

Technical description

I-Box

Isolator for laboratory research



GENERAL PRESENTATION:

I-Box isolators are specially designed for biomedical research applications, zootechnics:

- Breeding of immunocompromised mice, axenic mice, rodents with specific health status, etc.,
- Secure connections by DPTE doors to containers, transfer isolators or hoods.

I-Box isolators guarantee the strict maintenance of the specific sanitary conditions of the animals housed. They are developed to offer a very high level of containment and thus provide the user and the rodents with absolute biological protection.

Of robust construction, these devices are manufactured according to strict quality procedures and are entirely designed, produced, and controlled by Erlab-Noroit, in France.

MATERIALS USED:

The isolator's body is made of PMMA (*Polymethyl Methacrylate – thickness 8mm*), fully transparent.

PMMA is very used to build animal research equipment because of its very good surface quality, hard and smooth, very adapted to sterile manipulation and frequent washing and decontaminating.

The stand is made of steel with smooth polyester-powder coating, also very adapted to frequent decontamination (vaporized H₂O₂, peracetic acid, Formalin, Virkon, etc.).

FILTRATION:

Pre-filtration:

"G3" type pre-filters (gravimetric efficiency > 85%) are installed to avoid a fast clogging of the absolute filters.

The pre-filters can be easily replaced by the user. No tools required.

Absolute filtration:

"H13" type filtration (efficiency > 99,99% on 0.3 µm particles).

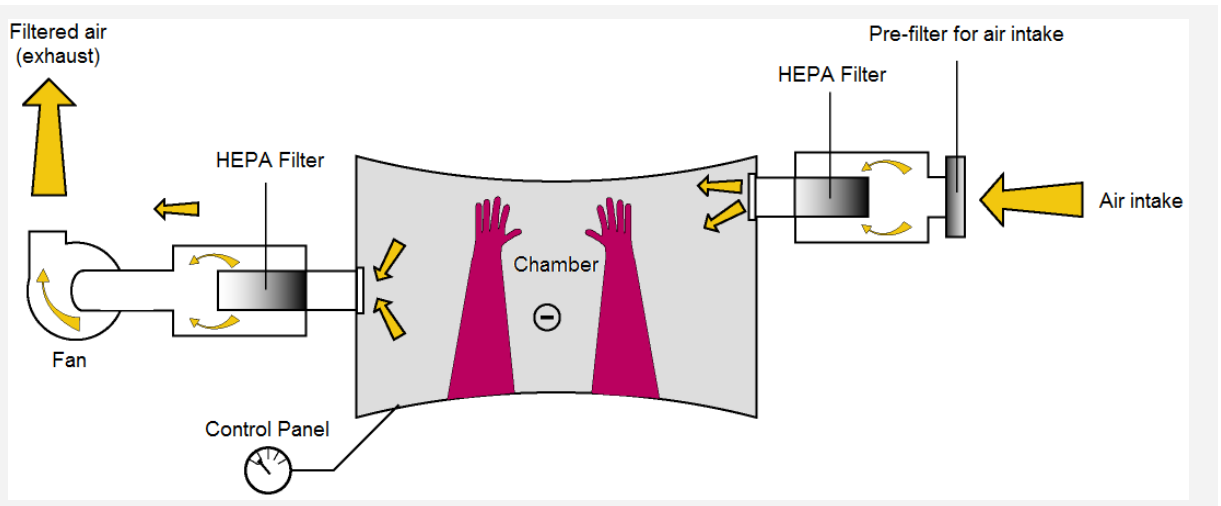
A filter is installed at the air intake, another one is installed at the exhaust, to ensure the full containment of the housed rodents. The exhaust network is equipped with a shut-off valve.

VENTILATION:

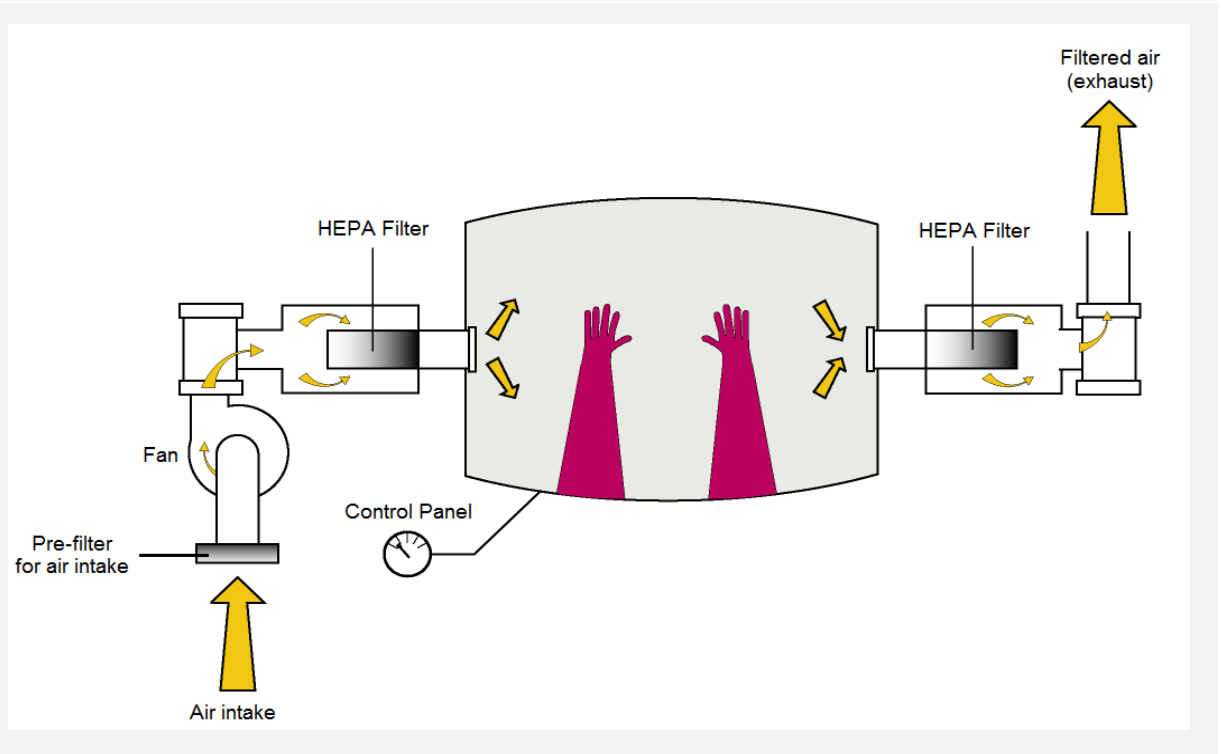
The chamber is kept either in negative pressure, (to ensure the absolute protection of the users against the housed rodents infected with pathogens), or in positive pressure (to protect the rodents against external contamination).

The airflow and filtration configuration is described hereafter:

Isolator in negative pressure



Isolator in positive pressure



TECHNICAL SPECIFICATIONS:

Model		I-Box zoo 2 gloves	I-Box zoo 3 gloves	I-Box zoo 4 gloves
Dimensions - equipment				
Internal	Width (mm)	1 200	1 500	1 800
	Depth (mm)	700	700	700
	Height (mm)	750	750	750
External	Width (mm)	1 250	1 550	1 850
	Depth (mm)	740	740	740
	Height (mm)	1600	1600	1600
External with male DDTP	Width (mm)	1 545	1 845	2 145
	Depth (mm)	740	740	740
	Height (mm)	1600	1600	1600
Other dimensions		Contact-us !		

ERGONOMICS:

The isolator’s transparent body means that the user is working in natural light and thus minimizes strain on the eyes. In addition to this, the transparent case allows a supervisor to monitor the user’s work, making the I-Box isolators an ideal choice in a training environment.

The sleeves are positioned on large ports (Æ 310mm), to ensure comfort and the ability to reach every part of the chamber:

- The gloves and sleeves can be safely replaced, without effect on the isolator’s containment.
- The isolators are mobile units, positioned on castors. The 2 front ones feature a brake.

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Installed on the back wall of the chamber, the service port is designed to enter bulky apparatus inside the isolator. It is also required to get access to the DDTP devices, for servicing.

STERILIZATION:

Erlab-Noroit recommends a sterilization with peracetic acid (*Soproper® brand*).

The I-Box isolator is fully equipped for the sterilization. It features a removable quick connector to ensure a tight and safe connection with the sterilizer.

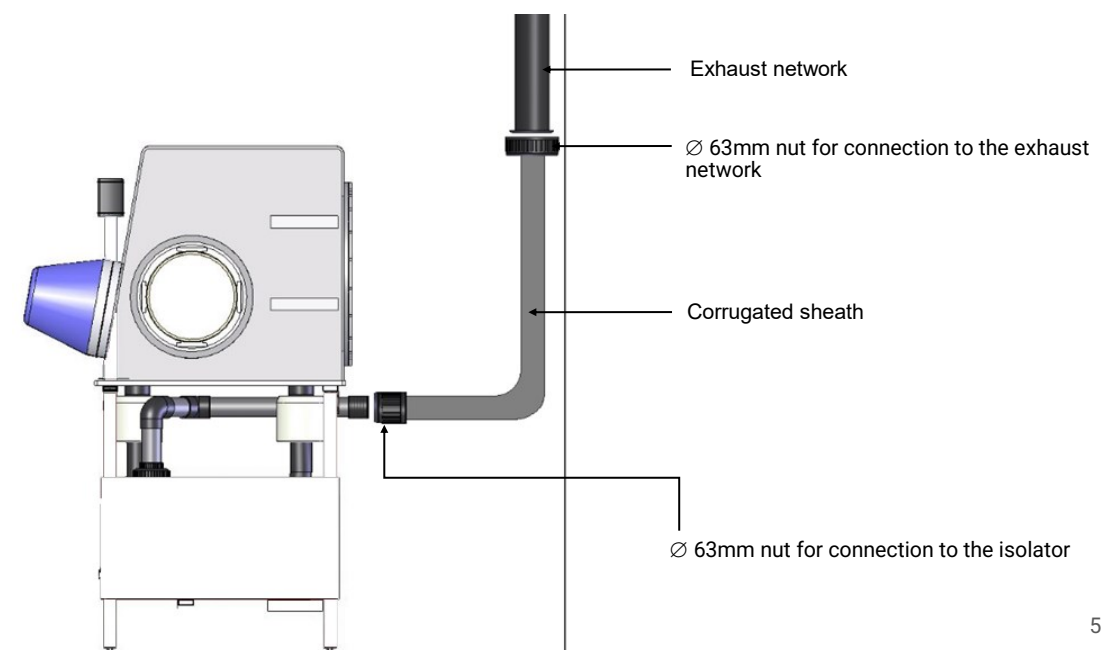
The standard Æ 63mm threaded connector is also available.

The isolator features an exhaust valve, which must be manually closed during the contact time of the sterilizing cycle. When the contact period is achieved, the valve must be released, to exhaust the sterilizing agent.

EXHAUST PORT FOR STERILIZATION:

During sterilization, the isolator must be connected to the exhaust network of the laboratory. When the sterilization is completed, the sterilizing agent is flushed outside.

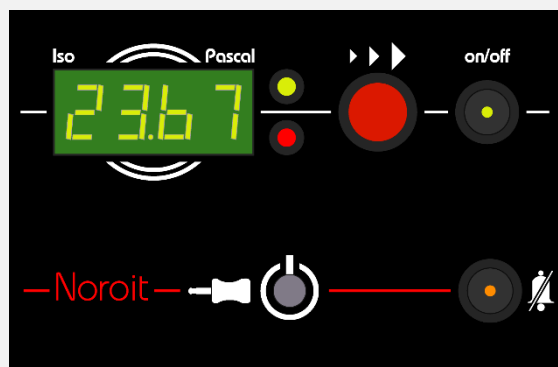
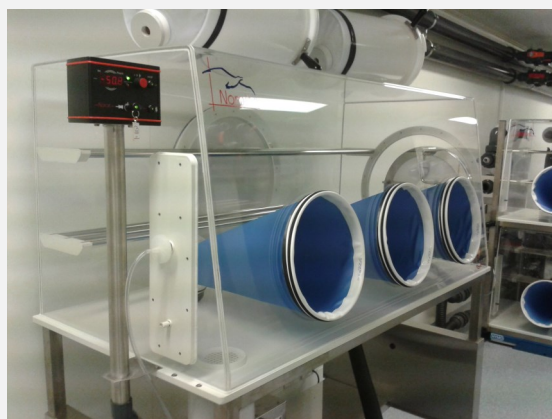
The connection is achieved by a Ø 63mm corrugated tubing, as described hereafter:



KEYBOARD:

User friendly keyboard

- Eye-level control panel,
- The keyboard is installed opposite the DDTP, to enable the easy and ergonomic connection of an isolator or a transport tank.
- The unit is microprocessor controlled,
- The isolator is switched on by an electronic key,
- The pressure is displayed, in Pascal,
- The alarm status is displayed by leds, for every measured values,
- The alarm triggers a relay whose contacts are available to the user, for recording and traceability,
- The audible alarms can be muted,
- The fan can be switched off easily, during the sterilizing cycle.
- The temperature and hygrometry inside the isolator can be displayed, (option, do not hesitate to consult us).



TRANSFER PORTS :

The isolator can be equipped with different type of transfer ports: Double Door Transfer Ports, male or female, or transfer cylinder.

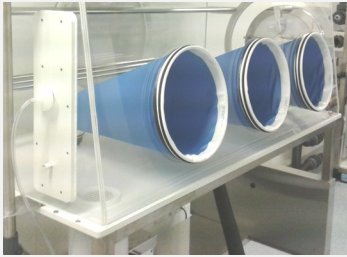
Male DDTP:

The isolator can be equipped with a Male Double Door Transfer Port, installed on a flexible output cylinder.

Female DDTP:

The isolator can be equipped with a Female Double Door Transfer Port, to enable a quick and safe connection with the other isolator or with a transfer tank.

OPTIONS:

Options	Illustrations	Commentaires
<p>Fluid and electric port</p>		<p>Installed on the back wall of the chamber, the fluid and electric port features 2 tight electrical sockets These sockets can be used to supply small apparatus (Precision scale, hair trimmer, magnetic stirrer, etc.). The fluid and electric port is made of PVC and can be easily drilled for further utilization.</p>