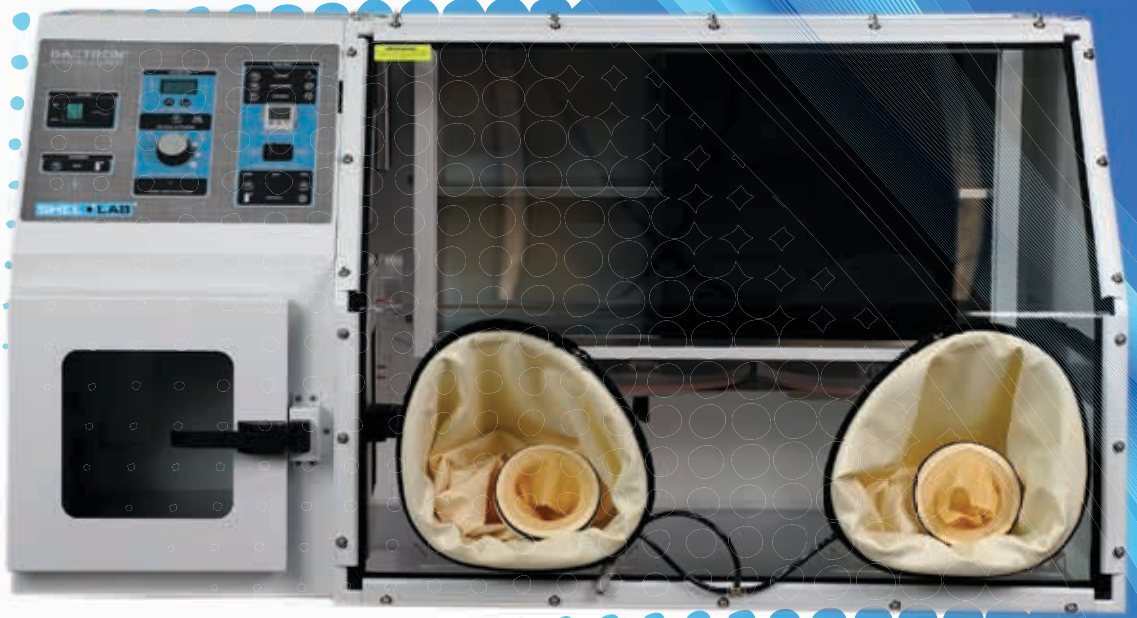
Bactron®

Anaerobic/Environmental Chambers

SHEL LAB®



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Bactron® Anaerobic/Environmental Chambers
300 - 900 Plate Capacity

BACTRONEZ

The BACTRONEZ is the smallest of the line with a 300 plate capacity. It's modular configuration allows users to choose the options that best fit their specific work flow needs.

BACTRON300

Our most popular model, the BACTRON300, provides a larger workspace than the BactronEZ and a 300 plate capacity.

BACTRON900

The BACTRON600 offers a 600 plate capacity incubator with a space saving rotating shelf design. Two rear mounted shelves help keep your workspace organized.
The BACTRON900 has an added rear wall incubator, with an independent temperature control, to give a total capacity of 900 plates.

BACTROX

The BACTROX hypoxia chamber permits oxygen and carbon dioxide control in increments of 1/10th of a percent. The rear wall incubator has a 300 plate capacity.

A System to Match Your Requirements

BACTRONEZ

Specifically designed for use by smaller laboratories, the 300 plate capacity BACTRONEZ is an ideal “starter” anaerobic chamber. This unit may also serve as an economical set up station for larger labs or as a replacement for vacuum jars and gas packs.

BACTRON300

The compact and economical BACTRON300 provides a 300 plate capacity incubator and delivers optimum productivity in everyday workflow. The operator enjoys ample work space for efficient performance of all procedures requiring an anaerobic atmosphere.

BACTRON600 and BACTRON900

The BACTRON600 is designed for high volume sample processing and storage, yet requires far less bench space than expected for its capacity. The BACTRON900 boasts the same features as the BACTRON600, with the addition of a rear wall incubator that holds an additional 300 plates. Each incubator has its own temperature controller for user set point flexibility.

BACTROX Hypoxia Chamber

This specialized chamber offers precise oxygen control within the range of 1% to 20% for Microaerophilic bacteriology and hypoxic tissue or cell culture applications. The SHEL LAB BACTROX permits oxygen control in increments of 1/10th of one percent and gives the user enhanced sample protection versus a tri-gas incubator.

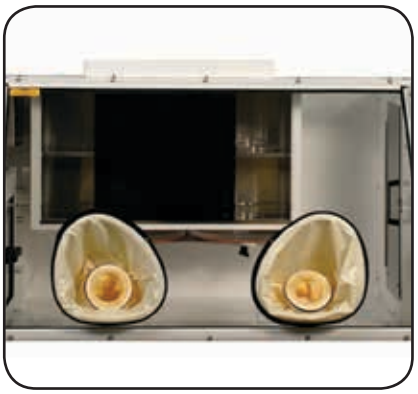
Anaerobic Conditions for Microbiology & Cell Biology

Anaerobes are organisms that can grow without oxygen. Some can live when oxygen is present (facultative) and some cannot tolerate even a trace of oxygen (strict or obligatory). Anaerobes are very prevalent, many are part of the normal human flora, and make up an estimated 50% of the earth's biota. Dozens of common infections are either exclusively anaerobic or are mixed aerobic/anaerobic. Some obligatory anaerobes may cause serious infections such as tetanus, gas gangrene, or botulism (through tainted food products). Therefore, isolation and identification of anaerobes are very important in clinical diagnoses and research, and in commercial processes such as canning, bottling (e.g. beer and other fermented beverages), and food fermentation. Anaerobic chambers have made a strong name for themselves over the past fifteen years as more and more labs have realized the cost savings in moving from vacuum jars or bags to anaerobic workstations. These labs have also seen significant improvements in successful culturing and identification. The SHEL LAB Bactron anaerobic and environmental chambers combine glove–free handling of samples with a consistent, oxygen-free environment that promotes faster sample turnaround. Modular equipment within the chamber facilitates the completion of basic work flow procedures from unpacking of materials to inoculation, incubation, inspection, and recovery.

Bactron Anaerobic/Environmental Chambers

Patented, Glove–Free, Sample Handling

Bactron chambers allow efficient and dexterous, glove–free handling and inspection of samples. The advanced, ergonomic arm port design ensures comfort and minimizes user fatigue during extended working sessions in the chamber.



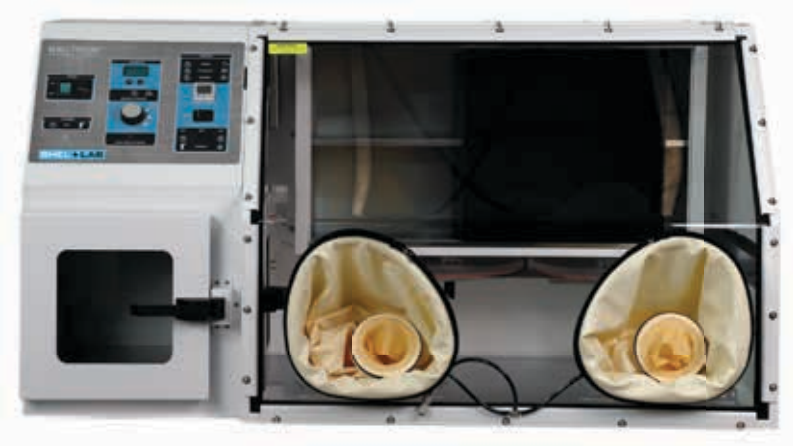
Variety of Models

A selection of five Bactron models lets you choose the sample incubation capacity and workspace area that you need, while offering substantial cost savings over disposable-type sample handling. Bactron chambers pay for themselves quickly and improve the quality and reliability of laboratory results.

Quality Construction

Bactron chambers are constructed of heavy-duty, stainless steel components to ensure chamber integrity and rigid Plexiglas front walls for an unobstructed view of the interior workspace. The stainless steel, pass box slide and workstation floor can withstand significant wear and tear and still maintain an aesthetically pleasing and cleanable finish. Visit www.shellab.com to see a video overview of Bactron features.

Bactron Anaerobic/Environmental Chambers



Key Features

- Gloveless design
- Incubator separate from working chamber
- Exclusive condensate controller
- Manual or automatic air lock
- Palladium catalyst cartridge
- Five standard models
- Exclusive gas connections
- Twenty four month warranty*

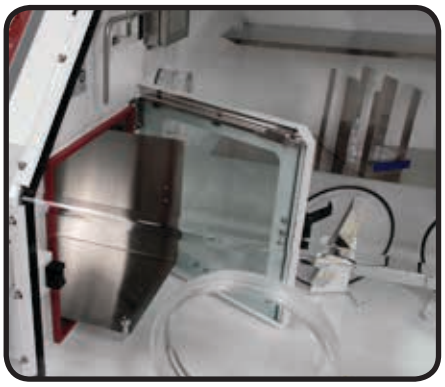
*Twelve month warranty on BactronEZ

Greater Efficiency for a Variety of Applications

Improved Productivity

Research and clinical laboratories that are handling even small volumes of anaerobic samples may save substantial amounts of time and money by using permanent workstations rather than disposable pouches and jars. With anaerobic chambers, productivity is further improved by an up to 50% reduction in sample turnaround time.

Simplified Access and Use



Bactron chambers enable a simplified workflow. The air lock module automatically exchanges room air for Anaerobic Mixed Gas (AMG), making sample transfer easier and safer:

1. Load samples into the air lock through the outer air lock door.
2. Activate the automatic air lock switch and place arms into sleeves. Perform the sleeve entry procedure using the foot pedals.
3. Open the arm port doors and insert arms into chamber. Store arm port doors in the convenient holders located inside the chamber.
4. Perform working procedures; load or unload incubator.
5. Pick up the arm port doors when exiting the chamber. Cover the arm ports and seal them before removing arms from sleeves. Anaerobic environment integrity is assured and maintained. Visit www.shellab.com to see a video on how to get started on using a Bactron chamber.

Notable Features of Bactron Anaerobic Chambers

Patented Cuffs
Comfortable, sleeve cuffs seal around the operator's arms to permit barehanded manipulation of plates and specimens inside the working chamber. The elimination of bulky gloves makes work more comfortable and efficient. Latex gloves may be worn, if desired.

Foot Pedals*
Convenient foot pedals are used by the operator to evacuate the sleeves before entering the working chamber.

Arm Port Doors
Sealed, access doors are removed when entering the working anaerobic chamber. The doors are kept on holders inside the chamber while the user's arms are inserted into the sleeves. The operator replaces and seals the doors when leaving the chamber, thus closing the system and maintaining a strict anaerobic environment.

Sliding Shelves
A shelf inside the air lock module slides into the chamber and makes loading of materials and samples easier.

Gas Connections
Each Bactron anaerobic chamber is equipped to operate as either a one gas or two gas system. One may use Anaerobic Mixed Gas (AMG) (5% carbon dioxide, 5% hydrogen, and 90% nitrogen) or may have the flexibility of using one tank of AMG and a second tank of nitrogen. For high volume users, two gas operation would be more economical. Gas consumption depends on the frequency of air lock usage, number of chamber entries and exits, and user work technique. Typically, one gas tank (200 cu. ft.) should last approximately 14 – 18 days.

Microprocessor Controls
Electronic controls operate a pre-programmed sequence to provide the desired chamber atmosphere. The air lock may be operated automatically or manually. Gauges and visual indicators show pressure, temperature, and cycle status.

Oxygen Catalyst and Humidity Controls
The anaerobic chamber atmosphere circulates through a condensate removal system and then through a catalyst that eliminates any trace amounts of oxygen. High relative humidity is maintained, while condensate moisture is removed, without the use of desiccants that could dehydrate media and samples.

Pressure Controls
The chamber is equipped with an automatic pressure control (manometer) that provides positive pressure at approximately three inches of water and gives a quick, visual check of the pressure level.

Revolving Shelves
The BACTRON600 and 900's large incubator contains a convenient revolving shelf that makes efficient use of the available storage space. The incubator in the BACTRON300 is inside the chamber at the top, rear, thereby maximizing working space underneath.

Microscope Adapters
An optional microscope adapter is available for the Bactron chambers. The adapter slides from side to side on the glass viewing wall so that a microscope may be positioned for close inspection of samples (microscope sold separately).

Vacuum Pumps*
An integral vacuum pump provides rapid evacuation of air from the air lock module for replacement by the inert gas mixture. One pump and a gas regulator are standard accessories for Bactron chambers.

External Lights*
An adjustable, ultra-bright LED light fixture that illuminates the chamber interior through the glass ceiling is available on select Bactron models.

Training Workshops*
Basic product training and operator training in anaerobic bacteriology and are included with each Bactron purchase (USA only).

*Optional on BactronEZ model only

Bactrox Hypoxia Chamber

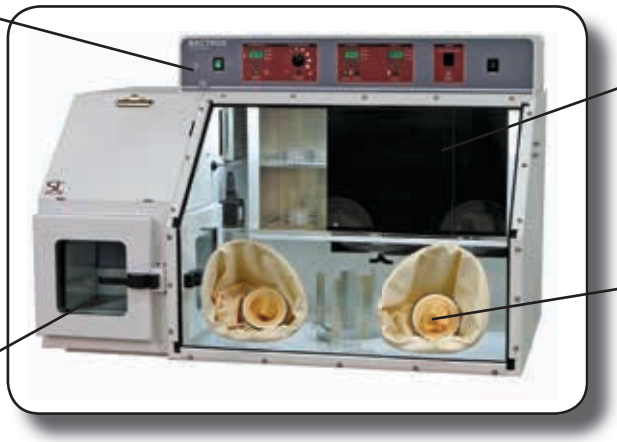
The SHEL LAB BACTROX offers precise oxygen and carbon dioxide control in a range from 1% to 20% for microaerophilic bacteriology and hypoxic tissue or cell culture applications. Unlike a tri-gas incubator, the BACTROX allows for microaerophilic bacteriology and hypoxic tissue or cell culture work to be performed in desired oxygen conditions throughout all culturing processes. The BACTROX is a complete workstation so bacteria and cells are likely to grow faster and show less damage.

Advanced Atmospheric PID Controller

- Highly Accurate Zirconium Dioxide Oxygen Sensor
- CO_2 Control & Logging
- O_2 Control & Logging
- Ambient Air Pump
- Standard Tanks

Large Pass Box

- Vacuum-less Pass Box
- 60 Second Cycle Time
- 90 Plate Capacity



Independent Incubator
(5°C above ambient to 70°C)

- Temperature Control & Logging
- 300 Plate Capacity

Vacuum-Less Sleeve Entry

- Quick Access to Cultures
- No Vacuum System
- No Foot Pedals

Features and benefits of the Bactrox Hypoxia Chamber:

- Ultra Bright LED Examination Lights
- Stainless Steel Body Construction
- Independent Gas Controls
- RS232 Data Collection
- Condensation Control
- Immediate Access to Workspace via Sleeves
- PC Calibration of Oxygen Sensor

BACTRON Specifications

BACTRON Model *-2 denotes 230V*	BACTRONEZ BACTRONEZ-2	BACTRON300 BACTRON300-2	BACTRON600 BACTRON600-2	BACTRON900 BACTRON900-2	BACTROX BACTROX-2
Exterior Dimensions (w x d x h)	48.7" x 31.3" x 26.5" 124 x 79.5 x 67.3 cm	61.3" x 31.3" x 26.5" 155.7 x 79.5 x 67.3 cm	88.2" x 31.3" x 26.5" 224 x 79.5 x 67.2 cm	88.2" x 31.3" x 29.5" 224 x 79.5 x 74.9 cm	48.7" x 31.3" x 32.5" 124 x 79.5 x 82.5 cm
Interior Dimensions* (w x d x h)	33" x 28.5" x 25.2" 83.8 x 72.4 x 64 cm	42.5" x 28.5" x 25.2" 108 x 72.4 x 64 cm	42.5" x 28.5" x 25.2" 108 x 72.4 x 64 cm	42.5" x 28.5" x 25.2" 108 x 72.4 x 64 cm	33" x 28.5" x 25.2" 83.8 x 72.4 x 64 cm
Chamber Volume	13.7 cu. ft. / 388 L	17.6 cu. ft. / 498 L	17.6 cu. ft. / 498 L	17.6 cu. ft. / 498 L	13.7 cu. ft. / 388 L
Air Lock (Access) (w x d x h)	9" x 10.7" x 9" 23 x 27.2 x 23 cm	12" x 13.5" x 12" 30.5 x 34.3 x 30.5 cm	12" x 13.5" x 12" 30.5 x 34.3 x 30.5 cm	12" x 13.5" x 12" 30.5 x 34.3 x 30.5 cm	9" x 10.7" x 9" 23 x 27.5 x 23 cm
Air Lock Volume	0.5 cu. ft. / 14 L	1.1 cu. ft. / 31 L	1.1 cu. ft. / 31 L	1.1 cu. ft. / 31 L	0.5 cu. ft. / 14 L
Incubator (w x d x h)	27.5" x 8" x 13.5" 70 x 20 x 34 cm	27.5" x 8" x 13.5" 70 x 20 x 34 cm	23.5" diam x 18.5" 59.7 diam x 47 cm	Side: See BACTRON600 Rear: See BACTRON300	27.5" x 8" x 13.5" 70 x 20 x 34 cm
Incubator Volume	1.7 cu. ft. / 48 L	1.7 cu. ft. / 48 L	4.6 cu. ft. / 130 L	6.3 cu. ft. 178 L	1.7 cu. ft. / 48 L
Electrical					
Volts/Hertz	110-120/50-60	110-120/50-60	110-120/50-60	110-120/50-60	110-220/50-60
Watts	1100/1440	1100/1440	1350/1920	1350/2400	1100/1440
Phase/Amps	Single/9/6	Single/9/6	Single/11/8	Single/16/10	Single/9
Interior Outlets	2, 1 amp. Max (120V) 1, 1 amp. Max (230V)	2, 1 amp. Max (120V) 1, 1 amp. Max (230V)	2, 1 amp. Max (120V) 1, 1 amp. Max (230V)	2, 1 amp. Max (120V) 1, 1 amp. Max (230V)	2, 1 amp. Max (120V) 1, 1 amp. Max (230V)
Exterior Outlet, Vacuum	5 amp. Max	5 amp. Max	5 amp. Max	5 amp. Max	2
TUV Approved (CE,UL,E)	Yes	Yes	Yes	Yes	Yes
Incubator Performance					
Temp. Range	Amb + 5°C to 70°C	Amb + 5°C to 70°C	Amb + 5°C to 70°C	Amb + 5°C to 70°C	Amb + 5°C to 70°C
Temp. Uniformity	(+/-) 0.5°C	(+/-) 0.5°C	(+/-) 1°C	(+/-) 0.5°C/1°C	(+/-) 0.5°C
Miscellaneous					
Petri Plate Racks Included	optional	8	10	10	7
Optional Stand Dimensions (wxdxh)	49" x 30" x 30" 124.5 x 76.2 x 76.2 cm	61.5" x 30" x 30" 156 x 76.2 x 76.2 cm	88.5" x 30" x 31" 225 x 76.2 x 78.7 cm	88.5" x 30" x 31" 225 x 76.2 x 78.7 cm	49" x 30" x 30" 124.5 x 76.2 x 76.2 cm
Plate Capacities	300	300	600	900	300

*The height dimension of the interior is a subjective working height. This measurement reflects the dimension from the floor of the chamber to the top of the body without regard for shelves, interfering incubators or the airlock door. **220 volt units are supplied with one interior outlet.
All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology. We reserve the right to change specifications at any time.

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Optional Accessories

Cuffs	3600502 (L)/3600501 (M)/3600500 (S)
9990738M	Sleeve Assembly Bactron - Medium Cuff
9990515	BACTRONEZ Microscope Adapter
9990535	BACTRON300 Microscope Adapter
9990511	BACTRON600/900 Microscope Adapter
CAT180	Catalyst Regenerating Oven
9490578	Anatox Fan

Caster stands are available for each model
Additional accessories are available at www.shellab.com

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