

Biocontainment IVC System

The biological safety mouse or rat IVC cage is developed for raising infected animals in the laboratory. It prevents the release of contamination from the cage to the environment and prevents cross-infection between different cages. It works with the pressure difference control from -20pa in the relative laboratory.



Designed To Prevent The Release Of Contamination From The Cage To The Environment And Prevents Cross-Infection Between Different Cages



The biocontainment IVC system is mainly composed of three parts:

- Biocontainment Ventilator
- Biocontainment Cage
- Rack

FEATURES

- The number of ventilation in the cage: ≥ 50 times/h;
- Air velocity in the animal living area in the cage not more than 0.2m/s;
- The pressure difference inside and outside the cage: the negative pressure type is not more than -20Pa;
- Noise: less than 60dB;

IVC BIOCONTAINMENT VENTILATOR

- Silent operation fans with high-efficiency motors. Fan speed adjusted automatically to meet the set value of exhaust CMH.
- Different Parameters like RH, Temperature, and CMH can be monitored through a Programmable Logic Controller with a TFT touch screen of size 7".
- PLC error indication provision with the option of Manual Mode to run the system without the need for PLC and prevent immediate failure of the system due to PLC error.
- Error logs and data logs options.
- Facility to set upper and lower limits for detecting error logs for temperature, RH & ACH.
- Easy selection of cage model, number of cages, ACH, negative pressure mode.
- Run Hour Counter with time-based change filter notice.
- Alarm on clogging of HEPA filter.
- A ventilator is fitted with pre-filter and HEPA filters which can be disassembled and replaced;
- The unit is fitted with a micro-pressure differential sensor to detect the pressure difference between the cage and ambient conditions.
- Multiple ventilator connectivity and control from the computer through an Ethernet port. (Pre-req.: LAN connection, internet connection, Wi-Fi & modem in buyers' scope).
- Data logs are downloaded on the computer through an Ethernet port.
- Power supply: 220 V, Single Ph., 50 Hz, AC supply.
- Castor wheels: 4 nos. 3" caster wheels made of polyurethane with nylon polyamide wheel center with ball bearing, 2 wheels with padlock.
- The ventilator unit is fitted with a battery backup system for a backup of 3-4 hours in case of power failure.

BIOCONTAINMENT CAGE

Cage Tray: Made of Polysulfone/ polyetherimide material & provision for stacking.

Cage Lid: Fitted with auto-closure type valve for air supply and exhaust.

The cage lid is fitted with a pre-filter and HEPA filter so that all the air exhausted from the cage is HEPA filtered before being released to the ambient conditions.

The cage lid is fitted with a silicon gasket for making the lid and tray locking airtight.

The bottom of the cage has a large arc transition, and there is no dead angle for air circulation.

ACCESSORIES SUPPLIED WITH EACH SET

Water bottle of 300ml (mice) and 500ml (rat) of polysulfone with S.S. 316 cap

Cardholder

Cage grill in SS 304 construction

CAGE RACK

- The cage rack is made of 304 stainless steel structures.
- Soft connection structure design, the main air supply, and exhaust pipes can be easily disassembled and installed, which is convenient for cleaning and disinfection of the cage.
- Air supply and exhaust valve made of high-quality autoclavable technopolymer and silicon material.
- Common rails for mounting the cage in the rack are made of high-quality autoclavable polymer material and are fitted with docking indicators.
- Duct couplers and end caps in special-grade rubber construction.
- The Main Inlet air and outlet air header are made of S.S. 304 material and holders are made from Aluminum/Delrin material.
- 5" caster wheels made of polyurethane with nylon wheel center with ball bearing. 2 nos. free moving & 2 nos. lockable.
- Flexible air hose for supply air & exhaust air connections
- Standard hose pipes supplied with each complete system are:
 - AHU to Rack Supply or exhaust hose pipe: 1 meter/ rack
 - Rack to AHU exhaust hose pipe: 0.8 meter/rack
 - AHU aluminum covering exhaust pipe: 1.5 meter/AHU

RAT BIOCONTAINMENT CAGE TECHNICAL PARAMETERS

Cage Name	Model No	Cage Material	Floor Space	Grill	Water Bottle	Inlet/exhaust port construction
Biosafe Rat IVC Cage	US-BSL-R-900	PSU / Polyetherimide	900 cm sq	Made of S.S. 304 material	Built-in drinking bottle, volume 400ml	Non-intrusive construction, automatic closing of the air inlet and outlet when the cage is removed from the cage rack

MICE BIOCONTAINMENT CAGE TECHNICAL PARAMETERS

Cage Name	Model No	Cage Material	Floor Space	Grill	Water Bottle	Inlet/exhaust port construction
Biosafe Mice IVC Cage	US-BSL-M-500	PSU/ Polyetherimide	500 cm sq	Made of S.S. 304 material	Built-in drinking bottle, volume 300ml	Non-intrusive construction, automatic closing of the air inlet and outlet when the cage is removed from the cage rack

IVC BIOCONTAINMENT VENTILATOR TECHNICAL PARAMETERS

Model No	Fan Type	Speed control method	UPS	Communication Interface	Host Dimensions (W x D x H)
US-X-BSL3	EC Centrifugal	Blower with its own speed control	Built-in (3-4 hours of operation without power)	Ethernet interface	450 x 500 x 2235 mm (Height with flanges)

BIOCONTAINMENT CAGE RACK TECHNICAL PARAMETERS

Model	Arrangement	Animal	Number Of Cages	Cage Type
RBC-S-M-30	6 levels x 5 columns	Mice	30	Single-Sided
RBC-S-M-36	6 levels x 6 columns	Mice	36	Single-sided
RBC-S-R-25	5 levels x 5 columns	Rat	25	Single-sided
RBC-S-R-30	5 levels x 6 columns	Rat	30	Single-Sided
RBC-S-R-36	6 levels x 6 columns	Rat	36	Single-Sided



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