Stackable Incubator Shaker-AEOLUS™



Product Advantages

Easy-to-start

• Intuitive user interface both press button models and touch screen models
• Ready-to-use design, standard equipped with pre-drilled platform

Reliable performance

• Precise Control with PT100 temp sensor and IR CO2 sensor
• CE-certified for safe continuous operation
• Real-time vibration alarm to maintain a reliable environment for your cultivation

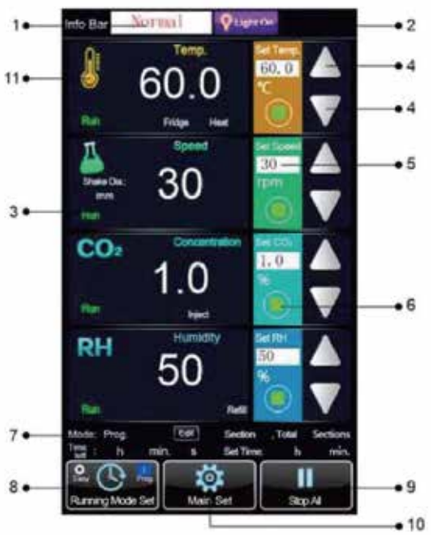
Robust design

• 304 stainless steel for the chamber
• Maintenance free DC brushless motor
• Industrial-grade Construction for 24/7 Operation

Intuitive Control

- Modularized control function is more user friendly for operation, clearly displays all the status and parameters
- Auto-lock and password protection

Capacitive touch screen display(Shaking incubator with CO2)*



Main Interface:

1. Displays the current instrument status.
2. Light button: Press to turn the light on or off
3. Displays the current function' s running status, orbit diameter (for speed), and any alarms
4. Plus and Minus buttons: Adjusts the corresponding function's value
5. Displays the set value and allows user to manually input the set value
6. Run/Stop button: Runs and stops function
7. Edit button for programmable mode: Sets up to 12 running segments of varying temperatures and speed
8. Running mode button: Switches between "Easy" and "Program Control" mode
9. Run/Stop all button: Runs and stops all functions
10. Main Settings button: Enters settings page (image below), which features specific settings for the user to edit
11. Function icon buttons: Graphically displays the real - time function data

Control Features:

• Powerful Data storage: Data is stored for more than 2 years.Recorded in 1 minute intervals
• Real-time data view: On the display, operator can view the running data from latest 7 days
• Data export: Easily export more than 2 years of parameter data via USB
• Optional Remote WiFi monitoring accessory and smart phone app enabled remote monitoring and control
• Various Alarms: Alarms can be set to activate when parameter values deviate outside of users set bounds
• Alarm recording: Alarm information is stored and viewable
• Easy Calibration: Calibrating functions only require inputting the difference between set and actual values

Color Capacitance Touch Screen
(Incubator Shakers)



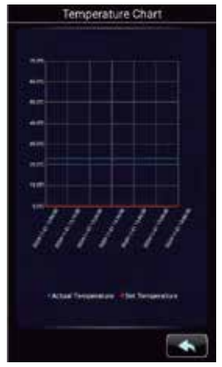
Data Management

Multiple Solutions for Data Access

1. Data on dispaly

Check the data history of your device and view informative graphs on screen display.
The data can be traced up to 7 days.





2. Built-in USB port for fast and easy data export

Data can be stored up to 2 years

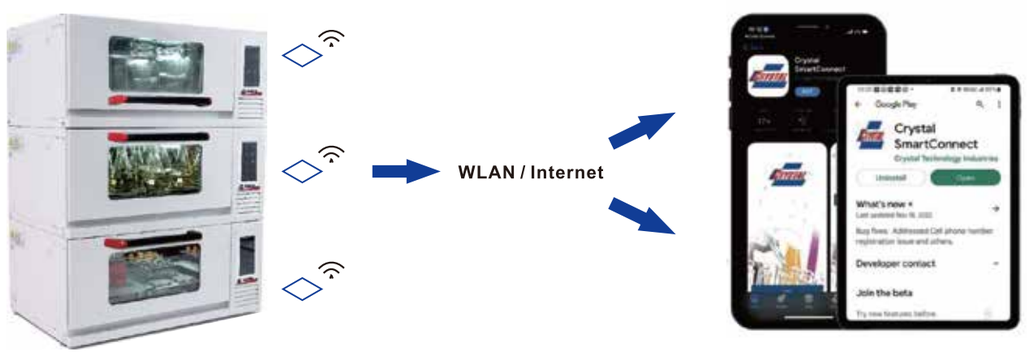


Stackable Incubator Shaker-AEOLUS™

3. Modbus RTU or Modbus TCP/IP

Provide communication protocol to Intergrate with user's monitoring system

◉ Remote Monitor & Control System & APP (Optional)



Remote Wi-Fi controller

◉ It is a wireless monitoring software for mobile phones used in the Internet or local area network to monitor and control the incubating shaker. All parameters of a unit can be monitored and controlled by a mobile phone, and multiple mobile phones can also monitor and control one or more machines. It is very suitable for timely monitoring of culture conditions which need higher culture environment. You can check the history data in the mobile phone, according to the culture effect of historical data, so you can optimize the latter culture parameters

◉ Features

- One cell phone can monitor multiple shakers at the same time
- More than two mobile phones can monitor one or more shakers at the same time
- Mobile phone can monitor and control the temperature, speed, humidity, CO_2, light and other parameters of the shaker through the LAN and the Internet
- Mobile phone can receive alarm information timely, and the alarm can be disposed
- Mobile phone can program to the machine and let the unit run as several section programs (the maximum is 12)
- Mobile phone can view historical data, including temperature, speed, humidity, CO_2, light, and other historical parameters

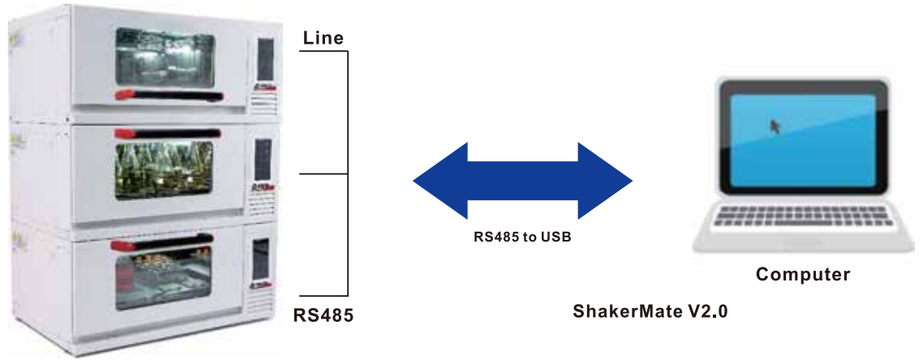
*Mobile phone APP user interface



◉ WiFi monitoring Technical Data

CPU	Four Core SoC @ 1.0GHz,1GB LPDDR2 SDRAM
Memory (GB)	32
WLAN	2.4GHZIEEE 802.11 b/g/n
Connecting Style	Plug-and-Play Device
Communication	USB 2.0
Smartphone Support	iOS/Android
HierarchicalUser Management	Supported
Dimension (LxWxH)(mm)	210x142x210
Net Weight (kg)	1

◉ Computer monitoring software
Comply with FDA 21-CFR-PART 11 and GMP regulation



◉ Description

ShakerMate is a computer software which is used for monitor and control the incubating shaker in LAN. Acomputer can monitor and control all the parameters of multiple machines, all settings change and related account operations on the machines could be recorded to the log file. The running data of the machine can be recorded every minute and stored in the database file, and the stored data can be exported to be a file, meet the requirements of FDA. It is very suitable for the requirement of records for both culture and operation

◉ Features

- One computer can monitor and control up to 32 shakers at the same time
- Arbitrary operation and machine data are recorded in log files and database files respectively, it can meet the data traceability requirements of FDA
- Computer can monitor and control the temperature, speed, humidity, CO2, light and other parameters of the shaker through the LAN
- Computer can program to the machine and let the unit run as several section programs (the max. is 12)
- Send a message to the machine's alarm information to the designated mobile phone
- Historical data reports can generate temperature, speed, CO_2 concentration, and humidity curves to see if there are any anomalies at a glance

Stackable Incubator Shaker-AEOLUS™

*PC software user interface

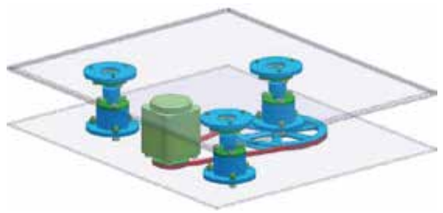


Comply with FDA 21-CFR-PART 11 and GMP regulation

Mechanical Driving System

1. Motor drive with Triple-eccentric Counter Balanced mechanism*





- Provide smooth and stable shaking for heavy and uneven loading
- Brushless motor drive provides high efficient and reliable operation
- Low noise and longer life span

2. Magnetic direct drive**

- Sealed Magnetic Drive is highly efficient, quiet, durable, and produces negligible heat that does not affect the chamber temperature
- Three axis eccentric balance system provides stable and reliable shaking
- Low cost as it is maintenance-free for direct drive. Eliminating the need of replacing the belts. Longer lifespan than motor drive

**Applied on incubator shaker IS-AM only

Temperature Control

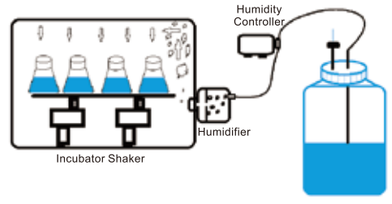
- Combined PID and Fuzzy Control Technology to maintain a consistent temperature
- Shaker with cooling are equipped with highly efficient inverter compressor refrigeration, which allows for cooling as low as 18°C below room temperature with low energy consumption (minimum temperature at 4°C)
- Precise temp uniformity to ensure reproducible cultivation results

CO_2 Control

- Infrared Sensor, drift-free
- Keep CO_2 concentration between 0-20%

Humidity Control (Optional)

- Set at 10% above ambient humidity, up to 90%
- No evaporation, no contamination in the chamber
- No condensation produced



Light Control (Optional)

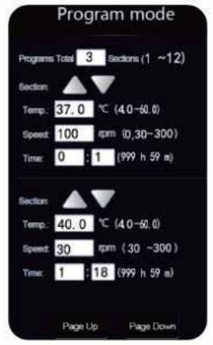
- White light, only available for IS-6

Light intensity resolution: 100 Lux
Light strength up to 20000 Lux



Program Mode Control

- Program mode allows user to set up to 12 segments of varying temperature ,speed and time
- Easy control mode with ultimate time



Alarm

- Audible and visual alarms if there is any deviation for the temperature, speed, CO_2 and humidity

Maintain a reliable environment for your cultivation

Max Loading Capacity:

Model No.	IS-6		IS-4		IS-18		IS-AM	
	Clamps	Sticky Mat	Clamps	Sticky Mat	Clamps	Sticky Mat	Clamps	Sticky Mat
50ml	135	187	135	112	134	187	72	70
100ml	60	112	45	72	60	112	30	42
150ml	60	104	45	60	60	104	30	42
200ml	60	84	45	45	60	84	30	30
250ml	60	77	40	40	60	77	30	30
500ml	38	40	25	28	38	40	16	20
1000ml	24	28	15	15	24	28	12	12
2000ml	15	15	12	12	15	15	8	8
3000ml	12	15	/	/	/	/	/	/
5000ml	1	8	/	6	/	8	/	4

AEOLUS™ IS-4 Series



Medium Size Dura-beam IR sensor Auto deforst

Key Features

- Triple-eccentric counterbalance drive system
- 10" high-res color touch screen with intuitive user interface
- 250L smaller size with better temperature uniformity, ±0.3°C, Cooling as standard function
- Stackable design, available either single unit or even stack up to 3 units
- Loading capacity: 6×5 L (Thomson) flasks with sticky mat
- Max loading: 20kgs at 300rpm for both 25mm&50mm orbit
- Set of UV lights on both side for easy sterilization

Ordering Information

Model	Orbital Diameter		Door-Swing Direction		CO_2
	25 mm	50mm	Upward	Downward	
IS-4W	√	×	×	√	×
IS-4W5	×	√	×	√	×
IS-4TW	√	×	√	×	×
IS-4CW	√	×	×	√	√
IS-4C5W	×	√	×	√	√
IS-4C5TW	×	√	√	×	√

Technical Data

Model		IS-4	IS-6
Shaking Control	Shaking Platform (mm)	Aluminum, 770×470	aluminum,900x560
	Shaking Orbit (mm)	26 or 50	26 or 50
	Max Loading (kgs)	20	20
	Speed Range (rpm)	0,30~300	0,30~300
	Setting Accuracy (rpm)	1	1
Temperature	Temp.Range	18°C below ambient temperature,minimum 4°C to 60°C	18°C below ambient temperature,minimum 4°C to 60°C
	Setting Accuracy (°C)	+0.1	+0.1
	Uniformity	+0.3°C(@37°C)	+0.4°C(@37°C)without CO_2,+0.3°C(@37°C)with CO_2
CO_2 (If Available)	CO_2 Sensor	IR	IR
	Setting Range	0-20%	0-20%
	Setting Accuracy	0.1%	0.1%
General Data	Display	10" touch screen	10" touch screen
	Timer	0~999h 59m	0~999h59m
	Working Height (mm)	305	335
	Internal Dimension (mm)	865×670×491	1005x784x535
	External Dimension (mm)	1240x785x(535+80 feet high)	1400x886x(600+80 feet high)
	Power Supply	AC220V+22V,50Hz/60Hz	AC 220V+22V,50Hz/60Hz
	Max Power Consumption (W)	1000	1000