



**Iskra pio** d.o.o.  
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Iskra PIO is a progressive European company active in the clean and cleaning technology.

We have 25 years experience in project development, engineering, production, validation and servicing of equipment.

We are specialized in the producing and integration of laboratory equipment in to the mobile container laboratories, including glove boxes and microbiological safety cabinets.

### CBRN mobile laboratory container

The CBRN mobile laboratory container, *from Iskra PIO* is a fully equipped mobile laboratory used for the detection, analysing and identification of chemical warfare agents, toxic industrial chemicals, radiological and nuclear materials. Mobile laboratory will provide a workspace in which operators can work safely, regardless of the environment.



It can be deployed/pre-positioned where there is a risk of radiological, biological or chemical terrorism or to support public health missions such as influenza outbreak or

natural disaster response. It will provide military units and first responders with a facility for emergency response, where they have the use of laboratory equipment, including Class II and Class III Biological safety cabinets, pass-through containment boxes and analytical equipment essential for working safely and effectively with chemical, biological or radiological hazardous materials.

### Features

- Laboratory is built into speciality 20 ft ISO shipping containers for easy global deployment , also it is self contained
- HVAC systems and controls, including HEPA and NBC filtration
- Glove box, *from Iskra PIO*, with under pressure HEPA and carbon filtration, could be used for low level alpha an/or low level beta particle containment
- Autonomous system for lift and lower on truck platform, with hydraulic legs
- Electrical generator supplied approximately 96 hours on one tank of fuel
- Thousand litres of onboard water
- Sinks drain into holding tank for lateral disposal
- Inner walls, floors and ceiling made from stainless steel sheets
- Outer chassis is air tight, coated with pigmented polyurethane (CARC) coat
- Eye wash station
- Laboratory furniture
- Laboratory material
- Weather monitoring station
- GPS tracking location system

### Basic instruments for radiological laboratory

- $\alpha$ ,  $\beta$  aerosol, liquid and soil monitoring
- high sensitivity Gamma Area monitoring

- Gamma spectroscopy facility
- Personal dose rate meters ...



### Ultrasonic cleaning equipment

Ultrasonic cleaning technique is an efficient one because of the fact that it sends sound waves through the water in an ultrasonic bath that ignites the cleaning process. A huge amount of minute bubbles, or often known as **cavitations** at times, are formed and then collapsed because of those sound waves. This creates many small jets moving through the cleaning liquid. These jets are used as a brush to wipe off the dirt from the object you are looking to clean. This results in ultrasonic cleaning of various objects within the cleaner. Ultrasonic is very helpful when it comes to cleaning objects that cannot be cleaned otherwise and you do not need to rub or polish these objects.

There are many considerations important to ultrasonic cleaning. Optimizing these variables will produce the best cleaning. The most important decisions to be made are choosing the proper cleaning solution, cleaning at the right temperature for the

correct amount of time, and choosing the right size and type of ultrasonic cleaner. Iskra PIO have good technical and technological solutions with a background in maintenance and cleaning of military component parts.

We are leaders in the field of **ultrasonic cleaning and disinfection of respiratory equipment** (breathing masks,...). That method removes body fluids, soot, toxic substances and debris from hard to reach areas, restoring parts to factory new cleanliness.



Another field of application is **ultrasonic gun and rifle cleaning**. Quickly and effortlessly removes dirt, carbon and grease even the most soiled guns. Ultrasonic waves penetrate deep into those hard to reach places for thorough and effortless cleaning.



## Microbiological safety cabinets

The microbiological safety cabinets assure a high safety level for operators, surrounding the product. The cabinets are manufactured according to requirements of SIST EN 12469:2000 standard. Iskra PIO has more than 20 years of experience in safety cabinets design and manufacturing. We have the ability to offer reliable and user friendly cabinets adapted to the requirements of the user.

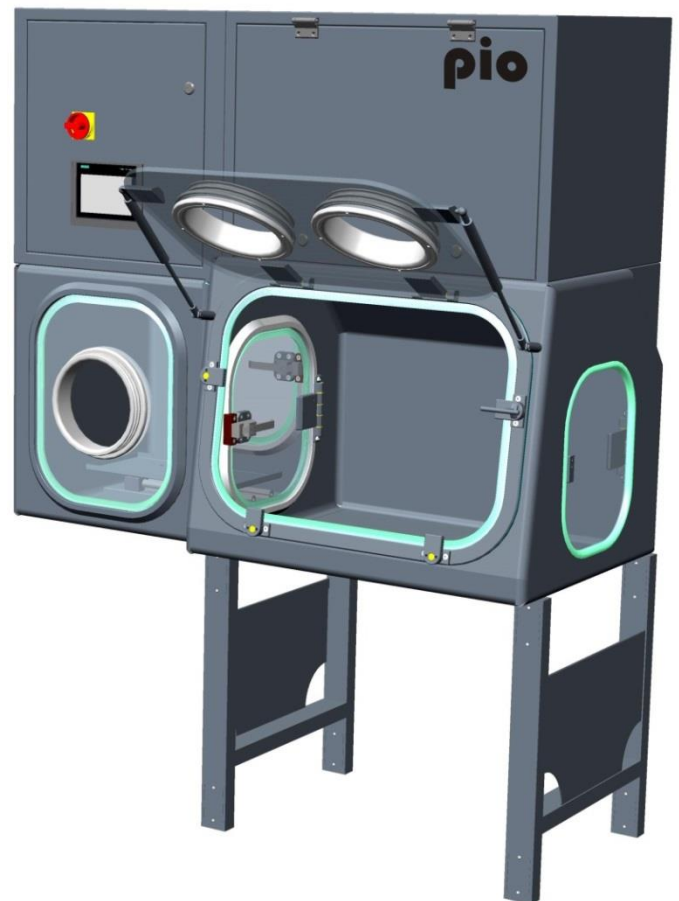


Microbiological safety cabinet executed in protective **class II** according to EN 12469:2000 and DIN 12980:2005 assure ISO 5 (ISO 14644-1:1999), class A (GMP) clean conditions inside working area. Clean conditions are assured by H14 (EN 1822) HEPA filtration of recirculating and exhaust air. Laminar vertical air flow in working area and air curtain on the front aperture assure controlled clean conditions in the chamber

and prevents material leakage from the chamber.

Microbiological safety cabinet executed in protective **class III** according to EN 12469:2000 assure safe conditions to operator, environment and product during handling hazardous materials. Safety is assured by

- Hermetically sealed construction
- physical barrier between operator and process – work is executed through gloves attached to chambers wall
- Controlled negative pressure inside working chamber
- H14 (EN 1822) HEPA filtration of inlet and double H14 HEPA filtration of exhaust air
- Air flow according to standard EN 12469:2000



Additional safety is enabled by an **automatic disinfection system** integrated in cabinet's construction and software.

Design and construction of safety cabinets for military use is adjusted to assure maximal reliability in most demanding environments.

## Validation

We perform validations to confirm clean and safe working conditions. We have a qualified team and annually calibrated measuring devices for validations.



After the process we prepare validation report, which is acceptable for inspection services.

Following tests can be included in the validation tests:

- Airborne Particle Counts
- Filter in Place Leak Test
- Air Flow Volumes/Air Change Rates
- Temperature/Humidity Test
- Room Pressurisation Test
- Smoke Patterns
- Light Levels and Noise Levels
- Leak test
- Recovering time
- KI-DISCUS test
- OEL test
- Sensors calibration
- ...

