



PORTABLE ISOLATOR



APPLICATION

Portable isolator is a mobile device allowing initial transportation from contaminated areas to the stationary medical facility designed for transfer of persons potentially infected with especially dangerous diseases or of patients infected with microbiological substances. Portable isolator can be used for transporting and protecting the patients with weak immune system from the “dirty” external environment.

External dimensions of the isolator: 2000x600x600

Dimensions when folded: 460x550x600

Weight: 22 kg

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LAMSYSTEMS X-BIO ISOLATING SYSTEMS

PORTABLE ISOLATOR



Isolator is produced by high frequency welding (HFW) method with additional joint sealing where bands are bonded under high temperature.

1 CHAMBER GLOVES

The isolator can be equipped with four or more changeable chamber gloves ensuring safe manipulations inside.

2 GLOVE PORTS

Glove ports are oval-shaped and ergonomically located for operating convenience when working with a patient. Glove ports are additionally equipped with leak-tight zippers for extra protection.

3 SYSTEM OF PATIENT FIXATION

There are two solutions for fixing patient's position inside the isolator:
1— four-spot buckle for holding the body;
2— buckle for holding legs.

4 SYSTEM OF HANDBARROW ATTACHEMENT

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

5 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.

6 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.

7 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.

8 SUPPLY AND EXHAUST VENTILLATION SYSTEM

MAIN DIFFERENCE of the LAMSYSTEMS portable isolator from its international analogs is the supply and exhaust ventilation system. Not only it provides air exhaust and negative pressure maintenance but also controls the air inflow by the two active ventilation systems.

Exhaust system maintains normalized negative pressure. Supply system supports necessary air inflow ensuring patient's healthy well-being. Both systems are calibrated at the manufacturing site. User does not need to adjust and tune up modes and velocities of the airflows. System operating time without charge is 8 hours. Charging is possible during operation from the stationary power unit 220/12 V.

9 FILTERS

Specially developed particle ULPA filters U16 (efficiency coefficient 99.99995%) with two threaded joints are used in the isolator. Filters are designed for protection from solid or liquid radioactive or high frequency particles, aerosols, bacteria, and viruses.

10 PRESSURE MAINTENANCE CONTROL

The control system allows application of various pressure modes (negative and positive). Negative pressure mode provides BSL-3 protection level. Values of pressure inside the isolator are displayed on the control panel for continuous monitoring of negative pressure maintenance. Control system includes emergency alarm. In case of leakage, it automatically starts pressure maintenance system inside the isolator.

11 LEAK-TIGHT ZIPPER

Leak-tight zipper is located on the bottom of the portable isolator ensuring convenient loading and unloading of the patient.

Biological Safety Level BSL 1-4

LEVELS	BIOLOGICAL AGENTS CHARACTERISTICS	EXAMPLES
BSL-1	May cause human illness.	
BSL-2	May cause human illness, may cause harm to the health of medical personnel, may be contagious to other people, preventive measures and treatment may be effective.	Bordetella pertussis, Chlamydia pneumoniae, Corynebacterium diphtheriae, Haemophilus influenzae, Streptococcus pneumoniae, Legionella pneumophila, Mycobacterium kansasii, Mycobacterium fortuitum, Mycobacterium avium; Orthomyxoviridae: Virus chřipky A,B,C; Herpesviridae: Epstein-Barrové virus (EBV), lidský cytomegalovirus (CMV), virus varicely-zosteru; rhinoviry; Poxviridae: cow pox, elephant pox, rabbit pox
BSL-3	May cause human illness, may cause harm to the health of medical personnel, may be contagious to other people, preventive measures and effective treatment are available.	Bacillus anthracis, Chlamydia psittaci (aviární kmeny), Mycobacterium tuberculosis, Mycobacterium tuberculosis; Bunyaviridae; virus dengue; hantaviry: korejská hemoragická horečka, virus Seoul; virus monkey pox
BSL-4	May cause serious human diseases, expose medical personnel to substantial health risks, highly contagious among people, preventive measures and treatments are not available.	Mycobacterium tuberculosis - MDR kmeny; Arenaviridae: virus horečky lassa, Tacaribe complex, arenaviry Nového světa: Junin, Guanarito, Sabia, Machupo; Nairovirus (krymsko-konžská hemoragická horečka); Filoviridae: virus eboly, virus Marburské horečky; Poxviridae: virus varioly; Coronaviridae: SARS-CoV (Severe acute respiratory syndrome)