

## Biological Fermentation System



Controller



Tank



Air Compressor

### Features:

- \* Large color touch screen, simple interface and operation.
- \* The tank body is made of high temperature and corrosion resistant borosilicate glass, which can visually observe the state of the tank.
- \* The peristaltic pump is easy to load, and the 4 fixed-speed peristaltic pumps can be directly used for the control of acid supplementation or alkali supplementation or feeding or defoaming.
- \* The entire system is simple to configure, and can quickly enter into fermentation operations or new project research and development, shortening process optimization time.

### Technical Parameters:

Model	BK-BR10	
Tank System	Capacity	10L, Working volume: 70%
	Sterilization Method	Sterilization in off-position autoclave
	Tank Structure	Imported SUS316L high quality stainless steel (food hygiene grade), high strength acid and alkali corrosion resistant stainless steel tank body
	Aspect Ratio	1:2 (changeable)
	Polishing	Internal and external polishing, polishing accuracy is RA0.4, reduce the chance of infection.
Stirring System	Tank Cover Interface	Flame ring inoculation*1, PH sensor interface*1, DO sensor interface*1, temperature sensor interface*1, spare ports *2 (for feeding, defoamer and acid and alkali), sensor with foam, exhaust port with condensing device
	Stirring Method	The magnetic stirring system is suspended on the strong magnetic machinery, and the magnetic stirring at the bottom of the tank without thimble is stable in speed. High performance mixing paddle, defoaming paddle, AC speed motor, stepless speed regulation.
	Sealing System	No mechanical seal, not easy to leak
	Agitating Valve	Fermentation special standard six-blade flat paddle, the height of the blade can be adjusted, and different types of mixing paddle can be changed according to the special requirements of the fermentation process.

Stirring System	Motor	Variable frequency and variable speed motor, speed setting controller
	Stirring Shaft	The maximum stirring speed will not be lower than 980rpm during the life of the fermenter
	Max Speed	1000rpm/min±5rpm
Aerating System	Aerate	Rotameter manual control, according to the process requirements to adjust and control the flow of each gas.
	Air System	Configure primary fine filtering
	Fine Filter Accuracy	0.2µm
Temperature Control	Control Mode	Intelligent PID control
	Control Range	Cooling water temperature +5~65°C±0.2°C
	Resolution	0.1°C
Pressure Control	Control Mode	Manual
	Control Range	0~0.2MPa
PH Control	Control Mode	Two peristaltic pump switch control flow acid and base, automatic control, automatic metering, intelligent PID control.
	Display Range	0.00~14.00pH±0.01pH
	Control Range	2.00~12.00pH±0.02pH
DO Control	Control Mode	It can be controlled with parameters such as speed, air flow, tank pressure and feeding, fermentation process sequence control (according to fermentation time, DO automatic variable control, at least 10 stages)
	Measuring Range	0.1~150%
	Control Accuracy	±3%
Foam Control	Detection	Electrodes automatically detect foam or liquid levels
	Control Mode	Peristaltic pump automatically add defoamer or feed, and measure, automatic PID control and alarm
Defoaming Control	Sensitivity	100 ~100000Ω
	Detection	Automatic foam detection
	Defoaming Method	Peristaltic pump automatically adds defoaming agent
Feeding system	Control Mode	Switch control, automatic flow and metering, automatic PID control, fermentation process segmentation control, the fermentation process is controlled in stages.
	Controller Function	Supplement quantity curve analysis, add quantity accumulation, display record, batch report analysis data saving.
Biological Process Controller	Controls Parameter	Temperature, PH, Dissolved Oxygen, Speed, Tank Pressure, Air Flow, Foam, Liquid Level, Multiple Feed, etc
	Detecting Parameter	Temperature, PH, Dissolved Oxygen, Speed, Tank Pressure, Air Flow, Exhaust, Foam, Multiple Feed and other parameters
	Off-line Parameter	Can calculate or input the necessary indirect parameters of fermentation process, such as OUR, CER, KLA, ammonia nitrogen, residual sugar, titer, viscosity, settlement, measurement function: can be measured for feed, bubble, acid and base
Standard Accessories	Air compressor*1, Peristaltic pump*4, Tank*1, Rotameter*1, Inoculating loop*1, 250ml Feed bottle*2, 500ml Feed bottle*1, 1000ml Feed bottle*1, filter*6, PH buffer*2	
Power Supply	AC220V, 50/60Hz (Standard); AC110V, 50/60Hz (Optional)	
Net Weight	135kg	
Package Size (L*W*H)	1200*820*1300mm	
Gross Weight	150kg	