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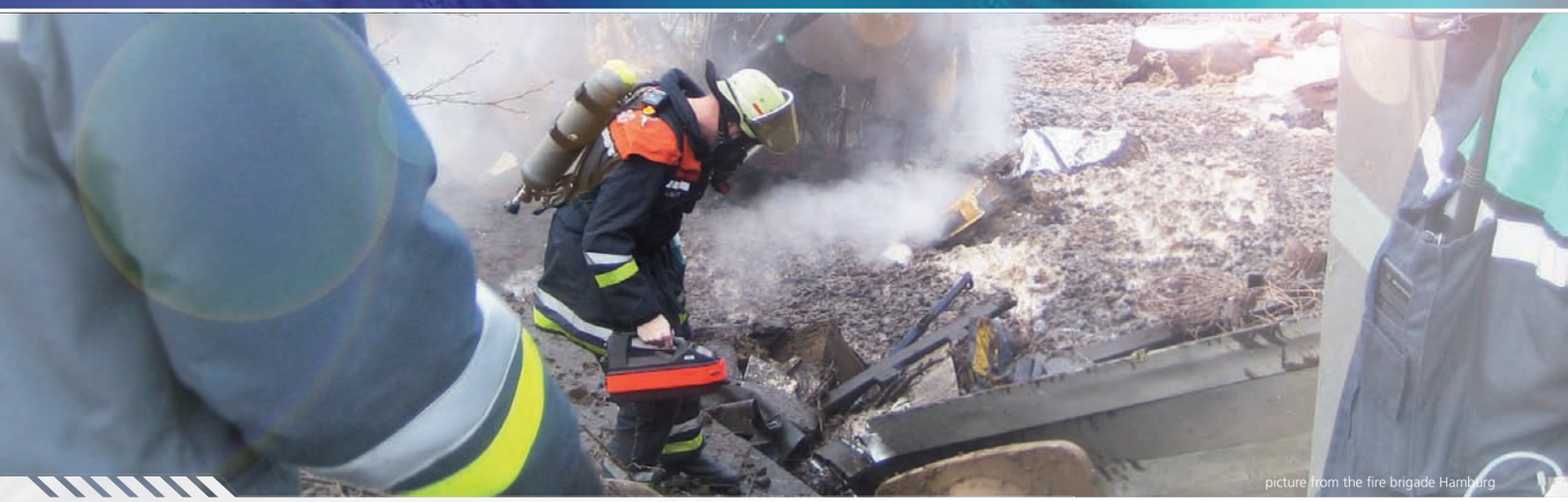
picture from the fire brigade Hamburg

GDA-FR

Gas Detector Array - First Response

Chemical defense

Radiological Nuclear defense

Portable detector for hazardous gases and chemicals

The portable **Gas Detector Array** is a battery operated analytical instrument specifically designed to measure and monitor most common gases. This instrument is used by Police, Fire Departments and many different operators from public security.

The GDA has been designed for the detection and identification of Toxic Industrial Compounds (TICs) and Chemical Warfare Agents (CWAs) – with optional expansion to the range of the most common explosives.

With its Hybrid Sensor Array it alerts to a wide range of hazardous gases. It offers high level safety without the need to select the "right" detector.

Alarms are released as soon as gases appear in dangerous concentrations – whether it is in ppb or ppm range. Compounds matching with the adaptable libraries are automatically displayed on screen. The GDA is permanently ready-to-use. A specialized gas-flow control allows faster deployment and the unit retains its sensitivity and reliability.

The GDA set allows

- High security through a wide coverage of a variety of gases and chemicals at a low concentration level
- Security and surveillance at public or high-level political events
- Risk monitoring of workers in chemical industries

Advantages

- Increased selectivity
- Portable instrument with integrated display, visual and audible alarm
- High level of safety through broad detection range of hazardous gases
- Detection and identification in seconds
- Works with computer or in standalone mode
- Substance identification possible using methods of pattern recognition
- Provides reliable results with easy operation
- Data logger and offline data analysis

Made in Germany
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Gas Detector Array - First Response

Hazardous compounds / GDA-Mode
List with tolerable concentrations*

Substance	Concentration limit* [ppm]	Sensor type
Acetic acid	20	IMS, SC
Acetone	500	IMS, PID, SC
Acroleine	0.2	SC
Acrylonitrile	20	MS, SC
Ammonia	50	IMS, SC, EC
Benzene	20	PID, SC
Carbon dioxide	10000	-
Carbon disulfide	10	IMS
Carbon monoxide	100	SC
Chlorine	1	IMS, EC
Chlorobenzene	100	PID, SC
Chlorocyane	0.3	IMS
Hydrazine	1	IMS
Ethanol	3000	IMS, PID, SC
Formaldehyde	1	SC
Hexane, n-	200	PID, SC
Hydrogen chloride	5	IMS, EC
Hydrogen cyanide	5	IMS, EC
Hydrogen fluoride	5	(IMS), EC
Hydrogen sulfide	10	IMS, EC
Methanol	500	IMS, SC
Nitrogen dioxide	1	IMS
Phosgene	0.1	EC
Phosphine	0.5	EC
Styrene	40	IMS, PID, SC
Sulfur dioxide	1	IMS, EC
Tetrachloroethylene	100	IMS, SC
Toluene	100	PID, SC
Toluene diisocyanate	0.02	IMS
Trichloroethane, 1,1,1-	300	IMS
Trichloroethane, 1,1,2-	25	IMS
Trichloroethylene	100	IMS, PID
Vinyl chloride	100	PID, SC, EC
...		

* Selection of chemical compounds (comparable to ERPG), tolerable concentration values for firefighter working 4 hours without breath protection

Chemical Warfare Agents (IMS-Mode)

Nerves	Skin	Blood
GA (Tabun)	HD (S-Lost)	AC
GB (Sarin)	HN (N-Lost)	
GD (Soman)	L (Lewisit)	
GF		
VX		

Technical Data

Sensor technology:
- unique combination of different detectors
- Ion Mobility Spectrometer (Ni63 ion source, positive and negative mode)
- Photo Ionization Detector (10.6 eV)
- Electrochemical Cell
- 2 Metal Oxide Sensors

Sampling System:
- internal pumps
- internal sample dilution system

Measurement Time:
- typical some seconds to less than 1 minute

Identification:
- different pattern recognition methods available

Display:
- graphical display integrated

Power:
- 30W, powered by rechargeable battery and/or power supply (serial port – RS-232)

Weight:
- 4.2 kg (8.4 lbm) (without batteries)

Dimensions:
- ca. 395 x 112 x 210 mm (ca. 15.7 x 4.5 x 8.4 in)

Operating system:
- Windows XP, Vista, Windows 7

Software:
- WinMuster GDA

Options:
- Wireless
- GPS
- Gamma detection

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