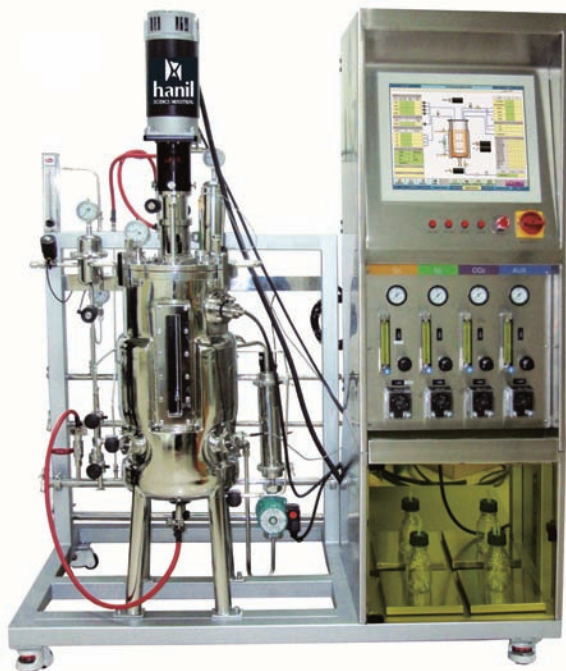


In situ sterilizable Fermentor

Biosis SP(Pilot)



30L~
100L
Vessel

50RPM~
1,200RPM
Speed

Vessel : 30L ~ 100L
Temp : Ambient +3°C ~ 80°C
Speed : 50RPM ~ 1000RPM



200L~
1,000L
Vessel

50RPM~
550RPM
Speed

Vessel : 200L ~ 1,000L
Temp : Ambient +3°C ~ 80°C
Speed : 50RPM ~ 550RPM

Features

- Intelligent 17" wide touch screen fermentation controller
- One-chip Micom is applied for minimizing size and making simple set-up process
- ATmega128 CPU and sensor board into One-board solve problems immediately
- High density fermentation : DO-stat, pH-stat, Exponential feeding, etc
- Remote control by PC software Data Logging system
- Automatic head lift system built-in to move Top plate easily
- Everything on one skid frame : Easy to install and move additional vessels and vessel controllers
- Accurate temperature control with cooler and heater
- Automatic flow control: mass flow controller
- Additional vessels for bigger capacities and peristaltic pumps for more accurate operation
- User's programmable sterilization process program : user password, set up sterilization time, and temperature
- If there is a problem with external steam supply, its own steam can be generated to change sterilizing process. There is no need to change the structure of pipes, but just need to change sterilizing valve sequence. User can manage sterilization program directly when changing of valve sequence is needed to sterilize in site
- Convenient DO management by one point calibration
- Getting zero point available without nitrogen

Head Lifting System

- Head plate is lifted by air cylinder and guided by the two sets of linear motion guide
- Safety pin is used to hold the lifted head plate
- Lifting system is made of stainless steel(SUS 304) that it is rustless
- Basic system with the 50L capacity

- In situ sterilizable pilot scale fermentor ; for bio reaction or bio response such as microbial fermentation, conversion and enzyme bioconversion.
- Applicable to the special culturing processes such as tissue culture, animal cell culture and insect cell culture with the attachment of additional devices.
- The sterilization in place procedure done automatically by using the external steam supply and conveniently changeable of the parameters and sequences on the basis of user's experience or designated data.



Bottom Drive Vessel
Volume of 15L~1500L
4 of Gas Mixers unified in one controller



All-in-one system including seed fermentor and main fermentor

Applied stainless pipe transfer line for perfect sterilization and user's convenience

Vessel : 50-500 L / 100-1000 L

RPM : 50~500 / 30~300

Specification

Agitation	Drive & Range	30L ~100L : AC motor Top drive(mechanical seal driving) 50~1,000 ±1 RPM(In the condition of no load) 200L ~1,000L : AC Geared motor Top drive(mechanical seal driving) 50~550 ±1 rpm(In the condition of no load)
	Impeller	Rushton turbine impeller, Foam breaker(SUS 316L)
	Sensor & Control	Magnetic hall sensor, PID control
Head Lift	The head lift system is powered by air cylinder and guided by two sets of linear motion guide	
Materials & Finish	Vessel/Piping	SUS 316L, SUS 304(electrolytic polishing)
Sterilization	Heat exchanger or inject steam into jacket.(105°C~130°C)	
Temperature	Range & Sensor	Ambient + 3°C~80°C(0.1°C), RTD(Pt-100), PID control
Aeration	Sparger	Ring sparger(SUS 316L)
	Filter	Inlet(0.2µm), Outlet filter(0.2µm)
pH	Range / Electrode	2.0~12.0 pH of set point, PID control / Gel Type
DO	Range / Electrode	0~200%, PID control / Polarographic Type
Pressure Control	The back pressure is controlled manually and/or automatically	
Control	Panel	17" Touch Screen Color LCD
	Communications	Memory stick, printer, computer, etc with the RS-232C communication protocol
Data Storage	pH, DO, Pressure, Temperature and Agitation speed	

※ Please note that technical specifications subject to change.