

CBRNE Accessories



Environmental swab

The tool is designed to obtain material for laboratory analysis by taking environmental swabs from surfaces of objects, which can accumulate unknown chemical or biological substances. The set consists of consumables (sterile sponges, dry and soaked in neutralizing buffer) and interchangeable parts allowing IBIS® and PIAP GRYF® robots to carry the tool in the gripper. The tool is transported in a holder mounted to the Picatinny Rail on the robot's mobile base.



SPME Adsorber

The device is used for adsorption of chemical molecules from the air and liquid to the SPME fiber for further analysis, for example in a gas chromatograph. The adsorber is controlled from an accessories panel or manually via user interface located on the casing. When placed on the robot, the device is transported in a transport holder and only taken from it for the duration of molecule adsorption. The device is charged wirelessly in its carrying case.



Ground Sampler

The tool serves to take samples of contaminated substrate (soil, sand, ice, etc.) to a container with a maximum volume of 300 cm³. The tool is transported in a holder which protects the robot and staff from contamination by collected material. The holder is mounted to the Picatinny Rail on the robot's mobile base. The set includes 3 different operating tips and interchangeable parts allowing IBIS® and PIAP GRYF® robots to carry the tool in the gripper.



Forensic Samplers Set

The kit is intended for taking samples in powder and liquid form such as blood, saliva or explosives. Secured samples may be examined in a laboratory, for example during forensic investigation. The tools are transported in holders mounted to the Picatinny Rail on the robot's mobile base. The set includes an indenter module, a swab module and associated consumables.



R-Sensor (EKO-C)

The device is designed for detection and measurement of Alpha, Beta, Gamma and X-Rays radiation. It is possible to control the radiometer and display the measurement results with the accessories panel or with user interface located on the device. When placed on the robot, the device is transported in a transport holder and only taken from it for the duration of measurement. The device is charged wirelessly in its carrying case.



Accessories console

Console is designated for the wireless control of CBRNE accessories equipped with radio modules and visualisation of the measurement data from the environmental sensors. Console is based on a rugged tablet, equipped with RFID access authorisation function and GPS localisation shown on the internal terrain map. User interface is made as graphical environment, in which whole control of the system of the accessories is made using a touchscreen.

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C-Sensor (LCD 3.3)

CWAs identifier and TICs detector for mobile robot consists of the Smiths Detection LCD3.3 sensor and an integrated tailored housing allowing to use the device via mobile robot's gripper or transport it in a holder mounted on robot's mobile base. The sensor samples the atmosphere and analyses its composition using ion-mobility spectrometry to detect substances hazardous to humans. The device adapted for use with a mobile robot allows carrying out remote measurements/detecting presence of chemical warfare agents and toxic industrial chemicals vapours as well as determining hot zones borders. Sensor data is transmitted to the operator's console in real-time.



R-Sensor (ZR-1)

The device allows omni-directional measurement of gamma dose absorbed in the air and it was designed to be used as a detector-meter during the incidents where ionizing radiation is or may be involved. Information from the radiometric sensor is transmitted in real time to the operator's console. The device can be operated remotely from the operator's console or manually via touch user interface.



Modular liquid sampler

Modular liquid sampler is designed for collection and storage of liquid environmental samples with the use of mobile robot. Several types of collecting tips and sample container holders can be attached to this device. Collected samples can be stored in two types of containers: a bellow bottle with a capacity of 200 [ml] or glass vials with a capacity of 4 [ml].



R-Sensor (ZR-2)

The device allows directional measurement of gamma dose rate and detection of neutron radiation and it was designed for use as a detector-meter during the incidents where ionizing, X-ray or neutron radiation is or may be involved. Information from the radiometric sensor is transmitted in real time to the operator's console. The device can be operated remotely from the operator's console or manually via touch user interface.



PIAP Bio-Vortex

The device is designed to collect and store liquid samples of biological pollutants from ambient atmospheric air. Collected watered pollution sample can be transferred either to the sample container (included as a part of the device) or to an external analyser. The container with a sealed sample can be gripped by a robotic manipulator, detached from the device and then transferred for further laboratory analysis. Easy and tool-free replacement of the contaminated device elements allows the device to collect several samples without a need for in-between decontamination.



Weather station

The device mounted on a mobile robot allows to perform meteorological measurements in the robot's vicinity in terms of wind speed and direction, precipitation, atmospheric pressure, temperature and relative humidity. Information from the weather sensor is transmitted in real time to the operator's console. The device can be operated remotely from the operator's console or manually via touch user interface. Information provided by weather station is of a particular importance in the incidents related to CBRN contamination, as it allows to estimate the direction and extent of contamination spread.

