

CO₂ Incubator

Percival® model B3600

General Purpose CO₂ Incubator 29.5 ft³ (840 liters)



Applications

- Designed for medical, pharmaceutical, animal, cosmetic, food and agricultural research applications, including mammalian cell and tissue culture, large volume anaerobic bacterial growth and sample testing, microbial production of bioactive compounds (enzymes, antibiotics) and many more applications

Please compare your own requirements to the specifications listed below.

Temperature Range

- 2°-70°C ($\pm 0.5^\circ\text{C}$) throughout the chamber
- Temperature control accuracy: +/- 0.1°C
- No refrigeration above 44°C

CO₂

- Range: Above ambient up to 10% CO₂
- Accuracy at 5% CO₂ and 25°C = 0.1% CO₂
- Sensor type: Vaisala GMP251, CARBOCAP
- Feature: Automatic CO₂ supply shutoff when chamber door is open

Humidity Control

Ultrasonic humidifier and dehumidifier with advanced RH sensor for control between 40-85% for set temperatures between 15°C to 30°C. Other humidity ranges:

- 30°C up to 75% RH
- 40°C up to 70% RH
- Humidity is controlled up to 40°C
- Humidity control accuracy: +/- 2%
- Humidity uniformity: +/- 5% throughout the chamber
- Humidifier water supply: Deionized or RO

Airflow/Circulation

- Air circulation inside chamber is from a specifically designed CFD air diffuser (conditioned air travels along the entire back wall, over the shelves and returns to the ceiling fans through an opening between the light fixtures and the doors)

B3600 specifications

Temp Range	Relative Humidity	CO ₂	Work Area	Exterior Dimensions						Shelving Size		Tiers	
				width		depth		height		in	cm	in	cm
°C		°CO ₂	ft ²	m ²	in	cm	in	cm	in	cm	in	cm	
2-70±0.5	up to 70% @ 30°C	ambient to 10%	32.3	3	33.5	85.1	33.6	85.4	77.2	196.1	28.8 x 27	73 x 68.6	6

Percival's IntellusUltra Controller

The IntellusUltra (C8) control system adapts to nearly any programming style with a large range of options for optimal control over experiments.

- Robust and reliable, industrial-grade integrated hardware design
- Highly flexible programming capabilities for customized configurations and expansion
- Precise, simultaneous control of up to 7 environmental parameters
- Industry-leading experiment protection and system diagnostics
- SCADA/LIMS Port available to provide CFR21 Part 11 or EU GMP Annex 11 compliance

IntellusUltra Touchscreen Interface

This high-resolution touchscreen displays advanced settings and data for fine-tuning experiments, including graphs and charts.

- 10.1" IPS, high-resolution display with 10-point multi-touch sensitivity
- Tabular and graphical presentation of chamber programs and parameters
- Highly visible process values and alarm notifications
- Enhanced user feedback menus

Please refer to percival-scientific.com for additional information regarding the control systems.

CO₂ Incubator Percival model B3600

Insulation

- Woodless construction using 2" thick foamed-in-place non-CFC Urethane insulation with 93% closed cell, R-value of 12.5, K-value of 0.16 and density of 2.2 lbs/ft³

Cabinet Construction

- 26-gauge smooth galvanized white side walls and top reinforced with 24-gauge backer plates
- Interior constructed of 24-gauge #304-4 stainless steel
- 24-gauge smooth white galvanized exterior
- NSF-compliant seam design
- Overall wall thickness is 2" (5.1 cm)
- Foamed-in-place non-CFC insulation (refer to insulation section)
- One 1 1/4" diameter access port on right hand wall
- Integrated floor drain
- Contains casters assembly and adjustable leveling legs to compensate for uneven flooring
- Exterior painted with highly reflective, environmentally friendly, high temperature baked white powder coating

Door

- One door opening 29.3" x 57.5" (74.3 cm x 146.1 cm) provides full access to the chamber interior
- Magnetic gasket provides a tight seal to door frame
- Door and frame heaters with drip deflector

Interior Space

- 29.7 ft³ (0.8 m³) with work area of 32.3 ft² (3 m²) provided on six tiers

Shelving

- Six tiers of stainless steel wire shelving (each shelf is 27"D x 28.8"W [68.6 cm x 73 cm])
- Shelves are supported by shelf clips allowing 1/2" vertical adjustments
- Maximum clearance between shelves is 8" (20.3 cm) per tier with all six shelves installed

Refrigeration

- Top-mounted, self-contained air-cooled condensing unit with hot gas bypass system for continuous compressor operation, extended life and tight temperature control. Continuous running condensing unit ensures precise temperature control by alternately cycling refrigerant and hot gas to coil; also prolongs compressor life and eliminates risk of ice buildup in coil.
- Allows easy access for maintenance and cleaning
- As heat is rejected, it rises and is dissipated into room without having any effect on inside temperature of cabinet
- Solenoid valves have extended stem for quiet and long life operation

Refrigeration (continued)

- Ceiling-mounted evaporator coil incorporates twin air circulation fans in aluminum housing (heat rejection to ambient [standard chamber] is 1865 BTU/hr)

Temperature Safety Limit Controls

- Experiment protection (adjustable high/low temperature control, audible alarms and visual indicators)
- Controls shut down all power to the chamber, activating alarms
- System automatically resets when temperature returns to normal range

Options (most popular)

- IntellusUltra Connect (C9)
- Convenience receptacles
- Door with observation window and cover (Q2)
- Dry alarm contacts
- LED working light (Q24)
- Door lock
- Non-tiltable slidable shelves in rails. Six stainless steel rails per each side wall in lieu of pilasters and shelves clips.
- Solid stainless-steel shelving in lieu of stainless-steel wire shelving

Contact info@percival-scientific.com with questions or for additional information about chamber options.

Electrical Service Requirements

- 120/1/60 with NEMA 5-15P plug provided (with standard chamber)
- RLA=9.0A (MCA=11.3A)

Regulatory Standards

- Electrical Safety: UL-508A, certified and labelled by Percival Scientific under UL file number E340161
- Quality System: ISO 9001:2015, certified under DQS, Inc. under certification number 10017261

Helping You Create Better Science

Percival Scientific controlled environment systems are the culmination of over 60 years of design and manufacturing experience. Our high-quality products have been developed through direct partnerships with the scientific community and offer platforms that are highly customizable and provide superior performance. We understand that scientific innovation comes from creativity, passion, technical expertise and attention to detail, and we are proud to help you create better science.



Percival Scientific, Inc.

505 Research Drive • Perry, IA 50220 USA

800.695.2743 • 515.465.9363 • Fax: 515.465.9464

[www.percival-scientific.com](http://www_percival-scientific.com)