



# PORTABLE ISOLATOR



## APPLICATION OF X-BIO

Portable isolator is a mobile device allowing initial transportation from contaminated areas to the stationary medical facility. It is designed for transfer of persons potentially infected with especially dangerous diseases or patients infected with microbiological substances.

Portable isolator can be used for transportation and protection of patients with weak immune system from external environment.

MAIN DIFFERENCE of LAMSYSTEMS portable isolator from its international analogs is the two-stage supply and exhaust filtration ventilation system. The system provides air exhaust and negative or positive pressure maintenance as well as controls the air inflow via two active ventilation systems.

External dimensions of the isolator: 2000x600x440 mm

Dimensions when folded: 750x550x420 mm

Net weight: 14 kg

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MAIN DIFFERENCE of the LAMSYSTEMS portable isolator X-BIO from its international analogs is the supply and exhaust two - stage filtration ventilation system. The system provides air exhaust and negative or positive pressure maintenance and controls the air inflow by the two active ventilation systems. Isolator is produced by high frequency welding (HFW) method with additional joint sealing where bands are bonded under high temperature.



## 1 SUPPLY AND EXHAUST VENTILATION SYSTEM

An exhaust system ensures a restricted preset (positive or negative) pressure, and a supply system provides the necessary air inflow that guarantees well-being of a patient. When the negative operating differential pressure is reached, control flash indicator (fig. 4) gets green. When the positive operating differential pressure is reached, control flash indicator gets blue. Both of the systems are factory calibrated. Thus, a customer doesn't need to set any operating modes or airflow velocities. Operating time on a single charge at least 3 hours. The isolator can be plugged in a fixed 220-240/24 V electrical outlet during its operation for charging.

## 2 PRESSURE CONTROL

A control system allows operation at various pressure modes (negative or positive). Negative pressure mode ensures BSL-3 protection.

## 3 EMERGENCY ALARM

The control system is featured with an audible and visible alarm that indicates operating failures and automatically maintains the preset pressure in case of depressurisation. If the alarm systems is activated, the control flash indicator (fig. 4) gets red.

## 5 FILTERS

Specially developed high efficiency air filters HEPA H14 (efficiency coefficient 99.995%) or combination filters A1B1E1P3 with a threaded joint (Thread Rd 40x3,5mm) are used in the isolator. Filters are designed for protection from solid or liquid radioactive or high frequency particles, aerosols, bacteria, and viruses.

## 6 LEAK-TIGHT ZIPPER

A tight zipper located at the bottom of the isolator prevents any leakage, protects from contamination by the environment and ensures simple loading of a patient.

## 7 CHAMBER GLOVES

The isolator is equipped with four chamber gloves that have changeable wrist part for safe manipulations inside the isolator. The gloves have the highest level of abrasion and puncture resistance, protect against viruses and infections. Comply with the requirements of EN 388 and EN 374.

## 8 SYSTEM OF PATIENT FIXATION

There are 2 solutions for fixing patient's position inside the isolator: three-spot buckle for holding the body (fig.8), buckle for holding legs.

## 9 SYSTEM OF STRETCHER ATTACHEMENT

Reliable (aviation) system for attaching the isolator to the stretcher consists of safety belts.

## 10 ZIPPER BOX

The zipper box provides the change of the slider if the zipper is damaged for the reason of wrong using.

## 11 PORTS FOR CONNECTING EXTERNAL DEVICES

Portable isolator is equipped with various ports for leak-tight connection of infusion solution tubes, drainage tubes, ECG electrodes and artificial lung ventilation systems.

## 12 PASS SLUICE

Isolator is equipped with a pass compartment with two leak-tight zippers. Zippers technologically exclude simultaneous opening and therefore forbid unprotected access inside the isolator through the pass.

## 13 MEDICAL WASTE STORAGE COMPARTMENT

Medical help administered to the transported patient generates medical waste. Special compartment is designed for safe storage of such waste on the way to the medical facility.

## 14 BATTERY

The portable isolator is equipped by outside removable battery (fig. 14). When one battery has low charge, it can be replaced to another battery and continue to use the portable isolator.

**ADDITIONAL OPTIONS:** According to the Customer's choice portable isolator can be equipped with the following additional options: basket stretcher (fig. 15), folding stretcher (fig.15), changeable filters, changeable gloves.