



## Winpact Solid State Fermentation System, FS-V-SA05P

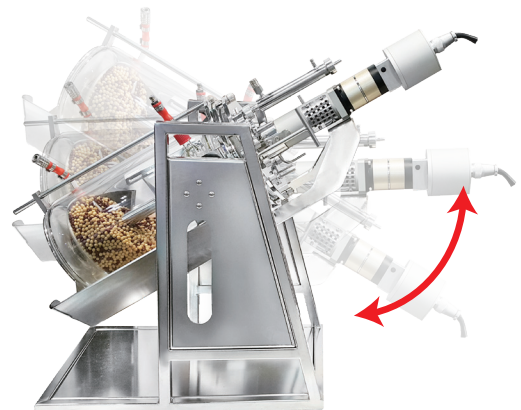


(FS-V-SA05P)

Solid state fermentation (SSF) can be used for enzyme, antibiotics, biofuel, and organic acid production in the food, pharmaceutical, cosmetic, industries, etc. One of the features for Solid state fermentation is to create low water level cultivating conditions for fungus, mold, filamentous fungi, and some bacteria growth.

Winpact Solid State Fermentation system is designed for the laboratory scale research to get excellent results. It is featured with a 10.4" color touch screen, user-friendly interface and 4 built-in peristaltic pumps on the Linux based operation system. An automatic vessel angle control mechanism provides an outstanding mixing efficiency for solid state material research.

This system is suitable for both aerobic and anaerobic fermentation with three kinds of impellers available (Broken, Anchor and Spiral type).

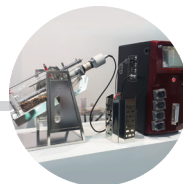


\*0°- 90° rotation, 120° for harvest

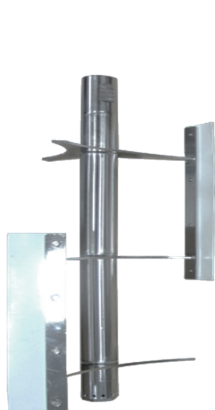
### Features

- Fully integrated system specifically designed for solid-state fermentation research involving saccharification, hydrolysis and more.
- Programmable angle-adjustable (0-90° for culture control, 120° for harvest control) vessel tilting and stirring mechanism permits superior sample homogeneity
- Impellers are designed to reduce stickiness and it ensures sample integrity during the fermentation process.
- Integrated motor shaft & air sparger assembly creates precise, disturbance-free controls of aeration and mixing
- Chemically resistant double jacketed borosilicate glass vessel design
- Can be used with pH and DO probes to control culture conditions (anchor type impellers only)
- Customizable impellers and aeration controller available
- Winpact Humidifier is available for real-time monitoring and humidity adjustment.

\*\*The minimum speed varies from 1-5 rpm depending on the medium viscosity.



## Impeller Type:



Broken



Anchor



Spiral



Winpact Humidifier  
(FS-O-HMD)

Control Unit	Control Panel	10.4" color touch-screen Interface, (Resolution: 800 x 600 pixels)
	Communication Port	Remote control through Ethernet, Analog AUX port for system extension
	Storage Program	Up to 59,994 programs for different kinds of condition.
	Data Internal Storage	Up to 100 data files.
	Data External Storage Interface	USB port
	Cabinet Material	Front panel: ABS / Housing: Painted iron
	Rated Voltage	110V~/ 220V~ ; 50/60 Hz
Aeration	Inlet Gas Flow-meter	0, 1 – 10 LPM
Dimension	Overall Diameter 350mm; Overall Height with Condenser 683 mm; Overall Height without Condenser 448 mm Dimension (with vessel holder) 430mm (L) x 730mm (W) x 780 mm (H)	
Temperature	Heating	Thermostat system: Built-in heat exchanger, 550W heater/water circulation pump
	Cooling	Automatic cooling water valve
	Range	5°C (41°F) above coolant up to 60°C (140°F)
	Resolution	0.1°C
Agitation	Control Mode	Manual or programmable 15-step PID control.
	Drive	Removable top brushless motor
	Speed Range	0, 1 – 60 rpm
	Resolution	1rpm
Impeller	Control Mode	Manual or programmable 15-step PID control.
		1. Broken type (FS-A-IM305) 2. Anchor type (FS-A-IM408) 3. Spiral type (FS-A-IM507)
		(Select one from the above type, and only anchor impeller can be used with pH and DO probes)
		*Note: Customized impellers are available. **In pH and DO measurement condition, the minimum medium volume is 4L and water content is more than 50%, tilting angle not over 30 degree. ***The measure value of pH and DO may not accurate when using in solid-state culture condition. ****pH and DO probe is not within the scope of warranty when using in solid-state vessel.
Vessel Swing	Angle Range	Normal operation: 0°~90°, adjustable time interval Harvest mode: 0°/ 120°
	Control Mode	Programmable control

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