



## Is the air clean?

Personal protective equipment  
and professional measuring systems –  
essential for invisible hazards in the air

PERSONAL  
PROTECTIVE EQUIPMENT  
NBC-DETECTION

Steel Plaza

WELCOME TO THE STATION

WELCOME TO THE STATION



# Prepared for emergencies.

## Keep calm

You might unexpectedly face a mission where many people are potentially in great danger from contamination of the ambient air. The situation must be evaluated within the shortest possible time, because incorrect decisions can have fatal consequences.

Globalisation increases the risk potential for civil populations and for emergency services. Low concentrations of poisonous gases and vapours are sufficient to endanger the lives of thousands of people or cause irreparable health damage. In recent years chemicals were also used during terrorist attacks.

Substances harmful to nerves, blood or the lungs, or viruses and bacteria can be transported in small quantities and introduced to the environment e.g. through air conditioning systems or supply lines.

This can turn vital breathing air into a threatening scenario for many people in the shortest of time.

A rapid evaluation of the situation is important to detect and prevent the danger. At Dräger we are aware of these immense challenges. With innovative measuring systems for the detection of hazardous chemical and biological substances and comprehensive equipment for your personal protection we support your difficult mission.



STL-69-2006

Is the air really contaminated with a hazardous substance?  
How dangerous is the situation? Is an immediate evacuation  
necessary? Which protective measures must be taken?



## 120 years of competence

The air we breathe is our most valuable commodity, but we rarely think about whether this air is always available without risk. Dräger has made it its business to develop innovative products and solutions for personal protection. Whether in a hospital, during fire fighting, in industry, in government offices, in civil defence and in the military – in every situation Dräger systems ensure the supply of breathable air. After all, wherever Dräger products are used, it is to preserve the most precious thing of all: life.

Since over 120 years, people worldwide rely on the medical and safety technology of Dräger. Innovative Dräger products continue to set new standards for safeguarding breathable air. "Technology for life" is the motto of the Dräger corporation.

The business division Safety develops concepts for a holistic management of danger, in particular for the protection of people and equipment. Our stationary and mobile gas measuring systems and

respiratory protection equipment meet the highest demands for reliability, handling and wearing comfort even under extreme conditions.

Dräger is thus one of the leading global safety equipment providers for NATO fighting forces in the field of gas measuring and respiratory protection technology. The German Federal Army, for example, relies on the personal NBC protection equipment of Dräger.

# Every moment counts.



ST-800-2013

## We clarify the situation

If there is a risk of contamination with biological or chemical substances during a mission, it is mandatory for measures to be coordinated. The processes described below can be carried out in varying order or even in parallel, depending on the mission tactics, situation and emergency forces involved.

### **A typical scenario may look like this:**

During an alarm with a suspected terrorist attack, the task forces don their NBC personal equipment, and the area at risk is blocked off. Using various detection methods, the task force assesses the threat level. The Dräger simultaneous tests enable a straight-forward initial assessment.

If contamination is suspected, the substance is immediately determined on-site using the Dräger simultaneous test. Then a sample is taken and sent to a lab for confirmation. The area is evacuated and decontaminated. Finally, a mission evaluation is conducted after the results of the lab tests become available.



## Focusing on the essential

Extreme conditions require your full attention. The protection of the emergency services and the people around them has priority. A protection which is highly effective but hardly noticeable, so you can concentrate on your actual tasks.

Full face masks and filters form a proven combination during a mission. Together they offer you an effective and comfortable personal protection system of the highest level.

### Dräger M2000

With the personal NBC protection system Dräger M2000 we set new standards for wearing comfort and flexibility. Even during missions lasting more than 24 hours the mask provides a high wearing comfort. The perfect pressure distribution via a 6-point textile harness and the soft material reduce the pressure sensation to a minimum. Three mask sizes ensure the ideal fit. A wide field of view and the option to insert spectacle frames offer ideal visibility for every wearer. A filter replacement

within seconds drastically minimises the risk of contamination. Two compatible filter types, the NATO standard round thread filter and the Dräger F2000 plug-in filter, make the mask flexible for the most varied military user groups.



Dräger M2000

ST-441-2003

### Dräger CDR 4500

The Dräger full face mask CDR 4500 has been specifically developed for use in civil defence and protection. Together with the Dräger NBC civil protection filters it keeps harmful gases and particles in the ambient air away from the respiratory tracts. The flexible mask material is extremely resistant, the handling of the mask very simple.



Dräger CDR 4500

ST-503-2008

# Under personal protection.



## Dräger NBC Master

The Dräger NBC Master series are gas-tight chemical protection suits tailored specifically to the needs of civil defence and protection. They protect against solid, liquid and gaseous chemicals and NBC warfare agents. The suit consists of high quality HIMEX® M\*, a material providing proven protection against chemical warfare agents. Safety gloves and safety boots or safety socks are connected gas-tight to the suit and easily replaced. A gas-tight zip fastener system with integrated barrier layer film, a communication radio pocket and a strap for a push-to-talk button are standard in the Dräger NBC Master series. Dependent on the design, the breathing apparatus is worn inside (9x90) or outside the protection suit (8x90). Four different suit sizes provide guaranteed wearing comfort. In addition, the suits can be equipped with a ventilation system or connected to a stationary compressed-air supply.

The Dräger NBC Master 8x90 is equipped with a special face cuff providing gas-tight sealing in combination with different full face masks. It can also be supplied with a permanently integrated full face mask.

## Dräger Protec Plus TF

Dräger Protec Plus are lightweight comfortable splash protection suits from Tychem® F\*\* fabric. They protect emergency services against solid and liquid chemicals, such as acids, lyes, dust and fine particles. The Dräger Protec Plus TF suits are particularly suitable for disaster protection, epidemic control, when handling hazardous biological substances or oil, and during decontamination work. The suit can be worn with disposable masks, filter masks and full face masks.



Dräger NBC Master

ST-5700-2004



Dräger Protec Plus TF

ST-4878-2005

\* HIMEX® M is a trademark of the company Dräger Safety AG & Co. KGAA.

\*\* Tychem® is a trademark of the company Dupont.



ST-6506-2007

## Race against time

Terror attacks with biological and chemical substances are intended to harm as many people as possible within a short time. After an attack on large gatherings, time is therefore as decisive a factor as the measuring accuracy. Dräger measuring systems reliably meet both requirements.

For the direct analysis on site, Dräger offers simultaneous and single tests to detect hazardous gases and vapours as well as toxins and bacterial pathogens within minutes. For the detection of explosive or toxic gases, additional detection systems, mainly derived from industrial applications, are available, which can also be used in fighting terror.

As one of the leading providers of detection technology for the measurement of hazardous substances in the air, our whole know-how contributes to a comprehensive library of hazardous substances. We are not only your competent contact for detection, but also provide advice on questions about the behaviour of the gases.

### Dräger Civil Defense Set

The two Dräger Civil Defense Sets (CDS) allow for several gases to be detected simultaneously. Dräger CDS contain directly indicating Dräger tubes for measuring chemical warfare agents. The response mechanisms of these tubes match those of the single tubes used for many years by NATO. However, during the CDS measurements you have the advantage of being able to detect eight different chemical substances simultaneously using only two sets.

Substances harmful to nerves, blood or the lungs are detected reliably within a few minutes. No calibration is required for the measurement, and the system can be deployed with a minimum of training requirement.



Dräger Civil Defense Set

ST-6723-2006

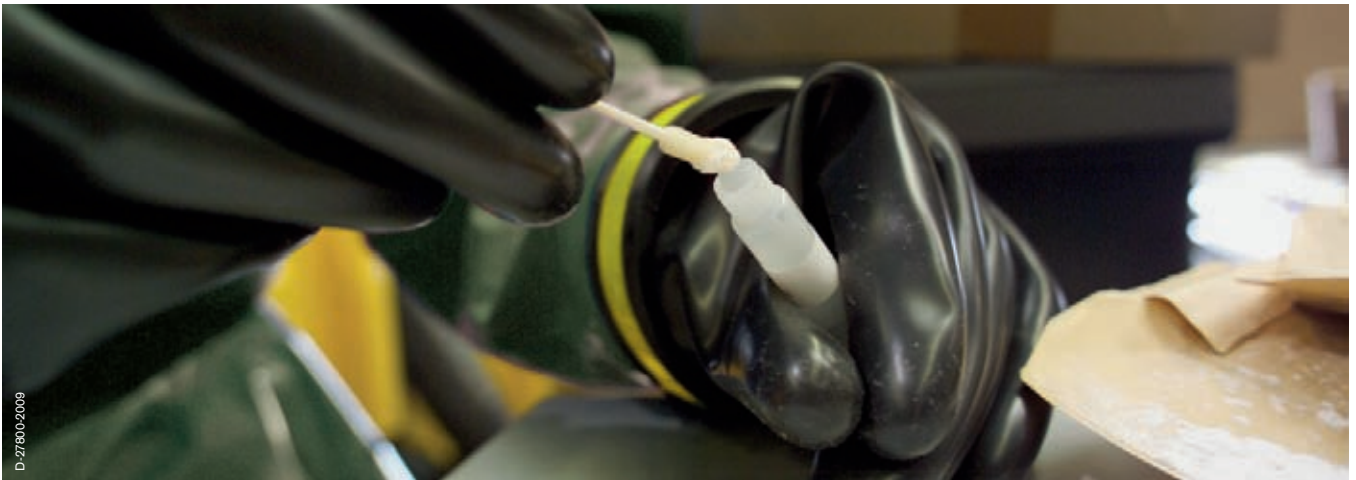


Dräger tubes®

2\_925-01



# Detecting invisible Danger.



D-27800-2009

The Dräger Civil Defense Set also excels in costs; compared to analytical instrument measuring systems the Dräger simultaneous method is clearly cheaper. Training sets are additionally available for exercises.

### Dräger Bio-Agent Test

Dräger Bio-Agent Test is a product series of immunological rapid tests for the detection of biological pathogens and toxins. It is easy to use, and within 10-15 minutes the test reliably detects the following substances:

- anthrax
- ricin
- botulinum toxin
- pest (y. pestis)
- SEB (staphylococcus enterotoxin B)

For high concentrations the result is available after 3 minutes only. The detection can be carried out as simultaneous test for measuring of 5 parameters or as single test for only one substance at a time.

Evaluation is entirely visual. Directly on site you can quickly and easily see whether contamination is present. Once the type of threat is known, additional protection measures can immediately be initiated without losing valuable time in lengthy lab tests.

To be prepared for an emergency, the operation and the reading of the results can be easily learned using low-cost training sets



ST-534-2008

**Dräger Bio-Agent Test  
Simultaneous test**



ST-13307-2008

**Dräger Bio-Agent Test  
Single tests**

## PERSONAL PROTECTIVE EQUIPMENT

### Dräger M2000\*

Dual visor full face mask for use with NBC protection filter F2000 in environments containing hazardous substances.



ST-2479-2003

### Dräger CDR 4500\*

Single visor full face mask for use with NBC civil protection filters in environments containing



ST-502-2008

### Dräger civil protection filters\*

The Dräger civil protection filters offer a long shelf-life and broad protection against industrial chemicals, all types of biological and radioactive particles, as well as chemical warfare agents



D-27801-2009

### Dräger NBC Master\* 8x90 and 9x90

Reusable gas-tight chemical protection suit specifically for civil and disaster protection. With externally or internally worn breathing apparatus.



ST-5700-2004

### Dräger Protec Plus TF\*

Lightweight comfortable splash protection suits from coated Tychem F fabric in olive for use in the police, emergency services or civil and disaster protection.



ST-4878-2005

### Dräger PSS® 7000

The new Dräger PSS 7000 makes the mission of the fire service even more comfortable and safe when using respiratory protection.



ST-6147-2007

### Dräger PAS Micro

Compact respiratory protection device to be worn on the back for short-term use and as emergency rescue device for pneumatic hose units.



ST-3559-2003

### Dräger PARAT® 3100 / 3200

Evacuation filter units in convenient format for the rapid protection against harmful gases.



ST-1853-2005

### Dräger PARAT® 4500

Industrial evacuation hood to protect against toxic gases, vapours and particles.



ST-1801-2005

## HAZARDOUS SUBSTANCE DETECTION

### Dräger Civil Defense Sets\*

Sets consisting of 5 Dräger tubes each for the simultaneous detection of chemical warfare agents.



ST-6723-2004

### Dräger Bio-Agent Test\*

Immunological rapid test for the detection of bacteria and toxins.



ST-547-2008

### Dräger short-term tubes®

For short-term measurements more than 200 Dräger tubes are available for the targetted measurement of so-called momentary concentrations.



2-925-91

## SINGLE GAS MEASURING INSTRUMENTS

### Dräger Pac® 7000

Long-term measuring and warning instrument with unlimited operating time, concentration display, adjustable operating day counter, data memory, several selectable sensors and additional alarms.



D-16525-2009

### Dräger X-am 2000

The 1 to 4 gas measuring instrument Dräger X-am 2000 becomes an important component of your safety concept with its sensors with a 5 year service life.



ST-7461-2005

### Dräger X-am 5000 / 5600

Convenient 1 to 5 gas measuring instrument with replaceable sensors for the personal monitoring of explosion hazards, O<sub>2</sub>, CO, H<sub>2</sub>S, CO<sub>2</sub>, Cl<sub>2</sub>, HCN, NH<sub>3</sub>, NO, NO<sub>2</sub>, PH<sub>3</sub>, SO<sub>2</sub> and organic vapours.



ST-9468-2007

### Dräger X-am 7000

Modern 1 to 5 gas measuring instrument with optional internal heavy duty pump. Optionally, the instrument can be fitted with three electrochemical and two infrared, PID or catalytic sensors.



ST-131-2004

### Dräger Multi-PID 2

For measuring volatile organic compounds in containers or sealed rooms.



ST-2465-2003

### Dräger Starter Kit

#### Recommendation for initial equipment

- Dräger gas sensor pump
- 5 sets Dräger CDS Kit for chemical warfare agents (I and V)
- Adapter for test tubes
- Opening device for test tubes
- 10 Dräger simultaneous Bio-Agent Tests for 5 biological warfare agents
- Stable carry case for CDS Kits
- Dräger mask CDR 4500 or M2000
- Dräger civil protection filter or F2000
- Dräger Protec Plus TF, olive

\* Marked products are subject to export approval.

## ORDER INFORMATION

### PERSONAL PROTECTIVE EQUIPMENT

#### Dräger M2000\*

Dräger M2000, size S				R 55 825
Dräger M2000, size M				R 55 820
Dräger M2000, size L				R 55 830
Dräger F2000, NBC protection filter				67 38 010

#### Dräger NBC Master\*

Dräger NBC Master 8x90, oliven green, basic suit in the appropriate size incl. backpack padding and blue transport cylinder				R 29 402
Dräger NBC Master 9x90, oliven green, basic suit in the appropriate size incl. backpack padding and blue transport cylinder				R 29 440

#### Dräger Protec Plus TF olive\*

Dräger Protec Plus TF, size M (168 to 176 cm)				R 57 760
Dräger Protec Plus TF, size L (174 to 182 cm)				R 57 761
Dräger Protec Plus TF, size XL (180 to 188 cm)				R 57 762
Dräger Protec Plus TF, size XXL (186 to 194 cm)				R 57 763

#### Dräger CDR 4500 + civil protection filter\*

Dräger CDR 4500 (black)				R 55 440
Respiratory protection filter A2B2E2K1-P3/ABC (black)				67 36 120
Respiratory protection filter A2B2E2K1-P3/ABC (silver)				67 36 121
CBRN CAP1 filter (black)				67 38 146

#### Dräger PSS® 7000

Dräger PSS 7000 manometer	DIN G5/8 cylinder valve connection	Tightening strap for single Universal cylinder	Dräger PSS 7000 SCS	33 55 068
	Cylinder quick-fit connection	Tightening strap for single Universal cylinder	Dräger PSS 7000 TCS	33 55 930
Dräger Bodyguard 7000	DIN G5/8 cylinder valve connection	Tightening strap for single Universal cylinder	Dräger PSS 7000 QC	33 56 542
			Dräger PSS 7000 QC	33 56 543
	Cylinder quick-fit connection	Tightening strap for single Universal cylinder	Dräger PSS 7000 BG7000 D SCS	33 56 546
			Dräger PSS 7000 BG7000 D TCS	33 56 547
Dräger Bodyguard II	Cylinder quick-fit connection	Tightening strap for single Universal cylinder	Dräger PSS 7000 BG7000 D QC SCS	33 56 485
			Dräger PSS 7000 BG7000 D QC TCS	33 56 548
Dräger Bodyguard II Tally				33 55 802
				33 55 804

#### Dräger Parat filter evacuation devices

Dräger Parat 3100				R 56 311
Dräger Parat 3200				R 56 312
Dräger Parat 4500, softpack				R 55 520
Dräger Parat 4500, traveller pack				R 55 755

### HAZARDOUS SUBSTANCE DETECTION

#### Dräger Civil Defense Sets\*

CDS I				81 03 140
CDS V				81 03 200
Training gas set for CDS I				81 03 230
Training gas set for CDS V				81 03 240

#### Dräger Bio-Agent Test\*

	Number per pack	
Dräger Bio-Agent Test anthrax	5	81 03 483
Dräger Bio-Agent Test ricin	5	81 03 487
Dräger Bio-Agent Test botulinumtoxin	5	81 03 484
Dräger Bio-Agent Test yersinia pestis	5	81 03 489
Dräger Bio-Agent Test SEB (staphylococcus enterotoxin B )	5	81 03 488
Dräger Bio-Agent Test simultaneous test for detection of 5 parameters (anthrax, ricin, yersinia pestis, botulinumtoxin, SEB)	10	81 03 482
Dräger Bio-Agent training set 1A contains 10 individual single simulation tests and 1 bottle of positive simulation powder, 1 bottle of negative simulation powder, 1 bottle of positive simulation fluid		81 03 497
Dräger Bio-Agent training set 5A contains 10 individual simulation tests in simultaneous version and 1 bottle of positive simulation powder, 1 bottle of negative simulation powder, 1 bottle of positive simulation fluid		81 03 496

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