



AEOLUS™ IS-18CA/IS-18A Stackable CO2 Incubator Shaker

Chemglass Part No. CLS-2545-series



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AEOLUS™ IS-18CA/IS-18A CO2 Incubator Shaker

The CO2 Incubator Shaker features Temperature, Shaking, CO2 Concentration, and Humidity controls. Its stackable design helps maximize floor space, with the capability to stack up to three units high.



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PRODUCT FEATURES

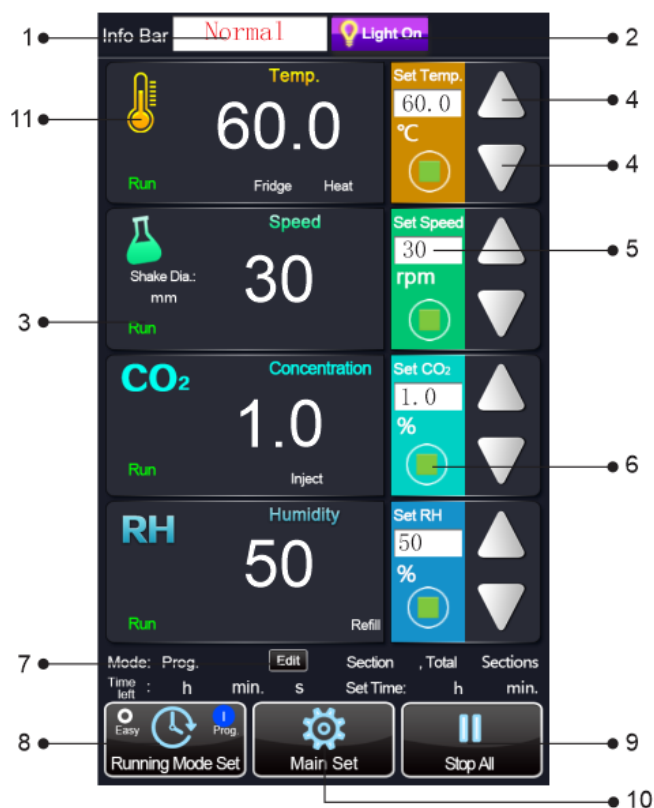
- 7" High-Res Color Touch Screen with intuitive graphic interface
- Chamber design features smooth rounded internal corners for easy cleaning
- Capacity is 6 x 5L Erlenmeyer shaker flasks
- Infra-Red(IR) CO2 sensor for precise and reliable CO2 detection
- Optional WiFi and RS485 monitoring and control
- 2 Sets of UV lights for easy sterilization
- Audible and visual alarms
- Mirror finish, pharmaceutical grade stainless steel chamber
- Stackable design up to 3 units.

Innovative Design

- Three axis eccentric balance system provides stable and reliable shaking
- Terminal feedback system ensures precise shaking speed
- Brushless DC motor is highly efficient, quiet, durable, and produces negligible heat that does not affect the chamber temperature
- Combination of Proportional-Integral-Derivative control and Fuzzy control for temperature ensure temperature accuracy within $\pm 0.1^{\circ}\text{C}$
- Program mode allows user to set up to 12 segments of varying temperature and speed
- WiFi and RS485 monitoring and control allows the user to stay in touch with the instrument even outside of the lab
- Highly efficient inverter compressor refrigeration allows for temperatures as low as 20°C below room temperature with low energy consumption (minimum temperature is 4°C)
- Infrared CO2 sensor provides accurate and reliable CO2 detection (IS-18CA only)
- Intuitive 7" capacitive touchscreen makes functions, such as setting alarm parameters, easy to complete
- Slide rail platform makes it easy to load and unload fixtures
- Noise reduction design keeps the instrument noise level to 55 dB
- Polyurethane foam insulation provides excellent thermal insulation.

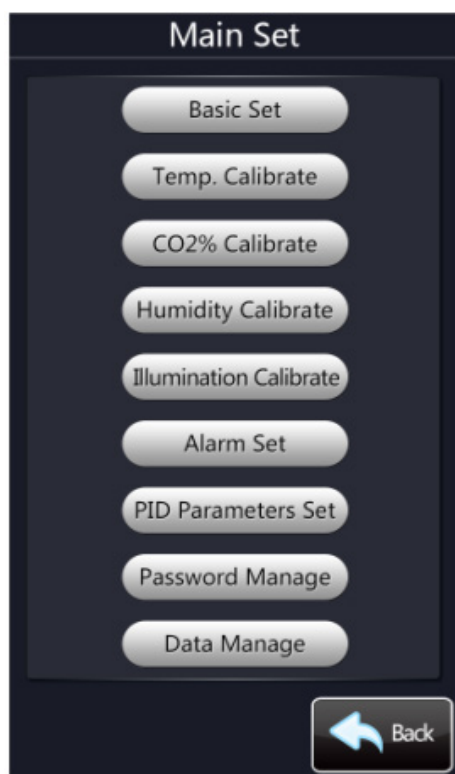
AEOLUS™ IS-18CA/IS-18A CO2 INCUBATOR SHAKER

CAPACITIVE TOUCH SCREEN DISPLAY



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 (912 days) of parameter data via USB.
- Remote WiFi / Ethernet monitoring accessory and smart phone app enable remote monitoring and control.
- Various Alarms: Alarms can be armed 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.

AEOLUS™ IS-18CA/IS-18A CO₂

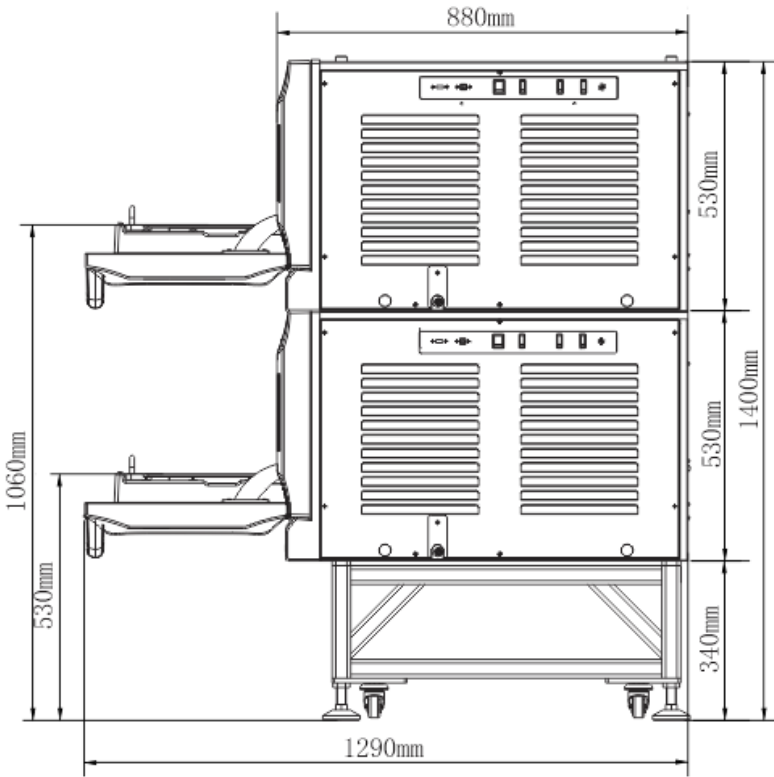
Incubator Shaker

OVERVIEW

- **High Resolution 7-inch Color Touch Screen:** Modular display presents instrument status and function values in a clear and concise manner.
- **Capacitive Touch Screen:** The capacitive screen is more responsive and durable than a resistance screen as there is no reaction delay when the screen is pressed.
- **Large Capacity:** The chamber can hold up to 6 x 5L Erlenmeyer shaker flasks.
- **Pull Out Rail Platform:** Operators can easily pull the platform out to load or unload fixtures. Only one locking handle in the middle of the platform makes the process fast and convenient.
- **Excellent Temperature Control Performance:** When the incubator is at a stable temperature of 37°C, the uniformity is $\pm 0.2^\circ\text{C}$.
- **Strong Cooling Capacity:** The incubator chamber can be cooled to 20°C below the ambient temperature (Lowest temp is 4°C).
- **Inverter Compressor:** Makes cooling a noiseless, durable, and highly efficient process while also saving energy.
- **Three Units Can Be Stacked:** This product can be purchased as a single, double, or triple stack.
- **Bi-Directional Ultraviolet Sterilization:** The chamber is equipped with two sets of UV sterilization light components to enhance the germicidal irradiation effect and reach all areas of the chamber.
- **Ultra Quiet Design:** The noise level is less than 55dB when incubator is running and cooling (loudest process), providing a quiet environment for the operator.
- **Slow Acceleration and Deceleration:** Shaking function starts and stops slowly to prevent large shear forces on the bacteria or cells.
- **High Pressure Water Rinse:** Both the platform and chamber feature an integrated draining system that is fast and efficient.
- **Efficient, Durable, and Light-Weight Insulation:** Polyurethane foam insulation provides advanced thermal insulation. The material is also air-tight, waterproof, lightweight, shockproof, electrically insulated, heat resistant, cold resistant, and solvent resistant.

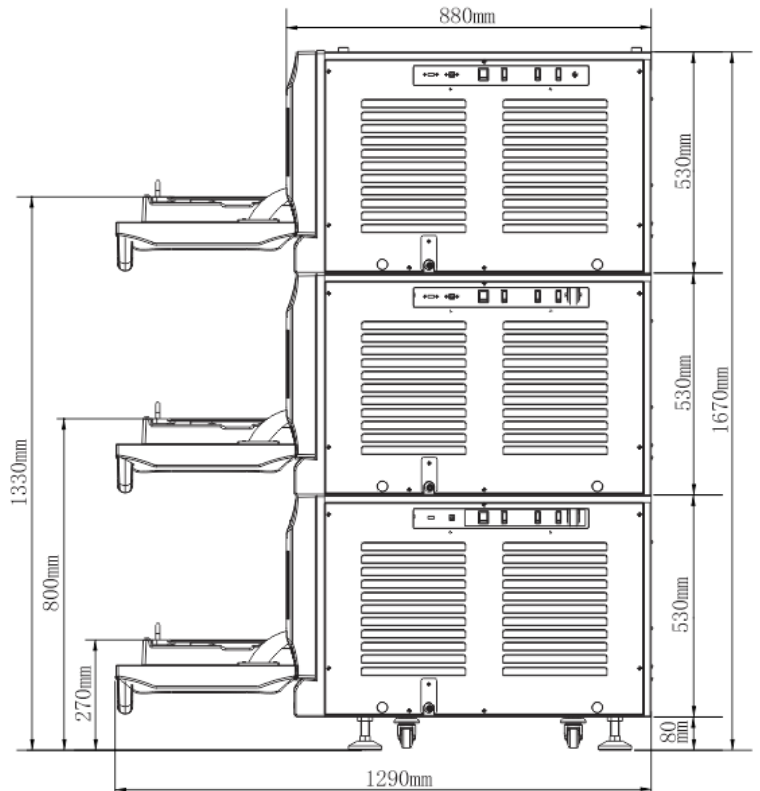
AEOLUS™ IS-18CA/IS-18A CO2 INCUBATOR SHAKER

PRODUCT DIMENSIONS Chemglass Part No. CLS-2545-series



**Double Stack with
CLS-2545-9020 Stand
Dimensions**

**Triple Stack with Down-Swing Doors
Dimensions**



AEOLUS™ IS-18CA/IS-18A CO2 INCUBATOR SHAKER

PRODUCT SPECIFICATIONS Chemglass Part No. CLS-2545-series



Product Name	AEOLUS™ Incubator Shaker	AEOLUS™ CO2 Incubator Shaker
Platform Dimensions WxD	900 x 560 mm (35.4 x 22 in)	
Max Capacity *	Clamp capacity: 25mLx134 / 50mLx134 / 100mLx60 / 150mLx60 / 200mLx60 / 250mLx60 / 500mLx32 / 1000mLx22 / 2000mLx15 / 5000mL(Shaker Flask)x6 Capacity with Sticky Mats: 25mLx187 / 50mLx187 / 100mLx112 / 150mLx104 / 200mLx84 / 250mLx76 / 500mLx40 / 1000mLx28 / 2000mLx15 / 5000mL(Shaker Flask)x6	
Capacity	302 L	
Max Load	20 kg (44.1 lb)	
Temperature Range	Room Temp. Minus 20°C~60°C (Lowest Temp is 4°C)	
Temperature Accuracy	±0.1°C (@37°C)	
Temperature Uniformity	± 0.2°C (@37°C)	
Temperature Stability	± 0.2°C (@37°C)	
Temp Recover Time After Door is Opened for 30s	≤6min (@37°C)	
Speed**	0(stop), 30~300 RPM	
Speed Accuracy	±1 RPM	
Orbit Diameter	ø25mm (ø1.0in)	
CO2 Sensor	NA	Infrared
CO2 Control Range	NA	0~20%
CO2 Control Accuracy	NA	±0.1%
CO2 Recover Time After Door is Opened for 30s	NA	≤6min (@5%)
Relative Humidity Type	NA	Active
Max Humidity	NA	95%
Programmable Segments	12 Segments	
Timer	0~999hr 59min	
Illumination	LED Lamps on Left and Right Walls	
Disinfection	UV Lamps on Left and Right Walls	
Door Opening Direction	Down-Swing (Optional up-swing door for top unit of triple stack)	
Internal Dimensions WxDxH	985 x 775 x 444mm (38.78 x 30.51 x 17.5in)	
External Dimensions WxDxH	1355 x 855 x 535 mm (53.35 x 34.84 x 21.06 inch)	
Internal Working Height	300 mm (11.8in)	
Net Weight	195 kg (430 lb)	
Display	7" Color Capacitive Touch Screen	
Parameter Protection	Password Protected	
Data Stored	Time, Temperature, Speed, Instrument Status	Time, Temperature, Speed, CO2 Concentration, Humidity, Instrument Status
Data Storage Interval	1 Minute	
Screen Data Display	Displays Most Recent 7 Days of Data	
USB Data Export	Most Recent 912 Days of Data	
Automatic Defrost	Yes	
Noise Level	≤55dB (When Compressor is Running)	
Auto-Recovery after Power Interruption	Yes	
Power supply	AC 110V±11V, 60Hz	
Power when Heating	≤800W	
Power when Cooling	≤300W	
Max Power	≤1000W	
Mobile Monitoring and Control by WIFI	Optional through IS-A64W Accessory and App	
Warranty	2 Years Parts and Service	
Certification	CE	

*Sticky Mat can be cut to fit platform

**Note: Double Stack units it is recommended that the Shaker Speed of the top unit <250 rpm
Triple Stack units it is recommended that the Shaker Speed of the middle and top unit < 250 rpm.

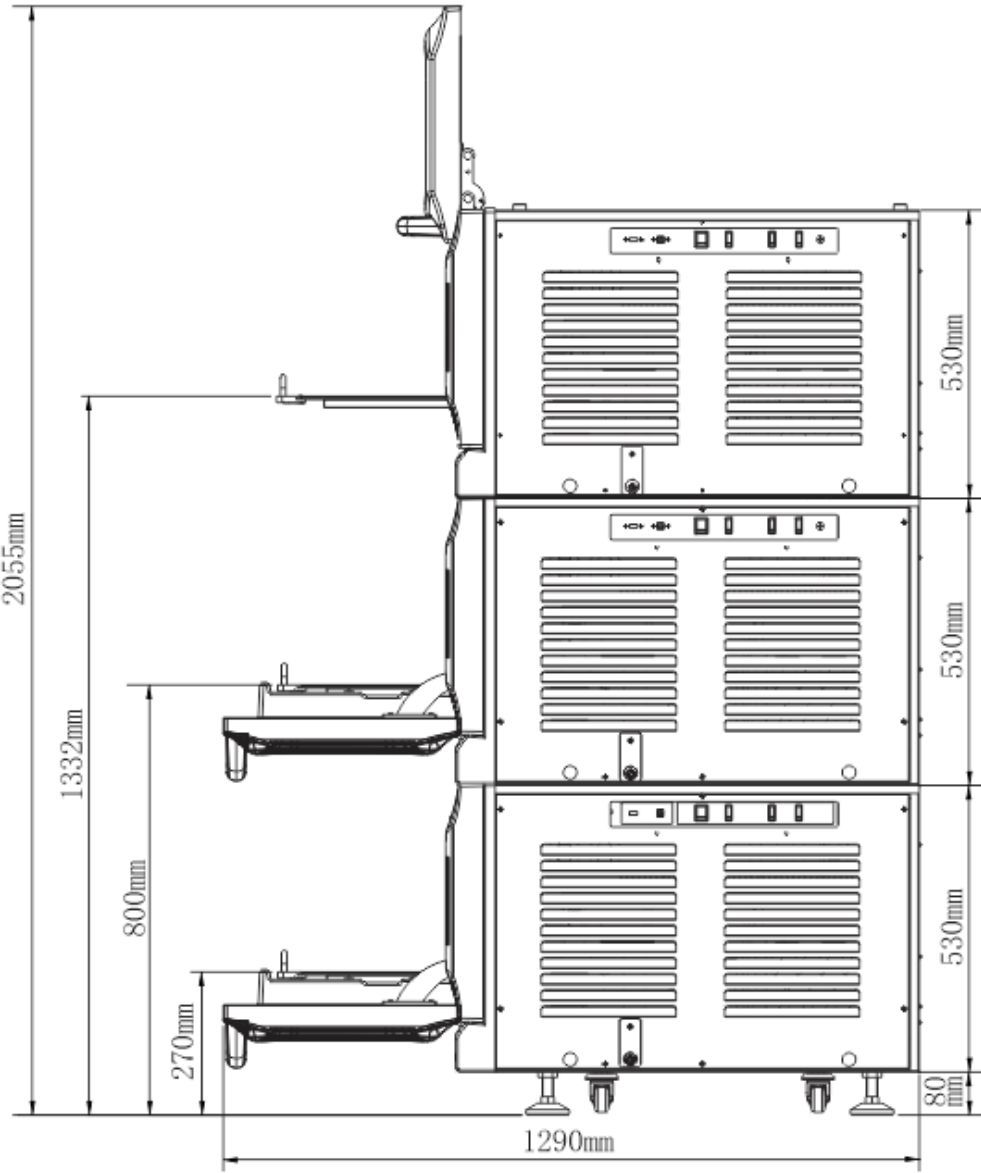


AEOLUS™ IS-18CA/IS-18A CO2 INCUBATOR SHAKER

PRODUCT DIMENSIONS Chemglass Part No. CLS-2545-series



Triple Stack with Top Up-Swing Door Dimensions



AEOLUS™ IS-18CA/IS-18A CO2 Incubator Shaker

PRODUCT ACCESSORIES



Tube Rack



Adjustable Tube Rack



Spring Frame



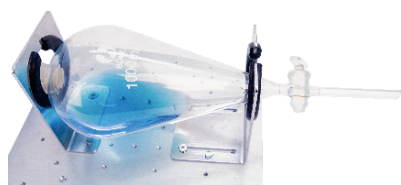
96-Well Micro-Plate Holder



Flask Clamps



Infusion Bottle Clamp



Fixture for Separating Funnel



Sticky Mat



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ACCESSORY SPECIFICATIONS

Part No.	Accessory Type	Description	Maximum Capacity	
CLS-2545-0025	Flask Clamps	Flask Clamp, 25mL	134	
CLS-2545-0050		Flask Clamp, 50mL	134	
CLS-2545-0100		Flask Clamp, 100/125mL	60	
CLS-2545-0150		Flask Clamp, 150mL	60	
CLS-2545-0200		Flask Clamp, 200mL	60	
CLS-2545-0250		Flask Clamp, 250mL	60	
CLS-2545-0500		Flask Clamp, 500mL	32	
CLS-2545-1000		Flask Clamp, 1,000mL	22	
CLS-2545-2000		Flask Clamp, 2,000mL	15	
CLS-2545-5000		Flask Clamp, 5,000mL	6	
CLS-2545-4000		Infusion Bottle	Infusion Bottle Clamp, 500mL	40
CLS-2545-4001	Infusion Bottle Clamp, 1000mL		28	
CLS-2545-0096	Microplate Holder	Plate Holder, 96-Well	30	
CLS-2545-9010	Pressure Regulator	CO2 Pressure Regulator	1	
CLS-2545-6005	Separatory Funnel Holder	Separating Funnel Fixture	4	
CLS-2545-3005	Spring Frame	Spring Frame, 428 x 295 x 80mm	2	
CLS-2545-3007		Spring Frame, 450 x 400 x 80mm	1	
CLS-2545-3009		Spring Frame, 550 x 470 x 80mm	1	
CLS-2545-3011		Spring Frame, 899 x 539 x 81.5	1	
CLS-2545-3002	Spring Platform	Mini Universal Spring Platform, 165x165x50mm	4	
CLS-2545-3003		Mini Universal Spring Platform, 350x240x80mm	4	
CLS-2545-9015	Stand	Stand for Stackable Incubator Stand for AEOLUS IS-ACMA/IS-AMA Incubator Shakers	1	
CLS-2545-9020		Base Stand for Stackable Incub, Base Stand for IS-18CA/IS-18A Single or Double Stack Only	1	
CLS-2545-8006	Sticky Mat	Sticky Mat, 140 x 140mm	24	
CLS-2545-MAT		Sticky Mat, 280 x 280mm	6	
CLS-2545-6014	Tube Rack	Tube Rack, 14mm x 40 Holes	9	
CLS-2545-6016		Tube Rack, 16mm x 40 Holes	9	
CLS-2545-6018		Tube Rack, 18mm x 40 Holes	9	
CLS-2545-6022		Tube Rack, 22mm x 27 Holes	9	
CLS-2545-6030		Tube Rack, 30mm x 21 Holes	9	
CLS-2545-7014		Adjustable Angle Tube Rack, 14mm x 40 Holes	9	
CLS-2545-7016		Adjustable Angle Tube Rack, 16mm x 40 Holes	9	
CLS-2545-7018		Adjustable Angle Tube Rack, 18mm x 40 Holes	9	
CLS-2545-7022		Adjustable Angle Tube Rack, 22mm x 27 Holes	9	
CLS-2545-7030		Adjustable Angle Tube Rack, 30mm x 21 Holes	9	
CLS-2545-7031		Adjustable Angle Tube Rack, 30mm x 24 Holes	6	
CLS-2545-9005		Visor Cover	Visor Cover, for Stackable Shakers	1
CLS-2545-014		Water Carboy	Water Carboy, 15L	1
CLS-2545-WIFI	WiFi Remote	WiFi Remote Monitoring	1	

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For over 25 years Crystal Technology and Industries has been driven to deliver exceptional value to the scientific marketplace by developing innovative equipment and Cryo Storage Solutions for today's scientist.

