



## RESEARCH MODELS

# Semi-Rigid and Flexible Film Isolators

### Typical Uses for Isolators

- Quarantine animal housing
- Containment of animals exposed to infectious agents, toxins, carcinogens, or other biohazardous materials
- Maintenance of foundation colonies of transgenic or knockout animals
- Housing and production of immunodeficient, germ-free, transgenic, axenic, defined flora rodents, and gnotobiotic animals
- Provide alternative environments for animals, biological materials, and microorganisms (e.g., temperature, humidity, light, specialized atmospheres, etc.)
- Satellite facility animal housing

For over a century, isolators have been used to provide a defined environment for maintaining animals, biological materials, and microorganisms. In that time, two types of isolators have become the most common: semi-rigid and flexible film.

Unlike other housing systems, animals held in an isolator are not exposed to an uncontrolled environment unless they are purposefully removed from the isolator. Additionally, animals with different health statuses can be housed in adjacent isolators with no risk of cross-contamination. From an operational standpoint, isolators require minimal training, are mobile enough to be placed in any conditioned space, and do not require specialized clothing or equipment.

### Construction

The semi-rigid isolator is made of 3/8" impact-resistant polypropylene on all but one side. All seams are welded to ensure maximum strength while eliminating crevices where dirt and debris could accumulate. The flexible front is constructed of a sheet of segmented polyurethane with integrated glove sleeves. The front is held in place using a compression fitting comprised of a compression plate, a channel, and a gasket. This design allows easy replacement of the polyurethane panel, should it be required. Gloves are attached to the isolator sleeve using o-rings around a plastic cuff. A sleeve clamp is used to seal off the glove to the isolator, allowing aseptic replacement of the gloves during operation.

An 18" port with clamp-locked, gasketed doors allows for the easy transfer of materials into and out of the isolator while maintaining microbiological integrity. An integrated lighting system provides internal illumination of the isolator. The 3' and 6' flexible film isolators are designed to accommodate plastic rat or mouse cages on a three-tier plastic seismic rack that stands free on the floor of the isolator. The isolator comes with a segmented polyurethane flexible bag with two sets of access gloves integrated into the bag wall. This flexible unit also includes a hermetically sealed double door transfer port assembly. The isolators are designed to be stackable to conserve space. Additionally, ergonomically adjustable stands are available to hold multiple isolators.

EVERY STEP OF THE WAY



### Additional Support

- On-site setup and training schedule
- SOPs available upon request

### Standard Features

Isolators are equipped with plastic shelving or adjustable pipe racking designed to accommodate various cage types. Cages and related equipment are not supplied with the isolator but can be ordered through Charles River. Supply and exhaust air to the isolator is passed through disposable HEPA filters (included). Each isolator has an integrated lighting system that can be changed from the outside of the isolator.

A series of small sealed ports are strategically placed on the outside of the isolator to allow insertion of electrical connections, monitoring lines, sampling tubing, and other research-related connections without breaching the microbiologic or environmental integrity of the isolator. Isolators are designed to be stacked two units high. The 3' semi-rigid isolator is available in right- and left-handed versions to facilitate the stacking process. Isolators can be provided either fully or partially assembled.

The semi-rigid isolator can be operated in either a positive or negative pressure mode using a central HVAC system or an optional portable blower. Optional exhaust shrouds and other coupling devices are available to allow exhaust air to be directed into a central building exhaust.

### Available Sizes

#### 3' Semi-Rigid Isolators

- Overall Dimensions:
  - 55" L x 36.5" W x 37" H (left-handed)
  - 57" L x 36.5" W x 37" H (right-handed)
- Capacity: 18 mouse cages or 9 rat cages

#### 3' Flexible Film Isolators

- Overall Dimensions: 48" L x 36" W x 37" H
- Capacity: 15 mouse cages

#### 6' Flexible Film Isolators

- Overall Dimensions: 78" L x 34.75" W x 41" H
- Capacity: 30 mouse cages or 12 rat cages

#### 6' Semi-Rigid Isolators

- Overall Dimensions: 91" L x 36.5" W x 47" H
- Capacity: 48 mouse cages or 18 rat cages

#### 8' Semi-Rigid Isolators

- Overall Dimensions: 121" L x 40" W x 47" H
- Capacity: 64 mouse cages or 27 rat cages

### Isolator Accessories

- Portable blower with adapter
- Magnehelic gauge for sensing static pressure across the isolator
- Adjustable isolator stand - holds two 6' or 8' semi-rigid isolators or four 3' semi-rigid isolators
- Optional stand available for 6' flexible film unit
- Syringe introduction port
- Autoclavable cylinder - used for an aseptic introduction of feed, bedding, and water for germ-free operation
  - Overall Dimensions: 24.5" L x 16" H x 12" W