



Full Series of Bioreactors



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Production Workshop

About us

Innova Bio-Meditech is one of the leading global providers of laboratory and medical devices. Firmly committed to our mission of “sharing innovative bio-meditech solutions with the world”, we are dedicated to innovation in the fields of Biology Project, Life Science, Pharmacy Industry and Medical Treatment.

Innova Bio-Meditech possesses a sound distribution and service network with business partners in North and Latin America, Europe, Africa and Asia-Pacific etc. We have built up a well established R&D, manufacture network with 3 centers in Beijing, Qingdao, and Shanghai. Inspired by the needs of our customers, we adopt advanced technologies and transform them into accessible innovation. This means constant effort and research, in order to more fully understand the developments of the market, produce constantly upgraded product ranges by adding new products year after year.

“Secure Quality, Continuous Innovation”



Offline Sterilization



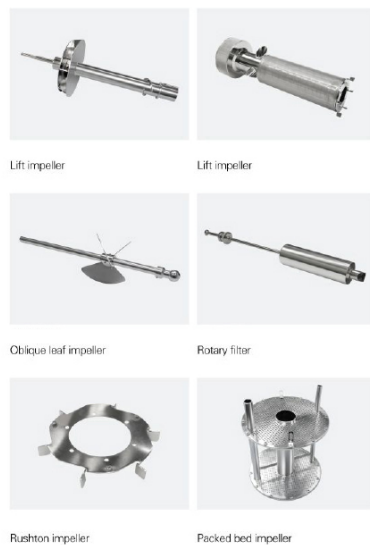
| Type | INOBIO-1/2/3/5/7BG | INOBIO-3/5/7JG |
|---------------------------|----------------------------------------------------------------------------------------------|----------------|
| Total Volume | 1/2/3/5/7L | |
| Vessel | 316L Stainless Steel+Borosilicate Glass | |
| Stirrer | Bottom Driven by Magnetic Coupling | Top Driven |
| Sterilization | In Autoclave | |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration | |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ | |
| Controller | BIOWIT™ –Process Controller, | |

In Situ Sterilization Fermentor



| Type | INOBIO-5/7/10BGZ | INOBIO-5/7/10JGZ |
|---------------------------|----------------------------------------------------------------------------------------------|------------------|
| Total Volume | 5/7/10L | |
| Vessel | 316L Stainless Steel+Borosilicate Glass | |
| Stirrer | Bottom Driven by Magnetic Coupling | Top Driven |
| Sterilization | In situ Sterilization (Steam Source External) | |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration | |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ | |
| Controller | BIOWIT™ –Process Controller | |

Animal Cell Fermentor



| Type | INO BIO-3/5/7BGC | INO FE-10/15/20/30/50/100BSC |
|---------------------------|------------------------------------------------------------------------------------------------------|------------------------------|
| Total Volume | 3/5/7/10L | 10/15/20/30/50/100L |
| Vessel | 316L Stainless Steel+Borosilicate Glass | 316L Stainless Steel |
| Stirrer | Magnetically Driven (Cell Lift Impeller, Marine Blade Impeller or Pitched Blade Impeller for option) | |
| Aeration | Air, O ₂ , N ₂ , CO ₂ delivery system with flow rate control | |
| Sterilization | Instu Sterilization (Steam Source External) | |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure, 4-Gas System | |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ | |
| Controller | BIOWIT™ –Process Controller | |

Plantcell Fermentor With Illumination



| Type | INO BIO-3/5/7/10BGG | INO FE-20/30/50/100BSG |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Total Volume | 3/5/7/10L | 20/30/50/100L |
| Vessel | 316L Stainless Steel+Borosilicate Glass | 316L Stainless Steel |
| Stirrer | Bottom Driven with Magnetic coupling (Top Driven and Airlift for option) | |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure | |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ | |
| Controller | BIOWIT™ –Process Controller | |
| Features | Magnetically driven and powerful agitator without mechanical seal, suitable to cultures conducted in a long period and with ease of cleaning. | |

Top Driven



| | |
|---------------------------|----------------------------------------------------------------------------------------------|
| Type | INOFE-10/15/20/30/50/100/300/500/800/1000JS |
| Total Volume | 10/15/20/30/50/100/300/500/800/1000L |
| Vessel | 316L Stainless Steel |
| Stirrer | Top Driven |
| Sterilization | In situ Sterilization (Steam Source External) |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ |
| Controller | BIOWIT™ –Process Controller |

Magnetically Driven



| | |
|---------------------------|----------------------------------------------------------------------------------------------|
| Type | INOFE-10/15/20/30/50/100BS |
| Total Volume | 10/15/20/30/50/100L |
| Vessel | 316L Stainless Steel |
| Stirrer | Driven by Magnetic Coupling |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure |
| Sterilization | In situ Sterilization (Steam Source External) |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ |
| Controller | BIOWIT™ –Process Controller |

Multifunctional Fermentor



| | | |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Total Volume | INOFE- 5/7/10L | 10L ~ 2KL |
| Vessel | 316L Stainless Steel+Borosilicate Glass | 316L Stainless Steel |
| Stirrer | Driven by Magnetic Coupling or Top Driven | |
| Sterilization | In Autoclave or In situ Sterilization (Steam Source External) | |
| Basic Features | Temperature, rpm, pH, DO Antifoam, Feed, Aeration, Pressure, Weigh Culture Medium, Weigh Feed, Exhaust O ₂ & CO ₂ , Offline Operation: CER, OUR, RQ, KLa | |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ &CO ₂ | |
| Controller | BIOWIT™ –Process Controller | |
| Features | Automatic control and monitor rpm, temperature, pH, DO, foam, air flow rate, weight exhaust O ₂ & CO ₂ , offline parameter (Bacteria number, Base, Nitrogen, Valence)could be input manually. | |
| With Tail Gas Analysis System (Multichannel) | Measuring CO ₂ online(Auto), Range(Modifiable): 0–5% ± 0.5% O ₂ online(Auto), Range(Modifiable): 0–5% ± 0.5% | |

Auto Sterilization



| | |
|---------------|----------------------------------------------------|
| Type | Applicable to Any Type of Fermentor |
| Sterilization | Auto in situ Sterilization (Steam Source External) |
| Controller | BIOWIT™ –Process Controller |
| Application | All Fermenters |

Cover Lifter



| | |
|-------------|------------------------------------------------------|
| Type | Applicable to Any Type of Fermentor |
| Lift | Lift cover for 500mm by electric or pneumatic system |
| Controller | BIOWIT™ –Process Controller |
| Application | 50–500L |

Solid Fermentor



| | |
|----------------|--------------------------------------------------------------|
| Type | INOFE-20/30/50/100/200/500/1000/2000SS |
| Total Volume | 20/30/50/100/200/500/1000/2000L |
| Load Rate | 20 – 60% |
| Vessel | 316L Stainless Steel |
| Stirrer | Rolling Ax.Or Rolling vessel |
| Sterilization | In situ Sterilization (Steam Source External) |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure |
| Controller | BIOWIT™ –Process Controller |
| Features | Equipped with large viewing port |
| Application | For pilot experiment. |

Airlift Fermentor



| | |
|---------------------------|----------------------------------------------------------------------------------------------|
| Type | INOFE –10/15/20/30/50/100QS |
| Total Volume | 10/15/20/30/50/100 |
| Load Rate | 75 ~ 90% |
| Vessel | 316L Stainless Steel |
| Stirrer | Airlift (Dia.: H=1.6 ~ 8) |
| Sterilization | In situ Sterilization (Steam Source External) |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ |
| Controller | BIOWIT™ –Process Controller |
| Features | Large viewing port, low shear. |

Reactors Enzyme-catalyzed Reactions



| | |
|---------------------------|----------------------------------------------------------------------------------------------------------------|
| Type | INO BIO –3/5/7/15/30/50M |
| Total Volume | 3/5/7/15/30/50L |
| Vessel | 3/5/7L: 316L Stainless Steel+Borosilicate Glass |
| Stirrer | Top Driven |
| Basic Features | Temperature, rpm, pH, Feed, Aeration |
| Advanced Features(option) | DO, Antifoam, Level |
| Controller | BIOWIT™ –Process Controller |
| Features | Specific Air-distributing ring make liquid and air mix completely; bottom webby for recycling Enzyme catalysis |

Biotrickling Filter

Multilayer Coupled Biotrickling Filter Reactor



This reactor includes a set of gas distribution system, and two sets of purification towers (multilayer coupled biological trickling reactors)

1. Gas distribution system: Control high concentration waste gas flow accurately by mass flow meter. Connect two gaseous pollutants, concentrations of each pollutant: 10–1000mg/M³.
2. Main purification tower: Each tower contains three vessels with packing material. The vessel is made of borosilicate glass, and has a jacket for temperature control. There is an inlet and an outlet for circulating fluid, a sample port for packing materials, as well as an inlet and an outlet for gas sampling on the side of each vessel. There is a water inlet and a water outlet in the vessel jacket.
3. Control system: Real time detection and automatic control for variable parameters, such as: temperature (15–45°C, accuracy: 1°C), pH (3–10), air flow (1–50L/min), and waste gas residence time (12–90s).
4. Exhaust purification system: The pipeline is made of stainless steel tube. The effective volume of adsorption unit is 30L.

Coupled Chemical Oxidation Biotrickling Filter Reactor



This reactor contains two towers, which shared a touch screen, a gas distribution system and an exhaust gas absorption system. Each tower is assembled from two vessels with packing materials. Each vessel has its own circulating water. The pollution gases come from the bottom of the tower, and finally flow out through the top of the tower.

1. Each vessel equipped with a sampling port for packing material, an inlet and an outlet for gas sampling, a microporous spray device, and a well-distributed gas inlet device.
2. Each vessel equipped with a temperature probe and a pH probe. Real time detection and automatic control for variable parameters, such as temperature (15–45°C, accuracy: 1°C), pH (3–10), air flow (1–50L/min), and waste gas residence time (12–90s).
3. In the center of tower there is a glass casing tube, in which a light can be installed.
4. Gas distribution system: Controls high concentration waste gas flow accurately by mass flow meter.
5. Exhaust gas absorption equipment (optional)
6. The pipeline is made of stainless steel tube. The effective volume of adsorption unit is 30L using activated carbon.

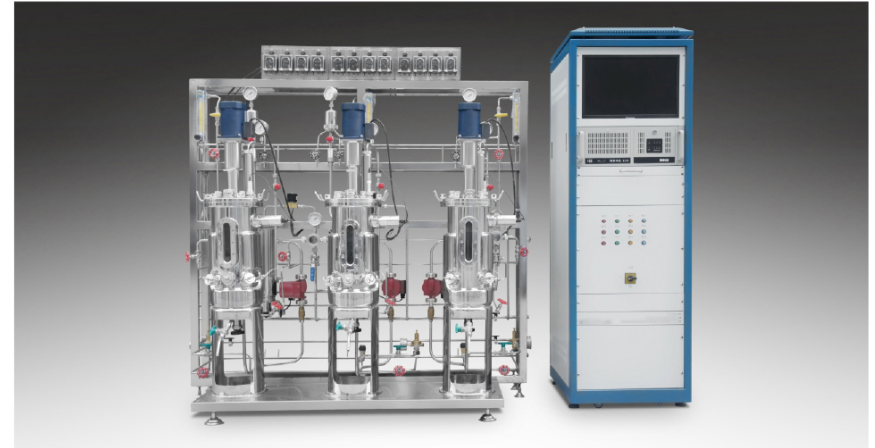
Multiple Glass Fermentor System



| Type | INOBIO-1/2/3/5/7/10GB-X | INOBIO-3/5/7/10JG-X |
|---------------------------|----------------------------------------------------------------------------------------------|---------------------|
| Total Volume | 1/2/3/5/7/10L-X | |
| Vessel | 316L Stainless Steel+Borosilicate Glass | |
| Stirrer | Driven by magnetic coupling | Top Driven |
| sterilization | In autoclave | |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure | |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ | |
| Controller | BIOWIT™-Process Controller | |

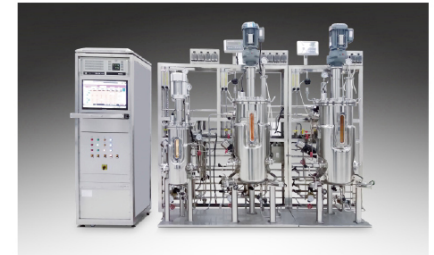


Multiple Fermentor System





| | |
|----------------------------|----------------------------------------------------------------------------------------------|
| Features | Composed of 2 - 8 fermentors |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure |
| Advanced Features (option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & CO ₂ |
| Controller | BIOWIT™ -Process Controller |
| Application | Screen of medium, improvement of process control, validation of strain performance |



Multi-step Fermentor System



| | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features | Innova Series Multi-Step Fermentors System is composed of fermentors and Multi-degree seed fermentor, it could be composed of any type fermentors, any fermentor of this system could be used separately, seed-transfer pipeline could be sterilized separately; unit rack; center console. |
| Basic Features | Temperature, rpm, pH, DO, Antifoam, Feed, Aeration, Pressure |
| Advanced Features(option) | Level, Weigh Feed, Multi-Feeds, Methanol & Ethanol, Exhaust O ₂ & Co ₂ |
| Controller | BIOWIT™ -Process Controller |
| Application | For pilot experiment and small-scale production. |

Bio-Process Controller

| Item | Series | 7000 Series | 3000 Series |
|------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Appearance | |  |  |
| Control Unit | | PLC | PLC |
| Interface | | 10.1" touch screen, with port for keyboard, mouse and printer | 19" VGA, Industry PC, with port for keyboard, mouse and printer |
| Data Storage | | 5000 Hours | Unlimited |
| Controllable Features | | <p>Online: Temperature (including auto sterilization), RPM, pH, DO, Multi-Feeds, Antifoam, Aeration, Pressure, Culture medium, O₂, CO₂, Methanol, Ethanol, Bacteria number (Other features could be customized)</p> <p>Offline: OUR, CER, RQ, KLa, EO₂, ECO₂, Bacteria number, Base, Nitrogen, Valence etc.</p> <p>Tendency curve, History curve, Data form, Alarm, Data store by batch, Password access etc.</p> | |
| Recommend /Max of connection | | 1 / 2 | 1~4 / 4 |
| Fermentation Analysis System | | Connect upper computer with LAN, one computer for several controllers | Built-in Fermentation Analysis System, connect upper computer with LAN, one computer for several (up to 32) controllers |

| Item | Series | 9000 Series | 7X Series & 9X00 Series |
|------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Appearance | |  |  |
| Control Unit | | PLC | PLC |
| Interface | | 10.1" touch screen, with port for keyboard, mouse and printer | 10~12" touch screen, Industrial computer with port for printer |
| Data Storage | | Unlimited | Unlimited |
| Controllable Features | | <p>Online: Temperature (including auto sterilization), RPM, pH, DO, Multi-Feeds, Antifoam, Aeration, Pressure, Culture medium, O₂, CO₂, Methanol, Ethanol, Bacteria number (Other features could be customized)</p> <p>Offline: OUR, CER, RQ, KLa, EO₂, ECO₂, Bacteria number, Base, Nitrogen, Valence etc.</p> <p>Tendency curve, History curve, Data form, Alarm, Data store by batch, Password access etc.</p> | |
| Recommend /Max of connection | | 1 / 2 | 1~6/Unlimited (theoretically) |
| Fermentation Analysis System | | Built-in Fermentation Analysis System, connect upper computer with LAN, one computer for several (up to 32) controllers | Built-in Fermentation Analysis System, connect upper computer with LAN, one computer for several (up to 32) controllers |

Distributing Control System



BLOWIT™-DCS Distributing Control System has the features such as central management and distributing control. Control and data collection is finished by root controller, the host computer monitors the entire fermentation process in time, record and analyze data and prints report forms. Due to distributing control, root controllers are separated which reduce probability of system crash because of local fault. BLOWIT-DCS is suitable for fermentation workshop or pilot experiment.

 A collage of various software interface screenshots from the BLOWIT-DCS system. The screenshots show different views of the control system, including data tables, process diagrams, and control panels.

- Top Left:** A data table showing process parameters and their values.
- Top Middle:** A process diagram showing a fermentation tank with various control points and valves.
- Top Right:** A data table showing process parameters and their values.
- Middle Left:** A control panel for "F1. 溶氧控制与补料关联参数设置" (F1. Dissolved Oxygen Control and Feeding Correlation Parameter Setting). It includes settings for correlation status (无关联), direction (正向), and feeding parameters (控制周期: 10, 工作时间: 5).
- Middle Middle:** A data table showing process parameters and their values.
- Middle Right:** A data table showing process parameters and their values.
- Bottom Left:** A data table showing process parameters and their values.
- Bottom Middle:** A control panel for "F1. pH电极标定" (F1. pH Electrode Calibration). It includes a sampling value of 0.000 pH, zero point calibration (0.00 pH), and slope calibration (1.000).
- Bottom Right:** A data table showing process parameters and their values.



Customer Site



Company has many technical personnel who are specialized in such fields as fermentation engineering, biochemical industry, automation control, computer, mechanical engineering, etc. and have rich experience in fermentation engineering design and field construction. While helping our users to solve various problems in production and processes and providing whole-set process solutions, we are making our contributions to the improvement of industrialization capacity of China's biotechnological field through our excellent product quality and services of high added value.



Customer Site



Company provides complete biopharmaceutical upstream and downstream process system equipment and comprehensive solutions. We are able to meet customers' different process requirements for cell culture or microbial fermentation, including culture medium preparation, seed expansion, cell culture and fermentation, harvesting and clarification, buffer solution preparation and storage, chromatography system, ultrafiltration system, etc., so as to help customers to realize high-standard and high-efficiency technological processes.



Customer Site



We have practical experience in microbial fermentation and powerful process and technology equipment capacity, advanced equipment manufacturing capacity, comprehensive project organization and construction capacity and project commissioning and personnel training ability. Currently, we have many complete examples in the biopharmaceutical fermentation field and enjoy a good reputation.



Customer Site



We have the ability and experience in manufacturing large-sized pressure vessels, especially the manufacturing of stainless steel vessels. We have accumulated rich experience in such aspects as equipment manufacturing,

surface treatment (matte treatment, mechanical polishing, pickling and passivation). Meanwhile, we have standard production workshops and have the ability to carry out automatic manufacturing and produce various special pressure vessels.



Valve



● Angle seat valve



● Angle seat valve



● Angle seat valve



● Solenoid valve



● Diaphragm valve



● Diaphragm valve



● Diaphragm valve



● Sample Valve



● Diaphragm valve



● Diaphragm valve



● Diaphragm valve



● Diaphragm valve



● Tank bottom valve



● Tank bottom valve



● Tank bottom valve



● Hydrophobic device

Fittngs



● Impeller



● Impeller



● Impeller



● Impeller



● Impeller



● Impeller



● Impeller



● Peristaltic pump



● PH Sensor



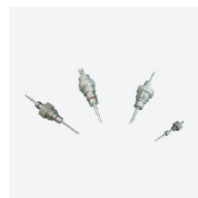
● DO Sensor



● Electrode sheath



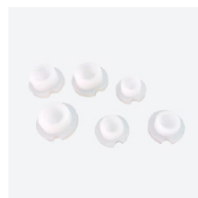
● Transmitter



● Feeding needle



● pH Controller



● Silicone plug



● Filter element

More Products

