

CBRN^e



Chemical, biological, radiological and nuclear explosion risks represent a high-level threat. The populace is particularly vulnerable to this type of risk. These risks primarily concern to the use of chemical weapons (terrorism), industrial accidents, natural or environmental catastrophes, natural or induced viral pandemics.

CEGELEC Défense Solutions & Services, in association with leading French industrial companies belonging to the CBRN Defence Economic Interest Group (GIE NBC) has developed a comprehensive set of solutions, such as mobile analysis and detection laboratories as well as protection and decontamination chambers adapted to the type of risk :

- **CHEMICAL**
- **BIOLOGICAL**
- **RADIOLOGICAL**
- **NUCLEAR**
- **enhanced (improvised) explosives**



COMPREHENSIVE, INTEGRATED TECHNICAL SOLUTIONS

The modular nature of the pressurised chambers and shelters makes it possible to install them quickly in total autonomy, with no external infrastructures or resources needed.

Combined with its partners' offers, CEGELEC Défense provides solutions that cover a large portion of the requirements in terms of CBRN defence :

- Detection, identification, alarm and monitoring,
- Individual and collective protection,
- Medical assistance,
- Decontamination,
- Waste and effluents.

OPERATIONAL NEEDS

Providing professionals (soldiers, fire-fighters, security services, police officers, industrial companies, emergency services, local authorities) with mobile solutions for detection, decontamination and protection in order to anticipate CBRN threats :

- Dissemination of CBRN agents,
- Detection of a device or terrorists ready to disseminate CBRN agents,
- Contamination of the population or the environment (air, water, food, etc.),
- Contamination or infection of the population and consumables (water, food, health-care products, etc.).

GENERAL CHARACTERISTICS

The solutions provided by CEGELEC Défense Solutions & Service are based on development programmes initially implemented to meet the needs of the French armed forces.

They are perfectly suited to civil defence and military operations , notably in response to terrorist attacks against the population :

- Chemical detection and radiological sensors to monitor an exterior security zone,
- Quick and easy deployment outside the contaminated area,
- Filtering and positive or negative pressurisation of protected zones.

These “all-in-one” systems are designed to favour agility and reduce energy use. They come with one or more additional Utility modules to supply power and other utilities, and to treat air or liquid/solid waste, etc.

- Transportability: Air - Land - Sea,
- Extreme weather conditions (-20°C to +70°C) tested in field situations in Afghanistan,
- Operability: shelter delivered by flat-bed truck and rolled out manually using integrated handling mechanisms.

DECONTAMINATION

MODULE



The decontamination shelter with extensions on two sides (3-in-1) produced by CEGELEC Défense Solutions & Services is specifically designed for mass-decontamination operations concerning both able-bodied and infirm victims or for placing groups in a safe environment while they wait to be extracted from contaminated zones. Its basic structure consists of a 20-foot container (that can be extended to provide a surface area of 32m²), which is easily transportable in hostile environments.

MOBILE CBRN

ANALYSIS LABORATORY

The laboratory is enclosed in an ISO 20, 30 or 40-foot container, which is perfectly compatible with any means of road or air transportation.

It incorporates all the measuring and handling equipment needed to enable operators to collect, analyse and qualify chemical, biological or radiological contaminants in total safety, whether they be solid, liquid or in aerosol form.

It includes all the filtering and pressurisation equipment needed, as well as communication and alert systems.



COLPRO

COLLECTIVE PROTECTION SHELTER

The module is completely airtight and pressurised; it isolates the personnel from external contaminants. The “decontamination” configuration incorporates five treatment areas with automatic multipoint showers. It enables continuous decontamination operations (chemical and thermal) for waste and effluents.

- Five simultaneous treatment lines, including one for patients on stretchers,
- High throughput capacity, up to 200 able-bodied persons and 9 incapacitated persons per hour,
- Large work area of 32 m².
The decontamination module can be easily integrated in a CBRN emergency response plan.

The COLPRO version uses airlocks to provide access between the decontamination zone and a rest and waiting area. Patients are thus sheltered from all external contamination and can wait in safety for rescue services to arrive.



Collective protection Shelter