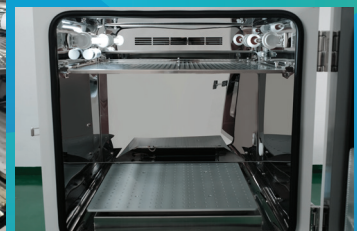




**CRYSTAL TECHNOLOGY
& INDUSTRIES, INC.**

**AEOLUS™ CO2/Non-CO2
170L Incubator Shaker
with Magnetic Drive
(25mm or 50mm Orbit Models)**



Company Introduction

For over 25 years, Crystal Technology & Industries has been driven to deliver more value to the global scientific community. Our approach utilizes the experience and skills of our over 40 engineers collaborating closely with top tier research institutions worldwide to design and develop products with application specific features and cutting-edge technology that provide the scientist with more innovative solutions.

The AEOLUS IS-DCA family of Stackable Incubator Shakers feature many advanced options in CO2 Incubation, Shaking drive technology and ease of use from Crystal Technology & Industries to help scientists. All our products undergo extensive testing to ensure superior quality. That is why every piece of equipment from Crystal Industries comes with our industry leading 2-year Warranty administered by our in-house, factory trained engineers.

Our presence is global with dedicated offices/warehouses in North America, Europe and Asia. Our goal is to consistently provide total customer satisfaction felt locally in our products and services. We look forward to serving the scientific community now and in the future.



BRINGING SCIENCE AND TECHNOLOGY TO LIFE!

Overview

AEOLUS™ CO2/Non-CO2 170L Incubator Shaker with Magnetic Drive (25mm or 50mm Orbit Models)

The CO2 170L Incubator Shaker features Temperature, Shaking, CO2 Concentration and Humidity controls (CO2 models only), with 25mm or 50mm orbit models available. Its stackable design helps maximize floor space, with the capability of stacking up to 2 units high. Each model features a static shelf ideal for parallel cell cultivation.

INNOVATIVE DESIGN

- **Reliable Shaking:** Three axis eccentric balance system provides stable and reliable shaking; terminal feedback system ensures precise shaking speed.
- **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.
- **Sealed Magnetic Drive:** Offers increased reliability, minimal maintenance, and quiet operation.
- **Built-in Platform:** Operators can easily load or unload samples. Universal Platform is shipped pre-installed in the unit.
- **Static Shelf:** Provides 18 x 18" platform for parallel cell cultivation.
- **Excellent Temperature Control Performance:** When the incubator is at a stable temperature of 37° C, the uniformity is $\pm 0.1^{\circ}$ C.
- **Strong Cooling Capacity:** The incubator chamber can be cooled to 15° C below the ambient temperature (Lowest temp is 4° C).
- **Programmable:** Program mode allows user to set up to 12 segments of varying temperature and speed.
- **Inverter Compressor:** Makes cooling a quiet, durable, and highly efficient process while also saving energy.
- **Two Units Can Be Stacked:** This product can be purchased as a single or double stack.
- **Ultraviolet Sterilization:** The chamber features a UV sterilization light mounted on the right wall, delivering germicidal irradiation that effectively reaches all areas within 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.
- **Efficient, Durable, and Lightweight 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.

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. Easy Loading Platform: Load and unload your samples on our convenient Universal Platform which is shipped pre-installed in each unit.
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 right), 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 two (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.
- **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™ CO2/Non-CO2 170L Incubator Shaker with Magnetic Drive

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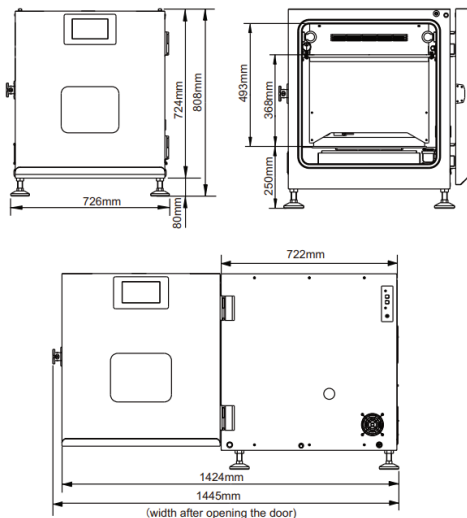
The CO2 170L Incubator Shaker features Temperature, Shaking, CO2 Concentration and Humidity controls (CO2 models only), with 25mm or 50mm orbit models available. Its stackable design helps maximize floor space, with the capability of stacking up to 2 units high. Featuring an innovative Magnetic Drive for increased reliability and minimal maintenance. Each model features a static shelf ideal for parallel cell cultivation.



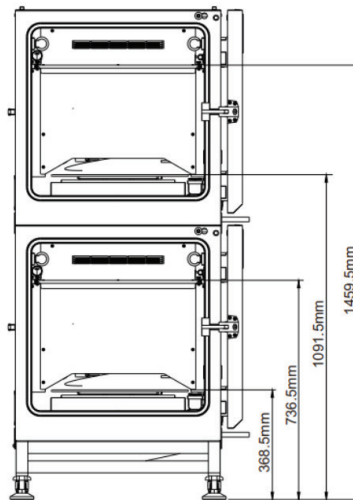
◆ Features

- 7" High-res color touch screen with intuitive graphic interface
- Innovative chamber design features smooth rounded internal corners for easy cleaning
- Static shelf provides 18 x 18" platform for parallel cell cultivation
- Infra-Red (IR) CO2 sensor for precise and reliable CO2 detection
- Chamber features built-in UV light for convenient sterilization
- Audible and visual alarms
- Mirror finish, pharmaceutical grade stainless steel chamber
- Stackable design up to 2 units
- Choose your custom stack, choice of CO2 or non-CO2, 25 or 50mm Orbit
- 25mm and 50mm orbit models available
- 2 Year Warranty
- Units shipped pre-stacked on single pallet, single or double stack (Stand sold separately)

Single Unit Dimensions



Double Stack Dimensions with IS-A216 Stand



CO2 Resistant Orbital Shaker

PRODUCT SPECIFICATIONS

Model	IS-DA	IS-D5A	IS-DCA	IS-DC5A
Product Name	AEOLUS™ 170L Magnetic Drive Incubator Shaker		AEOLUS™ CO2 170L Magnetic Drive Incubator Shaker	
Platform Dimensions (WxD)	460 x 460mm (18 x 18in)			
Static Shelf Dimensions (WxD)	460 x 460mm (18 x 18in)			
Max Capacity	Clamp capacity: 50mLx49/100mLx32/150mL/200mL/250mLx25/500mLx16/1Lx9/2Lx6/2.8mLx5/4L/5Lx4 Capacity with Sticky Mats: 50mLx64/100mLx49/150mL/200mLx36/250mL/500mLx25/1Lx9/2Lx6L/2.8mL/3Lx5/4L/5Lx4/6L/7Lx1			
Capacity	170L			
Max Load	15kg (33lbs)			
Temperature Range	Room Temp, Minus 18° C-60°C (Lowest Temp is 4°C)			
Temperature Accuracy	±0.1°C			
Temperature Uniformity	±0.3°C (@37°C)			
Temp Recover Time After Door is Opened for 30s	≤6min (@37°C)			
Speed	30-400rpm	30-300rpm	30-400rpm	30-300rpm
Speed Accuracy	±1 RPM			
Speed Drive	Magnetic Drive			
Orbit Diameter	Ø25mm (Ø1.02in)	Ø50mm (Ø2in)	Ø25mm (Ø1.02in)	Ø50mm (Ø2in)
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		Passive Humidification	
Max Humidity	NA		Ambient RH-95%	
Programmable Segments	12 Segments			
Timer	0-999hr 59min			
Illumination	LED Lamp on Left Wall			
Disinfection	UV Lamp on Right Wall			
Door Opening Direction	Leftward			
Internal Working Dimensions (WxDxH)	582 x 525 x 620mm (23 x 20.7 x 24.4in)			
External Dimensions (WxDxH)	745 x 784 x 728 (+80mm with feet) ((29.3 x 30.9 x 28.7 (+3.15in with feet))			
Internal Working Height w/Shelf Installed	14.48in (368mm)			
Internal Working Height wo/Shelf Installed	19.40in (493mm)			
Net Weight	150kg (331lbs)			
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	450W			
Power when Cooling	≤180W			
Power	≤630W		≤630W	
Mobile Monitoring and Control by WiFi	Optional through IS-A64W Accessory and App			
Warranty	2 Years Parts and Service			
Certification	CE			

AEOLUS™ CO₂/Non-CO₂ 170L Incubator Shaker with Magnetic Drive

Accessories



Test Tube Rack



Adjustable Test Tube Rack



Mini Universal Spring Platform



Infusion Bottle Clamp



Flask Clamp



Stand for 170L Incubator Shakers



96-Well Microplate Holder



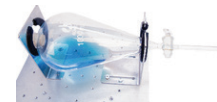
Sticky Mat



CO₂ Cylinder Pressure Regulator



Multi-Microplate Holder



Fixture for Separating Funnel

Item Number	Item Type	Specifications	Max Capacity	Item Number	Item Type	Specifications	Max Capacity	
IS-A50	Flask Clamp	Holds 25mL Flask	64	IS-A33	Infusion Bottle Clamp	Holds 500mL Infusion Bottle	18	
IS-A1		Holds 50mL Flask	49	IS-A34		Holds 1000mL Infusion Bottle	9	
IS-A2		Holds 100/125mL Flask	32	IS-A13	Microplate Holder	96-Well Microplate Holder	12	
IS-A3		Holds 150mL Flask	25	IS-A175	Multi-Microplate Holder	Holds up to 6 Standard Microplates	15	
IS-A4		Holds 200mL Flask	25	IS-A167	Deep Well Plate Holder	Holds 2 Deep Well Plates	12	
IS-A5		Holds 250mL Flask	25	IS-A35	Fixture holds Separating Funnel	Holds Separating Funnels of ±500mL	4	
IS-A6		Holds 500mL Flask	16	IS-A47	Sticky Mat	5.51 x 5.51in / 140 x 140mm	10	
IS-A7		Holds 1000mL Flask	9	IS-A22	Spring Frame	450 x 400 x 80mm	1	
IS-A8		Holds 2000mL Flask	6	IS-A215	Replacement Static Shelf	18 x 18 in	1	
IS-A9		Holds 2.8L Fernbach Flasks	5	IS-A216	Stand	Stand for 170L Incubator Shakers	1	
IS-A10		Holds 5000mL Thomson Flask	4	CIA25	CO ₂ Cylinder Pressure Regulator	Max Inlet Pressure: 3000psi Max Outlet Pressure: 60psi	1 (up to 2 units)	
IS-A225		Holds 4L Flask	4					
IS-A51		Tube Rack	Holds 50 Tubes x 1.5mL/2.0mL/5mL	10				
IS-A11			Holds 40 Tubes x Ø14mm	4				
IS-A12	Holds 40 Tubes x Ø16mm		4					
IS-A23	Holds 40 Tubes x Ø18mm		4					
IS-A24	Holds 27 Tubes x Ø22mm		4					
IS-A42	Holds 21 Tubes x Ø30mm		4					
IS-A20	Adjustable Tube Rack	Holds 40 Tubes x Ø14mm	4					
IS-A21		Holds 40 Tubes x Ø16mm	4					
IS-A30		Holds 40 Tubes x Ø18mm	4					
IS-A31		Holds 27 Tubes x Ø22mm	4					
IS-A32		Holds 21 Tubes x Ø30mm	4					
IS-A37		Holds 24 Tubes x Ø30mm	2					

NOTE: 3000mL flask clamps (IS-A9) are available for use with 2.8L Fernbach flasks. Flasks must be shorter than the working height of the incubator shaker chamber (300mm).

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