainless steel + borosilicate glass			
Mixing method	magnetic stirring	mechanical stirring		
Sterilization method	off-site sterilization autoclavable			
Basic configuration	Temperature, Speed, PH, DO, Defoaming, Ventilation, Pressure			
Extensible configuration (optional)	Exhaust O2, CO2 detection, Online detection of methanol and ethanol content, Refill weighing system etc.			
Power	220V 5KW			
Dimension(L*W*H)	800*600*650 mm			
Net weight	80 kg			

Cabinet Type Two Conjoined Parallel Glass Fermenter

The cabinet type two conjoined parallel fermenter is a upgraded product of two conjoined bioreactors. Can be moved integrally. Luxurious, beautiful and decent.

Features

- German Siemens PLC control system +10" touch screen display and operation, full Chinese menu and interface.
- Data analysis, saving, curve display can be carried out, data can be saved for many years, data can be exported with USB flash drive, tank data can be sampled and displayed, system data can be browsed and analyzed, and settings can be read.
- It can control the stirring speed, the temperature of the medium in the tank, the Ph value, and the DO value.
- The inner parts of the tank are all installed on the tank lid, which is very convenient for maintenance and cleaning; the stepless speed regulation range with automatic setting control is 50-1200rpm \pm 5rpm.
- Rotameter display, adjust gas flow according to process requirements.



Specification

Model	LBR-XGJ-2-H	LBR-XGC-2-H	LBR-XGC-2-A
Capacity	0.5L/1L/2L/3L/5L/7L/10L		
Material	316L stainless steel+ borosilicate glass		
Mixing method	mechanical stirring	magnetic stirring	
Sterilization method	off-site sterilization		
Basic configuration	Temperature, Speed, PH, DO, Defoaming, Ventilation, Pressure		
Extensible configuration (optional)	Exhaust O2, CO2 detection, Online detection of methanol and ethanol content, Refill weighing system etc.		

Off-site Sterilization Four Conjoined Glass Bioreactor

The desktop conjoined off-site sterilization bioreactor is a classic product in parallel comparison bioreactors, and is the first choice for strain screening and process research and development. It is cost-effective, small in space, easy to use, and ready to use.

Features

- German Siemens PLC control system +10" touch screen display and operation, full Chinese menu and interface.
- Data analysis, saving, curve display can be carried out, data can be saved for many years, data can be exported with USB flash drive, tank data can be sampled and displayed, system data can be browsed and analyzed, and settings can be read.
- The inner parts of the tank are all installed on the tank lid, which is very convenient for maintenance and cleaning; the stepless speed regulation range with automatic setting control is 50-1200rpm±5rpm.
- Rotameter display, adjust gas flow according to process requirements.
- Each tank is equipped with 4 peristaltic pumps beside the front tank, which can supply acid, alkali, defoamer and culture medium to the fermentation tank.
- Various parameters in fermentation such as pH, DO, temperature and speed can be monitored by the controller, and all data and control parameters can be transmitted to the controller or computer.
- The structure is compact, and various components can be integrated into the fermentation system.
- It adopts the direct coupling mechanical stirring method driven by the upper part or the magnetic indirect coupling mechanical stirring method driven by the lower part, which has a simple structure and stable operation.



Specification

Model	LBR-XGC-4-H	LBR-XGJ-4-H	LBR-XGJG-4-H	LBR-XGJGG-4-H
All capacity	1L/2L/3L/5L/7L/10L/15L			
Material	316L stainless steel+ borosilicate glass			
Mixing method	magnetic stirring	mechanical stirring		
Sterilization method	off-site sterilization autoclavable			
Basic configuration	Temperature, Speed, PH, DO, Defoaming, Ventilation, Pressure			
Extensible configuration (optional)	Exhaust O2, CO2 detection, Online detection of methanol and ethanol content, Refill weighing system etc.			
Power	220V 8KW			
Dimension(L*W*H)	1600*730*1750 mm			
Net weight	150 kg			

Off-site Sterilization Triple Quintuple Conjoined Glass Bioreactor

The off-site sterilization conjoined glass bioreactor suitable for microbial culture with viscous media and solids, complete sterilization. It is a powerful tool for the selection of medium formula and process optimization.

Features

- German Siemens PLC control system +10" touch screen display and operation, full Chinese menu and interface
- Data analysis, saving, curve display can be carried out, data can be saved for many years, data can be exported with USB flash drive, tank data can be sampled and displayed, system data can be browsed and analyzed, and settings can be read
- The inner parts of the tank are all installed on the tank lid, which is very convenient for maintenance and cleaning; the stepless speed regulation range with automatic setting control is 50-1200rpm±5rpm
- Rotameter display, adjust gas flow according to process requirements
- Each tank is equipped with 4 peristaltic pumps beside the front tank, which can supply acid, alkali, defoamer and culture medium to the fermentation tank
- Various parameters in fermentation such as pH, DO, temperature and speed can be monitored by the controller, and all data and control parameters can be transmitted to the controller or computer
- The structure is compact, and various components can be integrated into the fermentation system
- It adopts the direct coupling mechanical stirring method driven by the upper part or the magnetic indirect coupling mechanical stirring method driven by the lower part, which has a simple structure and stable operation



Specification

Model	LBR-XGC-3-H	LBR-XGJ-3-H	LBR-XGC-5-H	LBR-XGJ-5-H
All capacity	1L/2L/3L/5L/7L/10L/15L			
Material	316L stainless steel+ borosilicate glass			
Mixing method	magnetic stirring	mechanical stirring	magnetic stirring	mechanical stirring
Sterilization method	off-site sterilization autoclavable			
Basic configuration	Temperature, Speed, PH, DO, Defoaming, Ventilation, Pressure			
Extensible configuration (optional)	Exhaust O ₂ , CO ₂ detection, Online detection of methanol and ethanol content, Refill weighing system etc.			
Power	220V 4KW		220V 5KW	
Dimension(L*W*H)	1200*730*1650mm		2000*730*1650mm	
Net weight	100kg		200kg	

Off-site Sterilization Six-Twelve Conjoined Glass Bioreactor

Off-site sterilization six-twelve conjoined glass bioreactor is a set of conjoined Laboratory glass fermentation equipment with automatic control, convenient operation and powerful functions, which can meet various purposes of fermentation, such as batch, batch feeding, and even animal cell culture. The color touch screen is used to display all measured values and control parameters, which greatly facilitates the user's operation.

Features

- Siemens PLC control system + vinylon LCD touch screen, is used to display all measured values and control parameters, which greatly facilitates the user's operation. you can use USB for data transmission, sampling and displaying tank data, browsing and analyzing system data, reading settings
- Each tank is equipped with 4 peristaltic pumps beside the front tank, which can supply acid, alkali, defoamer and culture medium to the fermentation tank
- Various parameters in fermentation such as pH, DO, temperature and speed can be monitored by the controller, and all data and control parameters can be transmitted to the controller or computer
- The structure is compact, and various components can be integrated into the fermentation system
- It adopts the direct coupling mechanical stirring method driven by the upper part or the magnetic indirect coupling mechanical stirring method driven by the lower part, which has a simple structure and stable operation.



Specification

Model	LBR-XGJGG-6	LBR-XG)-(8-12)H
All capacity	0.6L/1L/2L/3L/5L/7L/10L	
Material	316L stainless steel+borosilicate glass	
Mixing method	Magnetic/Mechanical stirring	Mechanical stirring
Sterilization method	off-site sterilization	
Basic configuration	Temperature, Speed, PH, DO, Defoaming, Ventilation, Pressure	
Extensible configuration (optional)	Exhaust O2, CO2 detection, Online detection of methanol and ethanol content, Refill weighing system etc.	

Stainless Steel Upper Mechanical Stirring Bioreactors

Stainless steel upper mechanical stirring fermenters use for test project of yeast, enzymes, microorganisms such as fungi and bacteria culture test. With simple structure, convenient operation and low fault rate, it is a classical product of laboratory bioreactors.

Features

- Can control the stirring speed, the temperature of the medium in the tank, the Ph value, and the DO value
- The upper and lower limits of temperature, speed, Ph value, DO value can be set, and the alarm function of over-limit can be set
- All alarm accidents can be recorded and inquired
- Speed, temperature, Ph value, DO value, etc. can be set to automatic and closed states
- The temperature of the medium in the tank, stirring speed, Ph, DO and other parameters can be controlled by setting the curve in sections according to the process requirements
- Each parameter has PID adjustment process display, such as set value, real-time value, PID set value, upper and lower limit, curve display, manual/automatic switch, online setting, etc
- The historical data and curves of various parameters can be stored for many years, and the real-time curve can be restored when the power is turned on again
- The parameters of each detection and control loop can be manually set and online corrected on the screen. The temperature, DO, and PH sensors can be adjusted and adjusted, and the flow of each peristaltic pump can be calibrated; the operation has a password protection function, and the passwords are divided into administrators and Administrator operation password



Specification

Model	LBR-XSJ Series
Volume	5L/10L/20L/30L/50L/100L/200L/300L/500L/1000L optional
Diameter to height ratio	1:2~3
Feeding volume	70%
Material	Stainless steel 304/316
Function	PH/DO/Foam/Temp control
Pressure	0.3Mpa
Sterilization method	Automatic or manual sterilization
Stirring system	Mechanical stirring system at the top of the fermenter
Stirring Speed	in the fermenter: 70~1000rpm±1%
Temperature detection	Auto control (cooling water+5°C)~65°C±0.1°C
pH detection	2.00-12.00±0.05pH
DO detection	0-150±3%

Bottom Magnetic Mixing Stainless Steel Fermenters

Stainless steel mechanical stirring fermenters use for test project of yeast, enzymes, microorganisms such as fungi and bacteria culture test. With simple structure, convenient operation and low fault rate, it is a classic product of laboratory bioreactors.

Features

- The material is 316L stainless steel, the view on the tank lid is relatively open, and the operation and cleaning is very convenient; the polishing accuracy of the stainless steel is $Ra \leq 0.4$; the part in contact with the material is 316L.
- AC motor, which can run in harsh environments.
- Rotameter display, adjust the flow of gas according to process requirements
- Adopt strong magnetic upper magnetic stirring system (full sealing, zero leakage, no pollution, changing the dynamic sealing into static sealing, completely solving the problem of bacterial contamination in the cultivation of biological products tank).
- Straight blade agitating paddle (two-stage), mechanical compression defoaming paddle (first-stage).
- Fermentation pH control function: using intelligent PID control, special PH electrode.
- Fermentation dissolved oxygen degree control function: using intelligent PID control, dedicated DO electrode.
- Electric heating, water cooling, good heat exchange efficiency.
- In-situ sterilization.



Specification

Model	LBR-XSC series
Volume	5~5000L optional
Diameter to height ratio	1:2~2.5
Feeding volume	70%
Material	Stainless steel 304/316
Function	PH/DO/Foam/Temp control
Tank pressure	manual adjustment, pressure gauge display; range: 0~0.20Map
Sterilization method	Automatic or manual sterilization
Stirring Speed	50~700rpm stepless speed; accuracy: ± 1 rpm
Temperature detection	range: cooling water temperature $+5 \sim 55^{\circ}\text{C}$; accuracy: $\pm 0.1^{\circ}\text{C}$; resolution: 0.1°C
pH detection	range: 2~12ph; control accuracy: ± 0.02 ph, resolution: 0.01ph
DO detection	range: 0~100%, control accuracy: $\pm 3\%$; resolution: 0.1%
Foam control	electrode detection, peristaltic pump replenishing
Ventilation	manual adjustment, flow meter display

Secondary Stainless Steel Fermenter System

Secondary stainless steel fermenter is suitable for process development and small-scale production, each tank volume can be customized as request, volume is optional 5L, 10L, 30L, 50L, 100L, 200L, 300L, 500L, 1000L

Features

- The main body is made of al-stainless steel 316L tank, with no dead corners in the tank; with special sampling and discharge valves for fermentation tanks, and transplanting pipes
- Adopt a wide viewing angle observation mirror for the liquid level in the tank, 12V safety light, with temperature, PH, DO, defoaming, liquid level interface, inoculation port, replenishing port, and multiple spare ports, all welds are firm Neat and beautiful
- The optimized diversion design improves the exchange efficiency and the uniformity of the temperature in the tank
- Special AC motors for fermentation tanks ensure that the motors can run in harsh environments
- German Siemens S7-200 series PLC control system + 10" LCD touch screen display operation, the system has real-time display, data recording and data analysis of the running process
- Temperature, speed, Ph value, DO value, upper and lower limits can be set, and it has over-limit alarm function
- It has the functions of over-liquid level alarm and automatic refilling, as well as over-foam level alarm and automatic addition of defoamer
- The historical data and curves of various parameters can be stored for many years, and the real-time curve can be restored as it is when the power is turned on again
- It has the function of replenishment measurement; regular and quantitative replenishment
- The reactor software system has adaptive and self-diagnostic capabilities



Specification

Model	LBR-5SJ-50SJ	LBR-10SJ-50SJ	LBR-10SJ-100SJ	LBR-20SJ-200SJ
Volume	5L,50L	10L, 50L	10L, 100L	20L, 200L
Power	220V 6KW	380V 9KW	380V 12KW	380V 15KW
Weight	300kg	350kg	400kg	480kg
Required steam capacity and power when sterilizing	220V 12KW		380V 18KW	
Option	Any tank volume is optional as request			

Tertiary Stainless Steel Fermentation System

Tertiary stainless steel fermenter is suitable for process development and small-scale production, each tank volume can be customized as request, volume is optional 5L, 10L, 30L, 50L, 100L, 200L, 300, 500L, 1000L

Features

- The main body is made of all-stainless steel 316L tank, with no dead corners in the tank; with special sampling and discharge valves for fermentation tanks, and transplanting pipes
- Adopt a wide viewing angle observation mirror for the liquid level in the tank, 12V safety light, with temperature, PH, DO, defoaming, liquid level interface, inoculation port, replenishing port, and multiple spare ports, all welds are firm Neat and beautiful
- The optimized diversion design improves the exchange efficiency and the uniformity of the temperature in the tank
- Special AC motors for fermentation tanks ensure that the motors can run in harsh environments
- German Siemens S7-200 series PLC control system + 10" LCD touch screen display operation, the system has real-time display, data recording and data analysis of the running process
- Temperature, speed, Ph value, DO value, upper and lower limits can be set, and it has over-limit alarm function
- It has the functions of over-liquid level alarm and automatic refilling, as well as over-foam level alarm and automatic addition of defoamer
- The historical data and curves of various parameters can be stored for many years, and the real-time curve can be restored as it is when the power is turned on again
- It has the function of replenishment measurement; regular and quantitative replenishment
- The reactor software system has adaptive and self-diagnostic capabilities



Specification

Model	LBR-5L-50SJ-500SJ	LBR-10L-50SJ-100SJ	LBR-10L-100SJ-1000SJ
Volume	5L, 50L, 500L	10L, 50L, 100L	10L, 100L, 1000L
Power	380V 15KW	380V 18KW	380V 20KW
Weight	300kg	450kg	550kg
Required steam capacity and power when sterilizing	380V 45KW	380V 72KW	380V 100KW
Option	Any tank volume is optional as request		

Multiple Stainless Steel Fermenter System

Tertiary stainless steel fermenter is suitable systems sharp tools for strain screening, research and development and process optimization, saving time and labor costs with fast process validation

Features

- The main body is made of al-stainless steel 316L tank, with no dead corners in the tank; with special sampling and discharge valves for fermentation tanks, and transplanting pipes
- Adopt a wide viewing angle observation mirror for the liquid level in the tank, 12V safety light, with temperature, PH, DO, defoaming, liquid level interface, inoculation port, replenishing port, and multiple spare ports, all welds are firm Neat and beautiful
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Specification

Item name	Multiple Stainless-steel Bioreactor
Multiple quantity	1-20units combination
Volume	10L-10000L volume optional
Configuration	Temperature, pH, dissolved oxygen, speed, foam, replenishment, air flow(manual), tank pressure (manual)
Control system	LBR-A, B, C, D, H biological engineer control
Application	Suitable for fermentation experiment research from laboratory to production process, and can also be used for small-scale production

Plant Cell Illumination Bioreactor

Plant cell illumination bioreactor suitable for microbial cultures with low shear force. Internal or external light sources with adjustable intensity can be provided.

Features

- Siemens PLC control system + vinylon LCD touch screen, is used to display all measured values and control parameters, which greatly facilitates the user's operation. you can use USB for data transmission, sampling and displaying tank data, browsing and analyzing system data, reading settings
- Each tank is equipped with 4 peristaltic pumps beside the front tank, which can supply acid, alkali, defoamer and culture medium to the fermentation tank
- Various parameters in fermentation such as pH, DO, temperature and speed can be monitored by the controller, and all data and control parameters can be transmitted to the controller or computer
- The structure is compact, and various components can be integrated into the fermentation system
- Using off-position sterilization magnetic stirring method, which has a simple structure and stable operation



Animal Cell Bioreactor System

The large-scale culture technology of animal cells (hybridoma cells, CHO cells, insect cells, etc.) and its bioreactor engineering system can be widely used in research, process development and industrial production of antibodies, recombinant protein drugs, viral vaccines and other biotechnological products.

Features

- Siemens PLC control system + vinylon LCD touch screen, is used to display all measured values and control parameters, which greatly facilitates the user's operation. you can use USB for data transmission, sampling and displaying tank data, browsing and analyzing system data, reading settings
- Each tank is equipped with 4 peristaltic pumps beside the front tank, which can supply acid, alkali, defoamer and culture medium to the fermentation tank
- Various parameters in fermentation such as pH, DO, temperature and speed can be monitored by the controller, and all data and control parameters can be transmitted to the controller or computer
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Solid State Fermenter System

The solid biological reaction system is suitable for solid fermentation systems in the pharmaceutical, beverage, enzyme preparation, biological pesticide and other industries.

Features

- SIP and cooling: Steam is directly connected to the fermenter and incorporated with the special mixing system
- Temperature and humidity control: Temperature is digitally displayed. Air volume is adopted to control the temperature
- The medium temperature is controlled by adopting the fully atomized water supply system
- The material mixing and crushing system in the tank ensures even and stable fermentation
- Horizontal solid state fermenter. Convenient observation of materials, thorough discharging
- Control parameters: temperature, rotation speed, humidity

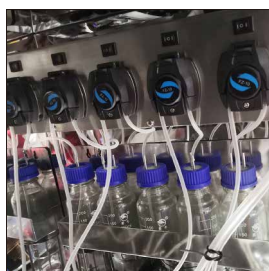


Multi-Passage Shaker Type Mini Bioreactor

The shaker-type micro-bioreactor saves more than 10 times in time compared with general culture methods, and is the best tool for large-scale strain/cell strain screening and culture condition optimization research.

Features

- Obtaining more information about the microbial culture process
- Determining differences between process and biological related effects
- Replacing expensive fermenter experiments
- Shortening research and development time for biological processes and culture conditions
- Providing ideal screening conditions
- Statistical culture media optimization studies
- Easy operation. Culture conditions same as those of reference bottles
- Shortening the time needed from the testing period to actual application
- Shortening the cycle of product's appearance on the market



Specification

Model	LBR-HYG-6
Container	0.5L-2L 6pcs glass tanks
Temperature control range	10°C-50°C
Temperature control accuracy	±0.1, 25°C
Ph range	2-12
PH accuracy	0.05
Oscillation mode	Rotation 0-250rpm/min



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