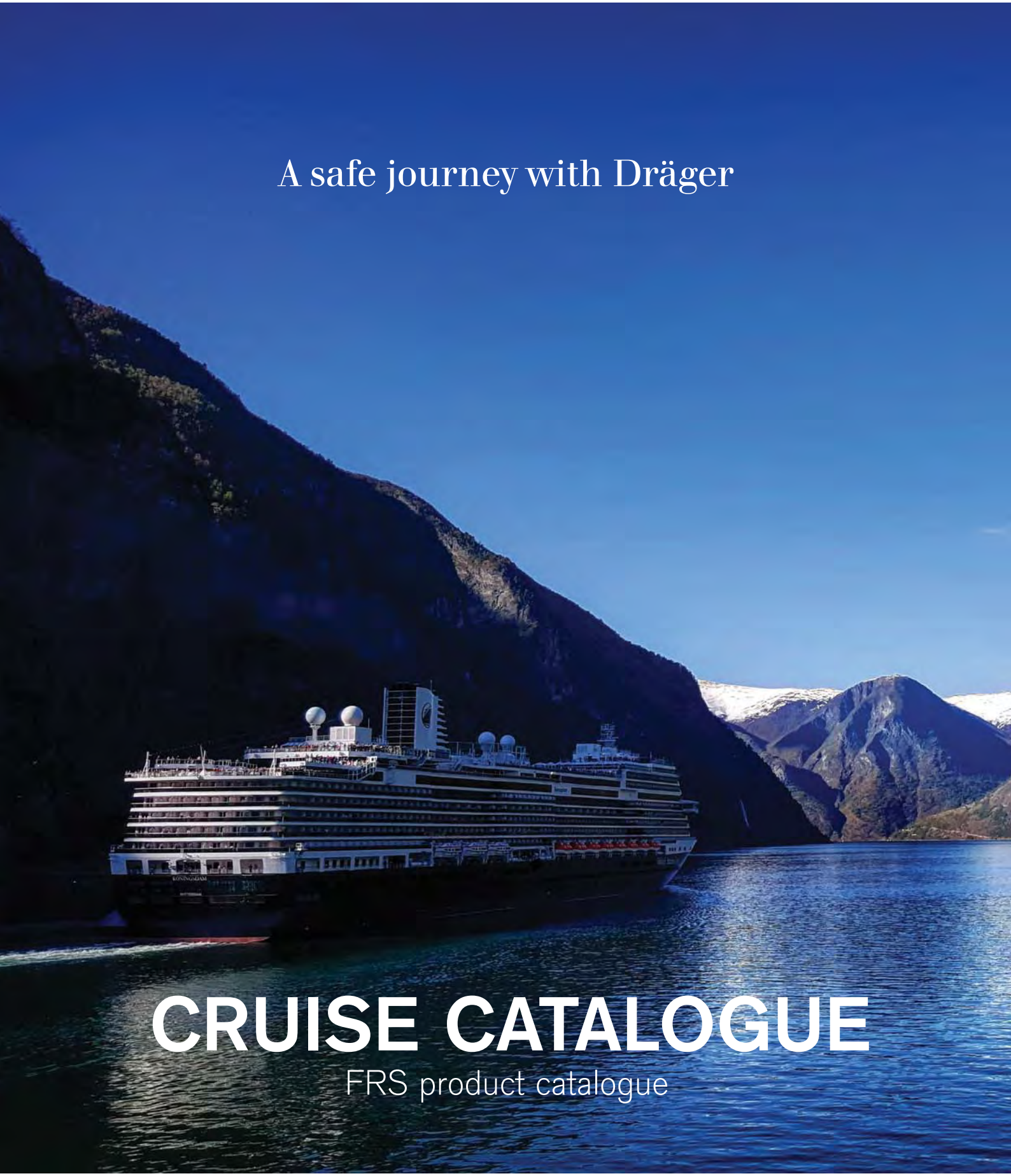
Dräger

A safe journey with Dräger



CRUISE CATALOGUE

FRS product catalogue

Dräger. Technology for Life®

Hoogvliet, 2018

Introduction

ADVANTAGES

- ✓ Total FRS package
- ✓ Fast delivery
- ✓ 24/7, 365 days support
- ✓ Largest FRS product range
- ✓ Top quality
- ✓ Worldwide Dräger locations

SAFETY ON BOARD

Dräger Marine & Offshore is a leading supplier and service provider of firefighting, rescue and safety (FRS) equipment on board of yachts, vessels, seaships, ferries, cruiseships and offshore platforms.

We provide products and service solutions for:

- portable and wheeled fire extinguishers
- fixed fire suppression systems and foam systems
- helicopter crash equipment
- survival suits and life jackets
- portable and fixed gas detection
- breathing protection and breathing compressors
- personal safety equipment

ONE PARTNER FOR ALL FRS SOLUTIONS

Dräger has qualified service teams which have the skills to perform the required service on the above equipment in one visit.

This not only reduces overhead in organizing service and travelling of technicians but also gives you one point of contact for all maintenance, certification and related administration.

DEDICATED TO THE MARINE & OFFSHORE WORLD

Years of experience and highly trained and certified technicians make Dräger an authority on firefighting, rescue and safety projects for the marine and offshore industries. Our organization has strong global presence and meets all the requirements of high safety and quality standards.

SAFETY MANAGEMENT SYSTEM

Our technicians are trained to the required standards. Dräger is in possession of ISO 9001, ISO 14001 and OHSAS 18001 certificates, has a Safety Management System in place and is an approved service organization for major class societies & brands.

125 YEARS OF EXPERIENCE

Dräger was founded in 1889 in Lübeck, Germany. Dräger is one of the world's leading suppliers of personal protective equipment, gas detection technology, and interdisciplinary system solutions for total hazard management. The company, with more than 13.500 employees worldwide, is present in over 190 countries around the globe nad has global sales of over 500 million euros.

DRÄGER MARINE & OFFSHORE

Dräger Marine & Offshore is located in Hoogvliet, close to the harbour of Rotterdam. For more than 40 years Dräger Marine & Offshore delivers tailor made and innovative products and services to the marine & offshore market. We clearly understand that long-lasting relationships are built upon mutual trust and proven reliability.

On the following pages you will find a shortlist of our safety product and service portfolio for the yacht business.

MEETING YOUR NEEDS

Dräger Marine & Offshore specializes on sales and service in the field of firefighting, rescue and safety equipment. As part of the well known Dräger organization we offer our customers first class products and support.

We feel responsible for all firefighting, rescue and safety equipment on board of your yacht(s). Our service portfolio consists of supply, installation and maintenance of FRS equipment.

DRÄGER MARINE & OFFSHORE OFFERS YOU

- one contact point for all firefighting, rescue and safety service
- worldwide FRS service locations
- a service organization and structure dedicated to the marine and offshore world
- located in the centre of the Port of Rotterdam
- service and support for both Dräger and non-Dräger equipment
- clear pricing structure for all services
- one invoice for all FRS services
- 90 days warranty on all services and repairs
- exchange equipment available during service to secure safety on board
- issuing of certificates on the services as a standard

24/7 AVAILABILITY 365 DAYS A YEAR

Our highly skilled service technicians are always there! We have a continuous working schedule. Whenever you visit our ports, our organization is standing by to support you.

ISSUING OF CERTIFICATES

When we service FRS equipment we ensure that the equipment is tested according to the manufacturer's requirements and appropriate regulations.

SPARE PARTS

We stock a wide range of parts for the FRS products most commonly used onboard of global, commercial marine vessels. We service for both Dräger and non-Dräger equipment; from fire extinguishers to self contained breathing apparatus; from portable gas detectors to life jackets.

ON BOARD SERVICE

Our field service engineers are fully equipped to help you on site. Trained, skilled and ready to service all portable firefighting equipment, fixed fire suppression, smoke detection and gas detection systems. These services will be carried out onboard wherever possible. If equipment requires repair, refilling, hydrostatic pressure testing or if computerized diagnostic equipment is required we will transport the equipment to our workshop or we will service your equipment on site in our mobile workshop container. Of course we will provide adequate exchange equipment wherever possible to ensure the safety onboard during the service period.

RENTAL EQUIPMENT

Via a rental pool Dräger makes all the safety-relevant equipment required (during shutdown) available to you, from communications technology or gas detection devices to personal protection equipment.

FRS WORKSHOPS

Our workshop technicians use modern technology to test, refill and repair your FRS equipment. Modern diagnostic equipment ensures rapid and reliable elimination of all malfunctions in safety equipment. Certified calibration and test gases make the service on your gas detection equipment both traceable and auditable.

TRAINING

Courses cover both theory and hands on use of equipment in practical applications; testing; maintenance and troubleshooting - for everything from gas detection set up and calibration – both fixed and portable; breathing apparatus; drugs and alcohol detection and first aid.

ADVANCED SERVICE SYSTEM

MONITORING MAINTENANCE

Dräger uses advanced ERP planning and registration software by Microsoft Navision®, which offers:

- barcode marking of all equipment
- equipment will be integrated into our ERP system
- ERP system equipped with service planning software
- one click overview of service to be performed per yacht, per year
- annual budget forecasting for up to five years

ADVANTAGES

- every service action can be planned
- one overview of all equipment on board of yachts
- one overview of service performed on a unit basis
- certificates generated straight from the system

Every single item is registered by:

- barcode
- serial number
- type of equipment
- manufacturer
- lifetime of equipment
- service actions required
- special surveys

MOBILE WORKSHOP ON BOARD

Dräger has DNV approved service containers, fully equipped with test equipment, spare parts and replacements, to perform FRS service on board.

The containers have been equipped with a computerized Dräger SCBA test bench and other test equipment. Service of firefighting, life saving appliances such as life jackets and survival suits, portable and fixed gas detection equipment, hospital oxygen systems, etc. can all be performed on board.

Alongside the test equipment these containers have enough spare parts and new equipment to be able to carry out repairs and/or replace defective equipment as required.

FRS CERTIFICATE PORTAL

Dräger offers you the FRS Certificate Portal:

- review, print, download and e-mail certificates in a digital online environment
- 24/7 availability, all you need is an Internet connection
- all certificates are clearly organized per order
- only one login code needed for complete overview of all FRS equipment per yacht
- this service is free of charge
- registration via www.draeger-mo.com

This service is meant for everybody who manages FRS certificates on board of a yacht.

QUALITY, SAFETY AND LIABILITY

QUALITY

We guarantee that the offered services are performed to the very highest standards. The quality of our work and our organization is safeguarded by a certified Quality Management System ISO 9001:2000, ISO 14001 and OHSAS 18001.

During a contract period Dräger always commits itself to keep the Quality Management System certified and valid. In addition, we welcome an audit by your quality manager at any time.

SAFETY

Safety on board is a key consideration for all professional operators. It is therefore reassuring that our service technicians are all in possession of a basic safety certificate. They understand the possible risks on board and they know what is expected from them to ensure the safety for themselves, for you, your guests and crew.

Our safety management system ensures that our procedures and our behavior are regularly monitored and adjusted where required. Of course it is possible to audit our safety system. Please ask your safety manager to contact us at any time to make an appointment.

LIABILITY INSURANCE

As part of the world wide operating Dräger group (www.draeger.com) our organization is in possession of a liability insurance which cover our activities. On request we can sent you a copy of the insurance policy.

CUSTOMER SATISFACTION

We are your Firefighting, Rescue and Safety partner who will provide solutions to meet your needs.
We clearly understand that long-lasting relationships are built upon mutual trust and proven reliability.
Therefor customer satisfaction is a key performance indicator for us.

We constantly monitor our customer satisfaction level and strive to improve our performance, our procedures and general behavior based on your feedback.
We have a procedure in place which offers you the opportunity to share your suggestions and/or concerns.


Dräger
NO ALC
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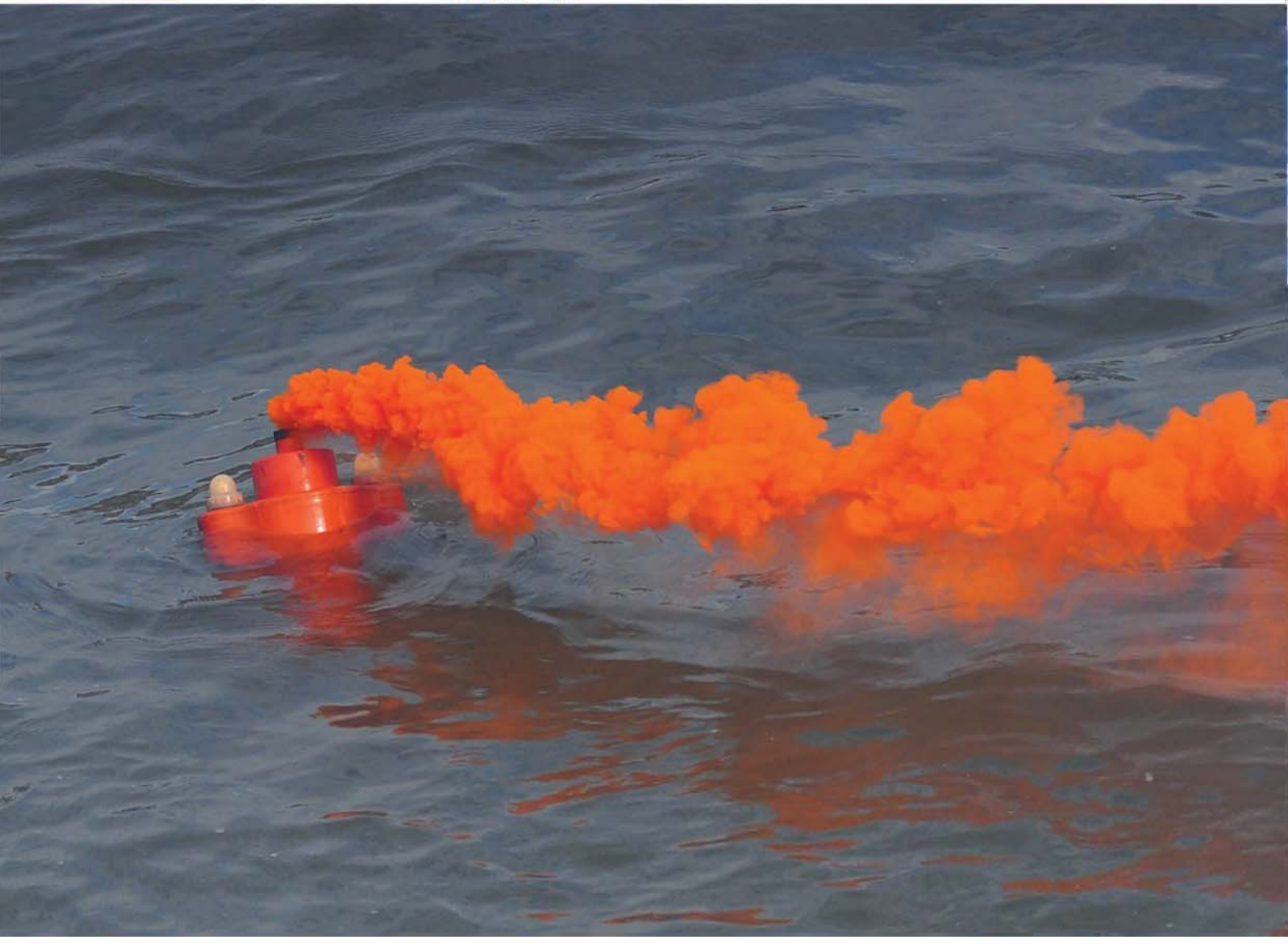
LIFEBUOY
WITH LIGHT



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Cruise market

Contents


Dräger
Saver


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600
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Dräger

Dräger 9 liter AB composite foam extinguisher (stored pressure)

The revolution in portable fire extinguishers: composite extinguishers are the latest development in the quest for durable corrosion resistant and low maintenance extinguishers. The extinguishers have EN3, CE and MED certification and a lifetime of 20 years. Another unique feature: the extinguishing medium in these units needs to be replaced every 10 years as per manufacturer specification. Foam extinguishers cover type A and B fires.

Dräger 9 liter AB composite foam extinguisher
Stored pressure

General description

The red outer HDPE mantle houses a pressure vessel which is manufactured out of HDPE. The valve is supplied in nickle plated brass. Hose clips, squeeze for action handle and carrying handle are supplied in stainless steel. Due to these material and construction choices replacement of the extinguisher caused by corrosion, scratches and dents belong to the past. Resulting into lower lifetime costs. In addition the extinguisher will remain in good condition, offering greater reliability for the user when being deployed in firefighting tasks. These extinguishers are 100% recyclable, reducing waste output at the end of its service life.

AB foam

AB foam is suitable for fire extinguishing of substances in fire class A (containing carbons) and fire class B (flammable liquids). An additional feature is that the foam is not conductive to electricity. The foam can be used to a maximum voltage of 1000 V and at a distance of at least 1 meter.

Applications

These extinguishers are extremely suitable for harsh (outdoor, saline) conditions as found on offshore installations, marine application, yachts and moist (production) spaces.

Features

- 10 year manufacturer guarantee
- replacement of foam once every 10 years
- durable and corrosion free
- reliable and ultra-strong composite material
- 100% UV resistant
- ± 15% lighter than conventional extinguishers
- cost reducing
- better overview of cost control
- environmentally friendly
- 100% recyclable product

TECHNICAL SPECIFICATIONS

Manufacturer / Model	Britannia / P50-9F
Extinguisher	Portable foam fire extinguisher
Type	Stored pressure operated
Capacity	9 liter
Fire class / Rating	34A/183B
Propellant gas	Nitrogen
Discharge time	49 seconds
Throw length	7 meters
Working pressure	12 bar
Suitable for electrical equipment	Up to 1000 Volt
Extinguishing agent	Foam
Temperature range	+5°C to +60°C
Approx gross weight	11.7 kgs
Approx dispatch weight	12.7 kgs
Approx unit dimension	640 x 210 mm (H x D)
Color	Red (RAL3000)
Approvals	EN3, MED, CE, Rijkskeurmerk 2212/01

Dräger 9 liter AB composite foam extinguisher (stored pressure)

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger 9 liter AB composite foam extinguisher (stored pressure)	1	01170221
Bracket for Composite powder extinguisher	1	18108025
Cover for fire extinguisher	1	18107002
GRP storage cabinet: DMO-35	1	03120114
Polyethylene fire extinguisher cabinet JBWE-70, red door	1	03130003

Dräger 6 liter AB composite foam extinguisher (stored pressure)

The revolution in portable fire extinguishers: composite extinguishers are the latest development in the quest for durable corrosion resistant and low maintenance extinguishers. The extinguishers have EN3, CE and MED certification and a lifetime of 20 years. Another unique feature: the extinguishing medium in these units needs to be replaced every 10 years as per manufacturer specification. Foam extinguishers cover type A and B fires.

Dräger 6 liter AB composite foam extinguisher
Stored pressure

General description

The red outer HDPE mantle houses a pressure vessel which is manufactured out of HDPE. The valve is supplied in nickle plated brass. Hose clips, squeeze for action handle and carrying handle are supplied in stainless steel. Due to these material and construction choices replacement of the extinguisher caused by corrosion, scratches and dents belong to the past. Resulting into lower lifetime costs. In addition the extinguisher will remain in good condition, offering greater reliability for the user when being deployed in firefighting tasks. These extinguishers are 100% recyclable, reducing waste output at the end of its service life.

AB foam

AB foam is suitable for fire extinguishing of substances in fire class A (containing carbons) and fire class B (flammable liquids). An additional feature is that the foam is not conductive to electricity. The foam can be used to a maximum voltage of 1000 V and at a distance of at least 1 meter.

Applications

These extinguishers are extremely suitable for harsh (outdoor, saline) conditions as found on offshore installations, yachts marine application and moist (production) spaces.

Features

- 10 year manufacturer guarantee
- replacement of foam once every 10 years
- durable and corrosion free
- reliable and ultra-strong composite material
- 100% UV resistant
- ± 15% lighter than conventional extinguishers
- cost reducing
- better overview of cost control
- environmentally friendly
- 100% recyclable product

TECHNICAL SPECIFICATIONS

Manufacturer / Model	Britannia / P50FM
Extinguisher	Portable foam fire extinguisher
Type	Stored pressure operated
Capacity	6 liter
Fire class / Rating	27A/183B
Propellant gas	Nitrogen
Discharge time	40 seconds
Throw length	4 meters
Working pressure	12 bar
Suitable for electrical equipment	Up to 1000 Volt
Extinguishing agent	Foam
Temperature range	+5°C to +60°C
Approx gross weight	8.5 kgs
Approx dispatch weight	9 kgs
Approx unit dimension	178 x 570 mm (d x h)
Color	Red (RAL3000)
Approvals	EN3, MED, CE, Rijkskeurmerk 2212

Dräger 6 liter AB composite foam extinguisher (stored pressure)

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger 6 liter AB composite foam extinguisher (stored pressure)	1	01170210
Bracket for Composite powder extinguisher	1	18108025
Cover for fire extinguisher	1	18107002
GRP storage cabinet: DMO-35	1	03120114
Polyethylene fire extinguisher cabinet JBWE-70, red door	1	03130003

Dräger 6 kgs ABC composite powder extinguisher (stored pressure)

The revolution in portable fire extinguishers: composite extinguishers are the latest development in the quest for durable corrosion resistant and low maintenance extinguishers. The extinguishers have EN3, CE and MED certification and a lifetime of 20 years.

Dräger 6 kgs ABC composite powder extinguisher
Stored pressure

General description
The red outer HDPE mantle houses a pressure vessel which is manufactured out of HDPE. The valve is supplied in nickle plated brass. Hose clips, squeeze for action handle and carrying handle are supplied in stainless steel. Due to these material and construction choices replacement of the extinguisher caused by corrosion, scratches and dents belong to the past. Resulting into lower lifetime costs. In addition the extinguisher will remain in good condition, offering greater reliability for the user when being deployed in firefighting tasks. These extinguishers are 100% recyclable, reducing waste output at the end of its service life.

ABC Powder
ABC-powder is suitable for fire extinguishing of substances in fire class A (containing carbons), fire class B (flammable liquids) and fire class C (flammable gases). An additional feature is that the powder is not conductive to electricity. The powder can be used to a maximum voltage of 1000V and at a distance of at least 1 meter.

Applications
These extinguishers are extremely suitable for harsh (outdoor, saline) conditions as found on offshore installations, marine application and moist (production) spaces.

Features
- 10 year manufacturer guarantee
- durable and corrosion free
- reliable and ultra-strong composite material
- 100% UV resistant
- ± 15% lighter than conventional extinguishers
- cost reducing
- better overview of cost control
- environmentally friendly
- 100% recyclable product

TECHNICAL SPECIFICATIONS

Manufacturer / Model	Britannia / P50PM
Extinguisher	Portable powder fire extinguisher
Type	Stored pressure operated
Capacity	6 kgs
Fire class / Rating	34A/183B
Propellant gas	Nitrogen
Discharge time	20 seconds
Throw length	5 meters
Working pressure	12 bar
Suitable for electrical equipment	Up to 1000 Volt
Extinguishing agent	ABC powder
Temperature range	-20°C to +60°C
Approx gross weight	8.5 kgs
Approx dispatch weight	9 kgs
Approx unit dimension	178 x 570 mm (d x h)
Color	Red (RAL3000)
Approvals	EN3, MED, CE, Rijkskeurmerk 2211

Dräger 6 kgs ABC composite powder extinguisher

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger 6 kgs ABC composite powder extinguisher (stored pressure)	1	01170111
Bracket for Composite powder extinguisher	1	18108025
Cover for fire extinguisher	1	18107002
GRP storage cabinet: DMO-35	1	03120114
Polyethylene fire extinguisher cabinet JBWE-70, red door	1	03130003

Dräger High Quality Fire Hose

The lay-flat fire hoses are extremely durable and very flexible to use. This hose is suitable for intensive firefighting. This extruded hoses are resistant to oil, gasoline, salt solutions, acids and chemicals.

Dräger high quality fire hose Good protection against ozone and atmospheric weathering

Applications
For intensive use.

Features
The high quality hose made of PVC nitrile, has an ozone, chemicals and acids resistant layer. The burst pressure is 50 bar. The rubber liner on the inside is "extruded" with the outside. The standard length is 20 meters. Standard available with Storz pillars and in the color red. Other colors and/or columns on request.

Life span
Hoses are available in different qualities. Before purchasing, keep the usage frequency in mind. This will determine the life span of the hose. The Polydur has a long life.

Hose Bridge
If hoses are placed on a road, they can be protected by placing them in a snake bridge. This will protect the hose and vehicles are able to pass.

TECHNICAL SPECIFICATIONS

Type	Polydur
Material	100% high tenacity synthetic yarn circular woven
Temperature	-35°C to +100°C
Working pressure	17 bar
Burtsting pressure	50 bar
Diameter	Ø 52 mm
Length	Standard: 20 meters Other lengths on request
Approvals	DIN 14811 Class 3, BS 6391:1983 Type III, MED 96/98/EC SBG*, Russian Maritime Register

ORDER INFORMATION

Description	Unit Sales	Articlenr
Storz - Pro / LM / N66 / 2,0" 20 meter, Red	1	02120071
Storz - Pro / LM / N66 / 1,5" 20 meter, Red	1	02120072
Storz - Pro / MS / N66 / 2" 20 meter, Red	1	02120072
Storz - Pro / LM / N66 / 2" 15 meter, Red	1	02120079
Storz - Pro / MS / N81 / 2" 20 meter, Red	1	02120080
Storz - Pro / LM / N81 / 2" 5 meter, Red	1	02120085
Storz - Pro / LM / N81 / 2,0" 20 meter, Red	1	02120082
Storz - Pro / LM / N81 / 2,5" 20 meter, Red	1	02120083
Storz - Pro / LM / N81 / 3,0" 20 meter, Red	1	02120084
Storz - Pro / Instantaneous BA /2" 20 meter, Red	1	02120088
Storz - Pro / MS / N66 /2" 20 meter	1	02120092
Storz - Pro / MS / N66 /2" 20 meter, Blue	1	02120096
Storz - Pro / MS / N66 /2" 30 meter, Blue	1	02120097
Storz - Pro / USPIN 1.1 / 2" 20 meter	1	02120100

POK 400 Spray Nozzle

We believe that POK products have the ability to provide firefighters all over the world the proper tools to save lives and to minimize property damage.

POK 400 DIN Spray Nozzle
Tough construction

POK nozzles are quality products that have been thoroughly tested. They meet the current standards and requirements of the daily (professional) user. Both standard and specialized nozzles are included in the range. Depending on the application, on-site use, performance, characteristics and manufacturing material, the appropriate nozzle is to be chosen. The final result of POK products comes after extensive testing of the products in consultation with users. This ensures that POK products meet the highest quality and usability.

Features
- tough anodized aluminium construction
- swivel inlet
- compact size for easy stowage
- meets the needs of Forestry and Rural Fire brigades where water conservation is desirable
- multi flow selection
- pattern detents for positive positioning
- change flow without changing pattern and flush without shutting down
- excellent for application of A class foam
- new inlet filter mesh prevents blockages caused by stones
- each nozzle etched with a unique serial number for identification

TECHNICAL SPECIFICATIONS

Material	Aliminium alloy, stainless steel
Spray	10 m, full jet, spray 110°, flush
Full stray	34 meters
Connection	G2"A
Adjustable	60, 130, 250, 400 l/min at 6 bar
Approvals	DIN 14367, DIN 14367-6-400-3-C

ORDER INFORMATION

Description	Unit Sales	Articlenr
POK: Debikador Spray Nozzle 400 - 2" DIN-14367	1	09124024

POK Mixy Eductor

Body manufactures in bronze with an inlet filter metering valve 0 to 6% with by-pass. The pick up tube needs to be ordered separately.

POK Mixy Eductor
Tough construction

Features
The foam mixer works on the Venturi principle. The water pressure in the state, creates a vacuum that causes the suction of the liquid. The device has a check valve ball which prevents any return of water into the tank of foam concentrate.

A dispenser valve allows you to adjust the proportion of water / foam from 0% to 6%.

A valve device ensures constant mixing rates, even when the pressure varies.

TECHNICAL SPECIFICATIONS

Setting aspiration	0 - 6%
Pressure drop	35%
Capacity	200 liters, 400 liters or 800 liters per minute

ORDER INFORMATION

Description	Unit Sales	Articlenr
POK Mixy Eductor, 200 liter p/m, excluding coupling	1	09120001
POK Mixy Eductor, 400 liter p/m, excluding coupling	1	09120002
POK Mixy Eductor, 800 liter p/m, excluding coupling	1	09120003
Pick up tube, 1.5 meters LM-N31 including suction bar	1	09120011
Pick up tube, 1.5 meters LM-N31 excluding suction bar	1	09120012

Delta Low Expansion Foam HV225 / S

Delta's "V" range of foam branch pipes are designed for the foams of the late '90s. All purpose alcohol resistant, FFFP and AFFF foams.

Delta HV225 Branch pipe
Self inducing models

General information
The new style branch pipe is designed to first expand the foam and then accelerate it to high velocity producing long throws beyond the capability of many older designs.

Delta's branch pipes are designed to match Delta variable inline foam inductors or equivalent types.

Features
- long throw
- self inducing models
- designed for all new technology foams
- all international inlets
- dot/Lloyds certified
- optional on/off ball valve available

Construction
- body: Light Alloy - internally and externally powder coat
- finish: Epoxy Polyester International Orange
- nozzle: Light Alloy
- inlet: HV 2" BSP Male

A wide range of International fittings are available as an option.

Self inducing models are supplied with quick release pick-up and stainless steel dip tube.

TECHNICAL SPECIFICATIONS

Nominal flow (L/min)	5 bar - 200 7 bar - 225
Foam Expansion	6-10
Range (metres) at 7 Bar	18-22
Length	740 mm
Weight	2.2 kgs
Approvals	Lloyds certified and D.O.T. approved (M.S.A.) for marine use

ORDER INFORMATION

Description	Unit Sales	Articlenr
Delta Low expansion foam HV225 / S	1	09121009

Dräger Nomex Fireman's Suit

Dräger would like to present its new line of firefighting clothes designed to the highest standards with one thing in mind: the firefighter. The new suit is the result of a close study of technical key features and usability of suits that are currently available in the market: the suit has been improved on eight key features as compared to the most readily available suits. Providing a safe barrier "between human will and fire's forces".

Dräger Nomex Fireman's Suit
A lightweight, durable and highly comfortable suit

Radiation heat barrier
A Kermel fleece that provides excellent thermal protection, these very thin layers found inside the layer concept, minimise the amount of water that can replace the critical insulation air space in the garment.

Membrane
A Hi-Tech polyurethane membrane coated on the outer radiation heat barrier. Ensures exceptional breathable characteristics and unmatched durability. Up to a temperature of 380°C, this membrane gives a good protection against heat and chemicals and will not melt.

Liner
A combination of Nomex and Viscose. The Nomex thread of this special weave method with the 2,5% Kevlar makes the liner strong. The fire retardant Viscose thread provides comfort and transports moisture to the outside of the liner. The multi-layer configuration ensures that each layer accomplishes its part of the job.

Air layers and thermal barriers
The protective value of the "ESS® 5 layer system" in combination with the fabric composite is found in the air between the fire fighter and the heat source. Air itself is the greatest single source of insulation qualities in protective clothing. Sandwiching stitching inside the facing cloth is therefore never used. All the layers are not stitched to each other; this improves the thermal insulation value (TPP) by protecting the moisture barrier and creating multiple air spaces between the very thin layers.

Comfort
The used layer system creates a lightweight, durable and highly comfortable garment without compromises to the suits protective features.

Quick Release Breakaway Zippers
Specially designed for military, firefighter and chemical suits. Ideal for situations where it's desirable to tear the zipper open without having to move the zipper all the way back.

Anti Aqua
High-Tech coated polyester fabric in sleeves, trouser legs, storm flap, back piece and pocket flaps. Prevents water and chemicals to easily enter the lining of the suit.

Eyelets
To quickly drain fluids from the suits pockets.

External padding
The suit features external protective pads on the knees and the elbows. Most other suits have their padding installed on the inside of the pants and do not use padding for elbows. Using padding for both elbows and knees increases user comfort. In addition using padding on the outside helps to protect the suit from damages on its most fragile parts.

Rounded pocket flaps
By using rounded pocket flaps the chances of being caught behind protruding parts when in action are reduced. In addition the rounding of the corners reduces wear and tear on the fabric in everyday use.

TECHNICAL SPECIFICATIONS

Type of material	NOMEX® III, 220 g/m^2

Dräger Nomex Fireman's Suit

Inner material	Jacket and trouser: NOMEX, 93% Meta-Aramide, 5% Para-Aramide, 2% Static Control Stitching: NOMEX Liner: NOMEX fleece (heat barrier), NOMEX fleece eith Hi-Tech PU breathable membrane, NOMEX viscose FR lining
Pockets	Jacket: Two side pockets with flaps, one inside pocket and one radio pocket on each chest Trousers: 2 box pockets on thighs. Inverse pocket in both sides
Color	Orange with reflective striping
Sizes	S - XXL
Approvals	EN469:2005, MED

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Nomex Fireman's Suit, size S	1	23110070
Dräger Nomex Fireman's Suit, size M	1	23110071
Dräger Nomex Fireman's Suit, size L	1	23110072
Dräger Nomex Fireman's Suit, size XL	1	23110073
Dräger Nomex Fireman's Suit, size XXL	1	23110074

Dräger HPS 7000 Fireman's Helmet

The Dräger HPS 7000 firefighter's helmet is in a class of its own thanks to its innovative, sporty and dynamic design, ergonomic fit and components which make it a multi-functional system solution. It provides you optimum protection during every operation.

Dräger HPS 7000 fireman's helmet
Tailor- made for every head

Tailor-made fit for every head

Two helmet shells for head sizes from 50 to 66 cm cover a wide range of individual head and face shapes. With a weight of approx. 1,380 g as basic version, it is one of the lightest helmets in its class. In addition to its comfortable interior fitting made of skin-friendly, anti-allergic and flexible materials, the Dräger HPS 7000 stands out with its high level of operating and wearing comfort.

Comfort is a matter of position

The padded 4-point harness allows for safe and easy adjustment to any head shape. The optimum balance of the helmet can be adjusted individually in the neck and chin area. The padding made of Nomex also ensures a comfortable fit. The integrated comfort hairnet enables the height to be adjusted and assures a good climate inside the helmet. During operation, the head size can be adjusted quickly via an easy-to-operate size adjustment wheel with safety mechanism on the outer shell, even with wet and thick gloves.

Design at its strongest

The ergonomic helmet design evenly distributes the weight to the head and relieves the neck muscles. The large and modern facial protection visor offers unrestricted protection with best visibility. For operations under chemical protective suits, the visor can be fixed permanently. A safe alternative is provided by the integrated and individually adjustable protective goggles with integrated softpad edge protection. Both visors leave enough space for the simultaneous use of corrective glasses or respiratory masks.

Innovative system design

As a provider of integrated system solutions, Dräger sets new standards for the interaction of its products. The universally and individually adjustable mask connection system of the Dräger HPS 7000 creates a strong and safe helmet-mask combination. The full-face mask FPS 7000, the integrated mask communication unit FPS 7000 COM-PLUS and the SCBA of the PSS series allow you to optimally configure the overall system. The light-weight LED helmet lamp is integrated into the helmet shell and illuminates the whole working area. It is located in the centre of the front plate and has an effective glare 2012shield as well as intelligent battery management system. The interior fitting can be equipped with various audio/speech headsets for different radios. This ensures reliable communication even in loud environments.

Highest safety - the material mix makes the difference

Despite its low weight, the Dräger HPS 7000 is one of the safest full-shell helmets in its class. Its outer shell of composite material in combination with the PUR inner shell provides reliable protection against thermal and mechanical influences. The plastic reinforced with glass fibre and aramide webbing resists extreme temperatures. It is even able to withstand the enormous radiation heat and flame engulfment of a flash over. The visors of high temperature resistant polyether sulphone reliably protect your eyes and face against high heat, particles and liquid chemicals.

Nothing left to be desired

A comprehensive accessory program completes the Dräger package. Reflective strips improve your visibility under unfavourable conditions and allow for individual marking. matched to your clothing, the various neck protection versions reliably keep your back free. Separate helmet lamps are attached with a lamp adapter on the right or left helmet side. A Nomex coating protects your helmet in any training situation and extends its service life. Helmet bags and cases provide safe storage and transport.

Ready again in no time at all

The Dräger HPS 7000 is easy and efficient to service due to the minimum number of components. The entire interior fitting can be removed and re-installed in just a few steps. You can replace individual components easily and quickly, using standard tools. All helmet components are cleaned and disinfected manually or in industrial washing machine.

Dräger HPS 7000 Fireman's Helmet

TECHNICAL SPECIFICATIONS

Size	H1: for head size 52 to 60 and optional for 50/51 (when using a separate padding strip), H2: for head size 56 to 64/66, continuously adjustable via adjustment wheel (available 2014)
Weight	Approx. 1,380 g (±5%)
Color	Luminescent, pure white,red, signal blue, zinc yellow, black, bright yellow, other colors on request
Mask connection (only PRO version)	Option to attach any adapter mask, e.g. Dräger FPS 7000, 4 positions adjustable
Interior fitting	Flame-resistant and washable 4-point harness made of Nomex, sweat band of eco leather, head support ring with wheel adjustment system (patent pending), integrated comfort hairnet, fixing lever for facial protection visor and communication adapter
Material, outer shell	Composite consisting of glass fibre reinforced plastic (PA-GF) and additionally reinforced with aramide webbing, high temperature resistant
Facial protection visor	2.5 mm polyether sulphone, anti-scratch coated (optional), approved acc. to EN 14458:2004 (±40 °C, T, N, K, AT, R, E3) clear or gold-coated version
Protective goggles (only for PRO version)	2.5 mm polyether sulphone with softpad edge protection, anti-scratch coated (optional), approved acc. to EN 14458:2004 (±40 °C, T, N, K, AT, R, E3), clear or tinted version, 2 positions adjustable
Approvals	EN 443:2008 (type B 3b, C, E2, E3, -40 °C), mask-helmet combination acc. to DIN 58610

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger HPS 7000, luminescent	1	R79170
Dräger HPS 7000, white	1	R79171
Dräger HPS 7000, PRO luminescent/matt black	1	R79250
Dräger HPS 7000, PRO white/matt black	1	R79251
Dräger HPS 7000 - neck protection Nomex / Aluminium	1	R79145
Dräger HPS 7000 - neck protection Nomex / short	1	R79146
Dräger HPS 7000 - neck protection Nomex, neck curtain, three-layer	1	R79147
Dräger HPS 7000 - helmet lamp, LED, integrated	1	R79013
For Dräger HPS 7000 and HPS 7000 PRO, to attach the integrated LED helmet lamp, order separately: E-kit front plate for Dräger HPS 7000 helmet lamp	1	R79226
Lamp holder Dräger HPS 7000 (for helmet lamps Dräger PX1)	1	R79129
Helmet lamp Dräger PX 1 LED	1	R62350
Helmet lamp Dräger PX 1 XENON	1	R57816

Bauer Junior II - E Compressor

The most compact highly mobile one of our diving compressor range. Due to its toughness and reliability the Junior has become a global classic. The Bauer Junior II offers an even more compact design and numerous improvements in details. The patented TRIPLEX® filter system guarantees purest breathing air according to DIN EN 12021 (formerly DIN 3188).

Bauer Junior II Compressor
Uncompromising quality

Invest in Bauer Quality

The Bauer Junior II is a product based on more than 50 years of experience and strict Bauer. Quality Management according to DIN EN ISO 9001. This is the uncompromising quality down to the last detail that has made us the global market leader for breathing air compressor units.

Easy Handling

- due to symbolic figures it is child's play to operate the compressor
- comprehensive documentation facilitates maintenance work

Toughness

- durable, long-life compressor block
- new fan and pulley protection made of unbreakable
- UV-resistant special plastic, which improves cooling air flow for increased compressor efficiency
- filling device: stainless steel; filling hose: kevlar

Safe Handling

- moving parts such as v-belt, pulley and fan have optimal protection
- the GS-sign certifies the observation of all relevant safety regulations

TECHNICAL SPECIFICATIONS

Medium	Air
Intake Pressure	Atmospheric
Intake Temperature	+5°C to +45°C
Ambient Temperature	+5°C to +45°C
Setting of safety valve	225 or 330 bar
Filling pressure	200 or / and 300 bar
Capacity	100 l/min measured at bottle filling 0 to 200 bar Tolerance ± 5% at +20°C Ambient Temperature
Speed	2300 l/min
Number of Compression stages	3
Number of Cylinders	3

ORDER INFORMATION

Description	Unit Sales	Articlenr
Bauer Junior II-EH Compressor 400V 50Hz	1	BK0J3EH00

Dräger Saver CF15

The Saver range of Emergency Escape Breathing Apparatus has been designed using the latest technologies available whilst still bearing in mind our three leading principles; reliability, quality and ease of use. The Saver CF constant flow emergency escape breathing apparatus allows safe, effective and uncomplicated escape from hazardous environments with the minimum of user training.

Dräger Saver CF15, with storagebox
Designed with one thing in mind, to save lives

Automatic activation
The unit is automatically activated on opening the carrying bag and can be simply re-set in the event of false alarm.

Long life neck seal
The air hood neck seal is ozone resistant ensuring high levels of protection, even after storage.

High visibility
The unit is contained in an instantly recognisable orange carrying bag, incorporating photo luminescent panels allowing the unit to be seen at very low ambient light and visibility levels.

Easy inspection
The cylinder contents gauge is clearly visible without any dismantling or adjustments to the unit due to a transparent viewing window located on the side of the bag. This allows for quick and simple cylinder contents inspection.

Made to measure
The Saver CF has been especially designed to be as easy to don as is possible, regardless of face shape or size and is suitable for users with glasses or facial hair.

Design
Utilises a simple fail-safe reducer system with excellent flow characteristics giving a consistent air flow rate at all cylinder pressure levels. The combined diffuser and exhalation valve account for excellent air supply combined with a very streamlined hood profile. The easy to don flame retardant hood incorporates a wide visor for enhanced peripheral vision and a long life ozone resistant neck seal.

The Saver CF is extremely compact in design providing greater freedom of movement.

Carrying bag
The high visibility orange carrying bag incorporates photo luminescent panels, is interchangeable for either chest bag or bandoleer positions, washable, flame retardant and allows water to self-drain.

Low contents warning
A warning whistle sounds when the unit is nearing the end of its air supply.

Optional: Storage box
Storage box for EEBD complete with photo luminescent sign.

TECHNICAL SPECIFICATIONS

Dräger Saver CF15	
Dimensions	490 x 160 x 250 mm
Weight	5.2 kgs
Max. pressure	200 bar
Working temperature	-15°C to 60°C
Storage box	
Dimensions	740 x 280 x 220 mm (l x w x d)
Weight	1.3 kgs

Dräger Saver CF15

ORDER INFORMATION

Description	Unit Sales	Articlenr
Hard case version: Dräger Saver CF15	1	3359740
Storagebox for Dräger Saver CF15	1	03170017
Safety Wash, 1 liter dispenser	1	3380164
Safety Wash, refill 1 liter	1	3380165
Safety Wash, 5 liter dispenser	1	3380166
Safety Wash, refill 5 liter	1	3380167

Dräger PARAT® 5500

The Dräger PARAT® 5500 fire escape hood was developed in cooperation with users – always with the focus on offering the fastest possible escape. Optimized operation and wearing comfort, a robust housing and a tested CO P2 filter guarantee that the wearer of the Dräger PARAT® 5500 is protected from toxic fire-related gases, vapours and particles for at least 15 minutes while escaping.

Dräger PARAT 5500
Fire escape hood

Ready for escape in only 3 steps

Exceptionally innovative and intuitive: When opening the packaging, the filter plug is automatically released from the filter. The filter is then deployed into operational position and the hood can be immediately donned. Thanks to the self-adjusting internal head harness, no additional tightening is required. All you have to do is: open the packaging, remove the and don hood – and leave the danger zone.

Reliable protection

The high-performance combination filter reliably protects against a wide range of toxic fire-related gases, vapours and particles.The CO P2 filter is approved according to the EN standard 403:2004. In addition, the filter is tested for use against H2S (at 2500 ppm) in accordance with DIN 58647-7. Particularly convenient: The security seal on the packaging shows if the unit has been opened. In addition, the filter is tightly sealed with two filter plugs.

16 years of service life

Replacing the filter after 8 years will extend the service life of the Dräger PARAT Escape Hood to 16 years in total. For this, Dräger offers filter replacement service or an expert training for your employees.

Sturdy and ergonomic at once

Both, ergonomics and wearing comfort were considered when designing the packaging of the Dräger PARAT Escape Hoods. The escape hood can be carried with a belt, shoulder strap, grip clip or belt clip. The PARAT Hard Case can also be mounted on the wall using a wall holder. Additionally, the robust packaging of the Dräger PARAT Escape Hoods protects the device from damage.

Different packaging types

You can select between three packaging types: The Hard Case provides splash water protection (IP54) – the Soft Pack provides dust protection (IP5) – or select the Single Pack with the standard filter plug system. Both, the Hard Case and the Soft Pack have viewing windows to check the filter expiration date and the condition of the device.

TECHNICAL SPECIFICATIONS

Dimensions	PARAT® 5510: 190 x 135 x 90 mm (l x w x h) PARAT® 5520: 215 x 155 x 105 mm (l x w x h) PARAT® 5530: 241 x 143 x 107 mm (l x w x h)
Weight	PARAT® 5510: 590 g PARAT® 5520: 660 g PARAT® 5530: 720 g
Filter performance	CO P2 combination filter against toxic fire-related gases, vapours and particles
Approved duration	At least 15 minutes
Approvals	According to EN 403:2004, additionally tested for the use against H2S (at 2,500 ppm) in accordance with DIN 58647-7

Dräger PARAT® 5500

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger PARAT® 5510, Single Pack	1	R59415
Dräger PARAT® 5520, Soft Pack	1	R59425
Dräger PARAT® 5530, Hard Case	1	R59435

Personal Grab Bag

Grab bag with personal escape aid to abandon the installation in case of a fire. The personal grab bag is to be used in the event of a fire.

Personal Grab Bag
Personal escape aid

Contents
- grab bag with carrying strap and photo luminescent identification strip
- Dräger Parat 5500 smoke hood
- heat resistant gloves
- cyalume light stick

Dräger PARAT 5500
A fire along with the hazardous smoke and fumes it gives off, can take you by surprise. The Dräger PARAT 5500 Fire Escape Hood is designed to help you escape the fire safely by filtering out the toxic smoke and fumes in the fire, allowing you to breathe easily while getting to safety. The Dräger PARAT 5500 has been successfully proven in use and public building and with fire departments, helping to rescue others, giving you minimum 15 minutes of escape protection in fire situations.

Light stick
The 6" EASY-LIGHT is a pure European product. Thanks to its elegant design, it is a good alternative to the 6" GLOWSTICK. The "alligator" hook helps to clip this lightsticks on many supports. Combine the 6" EASY-LIGHT with a lanyard and it becomes a glowing pendant. On special events, imprint the 6" EASY-LIGHTS to adapt more personally.

TECHNICAL SPECIFICATIONS

Dräger PARAT 5500	
Dimensions	Dräger PARAT 5510 single pack: 19,5 x 14 x 9 cm (H x L x W)
Weight	approx. 600 gr
Filter performance	Combination cartridge (gas & particle filter) provides protection against smoke, gases and particles, Filter Type CO-P2
Approved duration	minimum of 15 minutes
Approval	CE mark, tested to EN 403
Light stick	
Dimensions	150 x 11 mm
Weight	0.0133 kg
Color	Green
Duration of use	up to 12 hours
Approval	EN 71 1-2-3
Heat restistant gloves	
Operating temperature	150°C
Approval	EN388 CAT-1

ORDER INFORMATION

Description	Unit Sales	Articlenr
Grab bag	1	81111176
Dräger PARAT C	1	R59415
Heat resistant gloves	1	23110007
Cyalome stick	1	20190004

Dräger PSS 7000

Developed by professionals for professionals the new Dräger PSS 7000 represents a major leap forward in the evolution of breathing apparatus for the professional fire fighter.

Dräger PSS 7000
For professional firefighting

Design

The Dräger PSS 7000 is the result of Dräger's ongoing commitment to providing professional fire fighters with state of the art, world class breathing apparatus. A key measure of the performance of breathing apparatus is the degree to which it provides confidence and safety to the user during operational use.

The new harness is a key feature of the Dräger PSS 7000. The advanced compression moulded comfort padding combines high temperature performance, exceptional wear resistance and a high grip anti-slip surface ensures the harness remains in position and the set remains secure on the body.

Ergonomics

Ergonomic design is an important feature as it is essential in ensuring that the fire fighter can carry out the task at hand safely and effectively and with minimum effort. The Dräger PSS 7000 incorporates a range of features which together maximize comfort and minimize stress and fatigue resulting in the highest level of safety and confidence.

Durability and safety

Fire fighters and their protective equipment are routinely faced with hostile environments where they are exposed to extreme temperatures and/or chemicals. To provide the safety and protection required the Dräger PSS 7000 uses the most advanced materials and pneumatics which are proven in the field and come together to ensure long life and enduring reliability.

Care and maintenance

Simple and easy maintenance guarantee quick turnaround times in the workshop and ensure that your breathing apparatus is always ready for use. The Dräger PSS 7000 design incorporates a host of features which facilitate easy cleaning and decontamination and quick assembly and disassembly of all major components.

TECHNICAL SPECIFICATIONS

Weight of complete set	approx 11.9 kgs, for Dräger PSS 7000 pneumatic gauge Complete with Dräger FPS 7000 facemask, lung demand valve and Dräger 6.8 litre 300 bar carbon composite cylinder (20 year design life)
Input Pressure	200 or 300 bar
Normal 1st stage output pressure	8 bar
1st stage output flow	> 1000 l/min
High pressure whistle activation pressure	50 - 60 bar
Whistle sound level	>90 dBa
Whistle frequency range	2000 - 4000 Hz
Bodyguard sound level	N/A
Operating temperature range	-32°C up to + 70°C
Approvals	EN137; 2006 Type 2 vfdb 0802 Atex I M 1 / II 1 GD IIC T6 (Ta -30°C to +60°C): for the Dräger PSS 7000 and Dräger Panorama Nova masks with triplex visor Atex I M 1 / II 1 GD IIB T6 (Ta -30°C to +60°C): for Dräger PSS 7000 with all other Dräger Safety breathing apparatus masks

Dräger PSS 7000

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger PSS 7000 with standard cylinder strap	1	3355068
Dräger breathing apparatus S Plus	1	3338700
Lung Demand Standard type P	1	3357527

Dräger PSS® Merlin® System

The Dräger PSS® Merlin® Telemetry System offers a precise overview of the status of respiratory equipment wearers. The vital status information is communicated directly between the entry control point and the wearer. Technology, which supports the incident, significantly increases safety and protects the lives of your breathing apparatus wearers.

Dräger PSS Merlin System
Lightweight yet robust and easy to don

Telemetry – For precise monitoring of breathing apparatus wearers

The PSS Merlin System offers the choice of using two versatile versions. Firstly, you can use the PSS Merlin Entry Control Board, the Dräger Bodyguard 7000 or Bodyguard II electronic monitoring unit and the ATEXapproved PSS Merlin Modem.
Secondly, the system can be used with the Dräger PSS Merlin Software as opposed to the Entry Control Board. The Software, when used with the PSS Merlin PC Modem, offers additional benefits.
By using the PSS Merlin Modem, the latest information will be sent from the Bodyguard 7000 or Bodyguard II to the PSS Merlin Software or Entry Control Board, meaning that the incident commander is given real time information of the breathing apparatus wearer, enabling a prompt response in case of emergency situation.

Life critical information in real time

There is a two way communication between the wearer and the incident commander. Transmitted from the breathing apparatus wearer is the following data:
- Manual distress signal
- Automatic distress signal
- Cylinder pressure
- Time to whistle
- Elapsed time
- Withdrawal and evacuation signal
- Acknowledgment of global or individual evacuation signal

Via the Software or Entry Control Board, the incident commander is able to
- send individual or team evacuation
- acknowledge breathing apparatus wearer's distress signals, automatic distress signals and withdrawal signals

Automatic activation and logging in

For enhanced usability: When opening the cylinder valve, the system switches on both the Bodyguard 7000 and the PSS Merlin Modem. The PSS Merlin Entry Control Board is activated by the insertion of a tally key. The identity of the PSS Merlin Modem is read and a unique connection is established between radio and board. The system continuously monitors the status of the connection. When used with the Dräger PSS Merlin Software and the PSS Merlin PC Modem, it is even possible to log on the breathing apparatus automatically – without the need for insertion of a tally key.

Integrated hoses

Both the medium pressure air supply and gauge hoses are integrated into the carrying-frame to reduce the risk of snagging and entanglement, which results in improved security and safety whilst entering and working in confined spaces. With the ability to re-route these hoses from one side to the other in order to suit customer preferences for gauge access, this design feature also facilitates the easy replacement of each hose. It is however still possible to establish the connection by a tally, if required.
Personalization of the breathing apparatus can also be undertaken, enabling for easy documentation and transparency for tracking its usage.

Securely controlling the incident - Intuitive Merlin Software

When using the PSS Merlin Software, the PSS Merlin Entry Control Board is not required. The PSS Merlin PC Modem communicates directly with the wearers' PSS Merlin Modems. Even non-telemetry users can be displayed by entering a time to whistle countdown in the Software. Thanks to a weatherproof USB port, the robust and IP 65 rated PSS Merlin PC Modem does not require an additional power supply. In order to avoid loss of data, the system offers a three-way back-up: The PC Modem, the Software and an optional, external memory always save the latest status of the persons being logged on – no data will be lost. When using the overview mode, an incident commander can gather the information from several, independent entry control points. Analysis of this data gives a comprehensive picture to aid further decision making. A training mode gives users the ability to train in the operation of the software and carry out realistic incident simulations. Post incident, the data collected can be

Dräger PSS® Merlin® System

documented in a report whichit is then also possible to load intothe fire brigade administration software Drägerware.ZMS/fire.

All information at one glance
The Dräger Bodyguard 7000 combines life critical status updates: Displaying cylinder pressure, time to whistle, acoustic and optical warning signals, automatic distress signals, manual distress signals. When used with the PSS Merlin Telemetry System, Bodyguard 7000 displays radio signalstatus. All data is stored on the device and can be documented or easily retrieved to optimize training.

Increased wearer comfort, maximum freedom of movement
The PSS Merlin Modem is designed to fit perfectly onto the backplate of Dräger PSS 5000 and PSS 7000 series breathing apparatus. It is located centrally between the backplate and the cylinder resulting in a seamless integration with the ergonomic carrying system. The compact design decreases snagging risks; the clear waist belt allows more freedom of movement. As the PSS Merlin Modem is directly connected to the central electronics of the Bodyguard 7000, there is only need for a single rechargeable battery to supply power to both the Bodyguard 7000 and PSS Merlin Modem. This simplifies the battery logistics and charging process.

Increased charging efficency – even in trucks
In order to save valuable time with battery logistics, in-cab chargers are available for both the PSS Merlin Modem and the PSS Merlin Entry Control Board. The batteries are recharged easily and effectively, whilst inside the fire truck.
For users who wish to maintain battery packs off the breathing apparatus, Dräger has developed a bench system which allows up to 4 battery packs to be charged simultaneously. Uniquely, this charger can also perform a health check on each pack. Simply insert the battery into the charger – the rest is automatically carried out by the charging station.

Increased safety during the incident
- Vital information at one glance outside of danger zone
- Sending distress signals
- Acknowledgement of distress signals
- Integrated incident reporting
- Simple accountability with Dräger PSS Merlin Software

TECHNICAL SPECIFICATIONS

Dräger PSS PC Modem	
Size	135 x 120 x 40 mm
Weight	0.5 kg
Volts	5 V
Dräger PSS Merlin Entry Control Board	
Size	450 x 780 x 70 mm
Weight	9 kg
Volts	7.2 V
Dräger PSS Merlin Modem (only for Dräger PSS 5000/7000)	
Size	170 x 130 x 30 mm
Weight	0.44 kg
Volts	6.5 V
Dräger Bodyguard 7000	
Size	150 x 74 x 41 mm
Weight	0.35 kg
Volts	7.5 V
Dräger PSS Merlin Repeater	
Size	450 x 210 x 100 mm
Weight	2 kg
Volts	6.5 V

Dräger PSS® Merlin® System

Range	3km (line of sight)	
Transmission Power	500 mW	
Recommended minimal system requirements Dräger PSS Merlin Software	Operating System: Microsoft Windows XP Processor: 2.33 GHz (1.6 GHz for Netbook or Tablet PC) RAM: 128 MB (1 GB for Netbook or Tablet PC) Graphic Board: 128 MB Ports: USB 2.0	
Approvals	EN 137: Type 2 (Modem and Dräger Bodyguard 7000) ATEX 94/9/EC (Modem and Dräger Bodyguard 7000) EN 50303 (Modem and Dräger Bodyguard 7000) EN 60079-0 (Modem and Dräger Bodyguard 7000) EN 60079-11 (Modem and Dräger Bodyguard 7000) EN 60079-26 (Modem and Dräger Bodyguard 7000) Emark 2004/104/ec (Vehicle Charger)	R&TTE (EMC) 1999/5/EC (Telemetry Components) EN 300 220-2 (Telemetry Components) EN 300 330-2 (Telemetry Components) EN 301 489-3 (Telemetry Components) EN 60950 (Telemetry Components)

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger PSS Merlin PC Modem (incl. Software) - Freq (MHz) 450-470	1	3360895
Dräger PSS Merlin Entry Control Board - Freq (MHz) 450-470	1	3354270
Dräger PSS Merlin PC Modem (incl. Software) - Freq (MHz) 869.5	1	3359792
PSS Merlin PC Modem Tablet Adaptor	1	3360295
RFID Tallies (5 pcs.)	1	3360838
Power Cord UK	1	3351805
NiMH Battery PSS Merlin Entry Control Board	1	3351223
Tripod Adaptor for DIN Tripods	1	3354125
In-Cab Charger PSS Merlin Entry Control Board	1	3351810
Dräger PSS Merlin Modem (Dräger Bodyguard 7000) - Freq. (MHz) 450-470	1	3358410
Repeater 2 - Freq. (MHz) 869.5	1	3354562
4-Way Battery Charger Repeater	1	3351815
Entry Control Board Vehicle Charger Quick Release (QR)	1	3354349
In-Cab Charger QR PSS Merlin Modem (for SCBAs with Dräger Bodyguard 7000)	1	3358063
Portable Leaky Feeder (100 m)	1	3354787
Dräger Bodyguard 7000 Button Upgrade Kit	1	3357101

Dräger FPS 7000

The Dräger FPS 7000 full-face mask series sets new standards in terms of safety and wearing comfort. Thanks to its enhanced ergonomics and the availability of multiple sizes, it offers a large, optimized field of vision and a very comfortable, secure fit.

Dräger FPS 7000
Large field of vision

Field of vision and mask body

The modern full-face mask Dräger FPS 7000 has a large distortion-free polycarbonate visor, which provides you with an exceptional wide field of vision, even in difficult situations. The visor does not mist due to a well thought-out air circulation and is available with different coatings. The mask body made of either hypoallergenic Silicone or EPDM provides an especially comfortable fit.

Fit

The full-face mask Dräger FPS 7000 has an outstanding head and face fit. The ergonomic head harness and the double sealing line ensure a secure and comfortable fit on all face shapes and contours. The head harness of the Dräger FPS 7000 also ensures that the mask can be donned and doffed easily and quickly.

Mask-helmet combination

For those who use mask-helmet combinations the newly developed adapter offers a new level of safety. For example, when combining the Dräger HPS 6200 / 7000 with the new full-face mask, the newly developed and patented Dräger Q-fix connection prevents the unintentional release of the attachment. Integrated accessories The newly developed communication system Dräger FPS-COM optimally adapts to the design and ergonomics of the mask. Depending on what is required, it can be chosen with different modules and offers the optimal solution for each communication in the field. Whether radio, voice, amplifier or head-up display, everything can be directly integrated into the mask and is easy to use.

Modularity

Naturally, Dräger Safety pays close attention to our customers needs. The full-face mask Dräger FPS 7000 is not only safer and more comfortable; it also has more flexible options than previous models. Whatever may be needed during operation: It is quickly attached and ready for use.

Maintenance

The special accessories and simple maintenance of all mask parts make the Dräger FPS 7000 not only very economical and easy to service, but also flexible and versatile in its use.

TECHNICAL SPECIFICATIONS

Mask body	Convenient, hypoallergenic and flexible silicone or EPDM (dermatologically tested)
Harness	5-point connection with a large contact surface area at the back of the head, alternatively a hairnet
Mask-helmet combination	2-point connection for Dräger HPS 6200 either with Dräger Q-fix (with safety button) or with Dräger S-fix (without safety button) connection
Size	Mask body in 3 sizes (S, M and L) compatible with inner mask in 3 different sizes
Visor	polycarbonate visor available with different coatings
Connector	P, RA, ESA, PE and RP
Weight	approx. 600 gr (varies according to version)
Approval	EN 136 Class 3

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger FPS 7000 P-EPDM-M2-PC-CR	1	R56200
Dräger FPS 7000 M2-PC-Q-fix, size M	1	R56850
Dräger FPS 7000 S1-PC-CR	1	R56249
Dräger FPS 7000 L2-PC-CR	1	R56300

Dräger FPS-COM 5000

Because there is no time for misunderstandings in an emergency: The Dräger FPS®-COM 5000 communication unit has been specifically developed for the full-face mask Dräger FPS® 7000 and ensures clear communication through a voice amplifier unit or radio device – even under extreme conditions.

Dräger FPS-COM 5000
For clear audibility by voice amplifier or radio

Voice only - nothing else

The Dräger FPS-COM 5000 allows you to communicate without any interference, even in the loudest environment. The digital noise reduction technology filters out any interference that may reach the microphone inside the mask or any acoustic feedback that may occur. In particular, breathing sounds are not transmitted to the voice amplifier or the radio. This prevents any misunderstanding so you can fully concentrate on your mission.

Open to different communication channels

Use the attached jack to connect the Dräger FPS-COM 5000 to more than 350 different radio sets via the external Dräger C-C440 push-to-talk button or the Dräger C-C550 remote speaker microphone. Alternatively, you can connect the Dräger FPS-COM 5000 directly to the radio and use the built-in, push-to-talk button. To reduce the risk of snagging, the device can also be connected to specified radio sets via Bluetooth.

High reliability, low costs

Did you forget to turn off the Dräger FPS-COM 5000 after work? No problem: the communication unit shuts off automatically if there is no breathing sound for ten minutes (after a pre-alarm). This increases the battery life, lowers maintenance costs, and ensures that your equipment is ready for use when needed.

Communication lasts several hours

In combination with the Dräger PSS BG 4 plus, which can supply you with breathing air for up to four hours, the Dräger FPS-COM 5000 also keeps you in contact with your colleagues during extended missions. Even during complex tasks, you can discuss the subsequent procedure with your mission leader without having to interrupt your task.

Assembly without special tools

With the newly developed click-lock system, the Dräger FPS-COM 5000 is attached and removed in just a few steps. Nevertheless, the communication unit does not need to be removed for manual cleaning as it is protected against the ingress of water or humidity according to IP67.

Perfect fit for clear speech

The earpiece must fit as closely as possible to make sure important information is not lost and that no radio messages need to be repeated during a mission. The flexible gooseneck earpiece of the Dräger FPS-COM 5000 can therefore be adapted individually to suit your head shape – for a perfect fit and excellent audio quality.

TECHNICAL SPECIFICATIONS

Weight	depending on variant 250 to 320 g (without battery)
Battery types	2 x AAA
Operation time	approx. 32 hours (dependent on talk activity)
Ambient conditions for storage	-15 °C to +25 °C, 700 to 1,300 hPa, 10 to 95% relative humidity
Protection class	IP 67
Approvals	CE, EN 136, EN 137 Type 2, EN 145, IEC 60079-11: Ex I 1 M1 ia IIC T4/Ex ia IIC T4 Ga T=-30 °C ... +50 °C UL913: Class I, II, III, Div 1 Group A-G

Dräger FPS-COM 5000

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger FPS®-COM 5000	1	R62700
Dräger FPS®-COM 5000 with negative pressure face mask	1	R62701
Dräger FPS®-COM 5000 with positive pressure face mask	1	R62702
Dräger FPS®-COM 5000 with a rebreather face mask	1	R62703

Dräger FPS-COM 7000

The Dräger FPS®-COM 7000 provides hands-free communication for all wearers of respiratory protection devices during a mission. Excellent voice quality is achieved by removing interfering noises.

Dräger FPS-COM 7000
For clear audibility by voice amplifier or radio

For missions under the harshest conditions

For missions requiring respiratory protection you have to expect extreme conditions: thick smoke and noise-obstacles that not only cause stress but also significantly hinder any form of communication. This is even more difficult if a chemical protective suit is required: these suits restrict movement and suppress your voice. The Dräger FPS-COM 7000 in connection with the proven full-face mask Dräger FPS 7000 was developed especially for these applications. Each word is transmitted clearly and intelligibly to the members of the team.

Noise suppression for optimum voice quality

The newly developed digital noise reduction automatically suppresses ambient noises and only transmits your voice. In particular, breathing noise is filtered out preventing it from being transmitted to the voice amplifier or the radio. The integrated loudspeakers, with which you can interact directly with the injured people and team members without radio equipment, also have this function.

Wireless connection to the incident commander

Each Dräger FPS-COM 7000 has an integrated PTT button (push-to-talk) to operate a radio that can be connected as an option. You can communicate using a tactical radio by pressing just one button. The tactical radio can be connected with a cable or Bluetooth. The latter means that there are no cables that could become entangled; reducing the risk of snagging.

Hands-free team communications

The Dräger FPS-COM 7000 allows fast and efficient communication within one group or among different ones. And it works without pressing a single button. This improves your safety by not distracting you from your task. The voice-activated function also provides full-duplex communication. This means that you can talk and listen at the same time – as if you were on the phone.
If there is only one radio for the entire group, the system allows the automatic transfer of the received instructions for up to ten group members via short-range radio. This means that only one member of the group needs a tactical radio while everyone is still informed immediately.

Easy operation and individual setup options

The Dräger FPS-COM 7000 was developed with a focus on ergonomic handling and intuitive operation. The set radio group is announced via the earphones. In addition, different alarm tones warn of low battery status or if you are out of range from the team communication. An optional software allows numerous setting options with which you can adapt the system to your precise operation. You can, for example, define the number of groups. With the integrated switch you can switch between up to seven groups during the mission.

Robust and balanced

The robust communication unit adapts seamlessly to the Dräger FPS 7000. The robust design of the Dräger FPS-COM 7000 can resist even strong shocks and impacts. It is resistant to extreme temperatures and has protection class IP67. This means the Dräger FPS-COM 7000 is waterproof and can be easily cleaned after the operation. In addition, the balanced weight distribution prevents neck muscles from straining and increases wearing comfort – without restricting movement or limiting your field of view.

Flexibility before, during and after the mission

Thanks to its click connection that is easy to operate, the Dräger FPS-COM 7000 can be attached and removed in only a few steps – within seconds and without special tools. This allows greater flexibility to interchange between different face masks which can quickly be ready to operate by simply removing the protective cap. Therefore, you do not require a separate communication unit for every face mask. The device is easy to clean and maintain due to its easy assembly and distanced position between microphone and face seal.

Dräger FPS-COM 7000

TECHNICAL SPECIFICATIONS

Weight	depending on model 250 - 320 g (without battery)
Wireless frequencies	863 – 865 Mhz or 902 – 928 Mhz (Country specific, dependant on frequency allocation plan)
Transmission power	10 mW
Radio coverage	approx. 100 m free field, approx. 30 m in indoor
Number of talk Groups	configurable, max. 10 in one device
Communication type	voice-activated, duplex
Battery types	2 x AA batteries
Operation time	approx. 8 hrs (Dependent on talk activity)
Ambient conditions for storage	-15 °C to +25 °C, 700 to 1,300 hPa, 10 to 95 % rel. humidity
Protection class	IP 67
Approvals	EN 136 class 3 EN137 type 2 ATEX: Ex II 1 G, Ex ia IIC T4/ T3 Ga (Ta = -30 °C ... +50 °C) IECEx: Ex ia IIC T4/ T3 Ga (Ta = -30 °C ... +50 °C) CAN/CSA: Class I, Div. 1, Groups A-D T3/T4 CE 2004/108/EC, 1999/5/EC, 94/9/EG

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger FPS®-COM 7000	1	R61100
Dräger FPS®-COM 7000 th positive pressure face mask	1	R61300
Dräger FPS®-COM 7000 with negative pressure face mask	1	R61350

Dräger C-C440

Control unit with large Push-To-Talk button for easy handling of the radio transmitter. Tough and robust design according to IP67 / MIL-STD-810G standards. Specially designed for deployments using chemical protective suits. ATEX versions available.

Dräger C-C440
Easy to operate

Push-To-Talk button
The large pressure area enables secure voice transmission in any situation, even when the C-C440 is operated via the equipment or worn under protective clothing.

Sturdy connection socket
As a sturdy and robust quick-connect socket, the C-C440 can be combined with any of the upper units allowing connection to different types of radio devices.

Robust and water-repellent
The C-C440 has been designed to be particularly sturdy and robust for many different applications as well as being watertight, complying with IP67 / MIL-STD-810G requirements.

ATEX approved
Should the system need to be used in environments where there is a potential explosion hazard, the C-C440 is designed in such a way that it meets ATEX requirements and has ATEX approval.

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger C-C440 Communication Unit Contact our Sales department for order information.	1	On request

Dräger C-C550

Control unit for the tactical transmitter with integrated loudspeaker and microphone. Can be hooked up to a number of receiver models. Its strong and robust design is IP67 / MIL-STD-810G approved. Allows for independent deployments with the radio receiver (also without attached headset). User-friendly with two PTT buttons. ATEX versions available (regardless of radio transmitter type).

Dräger C-C550
Transmitter with integrated loudspeaker and microphone

Integrated microphone and speaker
The integrated microphone and the integrated speaker enable the use of the C-C550 without the upper unit.

Sturdy connection socket
As a sturdy and robust quick-connect socket, the C-C550 can be combined with any of the upper units allowing connection to different types of radio devices.

Robust and water-repellant
The C-C550 has been designed to be particularly sturdy and robust for many different applications as well as being watertight, complying with IP67 / MIL-STD-810G requirements.

ATEX approved
Should the system need to be used in environments where there is a potential explosion hazard, the C-C550 is designed in such a way that it meets ATEX requirements and has APEX approval.

Two large Push-To-Talk buttons
The two large push-to-talk buttons enable secure voice transmission whether the C-C550 is operated via the equipment or worn under protective clothing.

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger C-C550 Communication Unit	1	On request
Contact our Sales department (+31 10 295 2740) for more information about this product.		

Dräger Composite Air Cylinders

Designed using leading technology and advanced materials, Dräger's range of Composite Cylinders can be used in any application where breathing becomes difficult or impossible.

Dräger Composite Air Cylinders
Can be used in any application where breathing becomes difficult or impossible

Features
Through continuous product improvement and investment in technology, Dräger provides the highest quality pneumatics, carrying systems and high performance, ultra lightweight, carbon composite cylinders. Because Dräger manufacture all elements of the breathing apparatus system – masks, carrying systems, pneumatics and cylinders – you can be assured of the highest quality and maximum performance.

Dräger cylinders are manufactured and tested using automated, computer controlled processes. Continuous re-investment in plant and equipment ensures that Dräger cylinders are manufactured and tested in accordance with the most technologically advanced processes available. Automatic data collection ensures full traceability of materials used and the effective monitoring of critical process parameters.

Aluminum liner
These ranges of cylinders are manufactured from a seamless aluminum liner, which is subsequently over wrapped with carbon and glass fibres. The aluminum liner is cold drawn from AA 6061 aluminum plate and then wrapped with carbon fibre in an epoxy matrix, using a computer controlled 4 axis wrapping machine.

Glass fibre
An external layer of glass fibre in an epoxy matrix is then wrapped onto the cylinder. This external layer of glass fibre is applied to enhance the resistance of the cylinder to impact and abrasion in service. Following a high temperature curing of the epoxy matrix, an external gel coat is applied to the surface of the cylinder. This coating provides a smooth, easily cleaned surface for the cylinder. Every batch of 200 cylinders is subjected to exhaustive testing in accordance with the legislative design and manufacturing codes (EN 12245 and 97/23/EC), under the supervision of a Notified Body. All relevant production data is retained electronically for the full working life of the cylinder.

TECHNICAL SPECIFICATIONS

Water Capacity	6 liters
Free Air Capacity	1.636 liters
Working Duration	41 min
Nominal Duration	31 min
Service Pressure	300 bar
Weight	3.7 kg
Dimensions	492/495 x 152.5/154.0 mm
Design Life	20 years
Thread	M18 x 1.5
Approval	EN12245:2002

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Composite Air Cylinder, 6 liters, 300 bar	1	3353732
Dräger Cylinder KSF 6.8 liter, 300 bar	1	3353733
Dräger Cylinder KSF 9.0 liter, 300 bar, STD	1	3353734
Dräger Cylinder Carbon Composite, 9 liter, 200 Bar	1	3354631

Dräger Quaestor 7000

All static and dynamic tests of the Dräger Quaestor 7000 are carried out fully automatically. Controlled by the newly developed software, each test is carried out intuitively. For the user this guarantees high efficiency through comfort and speed.

Dräger Quaestor 7000
Fully-automatic static and dynamic tests

Fully-automatic static and dynamic tests

The test process is fully automated. Automatically opening and closing valves accelerate the process and manual intervention is no longer required. An external microphone also automatically captures the switchon point of the low pressure warning. Thus the service technician can use the time during the test for other activities.

Comprehensive test options

The Dräger Quaestor 7000 is available in four different versions that in each case test full-face masks, chemical protection suits, airline breathing equipment and compressed air breathing apparatus for functionality and leak tightness. Tests of diving apparatus (SCUBA), closed circuit breathing apparatus (CCBA) and safety valves (SV) are also possible, if required. The high-precision and manufacturer-independent measurements are carried out according to EN 137 and vfdb guideline 0840-02.

Ergonomic and flexible pressure connections

The pressure connections of the Dräger Quaestor 7000 are of ergonomic and flexible design. The medium pressure inlet is provided with an extendable hose, to eliminate the risk of leaks and resistance due to additional extension hoses. In addition the rotatable medium pressure outlet reduces the distance between the breathing connection of the lung demand valve and the mask opening or breathing adapter, e.g. if the test head has been rotated by 90 degree.

Optimum tight fit for all mask sizes

The test head can be turned without restriction and removed as required. This flexibility allows the user to tailor the test design even more individually and comfortably to his requirements. In addition, the gel face of the test head which emulates the elasticity of the human facial skin optimizes the tight fit for all common mask sizes.

Intuitive software

The included software contains a comprehensive database of preinstalled amendable device data. With user notices and graphic elements the manual test steps are presented comprehensibly even for inexperienced users. After every completed test a test result report is created for documentation purposes. An optionally applied test-due list provides timely information about tests that are due. The software also permits a customerspecific design of the test sequences, events and intervals.

Smart accessories

Included in delivery are an external microphone for the detection of the switching point of the low pressure warning and a specially designed bracket to ensure a comfortable rest position of the manometer or Dräger Bodyguard®. As optional accessory, the QSI Box guarantees a sound insulation of the low pressure warning. In addition a holder for all mask-helmet combinations can be upgraded to the test head. Furthermore, a compressed air breathing apparatus holder allows for a positioning at eye level.

TECHNICAL SPECIFICATIONS

Dimensions with test head (D x W x H)	50 x 55 x 65 cm
Weight (fully equipped with test head)	25 kg
Permitted temperature (storage)	from -30°C to 60°C
Permitted temperature (operation)	from 0°C to 40°C
Permitted air pressure	800 to 1,200 hPa
Permitted humidity	30 to 90% rel. humidity
Compressed air supply	Buffer bottle or pipework 300 bar stainless steel pipe
Pressure sensor accuracy	Class ≤ 1.0 according to DIN EN 837

Dräger Quaestor 7000

Pressure ranges	High pressure 0...350 bar Medium pressure 0...25 bar Low pressure -40...+30 mbar Low pressure -70...+30 mbar (diving) Flow O2 for 1 – 4 l/min (CCBA)
External cable connections	1 x USB interface to the PC 1 x 24 V power adapter for 110/230 V power supply 1 x connection for external microphone
Breathing frequency of the artificial lung	1 to 40 strokes/min
Maximum breathing volume	136 l/min
Tidal Volume	max. 3.4 l

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Quaestor 7000 Standard	1	R58312
Dräger Quaestor 7000 CCBA	1	R58313
Dräger Quaestor 7000 SCUBA	1	R59165
Dräger Quaestor 7000 SCUBA/CCBA	1	R58314
Dräger Quaestor 7000 Complete	1	R58364

Dräger Testor 2500/3500

The Dräger Testor 2500/3500 is a compact all-rounder for the static tests of your breathing protection equipment. Testing is reliable, easy, and convenient. The compact design enables both models to be integrated smoothly into any breathing protection workshop.

Dräger Testor 2500/3500
The compact all-rounder

Versatile testing options

Both Dräger Testor 2500/3500 models are designed for tests in the low – and medium-pressure range. They are especially suitable for testing:
- full face masks,
- compressed air breathing apparatus,
- lung demand valves, and
- chemical protection suits.

Quick and easy to operate

Use the Dräger Testor 2500/3500 to test your breathing protection equipment conveniently and reliably – manually with the Testor 2500 or PC-controlled with the Testor 3500. Both models feature a clear control panel with two pressure gauges, timers, and control levers. Negative and positive pressure is generated intuitively.
The Dräger Testor 2500/3500 is independent of inlet pressure thanks to the integrated pressure reducer. Any medium pressure from 4 to 10 bar may be applied.

Realistic mask testing

The test head of the Testor 2500/3500 has a natural shape. It is securely mounted, and the gel face may be replaced independently by the user as required. The design eliminates the need for any inflation and deflation of the test head. The new gel face II is more robust due to the optimised material composition. This enables full breathing protection masks to be tested faster and better in less time.

Improved user friendliness

Lung demand valves may be tested with an adapter, which connects easily to the mouth opening on the test head. Because there is no head inflation, the Dräger Testor 2500/3500 only features two control levers. Switching over the valves is also unnecessary. The small measuring range of -15 to +25 mbar is easier to read. This makes the device easier and more convenient to use.

PC operation

You can also operate the Dräger Testor 3500 with a PC, using the USB connection located on the rear of the device. The Dräger Protector software, which is included, guides you through the test process in steps, displays measured values in graphic form, and evaluates them. Naturally, all test results may be saved and printed for documentation purposes.

Integration is possible in any workshop
With its compact size and robust design, the Dräger Testor 2500/3500 fits into any workshop. A base plate (optional) also enables the device to snap onto the workbench mounting of the Dräger Quaestor 5000/7000 and the Prestor 5000. The gel face II is used for all three testing device types. This ensures maximum compatibility and increases the efficiency of your workshop.

Versatile training services

The Dräger Academy offers you a broad training program for the professional application and correct operation of our testing devices.

TECHNICAL SPECIFICATIONS

Dimensions (D x W x H)	300 x 515 x 335 mm
Weight (fully equipped with test head)	Dräger Testor 2500: 5.5 kg Dräger Testor 3500: 6.0 kg
Environmental operating conditions	
Temperature	+10 to 40 °C
Air pressure	850 mbar to 1,400 mbar
Rel. humidity	max. 70 %
Compressed air supply	4 to 10 bar
Medium-pressure manometer	

Dräger Testor 2500/3500

Measurement range	0 to 10 bar
Scale division	0.5 bar
Measurement precision	1.6% from end value
Low-pressure manometer	
Measurement range	-15 / 0 / +25 mbar
Scale division	0.5 mbar
Measurement precision	1.0% from end value
Timer	
Display	LCD
Pre-selected measuring time	1 s to 99 min

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Testor 2500 - Consisting of: Basic device and IFU	1	R62950
Dräger Testor 3500 - Consisting of: Basic device, USB cable, IFU and Dräger Protector Software	1	R62970

Hansen Sea Pass Passenger Suit

The Hansen emergency suit on board of passenger vessels and recreational vessels.

Hansen Sea Pass Passenger Suit
On board of passenger and recreational vessels

Features
- PU coated Nylon
- required use of additional approved life jacket on the outside of the suit
- insulated hood
- front zipper with waterproof inner lining
- attached 5-finger gloves
- adjustable ankle straps
- allows for use of shoes both inside as well as on the outside
- approved reflective tape
- the suit with approved life jacket is approved as substitute to thermal life jackets according to NMD regulations
- supplied in a vacuum watertight packed bag, takes a minimum of space
- tested and approved in accordance with ISO/SFD requirements for non-insulated immersion suits

TECHNICAL SPECIFICATIONS

Materials	Pu coated Nylon
Size	50 - 100 cm / 100-150 cm / 150 - 200 cm
Weight	0.3 kgs / 0.7 kgs / 0.9 kgs
Color	200 Fluor Orange
Approvals	SOLAS

ORDER INFORMATION

Description	Unit Sales	Articlenr
Hansen Sea Pass Passenger Suit - Available sizes: baby, junior/child, standard	1	20115039

Hansen Sealife Life Jacket

Hansen Sealife Life Jacket has a practical, space-saving design, which makes for a compact fit in onboard cabinets. The volume is 30 to 35% less than most of other life jackets.

Hansen Sealife Life Jacket
For a compact fit

Features
- retro reflective tape (8 pieces)
- light pocket
- integrated lifting loop in reinforced neck block
- adjustable chin strap to help
- correct head angle
- securely fastened whistle
- easy fastened belt
- floatable buddy line in protective pocket
- life jacket safety light included

TECHNICAL SPECIFICATIONS

Type	Solid life jacket
Color	International approved 290 orange
Size	Infant-child-adult
Dimensions (packed)	320 x 290 x 230 mm
Dimensions (unpacked)	1040 x 290 x 120 mm
Weight	Hansen Sealife adult = 0.64 kgs Hansen Sealife child = 0.56 kgs Hansen Sealife infant = 0.48 kgs
Approvals	MED, SOLAS

ORDER INFORMATION

Description	Unit Sales	Articlenr
Hansen Sealife Life Jacket, safety light included	1	20112004

Secumar Alpha 275 Twin SOLAS Tetra 3D Life Jacket

The Secumar Alpha 275 3D life jacket is recommended for wearers of immersion suits, insulated clothing or survival suits: Two triangular air chambers form a long lever which quickly turns the body into a safe position on your back.

Secumar Alpha 275 Twin SOLAS Tetra 3D Life Jacket
To combine with immersion suits, insulated clothing or survival suits

Applications
- water board authorities
- customs
- police
- locks
- dock workers
- inland waterways
- hydraulic engineering
- dredging
- underground engineering
- sewerage works
- stevedoring
- yachting

Features
- buoyancy chamber system: Bright orange buoyancy chamber in 3D-Design in navy blue protective cover, patented folding
- standard equipment: Zip pocket, inspection window, pocket for name tag, crotch strap loops, detachable neck fleece, whistle, mesh storage bag

TECHNICAL SPECIFICATIONS

Type of buoyancy	Inflatable
Method of Inflator	3001S 60g + 301SM 56g
Buoyancy	290N
CO2 cartridge size	60 gr
Color	Navyblue
Closure	Frontal click buckle
Approvals	CE/MED/SOLAS

ORDER INFORMATION

Description	Unit Sales	Articlenr
Secumar Alpha 275 Twin SOLAS Tetra 3D Life Jacket, safety light included	1	20110017

Secumar Golf 275N Life Jacket

A good value, this fully automatic inflatable lifejacket is for tough jobs. Protective cover made of robust nylon fabric. Very light and with a compact design. Buoyancy chamber and protective cover are separate components and in the case of wear and tear can be replaced independently of one other.

Secumar Golf 275N Life Jacket
An inflatable life jacket for tough jobs

Applications
- water board authorities
- customs
- police
- locks
- dock workers
- inland waterways
- hydraulic engineering
- dredging
- underground engineering
- sewerage works
- stevedoring

Features
- buoyancy chamber system: Bright orange buoyancy chamber in navy blue protective cover
- standard equipment: whistle

TECHNICAL SPECIFICATIONS

Type of buoyancy	Inflatable
Method of inflator	Automatic inflator 3001S
Buoyancy	275N
CO2-cartridge size	56 gr
Color	Navyblue, Orange (=SPR)
Closure	Front buckle
Emergency light	Optional
Approvals	CE

ORDER INFORMATION

Description	Unit Sales	Articlenr
Secumar Golf 275N Life Jacket, safety light not included	1	20110009
Seculux CFX-II Life Jacket light	1	20119004

Hansen Sea Lion Life Jacket 150N

The Hansen Sea Lion Life Jacket is specially designed for use as a combined working/ abandonment life jacket.

Hansen Sea Lion Life Jacket
Inflates automatically when it comes in contact with water

Applications
The life jacket is designed to be worn when the user is wearing heavy duty clothing or with an abandonment suit - where it guarantees to self right the wearer in less than 5 seconds. The Patented interlocking lobe design also creates an effective wave barrier preventing water channeling into the airways. The life jacket design gives neck and head support which is particularly vital for an unconscious wearer.

Features
- patented interlocking lobe design
- 150N Newtons buoyancy
- high visibility fabric
- wide range of options
- contoured head and neck support
- lightweight and comfortable to wear
- automatic firing mechanisms
- retro-reflective tape
- whistle
- grab loop
- locational light

TECHNICAL SPECIFICATIONS

Model	150N
Material	PVC cover
Sizes	XS-XXL
Color	Black cover, yellow vest
Approvals	SOLAS Chapter III 2010

ORDER INFORMATION

Description	Unit Sales	Articlenr
Hansen Sea Lion Life Jacket, 150N, safety light included	1	20112050

Man Over Board MOB1 personal locator device

The worlds smallest personal locating AIS Man Over Board device with integrated DCS. The MOB1 is intended to be installed within the life jacket and will activate automatically on inflation, sending the first alert within 15 seconds. In an emergency MOB1 provides two methods of rapidly communicating your location back to the vessel, plus providing visual indication.

MOB1 Man Over Board
Personal locator device

Rapid rescue
The best chance of rapid rescue if you fall overboard comes from your own vessel. Your crew needs to be immediately aware of the incident and keep track of your position whilst recovery is carried out. Even in the most moderate seas it is alarming how quickly a visual sighting of a man overboard can be lost.

Precise location
Once activated your MOB1 will transmit an alert to all AIS receivers and AIS enabled plotters in the vicinity. The integrated GPS ensures precise location is sent to your vessel and any others that may be assisting. An additional feature of the MOB1, is its ability to activate the DSC alarm on your vessels VHF, alerting your crew to the situation.

Compatibility
Most modern AIS plotters and DSC VHF comply with the standards required to receive the MOB transmissions. It is recommended that you check compatibility with the equipment manufacturer, particularly if you are using older equipment.

Strobe light
The integrated strobe light ensures maximum visibility in low light conditions.

TECHNICAL SPECIFICATIONS

Communication method	AIS (Automatic Indetification System) DSC (Digital Selective Calling)
Dimensions	Height 134 mm Diameter 38 mm
AIS transmission Transmit Power	1Watt
Frequency	161.975/162.025MHz
DSC Transmission Transmit Power	0.5Watt
Frequency	156.525MHz
Messages	Individual Distress Relay Distress Alert (by single call made on press of the activation button)
Temperature range	-20°C - +55°C (operational)
Temperature range	-30°C - +55°C (storage)
Waterproof	10 meter depth
Weight	92 grams
Battery lifetime	7 years
Approvals	RTCM SC11901, EN303 098-1

ORDER INFORMATION

Description	Unit Sales	Articlenr
Man Over Board MOB1 personal locator device	1	20121004

Electronic Distress Flare EDF1

The EDF1 electronic distress flare offers users a safe and long-lasting solution to visual signaling in an emergency.

Electronic Distress Flare EDF1
Visual signaling in an emergency

Advanced LEDs
The unique lens design combined with the use of advanced LEDs and highly efficient circuit technology ensures a constant level of light output throughout the life of the user replaceable battery.

Light coverage
The light output is a beam of over 30° throughout the full 360° azimuth, providing in excess of 6 times more light coverage than other electronic flares. Light is also distributed throughout the hemisphere above the unit to ensure visibility from the air.

Repeatedly usage
Unlike single use pyrotechnic flares the rescueME EDF1 can be used repeatedly in any of its four modes, ensuring continued visibility is maintained over a longer period. The unit is both safe to store and operate while also eliminating any worries associated with disposal.

Grab bag
The compact size and rugged design means the rescueME EDF1 is the perfect safety product for a grab bag, life raft or hiker's backpack.

TECHNICAL SPECIFICATIONS

Type	Lithium Primary
Chemistry	LiMn02
AIS transmission Transmit Power	> 6 hours
Temperature range	20°C to +55°C (operational)
Temperature range	30°C to +70°C (storage)
Waterproof	10 meters at +20°C
Weight	155 grams
Size	187 mm x 42 mm
Modes of operation	4 plus SOS signaling
Reach	7 mile / 11,2 km
Battery	Easy change replaceable battery

ORDER INFORMATION

Description	Unit Sales	Articlenr
Electronic Distress Flare EDF1	1	20121003

Comet Life Boat Set

Container for the safe and dry storage of various pyrotechnics in marine environment like lifeboats or MOB boats.

Contents for a lifeboat set
- 6x Comet Hand flare
- 4x Comet Parachute signal
- 2x Comet Smoke Signal
- 1x Container

Comet life boat set
For safe and dry storage

TECHNICAL SPECIFICATIONS

Container	
Dimensions	220 x 410 mm
Material specs	PVC container with screw off lid Rubber seal in lid

ORDER INFORMATION

Description	Unit Sales	Articlenr
Comet Life Boat Set	1	06110017

Dräger Alcotest 5820

The Dräger Alcotest® 5820 allows the professional user to perform a breath alcohol test with speed and precision. The measuring technology of this small and user-friendly portable measuring device has already proven in over 200,000 units in use worldwide today.

Dräger Alcotest 5820
Professional alcohol testing device

Breath alcohol testing made easy
The device is ready to use within seconds. This means that you can perform an (active) test on a subject at any time. It is also possible to measure alcohol in the ambient air (passive), in which case a mouthpiece isn't required.
All functions required for a measurement are activated with the convenient green OK button, while two menu buttons are used for navigation.

Versatile and tough
The tried and tested electro-chemical Dräger sensor in the Alcotest 5820 is distinguished by its very fast response times and a long service life. It operates with extreme precision and reliability. The analysis is reliable even at temperatures of -5 to +50 °C / 23 to 122 °F. The sensor also delivers reliable results quickly in case of a high alcohol content, for both active and passive measurements.

Convenient to use
Dealing with intoxicated people requires a high degree of attention and concentration. An intuative operation of the device is an important aspect for ease of use and smooth breath testing procedures.
All measurement functions can be operated with just one button to make it easier for you to perform the test. The large back-lit display is easy to understand due to its full-text messages which guide you securely through the alcohol test. An LED and audible signal complement the display and indicate the end of a measurement process. Two menu buttons are used to navigate through the menu, enabling you to perform functions such as reviewing the last test results.

Simply hygienic: the Slide'n'click mouthpiece
The sophisticated product design meets the requirements for performing the breath alcohol test quickly, easily and hygienically: The shape of the Slide'n'click mouthpiece allows you to intuitively fit it correctly, even in the dark. The Alcotest 5820 is ready to use again immediately after changing the mouthpiece. Furthermore, attempts at obstruction are consistently rejected by the device: The air outlet cannot be closed, foiling any attempts to manipulate the device when giving a breath sample.
A spacer on the mouthpiece keeps the lips of the person being tested from coming into contact with the device's housing. The spacer can also be used as a mouthpiece ejector if necessary. Mouthpieces with return valve are also available upon request.

TECHNICAL SPECIFICATIONS

Measuring principle	Electrochemical Dräger sensor for 1/4" technology, alcohol specific
Measuring range	0 to 2.5 mg/L; if measurement range limit is exceeded, a message is displayed
Sampling	Standard: automatic sampling when minimum volume resp. defined blow time is reached; Passive sampling without mouthpiece or manual initiation of sampling possible
Ready for use	Approx. 2 s after switching on
Display of the measurement results	After approx. 3 s (at 0 mg/L); after approx. 10 s (at 0.5 mg/L, room temperature)
Operating temperature	-5 to +50 °C / 23 to 122 °F
Relative humidity	10 to 100 % relative humidity (non-condensing and in operating state)
Ambient pressure	600 to 1,300 hPa / 17.7 to 38.4 inch Hg
Display	Graphic backlit LCD display; 32 x 22 mm / 1.3" x 0.9" (128 x 64 pixels)
LED	2-colour, to support display of results and warning messages
Audible signal	Different signal tones to support display messages and warnings
Datalogger	Storage of last 100 tests with test numbers

Dräger Alcotest 5820

Power supply	1 x CR123A-Battery, charge level indicator in display, with one battery approx. 1,500 breath tests can be done.
Mouthpiece adaption	Improved Slide'n'click mouthpiece attachment; can be fitted for right or left orientation
Mouthpiece	Hygienically, individually packaged, with tamper-proof, tamperproof air outlet, mouthpiece ejector and spacer between mouth and instrument housing
Operating concept	Measurement functions can be performed using just one button; menu navigation is via two menu button
Calibration	Wet gas or dry gas calibration
Housing	Impact resistant ABS/PC
Dimensions (W x H x D), weight	Approx. 50/60 x 141 x 31 mm / 2"/2.4" x 5.6" x 1.2"; approx. 150g / 0.33 lbs, incl. battery
Instrument configuration	Direct menu-guided configuration of instrument settings (PIN required) No additional PC software needed
Vibration and shock	EN 60068-2-27, EN 60068-2-6; EN600-2-64
CE marking	2004/108/EC (electromagnetic compatibility)
Norms	EN 15964, NHTSA, FDA Conformity, depending on configuration Warning or deactivation after end of service interval IP54

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Alcotest 5820	1	8325200
Protection cover	1	8324999
Dräger Alcotest mouthpiece (Slide'n'click) - Package with 100 pieces	1	6810690
Mouthpieces 'slide'n click', 250 pieces per unit	1	6810825
Mouthpieces 'slide'n click', 1,000 pieces per unit	1	6810830
Lithium battery (CR123A)	1	4543808

Dräger DrugCheck 3000

Use the Dräger DrugCheck® 3000 to find out within minutes if a person has drugs in his or her system. The compact and quick saliva-based drug test yields reliable results cost effectively and easily. The device does not require electricity and can be used anywhere.

Dräger DrugCheck 3000
Easy, fast, reliable and safe drug detection

Obtain samples easily and safely

The Dräger DrugCheck 3000 consists of two components: a swab for obtaining a saliva sample, and a test cassette for the analysis. The test cassette contains the buffer liquid and a window with two test strips, which display the control and test lines. The test itself is performed in three easy steps: Swab the saliva sample, shake the test kit, wait for a brief incubation period, and then start the test. A colour indicator on the swab disappears as soon as it has absorbed enough saliva for a test.

If the test result is negative, a line will appear alongside the respective substance class (drug). This means that none of the target substance was detected in the sample. If a line fails to appear next to one of the substance classes, then the result for this substance is positive. As soon as the control lines appear in the window, you can usually read the results after one to two minutes.

Fast and sensitive analysis

Check individuals for up to five substance classes simultaneously with Dräger DrugCheck 3000: cocaine, opiates, amphetamine, methamphetamine, and cannabis (THC). Of all the substance classes listed, cannabis is the drug consumed most frequently and also the most difficult of all compounds to identify (THC). This is why the Dräger DrugCheck 3000 was optimised to detect THC, and now offers two measurement options: fast or sensitive. The fast mode displays a quantity of 40 ng/ml or more after just one minute. The sensitive mode permits detection of 15 ng/ml THC after three minutes.

Unambiguous on-the-spot drug detection

Its compact design makes the DrugCheck 3000 easy to transport. It can be made ready for use quickly and easily, for and testing in the workplace. The test kit has no electrical parts, which makes it safe to use in hazardous areas.

Detects following substances

- Cocaine (COC)
- Opiates (OPI)
- Cannabis (THC)
- Amphetamine (AMP)
- Methamphetamine (MAMP)

Additional benefits

Dräger has decades of experience in alcohol measuring equipment and drug detection methods. For the DrugCheck 3000, Dräger employed the testing principle of the proven Dräger DrugTest® 5000 system, which reliably detects even minute traces of THC. The disposable DrugCheck 3000 test kit cannot be manipulated and is hygienic to use.

TECHNICAL SPECIFICATIONS

Dimensions (w x h x d)	32 x 11 x 57 mm
Weight	< 30 g (0,07 lb)
Operating range	Operation: 0 °C to 30 °C (32 °F to 86 °F) at 5% to 95% relative humidity
Storage / transportation	4 °C to 25 °C (39 °F to 77 °F)
Time of measurement	Fast measurement: analysis < 5 minutes Sensitive measurement: analysis < 7 minutes
Selecting the measurement mode	Dependent on the selected pre-incubation period and desired THC cut-off: fast: at 1 minute and 40 ng/ml sensitive: at 3 minutes and 15 ng/ml
Approvals	Licensed as a medical product within the EU in accordance with Directive 98/79/EC on in vitro diagnostic medical devices. Outside of the European Union for forensic use only (Non-IVD).

Dräger DrugCheck 3000

ORDER INFORMATION

Description	Unit Sales	Articlenr
DrugCheck® 3000 STK 5 IVD, 20 testkits in one package	20	8325500

First Aid Backpack

Compact handy backpack with first aid content. Equipped with reflective cross and triangle on the front pocket. The content is separated. The first aid backpack can also be used as a shoulder bag and is easy to hang on the wall. The backpack is waterproof and suitable for emergency response and first aid. Content is according to the guidelines of the Orange Cross.

First Aid backpack
All first aid kit contents

Contents
- 3 First aid dressing 6 x 8 cm sterile
- 4 First aid packet medium sterile
- 4 Gauze compress sterile 5 x 8,5 cm
- 4 Non-woven compress sterile 10 x 10 cm
- 3 Synthetic wadding 3 m x 10 cm
- 5 Aluminium wound dressing 10 x 10 cm
- 2 Elastic bandage 4 m x 6 cm
- 10 Wound closure strips 3 x 7,6 cm
- 2 Self-Adhesive Fixation Bandage 4 m x 8 cm
- 3 Ideal supportive bandage 5 m x 8 cm
- 2 Triangular bandage non woven
- 1 Roll adhesive plaster
- 1 Assortment plaster bandages
- 1 Plaster bandage elastic 100 x 6 cm
- 1 Life saving kiss resuscitation mask
- 1 Lister bandage scissors 14 cm
- 4 Latex gloves non sterile
- 1 Rescue sheet gold/silver 160 x 210 cm
- 1 Splinter tweezer Feilchenfeld 8,5 cm
- 1 Tick-out tick tweezer
- 1 Disinfection liquid lotion 1%
- 1 First aid advice step by step leaflet

TECHNICAL SPECIFICATIONS

Dimensions	340 x 100 x 380 mm
Material	Nylon 1680D
Color	Red
Packaging	Per piece in a bag

ORDER INFORMATION

Description	Unit Sales	Articlenr
First Aid Back Pack	1	19110018

Zoll AED Plus

A cardiac arrest or cardiac fibrillation is always sudden and, at that moment it is necessary to act immediately. Of course, one of the first things one should do is contact professional help. Zoll AED Plus does not only alert you when a transient is needed, also tells you if the heart massage is deep enough and runs at the right motion.

Zoll AED Plus
With a good step-by-step resuscitation guidance

This AED is distinguished from other brands
- use of special CPR-D padz
- mounted a pressure point to the electrodes, which controls the pressure and pace of the heart
- a good step-by-step resuscitation guidance with icons and a clear voice

Batteries
The Zoll Plus AED is the only one using normal household batteries, they are easily replaced and inexpensive to use.

By self-testing, the electrodes are also being tested.

Unique for marine use
It is the victim, however, of utmost importance that immediate first aid is granted. This first aid is the basis of CPR and ventilation: an AED increases the survival of the victim. Partly because the emergency services to vessels often need more time than is desirable, Dräger has added the AED to its portfolio.

Dräger has deliberately chosen the AED of Zoll Plus.

TECHNICAL SPECIFICATIONS

Particle and wateringress	IP-55
Battery life	5 years
Padz life	5 years
Display	LCD display, 70 x 30 mm
Dimensions	133 x 241 x 292 mm
Weight	3.1 kg
Operating temperature	0°C to +50°C
Storage temperature	-30°C to +60°C
Cable length	1.1 m
Guarantee	7 years
Approvals	UL2601, AAMI DF-39, IEC 601-2-4, EN 60601-1

ORDER INFORMATION

Description	Unit Sales	Articlenr
Zoll AED Plus, complete with carrying bag	1	19130027
Zoll AED closet, clear	1	19130029

Dräger UCF 9000 Thermal Imaging Camera

The Dräger UCF 9000 thermal imaging camera is suitable for all yachting and marine apps. The camera can be used for rescue operations, technical assistance, hazmat operations, monitoring as well as search for hot spots and hidden fire.

Dräger UCF 9000 Thermal Imaging Camera
Easy to use, small, light weight and EX approval

Always have a hand free

The UCF 9000 is a compact design. The holding hand also operates all functions. Buttons and keys are quickly selected with the thumb or index finger. With its robust support the UCF is conveniently at hand even while you are crawling on all fours: Simply support yourself against the ground with the device's crawlplate support.

Crystal clear images

Even when the visibility is extremely poor, the UCF 9000 will still deliver first-rate image quality and detailed precision. With its 384 x 288 pixels it offers an extremely high resolution, and thus provides 44% more detail than other fire fighting thermal imaging cameras. Its 57° field of view (horizontal) provides you with an extra-large overview of the situation. To bring the scene in even closer, you have the option of using the 4x zoom in addition to the 2x zoom.

Thermal image or real image mode

The UCF 9000 is capable of capturing films and individual photos of not just the displayed thermal images, but also from real digital images. With this option, you can make a live recording of real operations and training situations and evaluate them on the display on site with the play function.

The UCF basic functions

- laser pointer: use the pointer to mark heat sources or display the fill level of tanks
- snapshot-function: look around corners and freeze the image to assess the situation
- extended dynamic range: clearly detect persons and objects even near fires
- quick shutter: don't miss information because the detector is calibrating itself or when switching to a different operating mode

Eight additional image modes

- fire (fire fighting)
- persons (search and rescue)
- thermal scan (searching for hot-spots)
- outdoors (searching for persons outside)
- hazardous goods (leak detection and level indicators)
- scan PLUS (searching for heat sources - in real image)
- normal image (video camera)
- user-defined 1

Continued recording with full memory card

Should the recording capacity of approx. two hours be exhausted, the black box of the UCF 9000 guarantees further use of the thermal imaging video. If the memory is full, the camera will simply record over the beginning of the recording. The recording continues automatically.

Additional advantages

- intuitive operation: easy and safe handling even under rough conditions
- display brightness adjusts automatically to environment
- easy-to-read status information
- modern lithium ion batteries provide approx. four hours operating time
- automatic stand-by for longer battery life
- different attachment options (e.g. neck strap or retractable lanyard)
- wide range of accessories (e.g. transport case, vehicle installation kit, tripods, etc.)

TECHNICAL SPECIFICATIONS

Dimension of the camera	125 x 280 x 110 mm (w x h x d)
Weight	1.4 kgs incl. battery
Technology display	Liquid crystal display (LCD)
Size display	9 cm
Application modes	Standard, Fire, Persons, Thermal Scan, Outdoors, Hazardous Goods, Scan Plus, Normal Image, User defined 1
Protection cover housing	Rubber material EPDM
Carrying loops housing	High-temperature-resistant material

Dräger UCF 9000 Thermal Imaging Camera

Housing material	High-temperature-resistant plastic
Protection class	IP67
Infrared type sensor	a-Si Microbolometer Arry
Resolution infrared	384 x 288 pixels
IR spectral	7 to 14 um
Temperature sensivity	Typically 0.035 °C
Picture frequency	50 Hz
Material optics	Germanium
Focus optics	1 m to infinity
Field of view	Horizontal: 57° / Vertical: 41° / Diagonal: 74°
Operation time (at 23°C) with battery	Typically 4 hours
Operation time (at 23°C) with alkaline power pack	Typically 2 hours
Temperature measurement	Digital temperature display: -40°C to 1,000°C
Operating temperature	40°C to 85°C (inside camera), 150°C for 20 min., 260°C for 10 min.
Battery technology	Rechargeable lithium ion batteries
Battery status display	Precise 4-level battery indicator
Approvals	IEC 60079-0:2007, IEC 60079-11:2006, EN 60079-0:2009, EN 60079-11:2007, EN 60079-11:2007, ANS/ISA 12.12.01, CAN/CSA E60079-0, CAN/CSA E60079-11, I M2 / II 2G, Ex ib I Mb / Ex ib IIC T4 Gb, Flame test EN137:2006

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger UCF 9000 (50 Hz)	1	8321225
Transport Case	1	8321099
Neck strap	1	8323031
Retractable lanyard	1	8323032
Li-on battery (witj Ex-approval)	1	8323075
Battery charger	1	8321247
Dräger UCF 9000: Single Charger for Charging Modules, max. 5 charge modules	1	8316994
Tripod	1	8321254
Universal clamp	1	8321259

Dräger Pac® 6000

The disposable personal single-gas detection device, Dräger Pac® 6000, measures CO, H_2S, SO_2 or O_2 reliably and precisely, even in the toughest conditions. The robust design, quick sensor response times, and a powerful battery ensure maximum safety for up to two years with virtually no maintenance required.

Dräger Pac 6000
Robust design, quick sensor response time

Strong performance for maximum safety

You can rely on the Dräger Pac 6000: The personal single gas detection device warns against hazardous concentrations of carbon monoxide, hydrogen sulphide, sulphur dioxide or oxygen with precision and reliability. Powerful sensors with a very low t-90 response time ensure quick reactions. The Pac 6000 is versatile thanks to its wide measurement range. For example, the CO sensor measures concentrations from 1 to 1,999 ppm, and the H2S sensor from 0.4 to 100 ppm.

Easy handling thanks to clear user guidance

The D-Light indicates whether the functionality of the device has been tested and that it is ready to use. The housing is also designed with your safety in mind: each sensor variant of the Dräger Pac 6000 features a clear, well visible colour coding, thereby minimising the chance of mistakes.

Robust design – even for the toughest conditions

The Pac 6000 can easily handle even extreme conditions: depending on the sensor, temperatures from -40°C to 55°C and air pressures between 700 and 1,300 mbar can be tolerated. A membrane filter protects the sensor from foreign matter such as dust and liquids. The shock-proof, chemical-resistant housing meets the requirements specified in the IP68 standard rating.

User-friendly display with all important information

The large display is non-verbal and clearly indicates the respective gas concentration. Other important information, such as remaining operating time and battery capacity, is also displayed. The bright backlighting ensures clear reading of all values in the dark.

360° alarm with various functions

If the Dräger Pac 6000 measures hazardous gas concentrations, it sets off an audible, visual, and noticeable vibrating alarm. Two bright, flashing LEDs on the top and bottom of the device ensure that the alarm is easily visible from all sides. The acoustic alarm reaches a volume of 90 dB. The display can show the peak concentration measured at any given moment. Earlier alarms registered can also be retrieved at a later time even if acknowledged. The Pac 6000 with oxygen sensor has two additional alarm thresholds in addition to the standard alarm threshold setting.

Event logger for analyses and reports

The Dräger Pac 6000 logs concentrations and events along with date and time. The data can be downloaded to a PC via an interface and processed further there.

Economical operational costs

All of the versions of the Pac 6000 are equipped with extremely durable DrägerSensors® and a powerful battery. Neither the sensor nor the battery need to be changed for the entire two-year maintenance-free service life of the H2S, SO2 and CO versions. The service life of the Dräger Pac 6000 starts when it is first activated. The device automatically switches off after two years. The Pac 6000 is protected against water, dust and other foreign bodies by a special membrane filter. When the filter becomes heavily soiled you can quickly and easily replace it yourself. The device is then ready to use again in no time.

Fast function test saves time and money

Function tests and calibrations can be carried out especially efficient using the Dräger X-dock® calibration station. The automatic bump tests in the X-dock are a cost-efficient and convenient solution thanks to short test duration and extremely low test gas consumption. The Dräger Pac 6000 is simply placed in the bump test station and automatically selects the correct setting.

Dräger Pac® 6000

TECHNICAL SPECIFICATIONS

Dimensions	64 x 84 x 20 mm (w x h x d)
Weight	Approx. 106 g (113 g with clip)
Device service life	2 years from first activation
Battery service life	2 years (O2 min. 12 months)
Ingress protection	IP68
Air pressure	700 to 1300 hPa
Air humidity	10 to 90% relative humidity, non-condensing
Temperature	-30 °C to +55 °C (briefly down to -40 °C for 1 hr, depending on sensor)
Approvals	cCSAus, IECEx, ATEX, CE

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Pac 6000 CO LC	1	8326321
Dräger Pac 6000 H_2S LC	1	8326320
Dräger Pac 6000 O_2	1	8326322

Dräger Pac® 6500

The robust Dräger Pac® 6500 is your reliable companion under tough conditions. The personal single-gas detection device measures CO, H<sub2S, SO_2 or O_2 quickly and precisely. Quick sensor response times and a powerful battery also ensure safety.

Dräger PAC 6500
Quick sensor respone time and powerful battery

Strong performance for maximum safety

You can rely on the Dräger Pac 6500: the personal single-gas detection device warns against hazardous concentrations of carbon monoxide, hydrogen sulphide, sulphur dioxide or oxygen with precision and reliability. Powerful sensors with a very low t-90 response time ensure quick reactions. The Pac 6500 is versatile thanks to its wide measurement range. For example, the CO sensor measures concentrations from 1 to 1,999 ppm, and the H2S sensor from 0.4 to 100 ppm.

Easy handling thanks to clear user guidance

The D-Light indicates whether functionality of the device has been tested and whether it is ready to use. The housing is also designed with your safety in mind: each sensor variant of the Dräger Pac 6500 features clearly visible colour coding, thereby minimising the chance of mistakes.

Robust design – even for the toughest conditions

The Pac 6500 can easily handle even extreme conditions. Depending on the sensor, temperatures from -40 °C to 55 °C and air pressures between 700 and 1,300 mbar can be tolerated. A membrane filter protects the sensor from foreign matter such as dust and liquids. The shock-proof, chemicalresistant housing meets the requirements specified in the IP68 standard rating.

User-friendly display with all important information

The large display is word-free and clearly indicates the respective gas concentration. Other important information, such as the battery capacity, is also displayed. The bright backlighting ensures that all values are clearly legible in the dark.

360° alarm with various functions

If the Dräger Pac 6500 measures hazardous gas concentrations, it sets off an audible, visual and perceptible vibrating alarm. Two bright, flashing LEDs on the top and bottom of the device ensure that the alarm is easily visible from all sides. The acoustic signal reaches a volume of 90 dB. The display can show the peak concentration measured at any given moment. Earlier alarms registered can also be retrieved at a later time even if they have been acknowledged. The Pac 6500 with oxygen sensor has two additional alarm thresholds in addition to the standard alarm threshold settings.

Data logger and event logger for analyses and reports

The Dräger Pac 6500 logs concentrations and events along with the date and time. The data can be loaded on a PC via an interface and processed further there.

Economical operating costs

All versions of the Pac 6500 are equipped with extremely durable DrägerSensors® and a powerful battery. Neither the sensor nor the battery need to be changed over the two-year maintenance-free service life of the H_2S, SO_2 and CO versions. The Pac 6500 is protected against water, dust and other foreign bodies by a special membrane filter. When the filter becomes heavily soiled in use, you can quickly and easily replace it yourself. The device is then ready to use again right away.

Fast function test saves time and money

Function tests and calibrations can be carried out especially efficient in the Dräger X-dock® calibration station. The automatic bump tests in the X-dock are a cost-efficient and convenient solution thanks to the short test duration and the extremely low consumption of test gas. The Pac 6500 is simply placed in the bump test station and automatically selects the correct setting.

Dräger Pac® 6500

TECHNICAL SPECIFICATIONS

Dimensions	64 x 84 x 20 mm (w x h x d)
Weight	Approx. 106 g (113 g with clip)
Battery service life	2 years (O_2 min. 12 months)
Ingress protection	IP68
Air pressure	700 to 1300 hPa
Air humidity	10 to 90% relative humidity, non-condensing
Temperature	-30 °C to +55 °C (briefly down to -40 °C for 1 hr, depending on sensor)
Approvals	cCSAus, IECEx, ATEX, CE

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Pac 6500 CO LC	1	8326331
Dräger Pac 6500 H_2S LC	1	8326330
Dräger Pac 6500 O_2	1	8326332

Dräger Pac® 8000

With the robust Dräger Pac® 8000, you'll be well equipped for tough conditions: this non-disposable, personal single-gas detection device is a reliable and precise instrument, which detects hazardous concentrations of 29 different gases, including special gases like NO_2, O_3 or $COCl_2$.

Dräger PAC 8000
Detects 29 different gasses

Strong performance for maximum safety

You can count on the Dräger Pac 8000 to give you reliable, precise readings at any time even in extreme conditions. Our powerful sensors with a low t-90 response time ensure quick reactions. In addition to the standard alarms, you can define extra alarm thresholds for TLV®* and STEL*. * TLV® = Threshold Limit Values, STEL = Short Term Exposure Limit

Sensors for special gases

The Pac 8000 can be fitted with sensors for carbon dioxide (CO_2), chlorine gas (Cl_2), hydrogen cyanide (HCN), ammonia (NH_3), nitrogen dioxide (NO_2), phosphine (PH_3) and organic vapours (OV or OV-A). The Dräger Pac 8000 performs especially well when detecting different special gases: it can detect ozone (O_3) from concentrations as low as 0.02 ppm and phosgene ($COCL_2$) from 0.01 ppm. The Pac 8000 detects nitrogen dioxide (NO_2) from concentrations as low as 0.04 ppm.

Robust design – even for the toughest conditions

The Pac 8000 can easily handle even extreme conditions. The sensors can tolerate air pressures between 700 and 1,300 mbar. A membrane filter protects the sensor from foreign matter such as dust and liquids. The shock-proof, chemical-resistant housing meets the requirements specified in the IP68 standard rating.

Easy handling thanks to clear user guidance

The D-Light indicates whether functionality of the device has been tested and that it is ready to use. The housing is also designed with your safety in mind: each sensor variant of the Dräger Pac 8000 features clear, well visible colour coding, thereby minimising the chance of mistakes.

User-friendly display with all important information

The large display is non-verbal and clearly indicates the respective gas concentration. Other important information, such as the unit of concentration and battery capacity, is also displayed. The bright backlighting ensures that all values can be clearly read off in the dark.

360° alarm with various functions

If the Dräger Pac 8000 measures hazardous gas concentrations, it sets off an audible, visual and noticeable vibrating alarm. Two bright, flashing LEDs on the top and bottom of the device ensure that the alarm is easily visible from all sides. The acoustic signal reaches a volume of 90 dB. The display can show the peak concentration measured at any given moment. Earlier alarms registered can also be retrieved at a later time even if acknowledged.

Data logger and event logger for analyses and reports

The Pac 8000 logs concentrations and events along with date and time. The data can be downloaded to a PC via an interface and processed further there.

Economical operational costs

All of the versions of the Dräger Pac 8000 are equipped with extremely durable Dräger sensors® and a powerful battery. The Pac 8000 is protected against water, dust and other foreign bodies by a special membrane filter. When the filter becomes heavily soiled in use, you can quickly and easily replace it yourself. The device is then ready to use again in no time.

Fast function test saves time and money

Function tests and calibrations can be carried out especially efficiently in the Dräger X-dock® calibration station. The automatic bump tests in the X-dock are a cost-efficient and convenient solution thanks to short test duration and the extremely low test gas consumption. The Pac 8000 is simply placed in the bump test station and automatically selects the correct setting.

Dräger Pac® 8000

TECHNICAL SPECIFICATIONS

Dimensions	64 x 84 x 20 mm (w x h x d)
Weight	Approx. 106 g (113 g with clip)
Battery service life	2 years
Ingress protection	IP68
Air pressure	700 to 1300 hPa
Air humidity	10 to 90% relative humidity, non-condensing
Temperature	-30 °C to +55 °C (briefly down to -40 °C for 1 hr, depending on sensor)
Approvals	cCSAus, IECEx, ATEX, CE

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Pac 8000 HCN	1	8326353
Dräger Pac 8000 NH_3	1	8326354
Dräger Pac 8000 PH_3	1	8326355
Sensorfilter 8x00 (sensor grid, silver), set of 4 pieces	1	8326852
Sensorfilter 8x00 (housing silver), set of 40 pieces	1	8326859

Dräger Pac® 8500

The Dräger Pac 8500® single-gas detection device is a reliable and precise instrument even under the toughest of conditions. The device can be equipped with a hydrogen-compensated CO sensor or a Dräger dual sensor. This gives you the option of measuring two gases at once: either H_2S with CO or O_2 with CO.

Dräger PAC 8500
Measuring two gases at once

Strong performance for maximum safety

You can count on the Dräger Pac 8500 to give you reliable, precise readings at any time even under extreme conditions. Our powerful sensors with a low t-90 response time ensure quick reactions. In addition to the standard alarms, you can define extra alarm thresholds for TLV®* and STEL*. The Pac 8500 also provides a data and event logger for logging concentrations and events along with the date and time. The data can be loaded on a PC via an interface and processed further there. * TLV® = Threshold Limit Values, STEL = Short Term Exposure Limit

Convert to two-gas detection device using a dual sensor

Your single-gas detection device can become a two-gas device when a dual sensor is used. The Dräger Pac 8500 series offers the following sensor combinations: hydrogen sulphide with carbon monoxide or oxygen with carbon monoxide. Dual sensors enable detection of even low concentrations – and all in one and the same handy device. Measuring two gases at the same time reduces downtime as well. You can take vol.% measurements of oxygen and ppm measurements of carbon monoxide simultaneously using just one sensor.

Measurement of carbon monoxide with significantly reduced cross sensitivity

In industries where carbon monoxide needs to be measured with hydrogen as a background gas, the measured value for carbon monoxide may be falsified by cross sensitivity. Thanks to the special hydrogen-compensated CO sensor from Dräger, this cross sensitivity to hydrogen is significantly reduced in the display of carbon monoxide.

Robust design – even for the toughest conditions

The Pac 8500 can easily handle even extreme conditions. The sensors can tolerate air pressures between 700 and 1,300 mbar. A membrane filter protects the sensor from foreign matter such as dust and liquids. The shock-proof, chemical-resistant housing meets the requirements specified in the IP68 standard rating.

Easy handling thanks to clear user guidance

The D-Light indicates whether functionality of the device has been tested and if it is ready to use. The housing is also designed with your safety in mind: each sensor variant of the Dräger Pac 8500 features clearly visible colour coding, thereby minimising the chance of mistakes.

User-friendly display with all important information

The large display is word-free and clearly indicates the respective gas concentration. Other important information, such as the unit of concentration and battery capacity, is also displayed. The bright backlighting ensures that all values are clearly legible in the dark.

360° alarm with various functions

If the Dräger Pac 8500 measures hazardous gas concentrations, it sets off an audible, visual and perceptible vibrating alarm. Two bright, flashing LEDs on the top and bottom of the device ensure that the alarm is easily visible from all sides. The acoustic signal reaches a volume of 90 dB. The display can show the peak concentration measured at any given moment. Earlier alarms registered can also be retrieved at a later time even if they have been acknowledged. The Pac 8500 with oxygen sensor has two additional alarm thresholds in addition to the standard alarm threshold settings.

Economical operating costs

All of the versions of the Dräger Pac 8500 are equipped with extremely durable DrägerSensors® and a powerful battery. The Pac 8500 is protected against water, dust and other foreign bodies by a special membrane filter. When the filter becomes heavily soiled in use, you can quickly and easily replace it yourself. The device is then ready to use again right away. Thanks to the powerful battery, the Pac does not require charging on a daily basis and is easy to handle.

Dräger Pac® 8500

Fast function test saves time and money
Function tests and calibrations can be carried out especially efficient in the Dräger X-dock® calibration station. The automatic bump tests in the X-dock are a cost-efficient and convenient solution thanks to the short test duration and the extremely low consumption of test gas. The Pac 8500 is simply placed in the bump test station and automatically selects the correct setting.

TECHNICAL SPECIFICATIONS

Dimensions	64 x 84 x 20 mm (w x h x d)
Weight	Approx. 106 g (113 g with clip)
Battery service life	2 years
Ingress protection	IP68
Air pressure	700 to 1300 hPa
Air humidity	10 to 90% relative humidity, non-condensing
Temperature	-30 °C to +55 °C (briefly down to -40 °C for 1 hr, depending on sensor)
Approvals	cCSAus, IECEx, ATEX, CE

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger Pac 8500 CO LC / H_2 LC	1	8326365
Dräger Pac 8500 CO LC / O_2	1	8326366
Sensorfilter 8x00 (sensor grid, silver), set of 4 pieces	1	8326852
Sensorfilter 8x00 (housing silver), set of 40 pieces	1	8326859

Dräger X-am® 2500

The Dräger X-am 2500® was especially developed for use as personal protection. The 1 to 4 gas detector reliably detects combustible gases and vapours, as well as O_2, CO, NO_2, SO_2 and H_2S. Reliable and fully mature measuring technology, durable sensors and easy handling guarantee a high degree of safety with extremely low operating costs.

Dräger X-am 2500
Robust 1- to 4-gas detector for personal monitoring

Durable electrochemical sensors

Fully developed, high performance Dräger sensors in an extra small format for CO, H_2S, O_2, SO_2 and NO_2 gases enable safe use in industry, mining and in refineries. The impressive hydrogen sulphide sensor has a high resolution, so it can reliably measure even very low workplace limits. The non-consumptive and lead-free sensor for oxygen is characterized by an especially long service life of more than 5 years. Our CO and H_2S sensors also have this long service life expectation, so they contribute to especially low operating costs.

Poison-resistant Ex Sensor

The innovative, catalytic Ex sensor is impressive due to its high resistance to silicone and hydrogen sulphide. Together with the high degree of drift stability, this resistance enables an extraordinarily long service life of more than 4 years. Its high sensitivity with regard to flammable gases and vapours is confirmed by technical approval for measuring according to IEC/EN 60079-29-1 from methane to nonane. This approval also demonstrates the suitability of this instrument for use in refineries and in the chemical industry as well.

Maximum safety

The Dräger X-am 2500 has Ex approval for zone 0, so it is clearly designed for very high user safety in areas subject to explosion hazard. The functional design ensures that gas can enter from above and from the side – even if the instrument is inside a pocket or if the front gas entry is accidentally covered.

Fast, easy and inexpensive

From functional test to complete documentation, users have access to practical solutions that provide safety for implementation at any time. The Dräger Bump Test Station, which does not require a local power source, and the automatic Dräger X-dock testing and calibration station for comprehensive equipment management are ideal system additions that save time and effort. Together with the Dräger X-dock, the high quality Dräger sensors enable quick bump tests of 8 to 15 seconds1 with very low gas consumption. This significantly reduces your equipment operating costs.
- 1) With standard sensors: CH_4, O_2, CO, H_2S

Diffusion or pump

For clearance measurements for tanks and shafts or when searching for leaks, an optional external pump with a hose up to 30 m long is the optimum solution. When the measuring instrument is inserted, the pump function starts automatically. The switch from diffusion to pump operation can be handled quickly and easily without tools or screws.

Ergonomic and robust

Thanks to its low weight and ergonomic design, the Dräger X-am 2500 offers a high degree of wearing comfort. The practical two button control panel and easy menu navigation allow the instrument to be used intuitively, despite its comprehensive functionality. The integrated protective rubber coating and sensors that are not sensitive to shock provide additional safety in case of impacts or vibrations. Moreover, the Dräger X-am 2500 is not sensitive to electromagnetic radiation, e.g. from wireless devices. The Dräger X-am 2500 is water and dust resistant in accordance with protection class IP 67, so full functionality is guaranteed even if it falls into the water.

Reliable power supply

The Dräger X-am 2500 can operate with either alkaline batteries or with rechargeable NiMH batteries. This enables a reliable power supply for more than 12 hours, and with the high capacity battery pack more than 13 hours. Depending on the requirements, the batteries can be charged either in the workshop or in a vehicle. Operating time without Ex sensor is typically more than 250 hours.

Flexible power supply

The Dräger X-am 2000 can be used with either the standard alkaline or optional NIMH batteries. In addition, it can be fitted with a T4 battery which can be recharged while still inside the instrument. Charging can take

Dräger X-am® 2500

place in the workshop or in a vehicle, to suit your needs.

Intelligent data management
Everything's under control: the Dräger X-am 2000 is equipped as standard with a data logger. The data can be transmitted via infrared interface to a PC and analysed using the Dräger GasVision software.

Optimum solutions for function tests and adjustments
Simple, fast and professional: from a function test to complete documentation, users have a range of practical solutions to choose from for total peace of mind. The Dräger E-Cal automatic test and calibration station and the Dräger Bump Test Station are ideal complements to the instrument, saving time and minimizing your workload.

User registration in seconds
An absolute must to ensure the right person gets the right instrument: the optional registration set, when used in conjunction with the Dräger CC-Vision software, allows individualized issue of instruments and a quick check of completeness upon their return.

TECHNICAL SPECIFICATIONS

Dimensions	48 x 130 x 44 mm
Weight	220 - 250 gr
Temperature	-20°C to +50°C
Pressure	700 tot 1300 mbar
Humidity	10 to 95% r.h.
Alarms	Visual 360°, Audible Multi-tone > 90 dB at 30 cm, Vibration
Ingress Protection	IP67
Operating time	> 12 hours (without Ex sensor > 700 hours)
Charging time	< 4 hours
Data logger	Retrievable using an infrared interface > 1000 h with 4 gases at a recording interval of 1 value per minute
Approvals	ATEX: II 2G EEx ia d IIC T4/T3; I M2 Eex ia d I CE mark: 89/336/EEG MED

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger X-am 2500 Ex/O_2	1	8323900/2
Dräger X-am 2500 Ex/O_2/CO/H2S (LC)	1	8323900/4
NiMH Power Pack T4	1	8318704
NiMH Power Pack T4	1	8318639
Hand pump adapter	1	8319195

Dräger X-am® 8000

Clearance measurement was never this easy and convenient: the Dräger X-am® 8000 measures up to seven toxic as well as flammable gases, vapours and oxygen all at once — either in pump or diffsion mode. Innovative signalling design and handy assistant functions ensure complete safety throughout the process.

Dräger X-am 8000
Up to 7 toxic measurements

Specially designed for use with a pump, optimised for your requirements

The Dräger X-am® 8000 is equipped with a very powerful pump. It can be connected with hoses of up to 45 metres in length. A pump adapter makes it easy to switch between diffusion and pump mode at any time. This means the pump is only operated when you actually need it. That saves energy, reduces wear and tear, and thereby extends the lifespan of the pump. Handy and durable, the Dräger X-am® 8000 is intuitive to operate single-handedly using three function keys. The easy-to-read colour display clearly lays out all the information for you. Standard accessories include a sturdy shoulder strap, so you can comfortably carry the X-am 8000. Thanks to its compact and robust construction, the device can withstand even the harshest conditions.

Clearance measurement, release and documentation in no time

The X-am 8000 effectively supports various applications with specially developed assistant functions that guide you through each process step by step. During clearance measurement, for example, the smart assistant calculates the necessary flooding time for the device and probe (FKM hose) based on parameters such as measuring gases, temperature limits, and the indicated hose length. When monitoring for high methane concentrations, an optional automatic measurement range switch makes it easier to take a reading: if the Cat-Ex sensor measures values above 100% LEL, the display switches to the range of 0 to 100 vol%. An additional useful tool is CSE Connect. It combines an Android app, specially designed for the X-am 8000, with a cloud-computing solution. Measuring jobs can be quickly and easily transferred to the app using an online application. An optional Bluetooth® module in the Dräger X-am 8000 enables measured values to be transferred automatically to the CSE Connect app. You can also easily and conveniently use the app to create measurement reports. This saves time and helps you manage your measuring tasks during clearance measurements more effciently.

Clear signalling design

The signal system of the Dräger X-am 8000 is based on a clear colour code:
- Red light = gas alarm
- Yellow light = device-related alarm, e.g. low battery
- Green light = device is ready for use

Economical Fleet Management

Bumptest and calibration are carried out simply and quickly using the Dräger X-dock® calibrating station. Its low test gas consumption keeps operating costs to a minimum. Its reporting function and numerous other useful features make the X-dock Manager PC software a smart addition to any fleet management operation. To identify the devices in the fleet, you can either use tried and tested barcodes or an integrated RFID transponder.

Specialist for high and low hydrocarbon concentrations

To measure hard-to-detect hydrocarbons, you can fit the Dräger X-am 8000 with one of two high-performance PID sensors. The PID HC covers a measurement range of 0 to 2,000 ppm (Isobutene). The PID LC ppb is particularly suited for a measurement range of 0 to 10 ppm (Isobutene) with a low resolution in the range below 1 ppm. For benzene-specific measurements, the X-am 8000 can be used with a pre-tube. The advantage: you only need one measuring device for this application, which significantly reduces the costs of purchasing, maintaining and transporting devices in use. The use of the pre-tubes is supported by a built-in assistant.

Inductive charging protects against wear and tear

The X-am 8000 features inductive charging. This makes it easier to operate and increases the lifespan of the device. Issues like corrosion and contact problems in the charging cradle are a thing of the past. You can charge (outside of explosion-hazard zones) and measure at once, e.g, when in use

Dräger X-am® 8000

inside vehicles or on machinery. The charging cradle can connect with one another, taking up minimal space, and are compatible with existing Dräger X-am® series cradles.

TECHNICAL SPECIFICATIONS

Dimensions (HxWxD)	179 x 77 x 42 mm
Weight	Approx. 495 g, depending on sensor configuration, without strap, without pump Approx. 550 g, depending on sensor configuration, without strap, with pump
Temperature	-20 °C to + 50 °C
Pressure	700 to 1300 hPa
Humidity	10 to 90% (short-term up to 95%) r.h.
Ingress protection	IP 67
Energy supply	Lithium-ion battery, rechargeable, inductive charging
Alarms	visual: 3 LED 'red' (gas alarms), 3 LED 'yellow' (device alarms) acoustic: multi-tone, typically 100 dB(A) at 30 cm vibration
Charging time	Typically 4 hours after use during a shift of max. 10 hours
Pump operation	Maximum length of tubing 45 m
Approvals	ATEX / IECEx, MED / DNV GL, Class I, Zone 0, AEx da ia IIC T4 Ga, CE labelling
Warranty	3 years for the device, 1 year for the power supply, sensors: see DrägerSensor & Portable Instruments Handbook

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger x-am 8000 basic instrument	1	8325800

GS01 Hydrocarbon IR Detector

Truly wireless, the GasSecure GS01 combines single-beam triple-wavelength infrared (IR) technology with extremely low power consumption, to provide fast hydrocarbon gas detection in the most demanding and hazardous of settings. The GS01 creates value for the customer with dramatically reduced installation cost and time, reliable infrared operation, and calibration-free design.

GS01 Hydrocarbon IR Detector
Wirelessly reduces project costs by 60-80%

GS01 wireless gas detector

GasSecure offers the world's first truly wireless IR gas detector for demanding industrial applications. The GS01 is used to detect the presence of hydrocarbon gases and warn operators of the risk of fire or explosion. Its ultra-low power design and small integrated battery pack enables up to two years of continuous operation.* Customers have seen up to 60 – 80% savings on total project costs because of dramatically reduced installation cost and time. The wireless communication is based on the open ISA100 Wireless™ standard – which means simplified integration with other commercially available field wireless devices.

Features

- Truly wireless, no cables
- No recalibration required
- Fail-safe IR detection with triple wavelength including heated optics
- Suitable for SIL 2 systems – 3rd party verification of detector and wireless communication for safety applications
- Fast gas detection response of ≤5 seconds
- Hazardous area intrinsically safe design
- Low power, lightweight gas detector with intrinsically safe field replaceable battery pack
- Up to 2 years battery life (depending on environmental conditions)

Benefits

Adding capacity or upgrading facilities often entails expansion or modernization of existing gas detection systems. Wireless is a perfect solution since it can be integrated into legacy systems without the need to install new or additional cabling and increase plant uptime.

Features

- Significant cost and time savings when compared to wired detection system
- No cabling means hugely improved installation flexibility
- Reduced maintenance overheads due to lifetime calibration
- Easily transferrable between projects (eg. shutdowns, maintenance)
- No sensor drift due to lifetime calibration – therefore no false alarming
- Rapid response times mean early warning and increased plant safety

Applications

The GS01 is proven in the field to be a flexible and cost efficient solution for plant expansions, revamps, upgrades and new greenfield projects. Just some of the applications include:

- Oil & gas production platforms
- Oil & gas exploration rigs
- Storage tank farms
- Shutdown and end of life operations Petrochemical plants & refineries
- Gas terminals & processing plants FPSO / FLNG vessels

Technology

Infrared sensor technology is taken to the next level using patented MEMS (Micro Electromechanical System) optical filters. The device filters, focuses and switches light continuously, thereby establishing the gas and reference measurement. GS01 technology achieves fast and ultra-low power operation with life-long zero point stability. The innovative hardware design is supported by GasSecure's patented SafeWireless™ communication system that meets the requirements of reliability, fast response times, availability and power efficiency – all with full control of network traffic.

TECHNICAL SPECIFICATIONS

Detection method	Single beam, triple wavelength IR
Detectable gases	Hydrocarbons, 0 to 100% LEL - Available configurations: Methane, Propane
Calibration	Factory-set, no field calibration

GS01 Hydrocarbon IR Detector

Response time	≤5 sec.
Accuracy	±3% LEL or ±10% of reading (whichever is greater) - Refers to Methane
Zero-point stability	±3% LEL (lifelong)
Operating temperature	-30 to +50°C (extended range to +65°C on request, contact GasSecure)
Storage temperature	-40 to +65°C
Humidity	0 to 100% RH
Ingress protection	IP66 and IP67
Dimensions	300 × 110 × 170 mm
Weight	2.8 kg (incl. battery)
Mounting	With bracket for 8 mm or 5/16" bolts
Approvals	ATEX, IECEx: II 2G Ex ib IIC T4 Gb (-40 to +65°C) Safety level: SIL 2 certified to IEC 61508 Ed.2.0
Battery type	Lithium-Thionyl Chloride
Average power	5 mW
Battery lifetime	Up to 2 years
RF power	10 dBm (10 mW)
Communication type	IEEE802.15.4 in 2.4 GHz ISM band
Communication protocol	ISA100 Wireless™
Communication gateway output	Standard: Modbus TCP/RTU, OPC Optional: PROFINET (SIL2)

ORDER INFORMATION

Description	Unit Sales	Articlenr
GS01 Hydrocarbon IR Detector	1	On request

Dräger PEX 3000

The transmitter Dräger PEX 3000 detects flammable gases and vapours in concentrations below their lower explosive limit. Its DD-sensor provides a long-term stable measuring signal and responds to gas within a few seconds.

Dräger PEX 3000
Detects flammable gases and vapours in concentrations below their lower explosive limit

Six variants of transmitters

You can choose between two measuring ranges (0 ... 100 or 0 ... 10 %LEL) and two different junction box sizes. The larger junction box provides optional horizontal or vertical cable entry. Where the application asks for the sensor to be mounted remote from the junction box then it is possible to use the remote cable assembly combined with the sensing head of type Polytron SE Ex.

Simple installation

The three core screened cable from the control system terminates within the junction box of the Dräger PEX 3000 by means of three Ex-approved spring terminals. The sensor connects to three different Ex-approved spring terminals. Ex-approved spring terminals are not selfloosening and are inherently more reliable then standard screw terminals, therefore self-loosening is no longer an issue!

One-man Calibration

Owing to the state-of-the-art design of the Dräger PEX 3000 it is possible to open the Ex e junction box in the hazardous area to perform maintenance and calibration. Using the two internal push buttons and the internal seven segment digital display you can perform many different activities including one-man calibration. No additional hardware is required, e.g. a hand held terminal.

Explosion Protection

The Dräger PEX 3000 is approved according to the EU-Directive 94/9/EC to be operated at ambient temperatures ranging from - 40 up to + 65 °C. This applies to both explosive gas atmospheres and explosive dust atmospheres (Zones 1, 2, 21, and 22).

Low gas concentrations

For applications where it is necessary to detect low concentrations then the transmitters Dräger PEX 3000 type XTR 0010 or XTR 0011 with their special low-drift LC sensor are very suitable. These transmitters reliably detect gas leaks of concentrations up to 10 %LEL.

Newly developed: DD sensor

The new DD sensor is based on the well-known catalytic bead technology from Dräger and is designed and manufactured by Dräger for long term stability and resistance against sensor poisons. Furthermore, the new DD sensor uses an innovative non-sintered disc gas inlet therefore the reaction time towards the target gas in now only a few seconds. This fast speed of detection allows for countermeasures to be initiated earlier, therefore guarding against the formation of an explosive atmosphere.

TECHNICAL SPECIFICATIONS

Type	4-to-20-mA-transmitter with catalytic bead sensor
Gases and vapors	Flammable gases and vapors in the ambient air such as acetone, acetylene, ammonia, benzene, 1.3-butadiene, n-butane, n-butyl acetate, diethyl ether, dimethyl ether, ethanol, ethyl acetate, ethylene (ethene), ethylene oxide, n-hexane, hydrogen, methane, methanol, methyl ethyl ketone (MEK), methyl methacrylate, nnonane, n-octane, n-pentane, petrol 065/095, propane, i-propanol, propylene (propene), propylene oxide, toluene and o-xylene
Measuring range	Typ XTR 0000, XTR 0001: 0 to 100 %LEL Typ XTR 0010, XTR 0011: 0 to 10 %LEL
Power supply	12 to 30 V d.c. (nominal 24 V d.c.), max. 110 mA at 24 V
Signal output	Normal operation 4 to 20 mA - Maintenance 3.4 mA - Fault condition < 1.2 mA
Cabling	3-core, shielded, core cross-section 0.75 to 1.5 mm2, outer diameter 7 to 12 mm

Dräger PEX 3000

max. cable length (at 24 V, 250 Ohms)	2400 m at 3 x 1.5 mm2, 1600 m at 3 x 1.0 mm2, 1200 m at 3 x 0.75 mm2
Response time (at 25°C, methane)	Type XTR 0000, XTR 0001: t50: 3 ... 5 s, t90: 8 ... 10 s Type XTR 0010, XTR 0011: t50 < 9 s, t90 < 20 s
Ambient conditions	Temperature: - 40 to + 65 °C (depending on temperature class) Pressure: 700 to 1300 hPa Humidity: 5 to 95 % r. H.
Housing material	glass fiber reinforced polyester (GRP)
Ingress Protection	IP 66
Dimensions (W x H x D)	Type XTR 00x0: ca. 80 x 130 x 55 mm Type XTR 00x1: ca. 135 x 110 x 55 mm
Weight	ca. 600 g
Expected sensor lifetime	typical > 3 years
Explosion protection	except XTR 009x: II 2G Ex de IIC T6/T5/T4 Gb, II 2D Ex t IIIC, T80/95/130 °C Db IP6X, - 40 ≤ Ta ≤ + 40 / 55 / 65 °C XTR 009x: II 2G Ex de IIC T6 Gb, II 2D Ex t IIIC T80 °C Db IP6X, - 40 ≤ Ta ≤ + 65 °C
Performance approval	acc. to EN 60079-29-1 for the a.m. gases and vapors (100 %LEL variants only)
Functional Safety (100 %LEL variants only)	Average probability of failure on demand (TP = 1 year), PFD = 5.56E-04 Safe failure fraction (HFT = 0, Type B), SFF = 90.4 %

ORDER INFORMATION

Description	Unit Sales	Articlenr
PEX 3000, Type XTR 0000, small housing, 0 to 100 %LEL	1	8318280
PEX 3000, Type XTR 0001, medium-sized housing, 0 ... 100 %LEL	1	8318360
PEX 3000, Type XTR 0010, small housing, 0 ... 10 %LEL	1	8318290
PEX 3000, Type XTR 0011, medium-sized housing, 0 ... 10 %LEL	1	8318370
PEX 3000, Type XTR 0090, small housing, remote transmitter without sensor	1	8318380
PEX 3000, Type XTR 0091, medium-sized housing, remote transmitter without sensor	1	8318390
Dust filter for DrägerSensor PR M DD (PE-disks, 10 pieces)	1	6810537
Calibration adapter (PE)	1	6806978
Process adapter (stainless steel) for PEX 3000 XTR 0000, XTR 0001	1	6812470
Process adapter (stainless steel) for PEX 3000 XTR 0010, XTR 0011	1	6812465

Dräger PIR 7000

The Dräger PIR 7000 is an explosion proof point infrared gas detector for continuous monitoring of flammable gases and vapours. With its stainless steel SS 316L enclosure and drift-free optics this detector is built for the harshest industrial environments, e.g. offshore installations.

Dräger PIR 7000
Precise and stable measurement

Dräger PIR 7000

Two models of the Dräger PIR 7000 are available – type 334 and type 340. Each model works with a different measuring wavelength, thus giving the broadest possible range of detectable substances with superior accuracy.

Advanced signal stability

Following the success of the most stable point infrared gas detector worldwide – the Dräger Polytron IR – Dräger now introduce the Dräger PIR 7000 which encompasses the latest in revolutionary technology.
Based on patented innovations, the Dräger PIR 7000 combines a maximum light collecting construction with a 4-beam signal stabilising system. The total optical system uses no light beam split, simply a set of various reflectors. This double-compensating optical system is very resistant towards known influences such as dust, fog or insects frequently found in the measuring cuvette or by dirt accumulation on the optical surfaces. Due to its non-imaging construction, the measuring signal is not affected by a partial beam block.
This innovative optical system ensures that the Dräger PIR 7000 fulfils the customer requirements of ›no false alarms‹, longer service intervals and a drift-free signal output.

Fast response

Equally important is being informed about a potential hazard as early as possible. An early and reliable gas alarm allows for safety measures to be initiated on site.
To support this, the Dräger PIR 7000 offers a configurable response mode which allows the end user to choose between ›normal‹ or ›high speed‹ response subject to the application. Using the ›high speed‹ option, and combining it with the lowest feasible alarm threshold, the Dräger PIR 7000 shortens the reaction time in case of an alarm. Leakages can be detected at the earliest stage of their existence.

Multiple configuration capabilities

The Dräger PIR 7000 is delivered with the optimum default settings, but remains fully flexible to meet with the customers demands on an application-by-application basis. Whether it be reduced measuring ranges, configurable special signals (fault, beam block warning, maintenance), adjustable LEL values (values which are different across regions) all coupled with the configurable gas library (for other substances to be monitored) – all these features of the Dräger PIR 7000 offer the possibility to set up every device exactly to the customer's needs and preferences.

Maximum reliability – SIL 2 certified

After almost two decades of experience with infrared technology, leading to a continuously enhanced product quality, the Dräger PIR 7000 is further advanced as the total product has been developed in line with the Functional Safety standard EN 61508. This is applicable to both the devices hardware and software.
Furthermore, the excellent parameters as detailed in the SIL 2 (Safety Integrity Level) certificate, issued by the German TÜV show that only 2 % from the entire SIL 2 budget is allocated to the field device, thus providing flexibility to choose control systems and actuators.
This is a new understanding of reliability – not only fulfilling but exceeding the SIL 2 requirements significantly.

Dräger PIR 7000 offers

- Configurable gas library – methane, propane and ethylene fixed, up to 10 additional substances can be uploaded
- Multiple mounting and configuration capabilities (signals acc. to NAMUR NE 43)
- Precise and stable measurement
- Fastest response of less than 1 second
- Beam block warning in case of dirty optics for preventive maintenance
- Long maintenance intervals
- Extended temperature range of up to + 77 °C / + 170 °F
- Double-compensating, non-imaging optics (using 4-beam technology)
- Single cable multidrop capability using HART® communication
- Conventional 4-to-20-mA analogue signal output
- Hermetically sealed SS 316 L enclosure
- Integrated tag holder for individual labelling

Dräger PIR 7000

- No moving parts
- Resistant towards shock and vibration up to 4 G
- Continuous self-testing in the context of the IEC/EN 61508 standard
- Developed and manufactured according to the SIL guidelines, SIL 2 certified by TÜV
- Ex approvals for worldwide application: ATEX, IECEx, UL, CSA
- Dust approval for zone 21 and 22
- Typical lifetime greater than 15 years

TECHNICAL SPECIFICATIONS

Type	Explosion proof gas transmitter with infrared sensor technology
Principle of operation	Temperature-compensated infrared absorption, 4-beam technology
Gases and ranges	Methane, propane, ethylene: 0 to 20...100 %LEL Methane: 0 to 100 % vol. Further substances and measuring ranges on request
Measuring performance (type 334, methane, 0 to 100 %LEL)	Digital resolution: 0.5 %LEL Repeatability: ≤ ± 1 %LEL Response time: t- 0...90 - ≤ 4 seconds (“normal response”), < 1 second (“fast response”) Long-term drift: ≤ ± 1 %LEL after 12 months
Electrical data	Output signals: 4 to 20 mA, HART® Fault signal: ≤ 1.2 mA (configurable) Beam block warning signal: 2 mA (configurable) Maintenance signal: 3 mA (configurable) Power supply: 13 to 30 V DC, 3-wire Power consumption: 5.6 W (typical)
Ambient conditions	Temperature: – 40 to + 77 °C / – 40 to + 170 °F (operating), – 40 to + 85 °C / – 40 to + 180 °F (storage) Humidity: 0 to 100 %RH Pressure: 700 to 1300 hPa / 23.6 to 32.5 inch Hg
Enclosure	Material: Stainless steel SS 316L Connecting thread: M25 or ¾" NPT Weight: 2.2 kg (without accessories) Dimensions: 160 mm x Ø 89 mm / 6.3 " x Ø 3.5 " Ingress protection: IP 66 and IP 67, NEMA 4X
Approvals	ATEX: II 2G Ex d IIC T6 / T4 Gb, (-40 to +40 °C / +80 °C), II 2D Ex tb IIIC T80 °C / T130 °C Db IP65, (-40 to +40 °C / +80 °C) IECEx: Ex d IIC T6 / T4 Gb (-40 to +40 °C / +80°C), Ex tb IIIC T80 °C / T130 °C Db IP65, (-40 to +40 °C / +80 °C) UL (Classified): Class I, Div. 1, Groups A, B, C, D / Class I, Zone 1, Group IIC, Class II, Div. 1, Groups E, F, G CSA (C-US): Class I, Div. 1, Groups B, C, D, Class II, Div. 1, Groups E, F, G Safety Integrity Level: SIL2 certified by TÜV (EN 61508, EN 50402) CE mark: electromagnetic compatibility (directive 89/336/EEC)

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger PIR 7000 type 334 (NPT) HART®	1	6811552

Dräger PIR 7000

Description	Unit Sales	Articlenr
Dräger PIR 7000 type 334 (M25) HART®	1	6811550
Dräger PIR 7000 type 334 (M25) HART®, complete set	1	6811817
Dräger PIR 7000 type 340 (NPT) HART®	1	6811562
Dräger PIR 7000 type 340 (M25) HART®	1	6811560
Dräger PIR 7000 type 340 (M25) HART®, complete set	1	6811819

Dräger SAM 3100 3200

The Dräger sampling units were designed to measure the concentrations of toxic and potentially explosive substances in locations where access is difficult. All required components are already fitted to a mounting plate. To achieve maximum flexibility for a variety of applications, all Dräger transmitters with process adapter can be used.

Dräger SAM 3100 3200
To achieve maximum flexibility for a variety of applications

Easy installation

All electrical connections lead directly to the components, and cables can be routed individually to suit the situation in hand. High quality compression fittings on the mounting plate make it quick and easy to connect the sample gas or air extraction line.

Straightforward one-man assembly

The sampling system comes fully assembled, and the plate can be attached in just a few simple steps by one person. Predrilled holes for fixing screws make easy work of wall-mounting and customer- specific assembly. The sample gas tubes can be installed quickly and easily without the need for screwdrivers.

Variable sampling concepts

The Dräger SAM 3100 and Dräger SAM 3200 units come equipped as standard with a non-explosion-proof sampling pump. From the same series, an explosion-proof pump can be chosen as an option. If process air is available, another alternative is to use a wear-free – and therefore maintenance-free – injector with pressure regulator. The gas flow to be measured is reliably monitored via the ring initiator with integrated connection housing.

TECHNICAL SPECIFICATIONS

Mounting plate	Stainless steel, fitted with measurement head on request (see separate data sheet)
Dimensions	500 x 500 mm
Gas pump	
Air transport	Via membrane valves
Flow rate	7.5 L/min
Max. neg. pressure	140 mbar
Max. pos. pressure	1.5 bar
Weight	3.1 kg
Voltage / frequency	230 V AC / 50 Hz
Wattage	70 watts
Current consumption	0.45 A
Filter element	
Filter element length	75 mm
Filter surface area	70 cm2
Deadspace volume	65 cm3
Materials	Filter head: PVDF/PTFE Filter body: Glas Filter element: PTFE
Connections	3 x G 1/4" (1x sealed)
Flowmeter	
Measurement accuracy	± 2.5 % as per VDI/VDE 3513
Working pressure	10 bar max.
Connections	1/4“ NPT internal thread
Cone	Borosilicate glass
Float	Nickel chromium steel

Dräger SAM 3100 3200

ORDER INFORMATION

Description	Unit Sales	Articlenr
Dräger SAM 3100	1	On request

Dräger X-dock

The Dräger X-dock series provides you with full control of your portable Dräger gas detection instruments. Automatic bump tests and calibrations with reduced test gas consumption and short testing times save time and money. Comprehensive documentation and evaluations provide you with a clear overview.

Dräger X-dock
Provides you with full control of your portable Dräger gas detection instruments.

As versatile as your requirements

The X-dock is available in a wide variety of versions. The X-dock 5300 includes a master station including a module for a gas detection instrument from the X-am 1/2/5x00 or Pac family. It is immediately ready to use. The X-dock 6300 and 6600 versions can be configured freely. They consist of a master station and can be expanded with up to 10 modules for X-am 1/2/5x00 and/or Pac 1 gas detection instruments.

Easier than ever before

Insert the device, close the lid and remove it when the indicator goes "green" – a test with the X-dock is just that simple. It immediately detects all sensor combinations. Furthermore, the X-dock automatically tests and adjusts when all required test gases are connected. The station works independently and can be configured and used without a PC. The station is operated via an integrated touchscreen. A gas detection instrument is detected as soon as it is inserted, and all data is documented in the database.

More safety thanks to complete documentation

Do you need to document whether or not your devices are ready for operation? Who tested which device when, and what the result was? The X-dock stores all of the relevant data and reads the collected information from the gas detection instruments for subsequent evaluations – providing you with complete control every step of the way. You can use the reporting function (report wizard) to create customised reports. Furthermore, you can print a calibration certificate right at the stations, since the X- dock series supports standard PostScript-compatible USB printers. This functionality allows the user to manage all requirements of EN 60079-29-1 and EN 60079-29-2.

Automatically reduced costs

With a reduced gas flow (300 mL/min instead of 500 mL/min) per module, you save costs on test gases. Short testing times reduce the overall maintenance efforts. The valve concept (patent pending) requires one pump only, resulting in the need for less wear and tear parts. The valves automatically switch the test gases and – when connected – the compressed air as well.

Significant time savings

Up to 10 modules can be connected to the X-dock at any given time, allowing you to test gas detection instruments simultaneously but also independently of each other. The automatic bump test also saves time, because the test only takes 8 to 15 seconds 2. All Dräger test gas cylinders are already stored in the database – entering the part number will automatically fill in the fields required for the gas configuration. This eliminates the need for manual data entry.

Overview of results

The additional "X-dock Manager" software offers you even more comfort: It produces a detailed evaluation of the data in the calibration system and gas detection instruments, and presents the information in various graphics and statistics – providing you with a complete overview of all results. All connected X-dock systems can be connected in one network. Therefore, the data is not only stored locally in the system, but in a central database as well. With the X-dock manager you are always in control.

Further benefits

- Touchscreen operation at the master station
- Up to three configurable test routines
- Automatic leak tests
- Automatic tests of alarm elements (acoustic, visual and vibration alarms)
- Optional charging function for X-am 1/2/5x00
- Replaceable seal cartridge
- 12V operation (e.g. in vehicles) possible
- Can be subsequently expanded with up to 10 modules (X-dock 6300/6600)
- Evaluation of sensor response time

The X-dock manager offers much more

- Gas exposure in specific areas, number of conducted tests, device availability, overview of created and sent reports
- Templates for regular reports

Dräger X-dock

- An issue and return function to allocate gas detection instruments to specific individuals
- Monitoring of stations within the network: All connected systems can be monitored (e.g. information on the gas configuration)
- Overview of devices: direct access to test reports and device configuration
- Notifications, also via email, e.g. if test gases are running out
- VLAN capable

TECHNICAL SPECIFICATIONS

Operating Temperature	-5°C to 45°C
Storage Temperature	-20°C to 50°C
Humidity	100%, not condensing
Atmospheric Pressure	600 to 1050 mbar
Dimensions	109 x 61 x 206 mm
Weight	0.45 kgs
Power supply	4 x 1.5V alkaline (AA) batteries

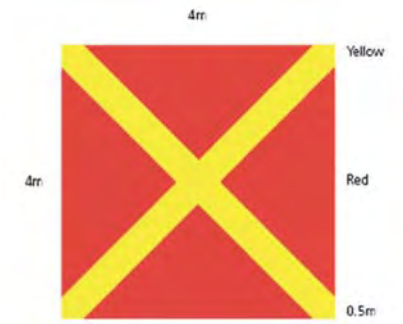
ORDER INFORMATION

Description	Unit Sales	Articlenr
Ready to use		
Dräger X-dock® 5300 X-am® 1/2/5, 3 gas connections, limited to one module, including adapter	1	8321880
Dräger X-dock 5300 PAC® 1/2/5, 3 test gas connections, limited to one module, including charger	1	8321881
Master versions		
Dräger X-dock 6300 Master, 3 test gas connections, can be expanded to 10 modules	1	8321900
Dräger X-dock 6600 Master, 6 test gas connections, can be expanded to 10 modules	1	8321901
Modular versions		
Dräger X-dock module X-am 1/2/5	1	8321890
Dräger X-dock module X-am 1/2/5+, allowing charging X-am 1/2/5 devices	1	8321891
Dräger X-dock module PAC	1	8321892
X-dock Manager		
Dräger X-dock manager standard	1	8321860
Dräger X-dock manager professional, standard functions plus instrument handout and return function and reporting centre	1	8321870
Additional licence for Dräger X-dock managers (both versions)	1	8321857
5 additional licences for Dräger X-dock managers (both versions)	1	8321858
Power supply		
Connector 100-240, 24 V / 1.25 A plug-in power supply, up to 3 modules	1	8321849
Connector 100-240, 24 V / 6,25 A plug-in power supply, up to 10 modules	1	8321850
Car adapter supply 12/24 V DC, up to 5 modules	1	8321855
Accessories		
Pressure valve 0.5 bar, constant, nickel-plated	1	8324250
Pressure valve 0.5 bar, constant , nickel-plated and with flow stop, vlave closes immediately when hose is removed	1	8324251
Pressure valve 0.5 bar constant , stainless steel	1	8324252
Hose connector (5 pcs)	1	8324095
Wall mount, standard	1	8321922
Wall mount, comfort (adjustable tilt angle)	1	8321910
Cylinder bracket for table mount version X-dock, excl. cylinder	1	8321918
Cylinder holder for DIN rail/wall mount	1	8321928
Filter for fresh air pump inlet for X-am 1/2/5x00	1	8319364
5 x 1.5 mm fluorinated rubber hose (by the metre), ideally suited for connecting the test gas cylinder with X-dock	1	1203150

Dräger X-dock

Description	Unit Sales	Articlenr
Spare parts		
Seal cartridge for X-am 1/2/5 module	1	8321986
Seal cartridge for PAC module	1	8321987
Display protection seal	1	8321804
Stickers for module numbering (1-10)	1	8321839
Spareset socket	1	8321974
Floater complete, without hose	1	6802337
Bar scanner	1	8318792

Helideck Closed Marker



Helideck Closed Marker
Marker 4 x 4 mtr

TECHNICAL SPECIFICATIONS

Material	PVC 630g/m2
Dimensions	4x4 m , stripe width: 0.5m
Fixation	Every 0,5m a brass fixation eye

ORDER INFORMATION

Description	Unit Sales	Articlenr
Helideck Closed Marker, 4 x 4 mtr	1	18107017

A safe journey with Dräger

/DraegerMO

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ocean
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