

CONTAINMENT SOLUTIONS

bio|**BUBBLE**

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.



contents

p2-3

NEGATIVE PRESSURE CONTAINMENT ENCLOSURES

bio**BUBBLE** Containment Rooms are soft-walled negative pressure enclosures powered by 50- 100 air changes per hour of HEPA-filtered exhaust. bio**BUBBLE** Containment Enclosures are completely customizable and constructed in any size, shape or configuration to suit the specific needs of your space and research.

p4-5

BENCHTOP BIOCONTAINMENT ENCLOSURES

bio**BUBBLE** Benchtop Biocontainment Enclosures provide high levels of containment for all BSL-2 and BSL-3 applications. Enclosures are ideal primary containment solutions for cell sorters, incubators, centrifuges, microscopes, or any benchtop laboratory equipment.

p6-8

CUSTOM SOLUTIONS

- KANSAS STATE UNIVERSITY
- COLORADO STATE UNIVERSITY / BSL-3 TB Research Lab
- BIOMEDICAL RESEARCH FACILITY / NHP BSL-4 Select Agent

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 the feelings of isolation and claustrophobia, which can occur in standard hard walled containment rooms. Communication is improved via visual access, which creates a user-friendly environment.

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

Cost Savings: bioBUBBLE 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: bioBUBBLE 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: bioBUBBLE offers complete on site installation and training performed by qualified bioBUBBLE 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 bioBUBBLE Containment Enclosures easy to clean and maintain. Enclosures tolerate all standard sterilants and disinfectants.

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

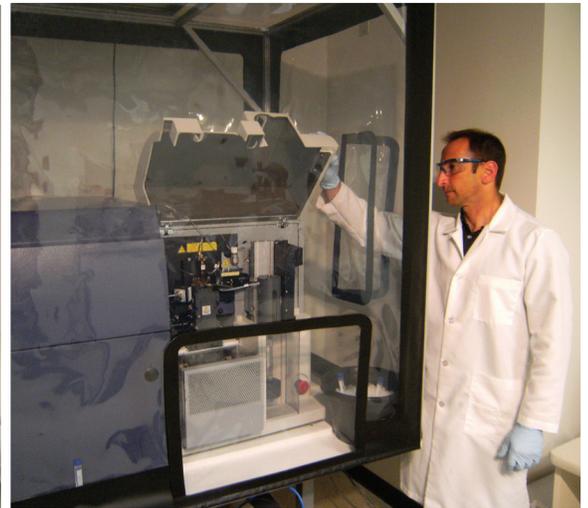
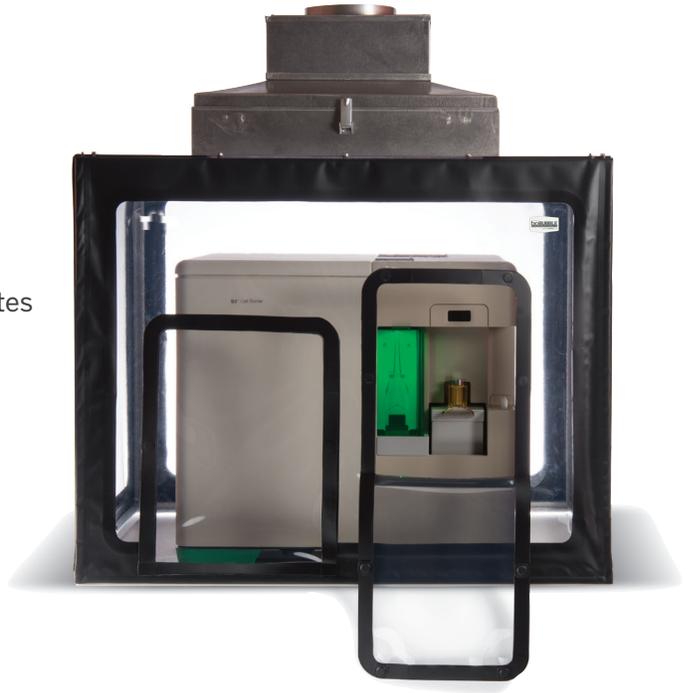
Options: Anterooms, multiple door styles, access control system & keypads, pass through boxes, custom docking systems, frame mounted shelving and tables, removable perimeter rodent barriers, ports for ventilated caging, auto watering systems, and heat resistant, opaque, or tinted vinyl.

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 primary 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 and surpasses Class 1 specifications:

- 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.



EASY TO USE
EXCEEDS CLASS 1
STANDARDS while minimizing
noise & vibration

FEATURES

Quiet: Flexible material minimizes noise and vibrations.

Energy Efficient: Fans are 75% efficient. Low back pressure allows fans to run at lower speeds to decrease energy usage. 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

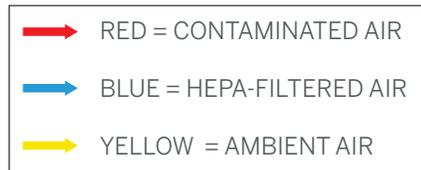
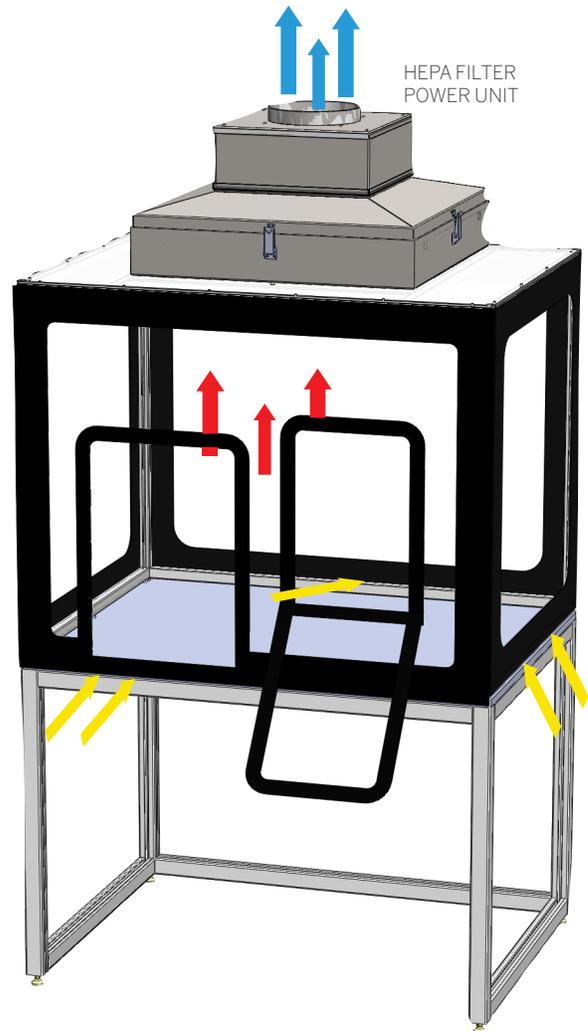
Airflow: 75+ fpm at user access

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

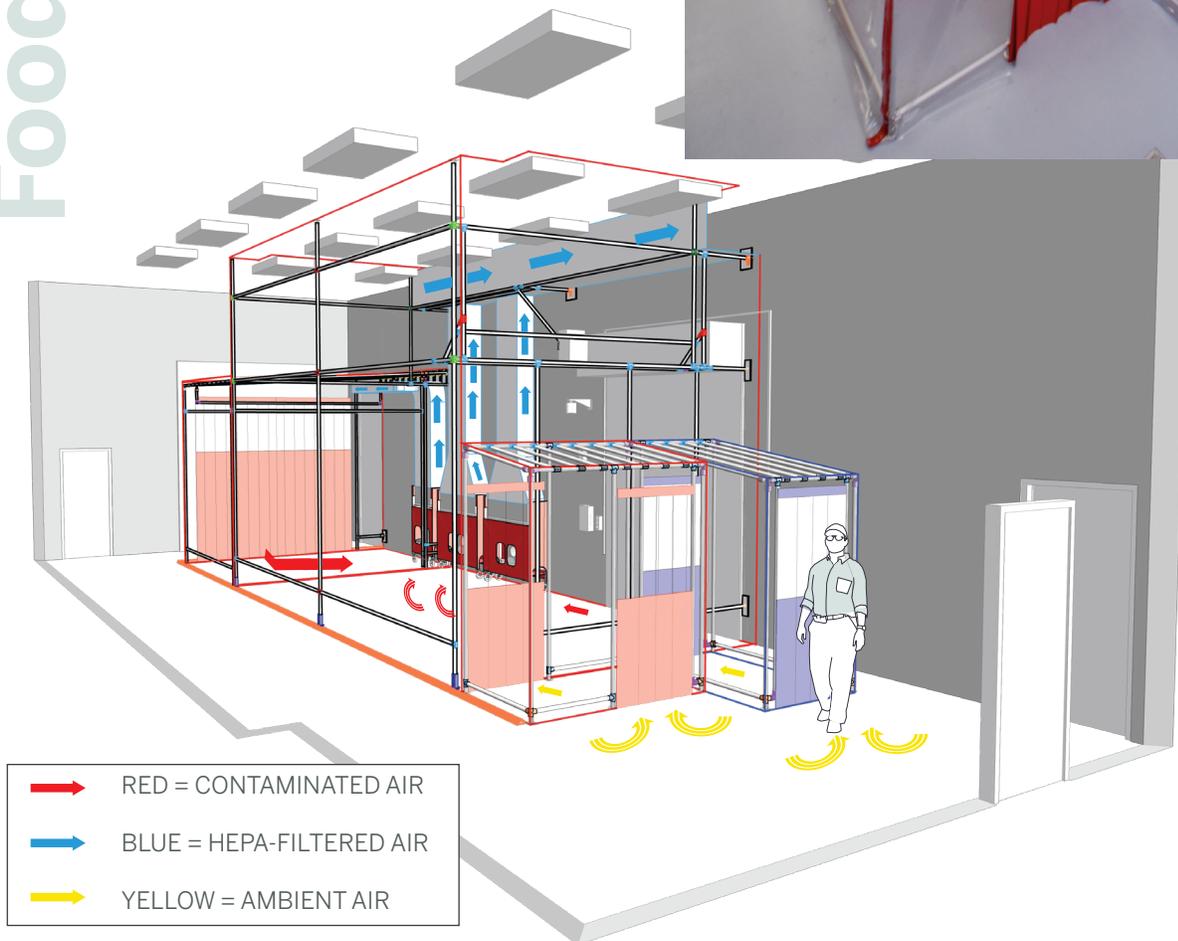
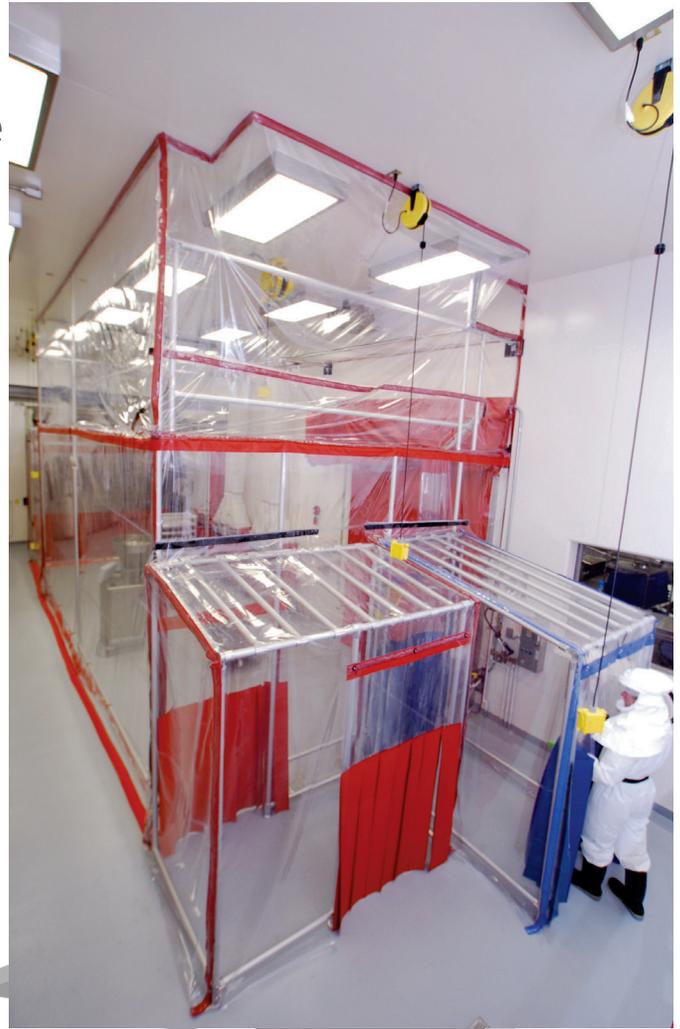


Primary Containment - Food Safety Research

KANSAS STATE UNIVERSITY Containment Enclosure

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

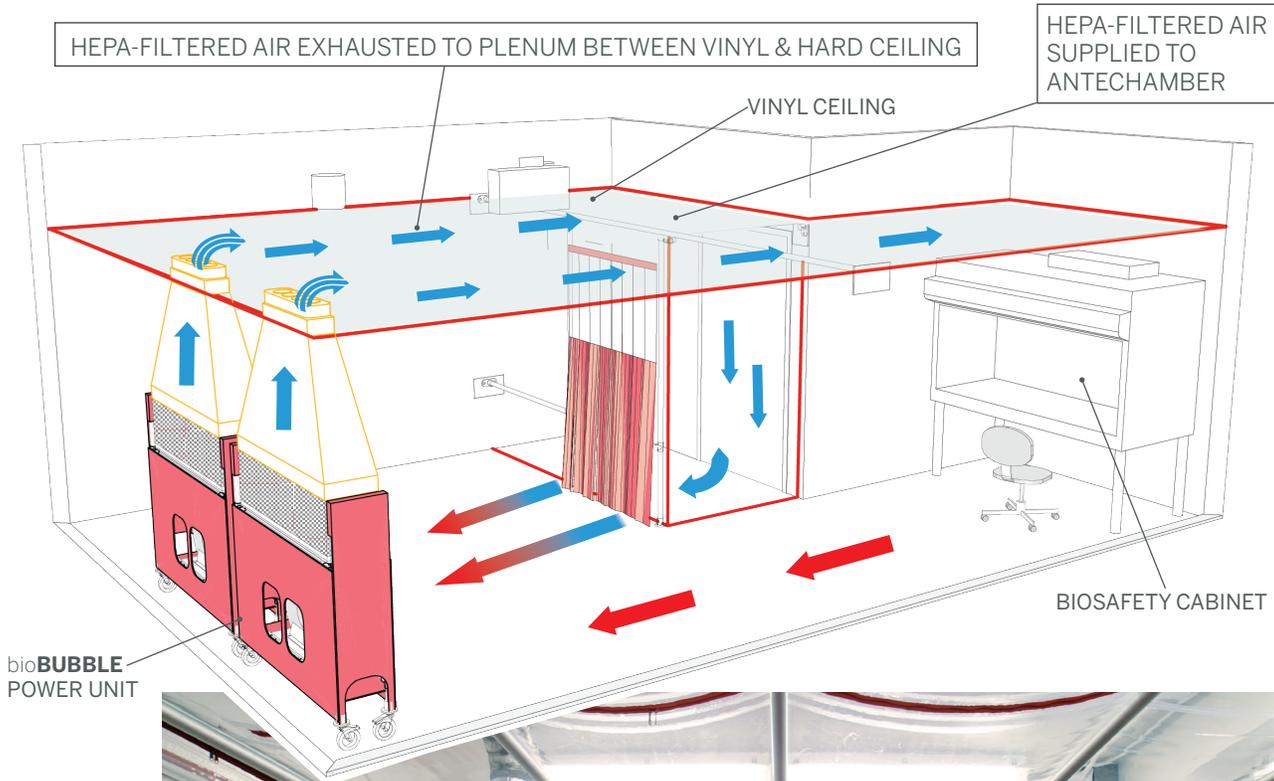
SOLUTION | Design and install a customized soft-wall enclosure reaching a height of 17' (5.2m) to accommodate oversized equipment. The enclosure also incorporates sloped ceilings for water runoff from equipment washdown procedures and has sealed vinyl connections and a spill berm at the floor for the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



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 bioBUBBLE 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 - NHP BSL-4 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
ISOLATION ENVIRONMENT

b|B

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

bio|**BUBBLE**

T 970.224.4262 | sales@biobubble.com | www.bioBUBBLE.com