CONTAINMENT SOLUTIONS

bioBUBBLE

CONTROLLED ENVIRONMENTS | CUSTOM SOLUTIONS

bio|BUBBLE

Thank you for your interest in bio**BUBBLE**® products and technology. bio**BUBBLE** has over 25 years experience designing custom ultra-clean and containment environments for a wide range of applications. We have projects worldwide, from minor renovations to complete turnkey solutions. We can help you with your project from concept to completion.

We have the solution to transform your space efficiently & creatively.

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NEGATIVE PRESSURE CONTAINMENT ENCLOSURES

bio**BUBBLE** Containment Enclosures are soft-walled, negative pressure enclosures with 50 – 100 air changes per hour of HEPA-filtered exhaust. bio**BUBBLE** Containment Enclosures are completely customizable, and constructed in any size or configuration to suit the specific needs of your space and research. Available in two basic design styles: **Freestanding Containment Rooms** and **Architecturally Renovated Containment Rooms**.

bio**BUBBLE** Containment Rooms are constructed using:

- a modular anodized aluminum framework
- vinyl skin with Velcro®-type connections
- blowers with long lasting, energy efficient, electrically commutated motors
- 99.99% efficient HEPA filters

bio**BUBBLE** Containment Enclosures are economical and durable enough to withstand the most demanding research and manufacturing environments. Some of the very first bio**BUBBLE** enclosures have been in continuous operation, 24 hours a day, 7 days a week, for over 20 years.

Architecturally Renovated Containment Room

Hybrid Freestanding Enclosure

50 ⇄ 100

Air changes per hour of HEPA-FILTERED
exhaust under negative pressure

APPLICATIONS

BSL-2, BSL-3 & BSL-4 applications • **ABSL-2, ABSL-3 and ABSL-4 levels (P2, P3, and P4)** • BSL-3-Ag • Quarantine environments

Surgical Suites or Procedural Areas • Isolation of laboratory equipment

Biocontainment of pollens and plant matter for horticultural research

Food Safety Research

FEATURES & BENEFITS

Superior Containment: High levels of HEPA-filtered exhaust and mass air displacement provide the best containment of airborne pathogens, contaminated dust, allergens, and other airborne contaminants. The re-circulated HEPA exhaust also provides an added barrier of cleanliness surrounding the containment environment.

User Friendly/Comfortable: Clear vinyl walls facilitate supervision by allowing complete visual access without the need to enter the containment environment. The clear vinyl walls also reduce feelings of isolation and claustrophobia, which can occur in standard hard walled containment rooms. Communication is improved via visual access, creating user-friendly environment.

Environmental Separation/Isolation: bio**BUBBLE** Containment Rooms provide environmental separation and isolation of groups, species or studies within the same room or shared space.

Cost Savings: bio**BUBBLE** Containment Rooms, when used as an alternative to hard walled construction in both new and renovated facilities, reduce capital costs by 30% - 45%. This investment is also completely transportable and can be relocated or retrofitted as location or applications change.

Flexible Construction: bio**BUBBLE** Containment Rooms are mounted on high quality, hospital grade casters, making them extremely portable and easy to move. Modular designs are also available, providing the benefit of docking multiple rooms together to increase size as needed.

Installation and Training: bio**BUBBLE** offers complete on site installation and training performed by qualified bio**BUBBLE** technicians, with little to no interruption of the workflow in your facility.

HEPA Filtration: 99.99% on 0.3 micron particles- military std MIL-STD-282/ industry std IEST-RP-CC-034

Easy to Clean: Zippered and Velcro®-type access points make bio**BUBBLE** Containment Enclosures easy to clean and maintain. Enclosures tolerate all standard sterilants and disinfectants.

Energy Efficient: bio**BUBBLE** Containment Enclosures are extremely energy efficient. Power Units use electronically commutated motors for energy savings.

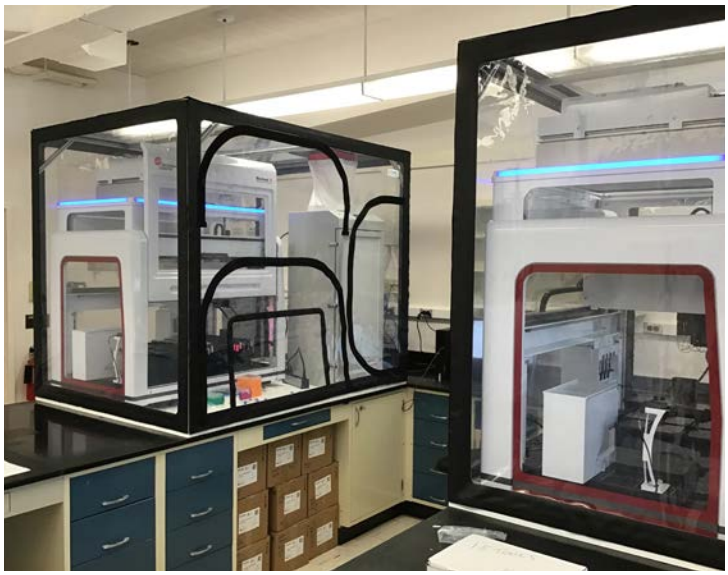
Options: Anterooms, multiple door styles, access control system & keypads, pass through boxes, custom docking systems, frame mounted shelving and tables, removable perimeter rodent barriers, ports for ventilated caging, auto watering systems, and heat resistant, opaque, or tinted vinyl.

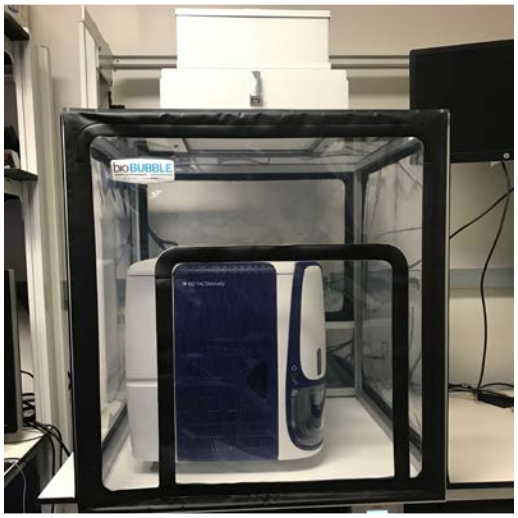
BENCHTOP BIOCONTAINMENT ENCLOSURES

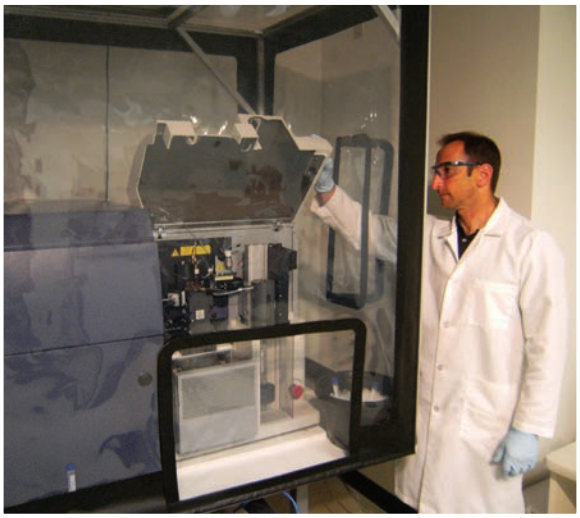
The bio**BUBBLE** Benchtop Biocontainment Enclosure (BBE) provides high levels of primary containment for BSL-2 and 3 applications. BBE's are ideal containment solutions for cell sorters, incubators, centrifuges, microscopes, or any benchtop laboratory equipment.

The BBE captures aerosols and other airborne particulates generated during laboratory procedures.

- Airflow 75+ fpm through the user access.
- 6-8 air changes per minute with little turbulence.
- Air is drawn into the BBE on all sides, decreasing uncirculated air pockets.
- Minimal noise and vibration







CAPTURE, CONTAIN & HEPA FILTER equipment that generates aerosols.

FEATURES

Quiet: Flexible material minimizes noise and vibration.

Energy Efficient: Fans are 75% efficient. Low back pressure allows fans to run at lower speeds to decrease energy use. Clear construction transmits ambient light, eliminating the need for an internal light source to maintain a low heat load and reduce electrical consumption.

Durable: Materials withstand the effects of harsh laboratory sterilants and disinfectants.

Easy Access: Innovative design facilitates access through sides of enclosure for maintenance and calibration. Custom access ports for use and service.

Remote Display: Monitors HEPA life, airflow and temperature.

Small Footprint: Custom sized to fit equipment.

Customizable: Options include size and style, access panel location, remote display, magnetic or hook and loop closures. Decon bags available for use with hydrogen peroxide vapor, chlorine dioxide, etc.

TECHNICAL SPECIFICATIONS

Power: 110-240 VAC; 1.75 A

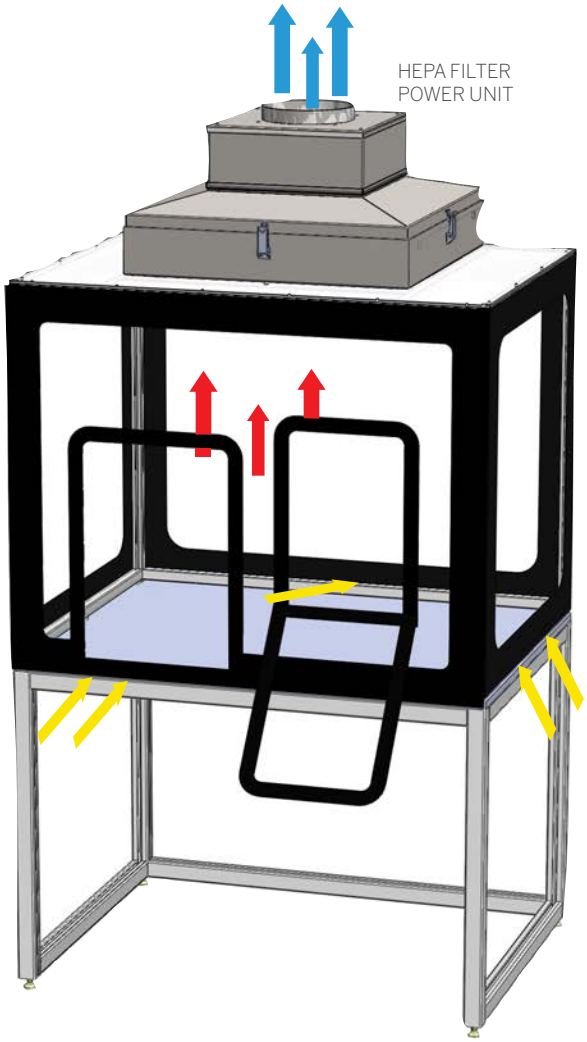
Airflow: 75+ fpm at user access

Heat load: 214 BTU/hr

Weight: Approx. 138 lbs

HEPA filtration: 99.99% or better on 0.3 micron particles, Military Std MIL-STD-282 / Industry Std IEST-RP-CC-034

HEPA replacement: Annual certification recommended



RED = CONTAMINATED AIR

BLUE = HEPA-FILTERED AIR

YELLOW = AMBIENT AIR

WORKSTATION

The bio**BUBBLE** Workstation is a portable, clean or contained environment. Negative Pressure Workstations provide transportable biocontainment and dedicated quarantine for materials or small populations. Positive Pressure Workstations provide clean isolation for small populations or materials. Use as a transport cart or a housing environment.

Workstations provide:

- Provide environmental separation between small groups or studies within the same space.
- Temporary or permanent housing within procedural rooms, surgical rooms and imaging areas.
- Can design to dock to directly to equipment for isolated transfer of materials and animals.

Options for shelves, battery backup to provide power during transport, clear or opaque vinyl

TECHNICAL SPECIFICATIONS

Power Requirements: 110-240 VAC, 1.75 Amps

Power: 84 Watts

Heat Load: 214 BTU/hr

Size: 56"W x 30"D x 80"H

Weight: 235 lb;278 lbs with the battery option

Airflow: Max 150 @115 Volts

HEPA filtration: 99.99% or better on 0.3 micron particles-

IEST-RP-CC-034, certify annually

ENCLOSURES FOR ROBOTS

bio**BUBBLE** containment enclosures for automated workflows provide personnel or product protection or both personnel and product protection with a flexible design. bio**BUBBLE** HEPA filtered containment and clean enclosures are custom designed in any size or shape for liquid handling robots, plate stackers, plate sealers, automatic pipettors or any other automated workflow.

FEATURES

Clear vinyl allows visual access to all sides of equipment

Soft walls reduce vibration

Easily moved

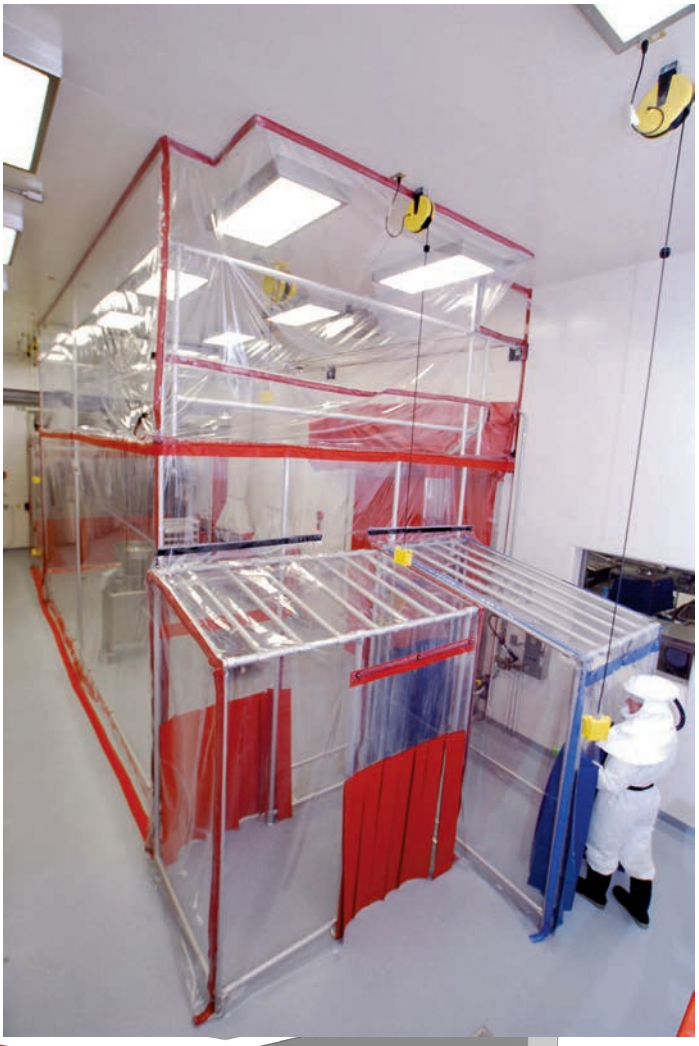
Specialized design to customize access, size and shape

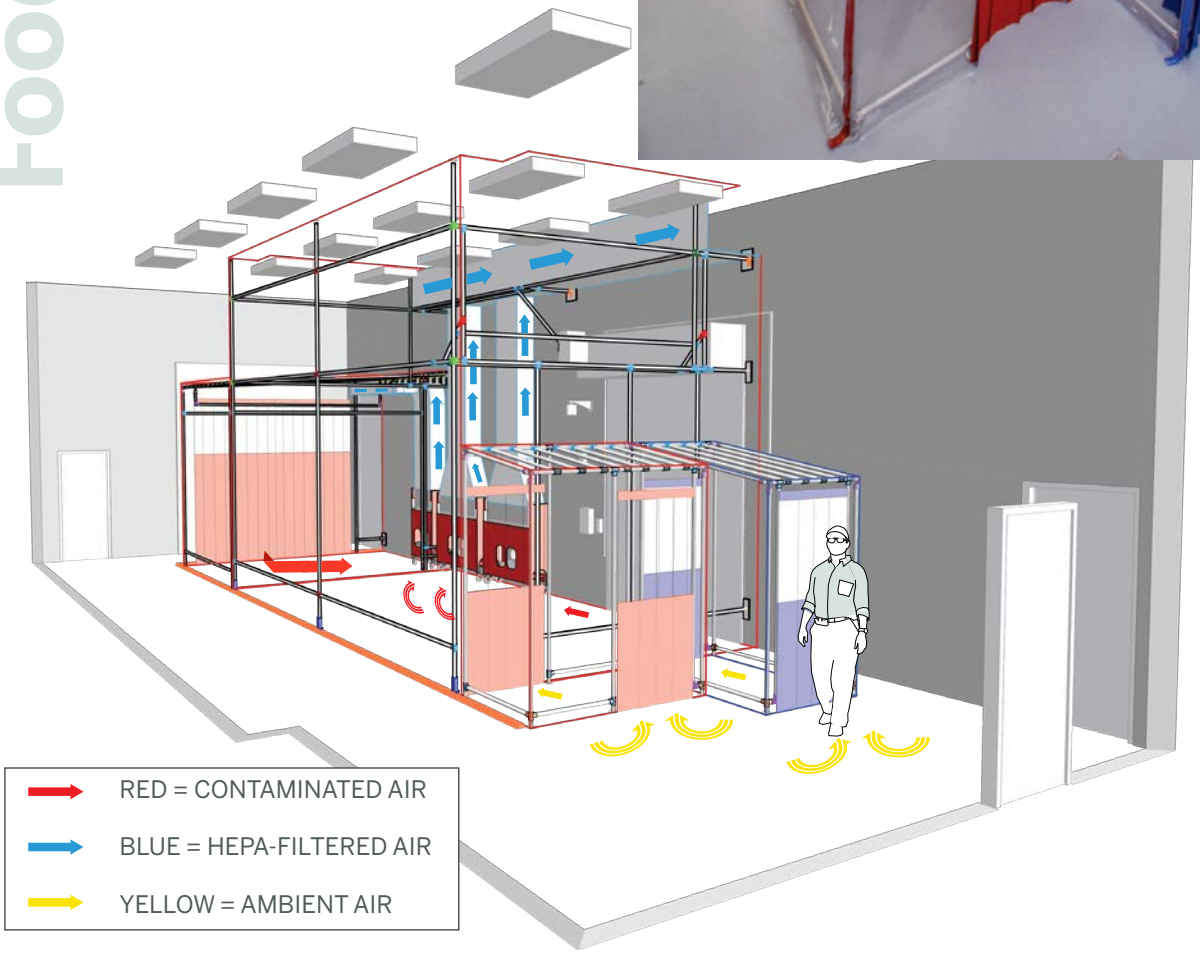
FLEXIBLE CONTAINMENT SOLUTIONS for laboratory automation.

KANSAS STATE UNIVERSITY
Containment Enclosure

CHALLENGE | To create a primary containment environment with the ability to handle large equipment and to provide liquid containment.

SOLUTION | Design and install a customized soft-wall enclosure reaching a height of 17' (5.2m) to accommodate oversized equipment. The enclosure also incorporates sloped ceilings for water runoff from equipment washdown procedures and has sealed vinyl connections and a spill berm at the floor for effluent containment.

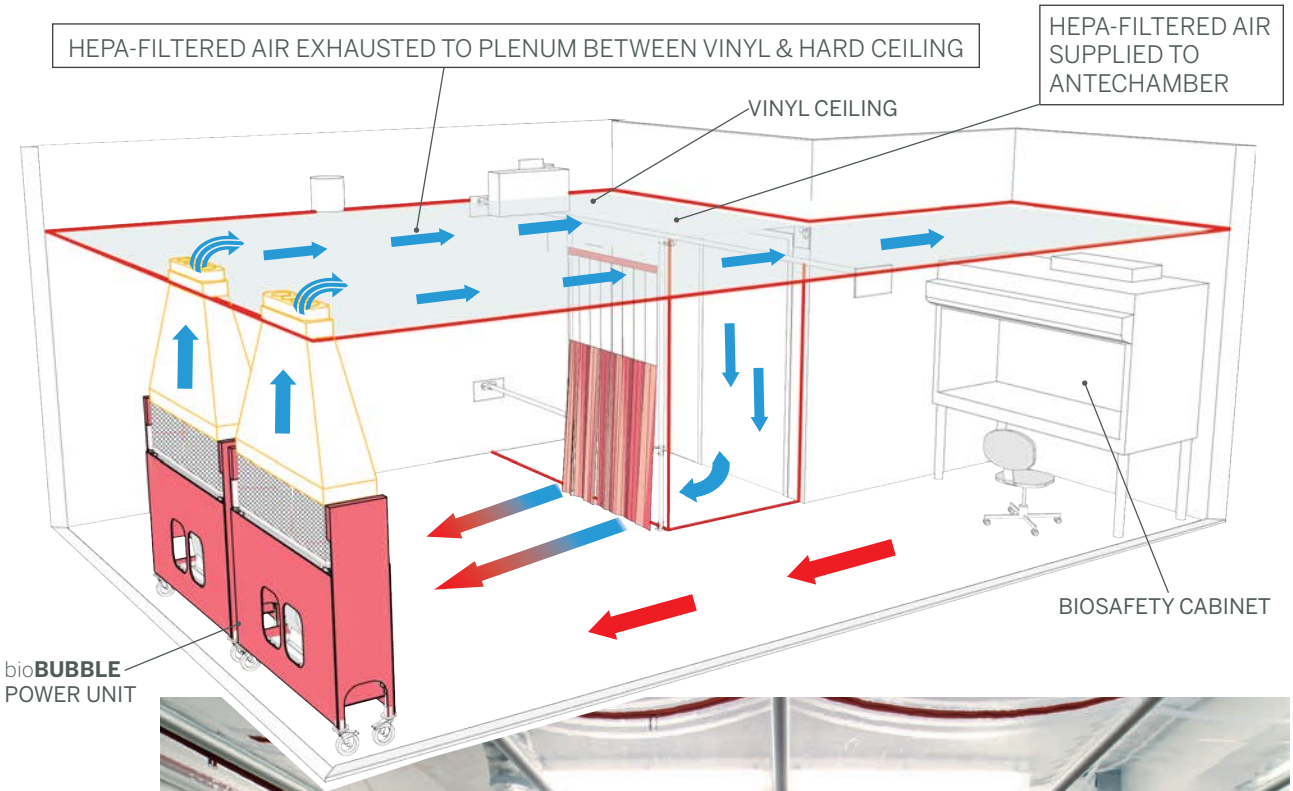




COLORADO STATE UNIVERSITY
BSL-3 Tuberculosis Research Laboratory

CHALLENGE | To economically renovate and create a primary containment environment within an existing space that will exceed ABSL-3 research guidelines.

SOLUTION | Create an environment that maximizes floor space by designing an architecturally renovated bio**BUBBLE** enclosure into the existing room. The custom, soft-walled, negative pressure environment includes HEPA-filtered exhaust and integrates an anteroom into the design for gowning/degowning procedures while creating a buffer zone between containment space and hallway.



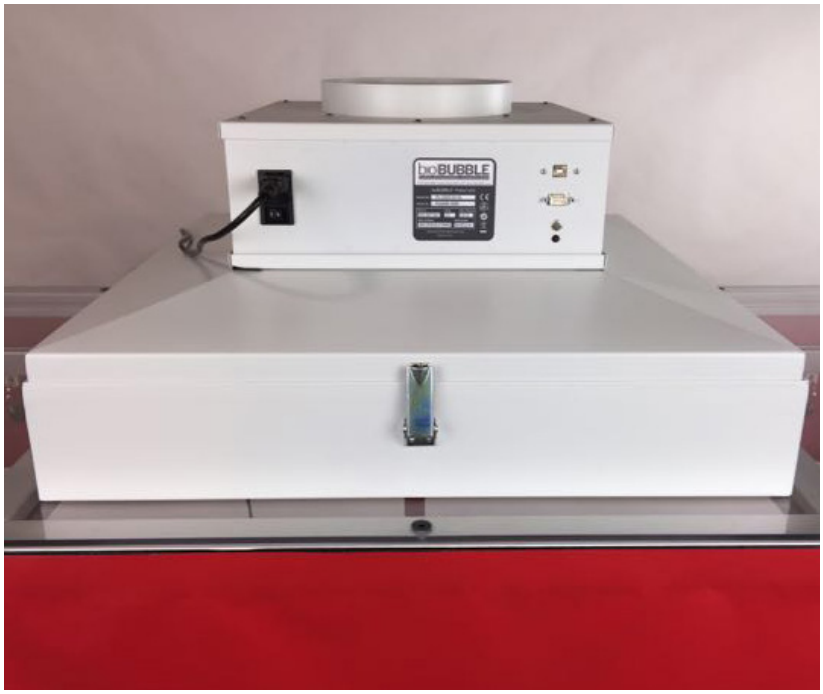
Primary Containment - Tuberculosis Research

Primary Containment - NHP BSL4 Select Agent

BIOMEDICAL RESEARCH FACILITY
NHP BSL-4 Select Agent

CHALLENGE | Provide primary separation between primate caging groups within a classified BSL-4 hardwall architectural space for scientific research.

SOLUTION | Custom freestanding enclosures with full access through front and sides for animal husbandry practices. The enclosure design also incorporates a clear vinyl ceiling and sides to allow ambient light transmission and promote noncontact socialization between caging groups. The ceiling mounted power unit maximizes available floor space and exhausts HEPA filtered air into the surrounding space.



ARCHITECTURAL RENOVATIONS

CUSTOM DESIGNED SOFT-WALL CLEAN ROOMS

ISOLATION ENVIRONMENT

HEPA-FILTERED CLEAN AIR EQUIPMENT

QUARANTINE ENVIRONMENTS

BIOSAFETY LEVELS 3 & 4

AIRLOCKS AIR SHOWERS

BEDDING DISPOSAL UNITS

ENVIRONMENTAL SEPARATION

TRANSPORT CARTS

PRIMARY CONTAINMENT

ARCHITECTURAL RENOVATIONS

CUSTOM DESIGNED SOFT-WALL CLEAN ROOMS

BIOSAFETY LEVELS 3 & 4

AIRLOCKS AIR SHOWERS

PRIMARY CONTAINMENT

ARCHITECTURAL RENOVATIONS

CUSTOM DESIGNED SOFT-WALL CLEAN ROOMS

CUSTOM DESIGNED BIOBUBBLE ENVIRONMENTS
ENCLOSURES ARE COMPLETELY CUSTOMIZABLE, AND CONSTRUCTED IN ANY SIZE OR CONFIGURATION TO SUIT THE SPECIFIC NEEDS OF YOUR SPACE AND RESEARCH.

PRIMARY OR SECONDARY CONTAINMENT
FOR ALL BIOSAFETY LEVELS

QUARANTINE ENVIRONMENTS
PROVIDE CONTAINMENT OF INCOMING ANIMALS WITH UNKNOWN HEALTH STATUS

SURGICAL SUITES & PROCEDURAL AREAS

ISOLATION OF LABORATORY EQUIPMENT
CELL SORTERS, CHROMATOGRAPHY EQUIPMENT, PLATE READERS, LIQUID HANDLING ROBOTS, DNA SEQUENCERS, DNA SYNTHESIZERS OR ANY OTHER LABORATORY EQUIPMENT

BIOCONTAINMENT OF POLLENS AND PLANT MATTER
FOR HORTICULTURAL RESEARCH

FOOD SAFETY RESEARCH

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