e-breathe

RESPIRATORY PROTECTION PRODUCT CATALOG

2022

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e-breathe

e-breathe - We design and develop the next generation of Respiratory Devices.

The increasing demand for intelligent respiratory protection solutions and the pursuit of maximum customer satisfaction with more and more user-friendly products led to the decision to develop and launch innovative respiratory protection systems. Under the slogan solid, simple and safe e-breathe develops innovative respiratory protection devices.

The experience gained in more than 25 years regarding the demands of the market for products forms the basis for the current success of e-breathe. The intelligent use of all possibilities of‚e'lectronic support during breathing led to the name e-breathe.

Quality - made in Germany

e-breathe represents the highest standards of quality, continuous innovation and easy-to-use products. Therefore the majority of our products are manufactured in Germany. Solely our hoods and suits are manufactured within the EU.

e-breathe develops personal protective equipment that focuses on the user. Our aim is to react quickly to the requirements of the constantly changing market. In order to achieve this goal, we are in close contact with our customers from industry, the private sector and the public sector.

Our focus lies on products in the field of respiratory protection. We are constantly expanding our portfolio. Our many years of experience in trade and retail and our familiarity with the market enable us to develop standard products as well as customised special solutions.

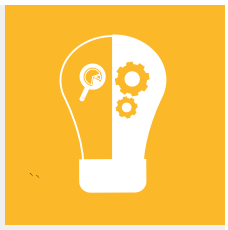
We follow a modular product concept and therefore offer our customers the highest possible flexibility with various possible combinations.

True to our motto **„SIMPLE.SOLID.SAFE"**, e-breathe products offer maximum comfort, variability and efficiency.

Simple. Solid. Safe

Customized Development

„You have to try the impossible to achieve the possible“ Hermann Hesse.



Since we are not satisfied with the status quo, we are always on the hunt for innovations and improvements. If there is no suitable product on the market for your specific requirements, we will develop the appropriate solutions for your needs in close cooperation with you. Our development team always finds the best solution for individual problems.

Service & Maintenance

You can trust our trained service technicians regarding the maintenance/repair of your respiratory protection systems. A regular service prevents failures and ensures a functional and safe system at all times. We have high-quality stationary test facilities and test systems in our service centre ensuring reliable testing of the whole system.

Training, Education & Instruction

Initial instructions and regular training in accordance with the DGUV are indispensable for the safe handling of respiratory protective devices and personal protective equipment. The implementation of interesting and entertaining training courses is one of the core strengths of e-breathe Safety Service. This applies to both small and large numbers of participants.

The personal interaction is our focus, therefore all our trainings are held live. We offer our trainings as face-to-face trainings at our location or as live webinars in virtual environments. For individual training needs, we develop customized solutions.

Rental Service

It‘s safe or it won‘t work at all! True to this motto, more and more large companies demand that their external companies provide suitable respiratory protection systems. The purchase of respiratory protective equipment is not suitable for every company. Whether the work under respiratory protection only occurs occasionally, or it is necessary to equip additional personnel at short notice.

In these cases you can hire our e-breathe systems and equipment.

Training & Instruction
e-breathe Safety Service

Providing high quality personal protective equipment is only one component to ensure safety in the workplace. The training of the user is just as important as the choice of suitable and high-quality materials. Our skilled trainers provide the knowledge you need to optimally train your employees.

Regular training and instruction may be required by national regulations and organisations.
We provide appropriate respiratory protection training and instruction.

Recurring instructions are often carried out by multipliers within the company. The multiplier training teaches the necessary components for instruction, including the creation of a certificate.

Our qualified personnel values informative presentations, a high amount of practical exercises and detailed information material. At the end of each training course, the participants receive a certificate.

The purpose of respiratory protection training is to enable the user to put on and use respiratory protective equipment properly. They will become familiar with the care of the devices, will know how the devices work and their characteristics and will be informed about markings.

In our training center in Mönchengladbach or live as a webinar:
We offer our training courses and instructions both in our training center in Mönchengladbach and as a live online seminar. All trainings and instructions are held as face-to-face trainings, where you can ask your questions directly to the instructor and communicate directly with our trainer and other participants.

Features of the e-breathe Safety Training:

- Trainings and instructions at our service partners, at your location or online
- Qualified personnel
- Trainings & Instructions with certificate
- Customizable instructions and training courses
- You can easily request all training courses online

Respiratory Protection - Filter Devices:

Goal:
The participant is able to put on and use respiratory protective equipment properly and is familiar with the care of the equipment. He is familiar with the operation and characteristics of the equipment and will be informed about the rights and obligations of equipment wearers.

Target Group:
Users who need to wear respiratory protective equipment at work to protect their health.

Training Details:
Duration: approx. 3 hours
Dates: by arrangement
Location: at our service partners or on site
Number of participants: max. 16 persons

Live training at your site or in the training centers of our partners

Online live training

Content:
This training is offered as first and follow-up instruction.
- Purpose of respiratory protection
- Regulations for respiratory protection
- Manufacturer's Instruction Manual
- Composition and effects of the relevant pollutants
- Consequences of oxygen deficiency on the human organism
- Human Respiration, Physiological Aspects
- Physiological burden from respiratory equipment
- Design and Operation of powered, air-purifying respirator
- Protection limits, duration of use, replacement of used filters & disposal
- System check before use & application
- Conduct during practical use
- Wahrnehmen des Filterdurchbruchs
- Dismounting of the system after use & maintenance (e.g. care, cleaning, inspection, testing, compliance with maintenance intervals)
- Practical Exercises
- Transfer of training documents for internal trainings

Respiratory Protection - Isolating Respiratory Protection

Goal:
The participant is able to put on and use respiratory protective equipment properly and is familiar with the care of the equipment. He is familiar with the operation and characteristics of the equipment and will be informed about the rights and obligations of equipment wearers.

Target Group:
Users who need to wear respiratory protective equipment at work to protect their health.

Training Details:
Duration: approx. 1 day
Dates: by arrangement
Location: at our service partners or on site
Number of participants: max. 16 persons
(for an optimal learning result)

Live training at your site or in the training centers of our partners

Online live training

Content:
This training is offered as first and follow-up instruction.
- Purpose of respiratory protection
- Regulations for respiratory protection
- Manufacturer's Instruction Manual
- Composition and effects of the relevant pollutants
- Consequences of oxygen deficiency on the human organism
- Human Respiration, Physiological Aspects
- Physiological burden from respiratory equipment
- Classification, design, operation of respiratory protective devices
- Protection limits, duration of use,
- System check before use & application
- Conduct under respiratory protection during exercise, use and escape
- Dismounting of the system after use & maintenance (e.g. care, cleaning, inspection, testing, compliance with maintenance intervals)
- Practical Exercises
- Transfer of training documents for internal trainings

Service and Maintenance

e-breathe Safety Service

Your health and safety as well as the health and safety of your employees are our top priority.
For good reason, respiratory protective equipment is subject to the care and maintenance requirements prescribed by national regulations and by manufacturers. Many national regulations define an annual maintenance interval. This recommendation is also followed by e-breathe Safety, which is declared as the manufacturer's specification for its equipment. Maximum care and regular inspections are essential for the safety of the user and for reliable operation of the equipment and prevent failures when you need your equipment.

e-breathe Safety Service

Being a competent manufacturer, we also support you with product maintenance and repairs and ensure the trouble-free functioning of your products at all times. For this purpose we have specially trained and certified service partners who have the appropriate equipment and service software at hand to provide maintenance and servicing for your respiratory protective equipment.

You will receive a test report according to DGUV 112-190 and manufacturer's specifications after each maintenance and your products will be provided with a test badge. You can find the next maintenance date on the inspection sticker. The complete test documentation is transparently prepared and sent to you. The documentation will be continuously updated at each service date so you will have detailed information about the condition of your products during their entire service life.

Our service partners offer on-site service on your premises, at your desired date, or you can simply and easily send your equipment to on of our service centres.

For all work, only original components from e-breathe Safety are used. To ensure that your equipment is optimally maintained and always reliably ready for use. If parts have to be replaced or if repair work is required which goes beyond maintenance, you will be informed in advance and given a cost estimate. The work will only be carried out after consultation and your approval.

The regular maintenance prevents abrasion and can significantly extend the service life of your respiratory equipment.

Our service partners have trained specialist personnel and the appropriate authorisations to ensure long-term safety and reliability of the technology. No matter if recurring tests of respiratory protective devices or the cleaning and disinfection - we will provide the best service for you.

Do you have any questions about the scope of testing or about the procedure? If so, please contact us or an e-breathe Safety Service Partner, we will be happy to help you and provide all the necessary information.

Services of the e-breathe Safety Service:

- Maintenance according to DGUV 112-190 and manufacturer's recommendations with test report and test seal
- All our service partners are trained respiratory protection technicians and instructors
- Documentation and recording of reparation data for your safety
- Provision of temporary replacement equipment (on demand)
- Cost estimates before repair authorization
- Individually coordinated maintenance plans according to service life and workload

NEW - e-breathe Service Box:

Our practical e-breathe service boxes are available in two sizes and are ideal for storing and shipping your equipment. Feel free to contact us for more information.

Service and Maintenance

e-breathe Safety Service

Maintenance service:
powered, air-purifying respirator (PAPR) or compressed air systems

Maintenance of the head piece:
- Cleaning and disinfection
- Visual inspection and functional testing
- Replacement of defective or missing parts
- Replacement of hygiene parts if necessary (e.g. face seal)
  Airtight and hygienic packaging
- Marking with test badge and barcode
- Preparation of a test report

Maintenance of the breathing air hose:
- Cleaning and disinfection
- Visual inspection and functional testing
- Replacement of defective or missing parts
- Airtight and hygienic packaging
- Marking with test badge and barcode
- Preparation of a test report

Service Partner
You can find our service partners on our website:
www.e-breathe.de

Maintenance of the PAPR:
- Cleaning and disinfection of the blower unit
- Replacement and disposal of filter elements
- Visual inspection
- Battery check
- Charging station check
- Inspection / Readout by Service Software
- Checking the air flow (recalibration if necessary)
- Checking the alarm functions
- Replacement of defective or missing parts (e.g. seals)
- 30 minute test run
- Marking with test badge
- Preparation of a test report

Maintenance of the CA Regulator valve:
- Cleaning and disinfection of the compressed air regulator unit
- Visual inspection
- Inspection of the carrying device
- Airflow check
- Alarm function check
- Leakage check
- Inspection of the compressed air connections / couplings
- Marking with test badge
- Preparation of a test report

Maintenance CA Filter Station: (Inhouse)
- Visual inspection and functional test
- Leakage check
- Compressed air connections check
- Compressed air supply check
- Replacement of filter elements and disposal
- Marking with test badge and barcode
- Preparation of a test report

Maintenance Compressed Air Hose: (Inhouse)
- Cleaning
- Visual inspection and functional testing
- Leakage check
- Marking with test badge and barcode
- Preparation of a test report

Rental Service

e-breathe Safety Service

Some situations, especially unpredictable ones, can quickly lead to shortages and require respiratory equipment only for a limited period of time. In such cases, it is sometimes more economical to ensure the health of employees with rented equipment.

In suddenly occurring exceptional situations, suitable protective equipment is needed at short notice. Our Rental Service is prepared for these kind of situations and is able to provide larger quantities of rental equipment. We keep about 300 powered, air-purifying respirator (PAPR) and compressed air devices and over 500 head pieces in stock at our central warehouse.

Usually we expect a preparation time of one week for the preparation, provision and dispatch of the equipment. However, we are also your reliable partner in emergency situations and attempt to provide you with the appropriate equipment in the shortest possible time.

The respiratory protection equipment and accessories are delivered in a robust plastic storage box and are ready for immediate use.

The inspection and cleaning* of the equipment after use is an integral part of every order and is already included in the rental price.

Product test and trial run directly at your site
Rental equipment offers you the opportunity to put the products through their paces at your location before making a permanent or possible purchase. For this reason we offer you the possibility to purchase the equipment directly after the rental period.

Rental service in case of failures due to maintenance:
Do you need replacement equipment during the maintenance of your equipment at our premises? In order to maintain your operational processes and to protect you from breakdowns, we provide you with inexpensive replacement equipment for the duration of the repair for any repair and maintenance orders.

e-breathe Safety Rental Service:

- Fast delivery of rented respiratory protective equipment
- Flexible rental period according to your wishes
- Collection of the used respiratory protective equipment after use (optional)
- Inspection, cleaning and disinfection of the equipment after operation
- Replacement of hygienic spare parts (e.g. face seals)
- Transparent billing of the rental period, the used consumables and the spare parts to be replaced
- Initial instruction and proof of handling of the equipment
- Possibility to purchase the respiratory protective equipment after rental

Rental Service: Rental Offer

Head Piece:

- Face Shield
- Reusable Hoods
- Full Face Masks / Half Masks
- Rental includes breathing air hose

Limited-Use Hoods / Suits:

- Limited-Use Hauben hoods are easily disposed of
- No cleaning and maintenance costs during operation
- No maintenance costs after use
- Rental includes breathing air hose

Powered, air-purifying respirator (PAPR):

- Different PAPR depending on individual requirements
- PAPR for EX-areas

Compressed Air Systems:

- Compressed Air Regulator Valves
- Compressed Air Hoses in different lengths
- Mobile Compressed Air Filter Stations

Spare Parts & Consumables:

- Filters & pre-filters
- Protective covers for PAPR & breathing air hose
- Visors & Protective Foils
- Face Seals and Headgear
- Batteries for PAPR

Selection of Respiratory Protection

With regard to the health and safety of employees, decision-makers are challenged to create the optimal solution for their application. With regard to operational concerns, it is important to understand and correctly interpret both the applicable laws and the recommendations of the institutions responsible for legal accident insurance.

Various factors play a role in selecting the right respiratory protection system. Factors such as the area of use and the working environment with its specific sources of danger and individual requirements must be taken into account, as well as comfort, design, maintenance and servicing costs, cost-effectiveness, availability and the service life of the equipment.

THE FOLLOWING FACTORS ARE ESSENTIAL IN SELECTING OF RESPIRATORY PROTECTION:

1. HAZARD ASSESSMENT

The first step in the hazard assessment is to comprehensively investigate and monitor hazards and exposures in the workplace or work area. Related to the use and need for respiratory protection, determine if hazards from the surrounding atmosphere are present. Do an identification of harmful exposures to gases, vapors, dusts, fumes, aerosols, or other pollutants and check, adequate oxygen concentration.

2. HAZARD CLASSIFICATION

The subsequent risk assessment of the identified hazards and exposures according to type and level of risk, duration of risk, and probability of risk forms the basis for the proper selection of respiratory protective equipment. Evaluate all risks that may arise in the workplace (e.g., from noise, falling object hazards, fall hazards, restricted movement, flying sparks, pollutant concentrations, and oxygen levels).

3. SELECTION OF RESPIRATORY PROTECTION EQUIPMENT

The hazard assessment provides information about the type of protective equipment needed and the specific protective characteristics that must be present. Keep in mind the following guiding principle "as much protection as necessary, as little exposure as possible".

Now determine the concrete protection that the respiratory protective equipment should provide:
- Protection against particles
- Protection against gases, vapors and particles
- Which warning properties does the pollutant have and what is the concentration?
- How high is the oxygen concentration?
- Is any other protection needed? For example: eye and face protection, hearing protection, head protection.

4. TRAINING / INSTRUCTION OF THE USERS

An optimal protective effect can only be guaranteed by correct handling of the equipment. Incorrectly used and worn protective equipment is unfortunately not uncommon in practice. Maximum protection therefore requires instructed and trained users.

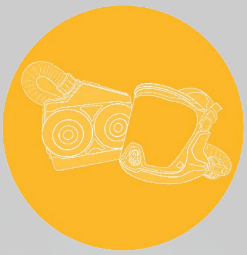
5. MAINTENANCE AND SERVICING OF RESPIRATORY PROTECTION EQUIPMENT

Regular maintenance and inspection of the equipment is essential for reliable and safe use. For a long service life of the equipment, the equipment should be designed for easy maintenance.

Types of Respiratory Protection

The classification of respiratory protective devices distinguishes between filtering respiratory protective devices, which operate depending on the ambient atmosphere, and isolating respiratory protective devices, which operate independently of the ambient atmosphere.

FILTER RESPIRATORY PROTECTION:



Filter devices are dependent on the ambient atmosphere and assume, among other things, that sufficient oxygen (at least 17%) is available. In addition, the ambient conditions must be known and the pollutants must be able to be filtered by a filter and must be clearly perceptible (by smell / taste).

Filter devices must not be used if the concentration of impurities is high enough to pose a direct threat to life and limb.

A PAPR consist of a battery-powered respirator, a carrying device, a breathing air hose, a breathing connection and one or more particle, gas or combination filters.

Polluted ambient air is sucked in by a respiratory protection blower, which then streams through the connected filter and is filtered of particles or gases and vapours. The PAPR is connected to the breathing connection either directly or via a breathing air hose, via which the filtered air is led to the wearer. An overpressure is built up in the breathing connection, which prevents pollutants from penetrating directly into the head part.

ISOLATING RESPIRATORY PROTECTION:

Isolating devices operate independently of the ambient atmosphere. They offer protection against oxygen deficiency and atmospheres containing pollutants. Non-toxic respiratory gases are supplied to the wearer. They are used for applications with insufficient oxygen in the environment, when the ambient conditions are unknown or when pollutants cannot be filtered or are poorly or imperceptibly noticeable.

Isolating devices consist of an environment-independent air source (e.g. breathable compressed air from a compressor / compressed air network), a compressed air hose, a carrying device, a compressed air regulator valve, a breathing air hose, a breathing connection and a compressed air filter station.

The compressor continuously supplies breathable compressed air via a compressed air hose to the compressed air control valve of the carrier. This can adjust the flow rate of the volume flow at the control valve, which is then led to the breathing connection of the wearer via the connected breathing air hose. An overpressure is created in the breathing connection, which prevents pollutants from penetrating directly into the head section.

The compressed air supplied by the compressor has to have breathing quality according to EN 12021. Otherwise, a compressed air filter station must be used.

Overpressure Resp

Filtering Respiratory Protection

depending on the ambient atmosphere

Power assisted Filtering Devices

PM Proflow 2 SC
PM Proflow 2 EX

e-breathe
Smartblower

e-breathe e-Flow
Filter-System

encapsulated filters
(with DIN-RT connection)

PM
Combination Filter

PM
Particle filter

uncapsulated filters
(with DIN-RT connection)

e-breathe
Particle filter

e-breathe
Gas filter

e-breathe
Combination Filter

e-breathe
Filter Cover
(Filter Housing

Inside
PU-flexible

Inside
PU-fixed l.

ESA
PU-flexible

Click
PU-flexible

Click
PU-fixed l.

Overpressure Suits

internal air source

e-breathe
MicroMax NS
Inside

e-breathe
ChemMax 1
Inside

e-breathe
ChemMax 3
Inside

e-breathe
Splash
Inside

Chemical
Grey
Inside

Chemical
Grey
Outside

Overpressure Hoods

Limited-Use chemical resistant

e-breathe
SH1

e-breathe
LH1

e-breathe
LH3

PM Lab
Hood AV

Multi-
Hood

Multi-
Hood

PM
Chemical
Hood

piratory Protection

Isolating Respiratory Protection

independent of the ambient atmosphere

Fresh Air Pressure Hose Device / Compressed Airline

e-breathe e-Flow PAD-System

e-breathe FDS

e-breathe e-Line

uncapsulated filters / Filter inserts

e-breathe Particle filter ecoPAD

e-breathe Gas filter Adapter (Filter Housing)

e-breathe Gas filter ecoPAD

FDS Hose- / Belt unit

FDS Hose- / Belt Unit

Compressed Air Filter Station / Hoses

stationary Filter station

mobile Filter station

Compressed Air Hoses

MM PU-flexible

Vario PU-fixed l.

Vario EPDM

FDS Suction Hose 10-40m

RT PU-flexible

RT PU-fixed l.

RT EPDM

reusable

e-breathe SH2

e-breathe LH2

Multi-Hood

PM Lab Hood AV

Face Shield

e-breathe Mulitmask-System 2.0

Multimask Pro Foam

Multimask Pro Mesh

Multimask Pro Silicone

Full Mask

DIN-RT-Connection

Full Face Mask

Which respiratory protection system do you need?

Different respiratory protection systems for individual applications & requirements.
Depending on the concentration of pollutants in the workplace and the requirements of the workplace environment, a different respiratory protection system is needed. There are three different systems to choose from: Filtering respiratory protection systems with a respiratory blower, isolating compressed air respiratory protection systems and isolating fresh air pressure hose devices.

The following symbols are used as a guide to indicate which respiratory protection system is being used: Powered Filtering Respirator or Insulating Respirator and which headpiece types (hood or mask) it may be combined with.


Blower filter unit


Compressed air hose unit


Hoods


Respiratory mask

POWERED RESPIRATORY PROTECTION SYSTEMS WITH HOODS & SUITS FROM PAGE 20

A blower filter unit is worn on the belt or back for maximum freedom of movement. The respiratory protection blower provides the user with a constant supply of breathable air. The air flow can be individually adjusted on the device while the user does not feel any breathing resistance. As a result, there are no wearing time limitations when using a respiratory protection blower with a hood. Depending on the filter selected, the devices can be used to protect against particles, gases and vapors. If the concentration of contaminants is too high or the ambient conditions are unclear, an isolation device must be used.

Fan respiratory protection systems with hoods according to EN12941 TH3 can be used up to a maximum of 100 APF D (VdGW).

POWERED RESPIRATORY PROTECTION SYSTEMS WITH HALF- & FULL MASK FROM PAGE 24

Powered filtering devices with a half and full face mask can be worn on a belt or directly on the mask with our special systems. The respirators, which fit closely to the face, offer a higher protection factor compared to hoods, but due to their fit lead to a higher strain for the user when wearing them and are subject to wearing time limitations. For short operations, they offer the advantage that the respirator can be used with only a filter, without a blower.

Blower respirator systems with half & full face masks according to EN12941 TM3 can be used up to a maximum of 500 APF D (VdGW).

COMPRESSED AIR HOSE UNITS FROM PAGE 44

Compressed air hose devices can be used with a hood or a respirator. The compressed air control valve is worn on the belt and supplied with breathable air via a compressed air hose and an additional compressor. When using a compressed air hose device, the supplied compressed air must be of breathing air quality according to EN12021. If this is not the case, a compressed air filter station must be used additionally. Compressed air hose devices belong to the insulating respiratory protection devices and are used when the concentration of harmful substances is too high to use filtering respiratory protection or it has unknown poor warning properties.

Compressed air respiratory protection systems with hoods according to EN14594 Class 3A/B can be used up to a maximum of 100 APF D (VdGW).

FRESH AIR PRESSURE HOSE UNITS FROM PAGE 58

Fresh air pressure hose devices belong to the insulating respiratory protection devices and are mainly used in contaminated or low-oxygen work areas where the use of filtering respiratory protection or compressed air respiratory protection is not possible. The required breathing air is drawn in from an area outside the contaminated ambient atmosphere via a respiratory protection blower and supplied to the breathing connection via an air supply hose over a distance of up to 40 meters. The system offers the advantage of covering different application possibilities. For example, the respiratory protection blower can also be used with the full-face mask in areas where filtering respiratory protection is sufficient. The user thus has a 2in1 system and can switch depending on the activity to be performed.

Fresh air respiratory protection systems with full-face masks according to EN138 Class 2 can be used up to a maximum of 1000 APF D (VdGW).

Filter Respiratory Protection

In this chapter you will find our powered, air-purifying respirators (PAPR) / blower filter devices. A more detailed overview and further information can be found in our separate product brochure.

POWER ASSISTED FILTER PROTECTION

Includes: Powered air-purifying respirator, carrying device, breathing hose, respiratory connection and one or more filters that remove contaminants from the ambient atmosphere. A constant overpressure is built up in the breathing connection.

Benefits:

- Breathing air is supplied to the wearer → No breathing resistance
- Blower is worn directly on the belt → Increased mobility
- No limitation on wearing time for helmets & hoods → Higher productivity
- Constant air flow for efficient cooling → High wearing comfort
- Freely Portable → Flexible applications
- Suitable for beard & spectacle wearer → High wearing acceptance
- Combined Protection → Respiratory, head, face and eye protection

Components

Breath Connection
Half mask / Full face mask
Helmet / Visor / Hood
Protective suit

Breathing Air Hose
Fixed length
Flexible length
EPDM (heat resistant)

Carrying Device
Hip belt
Shoulder straps
Back harness straps

PAPR
Blower unit
Battery
Charger

Filter
Particle Filter
Gas Filter
Combination Filter

Respiratory Filter Accessories
Prefilter
Prefilter holder
Filter decon / Shower caps

e-breathe e-Flow

Powered Air Puryfing Respirator

THE ALL-IN-ONE POWERED AIR PURIFYING RESPIRATOR:

With its new e-breathe PAPR-system, e-breathe has developed an absolute all-rounder. Thanks to its innovative and modular concept, the e-Flow belongs to the newest generation of air purifying respirators. The slim housing and ergonomic design enable an easy operation even in confined spaces. The system includes a basic unit and various filter boxes that serve as filter housings. The modular design allows the unit to be configured precisely to suit individual requirements. No matter whether the situation requires a connection with DIN round thread filters, an e-breathe ecoPAD filter or a three-filter operation, the modular e-Flow is always immediately ready for operation.

INTELLIGENT TECHNOLOGY FOR MAXIMUM SAFETY:

In addition to its universal application, the blower also convinces in terms of technology and equipment. The blower is equipped with the newest technology and offers maximum safety and protection.

• AUTOMATIC SYSTEM TEST:

The integrated software of the intelligent e-Flow carries out an automatic system test each time the device is switched on and thereby checks the functionality of the device before each operation.

• INTELLIGENT 2-STEP WARNING SYSTEM:

All the important components are permanently monitored by the electronics guaranteeing that the user is warned when the volume falls below the minimum level, when the filter is full or when the battery power is too low.

The alarm function of the e-breathe e-Flow is equipped with a 2-step warning system:
Stage 1 - Warning: audible and visual signal
Stage 2 - Alarm: audible, visual and mechanical (vibration alarm) signal

• RELIABLE ENERGY SOURCE:

Long-lasting and reliable blower breathing protection requires a reliable energy source, which has been implemented in the new e-breathe e-Flow as a replaceable and lightweight lithium-ion battery with fast charging function and a long service life. The communication between the system and the battery provides a real-time display of the remaining battery life.

• MADE IN GERMANY

To ensure a high quality of our products the manufacturing takes place in Germany. The complete service, maintenance and repair also is done in Germany. This minimizes downtimes due to long transport routes and/or poor availability of spare parts and ensures a rapid re-use.

Technical Specifications

Operation Mode **Approvals:**	**e-breathe e-Flow Hood-System -> CE certified according to EN 12941 (TH3)** **e-breathe e-Flow Full Mask System -> CE certified according to EN 12942 (TM3)**
Airflow (automatic readjustment)**:**	**Air flow adjustable in three stages and head section mode at the device** **hood system 160 - 180 - 200 l/min** **full mask system 120 - 140 - 160 l/min | half mask system 80 - 100 - 120 l/min**
Airflow Warning:	**< 160 l/min hood system** **< 120 l/min full mask system | < 80 l/min half mask system**
Battery Warning:	**< 15 min remaining time**
Battery:	**Lithium-Ion Battery: 14,4V / 3,4Ah / 49WH**
Operating Time:	**approx. 8 to 10 hours** **(Depends on the concentration of pollutants and the adjusted airflow.)**
Battery Recharging Time:	**less than 2,5 hours (quick charge function enables rapid charging: 1 hours for 80%)**
Temperature Range:	**-10°C to +40°C <70% RH**
Weight:	**approx. 1100g (with battery / without filters / without belt)**
Alarm System:	**optical alarm (Display of the alarm at the color display with corresponding error code.)** **acoustic alarm (≥ 75 dB)** **vibration alarm**
IP Protection Class:	**IP65 with Decon Cap**

Product Characteristics:

High Comfort:
- low noise level
- the system adapts optimally to every requirement due to different carrying systems
- ergonomic fit: blower fits tightly to the body and provides a high wearing comfort

Maximum Safety:
- intelligent 2-stage warning system
- easy handling
- robust construction with reliable electronics and protection class IP 65

Air Flow:
- constant monitoring of the air flow, independently of battery charge status and filter saturation
- Strong air flow with an air volume control from 160l/min to 200l/min to ensure an over-pressure in the head section even under extreme conditions.

Modular Construction:
- Basic unit, which can be combined with various filter elements depending on the specific application
- easy to maintain: quick & easy replacement of spare parts and components

Filters / Filter Accessories:
- Particle filters, Gas filters and Combination filters available.
- DIN round thread filter connection for disaster protection
- Pre-filters, Pre-filter holders, Filter decon caps and filter caps available

Made in Germany:
- Developed in Germany
- Produced in Germany
- Certified in Germany

Breathing Devices:
- Face shields
- Limited-Use & Reusable Hoods
- Blower suits
- Half masks & Full face masks

Approvals:
- EN 12941: Class TH3
- EN 12942: Class TM3
- EN 138: Class B
- PPE Regulation

e-breathe e-Flow

PAPR

1 BASIC UNIT:

The basic unit combines technology and intelligent electronics. The built-in brushless motor from ebm-papst impresses with above-average quality and has a significantly longer service life than conventional motors.

2 FILTER CONNECTION / BOXES:

The e-Flow has a modular design and features different filter mountings. Thanks to the interchangeable filter boxes, different filter holders can be used with the e-Flow depending on the application. For this purpose, the filter box can be changed easily and quickly, thus adapting to your individual requirements.

Can be used with: DIN round thread filters, e-breathe ecoPAD particle filters & ecoPAD gas filters, three-filter operation.

3 E-BREATHE ECOPAD FILTER SYSTEM:

- The e-breathe filter range effectively protects against particles, gases and vapors.
- Modular replacement of the combination filter when one filter becomes saturated: Individual replacement of the particle filter or the gas filter is possible.
- Optional filter accessories, which can be easily & quickly clicked onto the filter cover:
  - Pre-filter holder, with openings on the sides, prevents suction blockage
  - Pre-filters, increasing the service life of the filter pads
  - Spark arrester to protect against a filter fire
  - decon cap, with opening facing downwards, allowing showering with blower

4 EXCHANGEABLE LI-ION BATTERY:

- The battery is replaceable with a simple click.
- Quick charge function charges the battery up to 80% in one hour and fully in 3 hours.
- Battery life is approximately 8-10 hours, depending on filter/head combination and pollutant load.

5 ADJUSTABLE AIR FLOW:

The airflow can be increased/decreased, depending on the head part selected, simply by pressing a button in three different increments. Especially during strenuous work or when used in hot or humid environments, this proves to be a pleasant and useful addition.

6 HOSE CONNECTION:

The DIN round thread connection is compatible with all e-breathe & PM headpieces and hoses.

7 WEARING COMFORT:

- Fit: permanently tight to the body.
- Large selection of different wearing systems for a wide range of applications

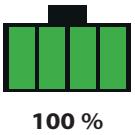
8 USB SERVICE INTERFACE:

Through the service flap located on the back of the e-Flow, the e-Flow can be connected to the PC, read out and configured with regard to your needs.

9 COLOR DISPLAY:

As soon as you start the e-breathe e-Flow blower respiratory protection system, it performs a system test of all important components. After only a few seconds, the e-Flow shows all important information on the home screen in the display:

Battery status
- Battery charge status
- Remaining battery life



Filter status
- Current filter capacity

Air flow rate
- Set air flow rate
  160 - 180 - 200 l/min

Headpiece mode
- Half mask mode
- Full mask mode
- Hood mode

Service date
- Display of the next service date + reminder

System information
- Operating hours
- Battery charge cycles
- Software version

e-breathe e-Flow

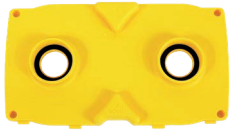
PAPR

e-breathe e-Flow

PAPR

The starter pack is designed for owners of headboards approved with the e-breathe e-Flow. When used with the head unit, filters and breathing air hose, the starter pack provides all the necessary components to get the system into operation.

Starter-Packs: PAPR e-Flow		
Article Name	Part Number	Image
The starter pack consists of: Blower unit, filter holder, battery, charging station, cleaning kit, comfort belt		
e-breathe e-Flow **Blower Unit with PAD-Box** **- Hood System** 160-180-200 l/min **- Full Mask System** 120-140-160 l/min	**3220051xx** **00** **02**	
e-breathe e-Flow **Blower Unit with Filter-Box** **- Hood System** 160-180-200 l/min **- Full Mask System** 120-140-160 l/min	**3220050xx** **99** **01**	
e-breathe e-Flow Blower Unit **Basic with PAD-Box** **Basic with Filter-Box**	**3220050xx** **60** **50**	

Accessory & Spare Parts: e-Flow		
Article Name	Part Number	Image
e-Flow PAD-Box (Box for ecoPAD Filter)	**322005001**	
e-breathe Filter Cover (Piece) **e-breathe Gasfilter - Adapter (Piece)**	**322002131** **322002246**	
e-Flow Filter-Box (Box for standard connection thread)	**322005002**	
e-Flow Battery **Li-Ion 14,4 V / 3,4 Ah / 49WH**	**322002176**	
e-Flow Charging Station	**322005003**	
e-breathe Wall Mount **for Charging Station**	**322002136**	

Accessory & Spare Parts: e-Flow		
Article Name	Part Number	Image
e-breathe Comfort Belt Pro	**322003003**	
e-breathe Carrying Devices	refer to chapter Smartbelt / Carrying Devices	
e-Flow Disposable Device Cover **- PAD-Box** **- Filter-Box**	**3220050xx** **04** **05**	
e-Flow Heat Protection Device Cover **- PAD-Box** **- Filter-Box**	**2231004xx** **02** **01**	
Cleaning / Storage Kit **- PAD-Box** **- Filter-Box**	**5005100xx** **49** **48**	
PM Disinfectant **Basic spray head for Disinfectants (plastic)**	**129001000** **129001001**	
e-breathe Service Box M **Storage Case**	**119458610** **119458616**	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	
e-breathe Prefilter (PU 20) **e-breathe Prefilter holder** (Piece)	**302052691** **322052606**	
e-breathe Decon Shower Cap **e-breathe Spark Protection Inserts for ecoPAD (Pair)**	**322002224** **322002138**	
e-breathe Filter	see chapter Filter	

e-breathe Smartblower System

PAPR

The small and lightweight Smartblower respiratory protection system offers maximum flexibility and safety. The system has a modular construction and consists of a Battery/Control Unit (SVE), a connecting cable and the blower unit. The system can be extended according to specific requirements. The unit is suitable for pressurised applications and supplies the connected head piece with filtered breathing air. The blower is controlled by a 350g Battery/Control Unit and delivers an air volume from 140l/min up to 160l/min.

The Smartblower System features a wide range of practical functions:

Automatic airflow readjustment

The integrated software controls and monitors the airflow to ensure that the user is supplied with the required airflow rate even in the event of a more and more saturated filter or decreasing battery power. If the system is no longer able to ensure the correct airflow rate the system automatically gives the user an optical and audible warning.

Ultralight

With only 435g in weight (Motor Unit + Battery Unit) the system is ultra-light. The blower motor impresses with its compact size and its weight of only 85g. Thanks to its very low weight the motor unit can directly be connected to a full face mask without a breathing hose. The lightweight and ergonomical design ensures an optimal weight balance of the unit and guarantees maximum comfort

Wide range of components for every application

To complete the system, e-breathe offers a wide range of compatible face pieces, such as half and full face masks or hoods, filters and accessories. The system provides a large number of options and accessories to best fit your application.

Modular Respiratory Protection System

All main components have a modular design enabling quick replacement of damaged parts. The associated downtimes and costs are thus kept as low as possible.

Exchangeable Lithium-Ion Battery

The Battery/Control Unit consists of a Lithium-Ion Battery with a battery run from up to 8h. A second Battery/Control Unit can be used as an exchangeable battery and allows the user to work without a break. The simple and efficient quick charge system allows rapid charging (1 hour for 80% and 3 hours for the whole battery).

Protection Class IP67

The Battery/Control Unit and the Motor Unit feature heavy-duty design and achieve a high Protection Class IP67 (protection while temporarily submerged) in closed condition.

Technical Specifications:

Operating mode:	**e-breathe Smartblower Hood-Mode One Filter Mode**	**e-breathe Smartblower Full Mask Mode One Filter Mode**
Approvals:	**CE certified according to EN 12941(TH3)**	**CE certified according to EN 12942 (TM3)**
Airflow (automatic readjustment)**:**	**not adjustable on the device 140-160 l/min**	**not adjustable on the device 140 l/min**
Airflow warning:	**< 135 l/min**	**Nein**
Battery warning:	**< 15 min remaining runtime**	**< 15 min remaining runtime**
Battery:	**Lithium-Ion Battery:** 11,25V / 2,95Ah	**Lithium-Ion Battery:** 11,25V / 2,95Ah
Operating Time:	**approx. 6-8 hours**	**approx. 6-8 hours**
Battery Recharging Time:	**1 hour = 80% quick charge function 3 hours = 100%**	**1 hour = 80% quick charge function 3 hours = 100%**
Number of filters:	**1 x Particle filter**	**1 x Particle filter**
Accessories:	-	-
SVE (control unit):	**SVE Hood Mode**	**SVE Full Mask Mode**
Temperature Range:	**-0°C to +40°C <70% RH**	**-0°C to +40°C <70% RH**
Weight:	**ca. 470g (without belt / without filter)**	**ca. 470g (without belt / without filter)**
Alarm System:	**Optical alarm (displayed on display) Audible alarm** (≥ 75 dB)	**Optical alarm (displayed on display) Audible alarm** (≥ 75 dB)
IP Protection Class:	**IP65 with decontamination caps**	**IP65 with decontamination caps**

Smartblower Operating Modes

PAPR

Full Face Mask Mode: One Filter Mode

The Motor Unit can be easily screwed frontally between a half mask or a full face mask and a filter into the screw thread of the mask. The lightweight Battery /Control Unit can be attached to the hip belt. The blower serves as a breathing support. It extends the application time and results in a work facilitation for the user.

- Suitable for all applications, which require a protection with a full face mask
- Breathing assistance for the user & extension of application time
- Cost-effective due to one filter mode & e-breathe filter system
- Work facilitation for the user

Technical Details:
- SVE Mode: SVE Full Face Mask Mode
- Number of filters: 1x Particle Filter
- Battery life: ca. 6-8 h
- Certification: CE Certification according to EN 12942

Hood Mode: One Filter Mode

The Motor Unit and the Battery/Control Unit are worn comfortably on a Belt. The Motor Unit and the hood are connected through a breathing hose which supplies the hood with breathable air. The blower builds up a constant overpressure inside the hood which prevents the intrusion of harmful substances. The blower is operated by only one filter and is therefore more cost-effective and more sustainable than other solutions.

- Possible application: pharmaceutical industry & disaster medicine
- No limits on application time & no G26 medical check-up

Technical Details:
- SVE Mode: SVE Hood-/ One Filter Mode
- Number of filters: 1x Particle Filter
- Headtop: Hood
- Battery life: ca. 6-8 h
- Certification: CE Certification according to EN 12941

Hood Mode: Two Filter Mode

The Smartblower Hood / Two Filter Mode allows two particle filters to be used at the same time due to the additionally available Y-Connector. The Y-connector is screwed between the motor unit and the particle filter.

This enables the use of two particle filters to extend the battery life and achieve a higher initial volume flow. The Y-Connector with blower and particle filter can be worn on the belt or mounted on the Smartbelt backbelt system.

Technical Details:
- SVE Mode: SVE Hood-/ One Filter Mode
- Accessories: Y-connector required
- Number of filters: 2x Particle Filter
- Head part type: Respirator hoods
- Battery life: ca. 6-8 h
- Certification: CE Certification according to EN 12941

e-breathe Smartblower System

PAPR

Modular Respiratory Protection System

Motor-Unit
The small blower motor supplies up to 160ltr/min. of air.

Accessory: Smartbelt
For carefree work. Combined with accessory it can be worn as a back strap.

SVE (Battery/Control Unit)
- Works reliably a whole work shift
- Light intelligent li-ion battery
- Weight: 350g
- Complete battery charging after 3h
- IP 67 watertight
- Color Display

Accessory: Y-Connector
Combines 2 filters with the Smartblower motor, enabling the air supply and the air consumption to be spread through 2 filters.

SVE Cable
- Waterproof connecting cable
- Available in different versions
- Screw connection for a secure hold

EN-round thread connection
Cost-reducing thread filter connection with an one filter mode.

Control & Supply Unit:

The 350g lightweight SVE (Control & Supply Unit) controls and monitors the small blower. To ensure a high level of safety, the integrated software of the intelligent SVE performs an automatic system test each time it is switched on and records all usage data during operation, thus providing reliable information for service.

The integrated color display provides an easy operation and convinces by its functionality. All important functions and information can be quickly accessed at all times. The optical and acoustic signal warns the user in case of a decreasing flow rate or battery run time or in case of a saturated filter.

The lithium-ion battery (11.25V/2.95Ah) integrated inside the SVE supplies the user reliably and safely for an entire shift. With the integrated quick charge function, the unit is charged up to 80% after only one hour and is quickly ready for use again. Complete charging is achieved after three hours. A second SVE can be used as a rechargeable battery to ensure failure-free operation.

To ensure a safe and optimal use of the blower, the SVE is adjusted to the customer's requirements and intended use before delivery.
The following operating modes are possible:
- **Full mask operation:** For full masks and half masks
- **Hood operation:** For respirator hoods with one or two particle filters

The color Display informs the user about:

Status Display
Display of the remaining battery time in real-time and the selected air volume.

Battery-, filter-, blower warning
If the remaining running time, the volume flow or motor error is not reached, the user is warned.

system information
Display of operating hours, serial number, battery charging cycles and the next service date

Y-Connector & Smartbelt

Accessory Respirator

Accessory for the Smartblower System

Y-Connector

The Y-Connector combines 2 filters with the Smartblower motor, enabling the air supply and the air consumption to be spread through 2 filters. This is necessary when the Smartblower is used against gases.

To increase the air volume or to extend the lifetime of the filters the Y Connector can also be used with two particle filters.

The Y-Connector is available in 2 versions:

- **Y-Connector Hip:** Connected to the BeltClip it can be worn directly on the belt.

- **Y-Connector**: Due to the bayonet lock it can be connected directly to the back carrying Smartbelt System.

Smartbelt - Back Carrying System

The Smartbelt adapts excellently to the requirements of various application areas. It follows every movement of the user light and flexible and therefore supports him optimally on the activities to be performed.

Due to the modular construction of the components and the safety buttons at the Smartbelt, the system can be easily extended and the wearing position can be changed according to the users' requirements. The user can choose from five different wearing positions and combinations which enables him to attach the system for example to a hip belt or a backpack system.

The Backpack System combines comfort, safety and ergonomics. The back cushion made of functional foam ensures sufficient ventilation and wicks away warmth and moisture. The ergonomic harness construction perfectly distributes the weight to the hip and shoulder area. The bayonet locking at the Smartbelt ensures a safe and quick inclusion of the Y-connector.

For more information on the product and ordering information, refer to chapter Respiratory Accessories.

Components Smartbelt:

Wings (basic unit)

+

Backpack Harness

+

Blower Belt

+

Buckle Band

e-breathe Smartblower System

PAPR

The Starter Packs are intended for users with headpieces, which are already certified with the Smartblower System. In combination with a head piece, breathing hose and filters, the Starter Pack offers all necessary components to put the Smartblower System in operation.

Starter-Packs: PAPR Smartblower		
Starter-Pack	Part Number	Image
The Starter Pack consists of: Motor, SVE Hoods / One Filter Operation (Battery), Charging Station, Belt Blower, Belt Clip, SVE Spiral Cable 2.0 DV and Cleaning Kit		
e-breathe Smartblower One Filter System	**322002100**	
The starter pack consists of: Motor, SVE Full Mask Operation (Battery), Charging Station, Belt Blower, SVE Spiral Cable 2.0 DV and Cleaning Kit		
e-breathe Smartblower Full Mask System	**322002200**	
The starter pack consists of: Motor, SVE Hoods / One Filter Mode (Battery), Charging Station, SVE Spiral Cable 2.0 DV, Smartbelt waist belt, Y-Connector and Cleaning Kit		
e-breathe Smartblower Two Filter System	**322002201**	

Accessory & Spare Parts: Smartblower		
Starter-Pack	Part Number	Image
e-breathe Smartblower Motor V.1.1 (without cable)	**322002102**	
Battery/Control Unit (SVE) **SVE Hood / Onde Filter Mode [1]** **SVE Full Mask Mode [2]**	**3220021xx** **322002103** **322002113**	
e-breathe Smartblower Charging Station V.1.1	**322002101**	
SVE Spiral Cable 2.0 DS (double screw connection)	**322002137**	
SVE Cable, long & straight 2.0 DS (double screw connection)	**322002139**	

e-breathe Smartblower System

PAPR

Accessory & Spare Parts: Smartblower		
Starter-Pack	Part Number	Image
e-breathe Wall Mount Charging Station	**322002136**	
e-breathe Cleaning / Storage Kit	**500510046**	
e-breathe BeltClip	**322004021**	
e-breathe Smartblower Belt (50mm) **e-breathe Belt decon**	**322002105** **302062996**	
e-breathe Smartbelt Backbelt System	see chapter Smartbelt / Carrying Devices	
Y-Connector Hip (For belt clip)	**322003000**	
Y-Connector (For Smartbelt)	**322003001**	
e-breathe Smartblower Device Cover Limited-Use	**116001042**	
PM Rescue Clean Disinfectant **Basic spray head for Disinfectant** (artificial)	**129001000** **129001001**	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	
e-breathe Prefilter (PU 20) **e-breathe Prefilter Holder** (Piece)	**302052691** **322052606**	
e-breathe Filter	see chapter Filter	

PM Proflow 2 SC / EX

PAPR

The PM Proflow SC is a compact and durable blower-assisted respiratory protection system. Smart and easy to use, the PM Proflow 2 SC blower unit features a number of improvements over the original Proflow concept.

The ergonomic design of the lightweight and compact PM Proflow SC includes a curved back plate that provides comfort even during long periods of work. A wide range of head sections allows it to meet the needs of a variety of applications.

The rotation of the powerful motor varies depending on the filter/head section combination used. A microprocessor calculates and automatically adjusts the power required to maintain the specified airflow rate.

MULTIFUNCTIONAL AND VERSATILE

- Different head parts allow usage in a wide range of applications.
- A wide range of filters is available, including PSL, APSL, ABPSL, ABEPSL, ABEKPSL and ABEKHgPSL filters.

Technical specifications:

	PM Proflow SC
Approvals:	CE certified according to EN 12941 (TH3) CE certified according to EN 12942 (TM3)
Airflow (automatic readjustment):	not adjustable on the device 120 l/min 160 l/min
Airflow warning:	< 120 l/min < 160 l/min
Battery warning:	< 15 min remaining runtime
Battery:	Nickel metal hydride battery: 9,6 V
Operating Time:	approx. 4-8 hours (depending on combination filter / head part)
Battery Recharging Time:	6 hours charging time, automatic trickle charge
Temperature Range:	-10°C to +40°C <95% RH
Weight:	ca. 1400g (without belt / without filter)
Alarm System:	Optical alarm (display of battery status (A), exhaustion of filter capacity (P)) Acoustic alarm (with low battery capacity)
IP Protection Class:	IP54

Intelligent

• The electronic control of the air supply ensures a pleasant air flow and automatically compensates for changes in filter resistance.
• The data storage function in the unit records all usage data to provide reliable and downloadable information for service and maintenance.
• The manufacturer provides a 3-year warranty or a maximum of 1,800 hours of operation on the blower unit if the annually due service is performed by an authorized partner. (max. 1 year warranty on the battery).

Performance monitoring

• The warning system ensures a reliable operation.
• Permanent visual monitoring of the battery charge status and filter clogging with acoustic signal when the battery needs to be charged or the filter needs to be replaced.
• Operating time of 4 - 8 hours with one single charge (depending on the filter/head combination).

Minimal maintenance required

• No calibration or maintenance required by the wearer.
• Using electronics, PM Atemschutz, as an approved service center, is able to run diagnostic programs for verification and provide comprehensive service history records.

Low operating costs

• Durable construction and heavy-duty materials provide a long useful life.
• The splash-proof housing allows for easy decontamination.

Always on standby mode

• The integrated battery unit is securely enclosed in the housing and can be recharged inside the device.
• A lightweight NiMH rechargeable battery with quick charge function is used.
• The Smartcharger indicates the charging status and switches to trickle charge. A fully charged battery can remain connected in standby mode.
• A secured on/off switch prevents accidental turn-off.

PM Proflow EX

ATEX device for use in explosive atmospheres:
The PM Proflow EX is designed for applications where a potentially flammable atmosphere requires a system with explosion protection. Tested and approved in potentially explosive gas-air mixtures as well as in dust-air areas.

EX Classification: II 2G Ex ib IIC T3/II 3D Ex tD A22 IP54 T80C

PM Proflow SC / EX

PAPR

The starter pack is intended for owners of headboards that are approved with the PM Proflow SC / EX. When the basic unit is used in combination with the head piece, filters and breathing air hose, the starter pack provides all the necessary components to put the system into operation.

Starter-Packs: PM Proflow		
Starter-Pack	Part Number	Image
The starter pack includes: PM Proflow 2 SC Blower, battery charger, battery, comfort belt		
PM Proflow 2 SC Blower Unit - 120 l/min Full Mask Mode - 160 l/min Hood Mode	**1000xxxxx 64024 29808**	
PM Proflow 2 SC Blower Unit Basic (without belt) - 120 l/min Full Mask Mode - 160 l/min Hood Mode	**100064xxx 124 324**	
PM Proflow 2 EX Blower Unit - 120 l/min Full Mask Mode - 160 l/min Hood Mode	**No longer Available since 2018!**	

Spare Parts & Accessories: PM Proflow		
Starter-Pack	Part Number	Image
Proflow 2–NiMH Battery 9,6 V/4,5 Ah Proflow EX–NiMH Battery 9,6 V/3,8 Ah	**105063790 No longer available!**	
Charger PF for NiMH Batteries	**100063791**	
Blower Body PF2-SC	**100064049 Nicht mehr Verfügbar!**	
Motor unit PF2-SC Motor unit PF2-EX	**100064089 100064093**	
Tension Ring PF	**109063594**	

PM Proflow SC / EX

PAPR

Spare Parts & Accessories: PM Proflow SC & EX		
Starter-Pack	Part Number	Image
e-breathe Comfort Belt Pro	**322003003**	
e-breathe Carrying Devices	refer to chapter Smartbelt / Carrying Devices	
Filter sealing	**227063899**	
Power Source 12 VDC for Car cigarette lighter (A)	**100063587**	
External power supply (230 V) **PM Emergency battery pack**	**100063588** **252001000**	
Proflow Device Cover **Protective Cover for Hose**	**116001031** **116001041**	
Proflow Cleaning / Storage Kit	**500510046**	
e-breathe Service Box M **Storage Case**	**119458610** **119458616**	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	
PM Cover for filter	**500052693**	
e-breathe Prefilter (PU 20) **PM Prefilter Set (Prefilter 6 pcs. + -holder 2 pcs.)**	**302052691** **100052692**	
PM Filter	see chapter Filter	

Filter Respiratory Protection

Blower filter unit

Respiratory mask

Particle Filter:

Particle filters offer protection against particles and are divided into three classes according to their filtration capacity: P1 / P2 / P3. A higher protection class includes a lower one. The filter medium in the particle filter catches the particles, thus increasing its resistance. As soon as the filter resistance is too high, the filter must be replaced.

Type	Colour	Main area of application	Class	Particle filter Filter performance EN 143		FFP Masks Filter performance EN 149	
P3	white	P = For use against solid toxic, radioactive and harmful particles as well as microorganisms such as bacteria and viruses.	1 2 3	80,0 94,0 99,95	% % %	80,0 94,0 99,0	% % %
NR	NR (not reusable) = The particle filter is not intended for multiple use and can only be used during one shift.						
R	R (reusable) = The particle filter is intended for multiple use and can be used over several working shifts.						
S	S (Solid) = The particle filter is intended for use against solid aerosols.						
SL	SL (Solid Liquid) = The particle filter is designed for use against solid and liquid aerosols.						

Gas Filter:

Gas filters provide protection against gases and vapours and are divided into 3 classes according to type and main area of application, according to their performance. The activated carbon in the gas filter absorbs various gases. As soon as the gas filter is saturated or exhausted, the gas breaks through. The user can perceive this by smell and/or taste and the filter must be replaced.

Type	Colour	Main area of application	Class	maximum permitted gas concentration Half- / Full Mask EN 14387				PAPR EN 12941 / EN 12942			
A	brown	Protects against organic gases and vapours with a boiling point above +65 °C. z. B. Solvents, toluene, xylene and styrene	1 2 3	0,1 0,5 1,0	Vol-% Vol-% Vol-%	1000 5000 10000	ppm ppm ppm	0,05 0,1 0,5	Vol-% Vol-% Vol-%	500 1000 5000	ppm ppm ppm
B	grey	Protects against inorganic gases and vapours. z. B. Chlorine, hydrogen sulphide and hydrocyanic acid (not against CO)	1 2 3	0,1 0,5 1,0	Vol-% Vol-% Vol-%	1000 5000 10000	ppm ppm ppm	0,05 0,1 0,5	Vol-% Vol-% Vol-%	500 1000 5000	ppm ppm ppm
E	yellow	Protects against acid gases and vapours. z. B. Sulphur dioxide and hydrogen fluoride	1 2 3	0,1 0,5 1,0	Vol-% Vol-% Vol-%	1000 5000 10000	ppm ppm ppm	0,05 0,1 0,5	Vol-% Vol-% Vol-%	500 1000 5000	ppm ppm ppm
K	green	Protects against ammonia and certain amines. z. B. Ethylenediamine	1 2 3	0,1 0,5 1,0	Vol-% Vol-% Vol-%	1000 5000 10000	ppm ppm ppm	0,05 0,1 0,5	Vol-% Vol-% Vol-%	500 1000 5000	ppm ppm ppm
AX	brown	Protects against organic gases and vapours with a boiling point below 65 °C. z. B. Acetone, methanol and dichloromethane	- - -	Observe manufacturer's information							
HG	red	Protects against mercury vapour. Warning! Maximum application time 50 hours.	- - -	Observe manufacturer's information							

Combination Filter:

Combination filters are a combination of a gas filter and a particle filter. They offer protection against gases, vapours and particles. They must be replaced as soon as one of the two components is saturated.

Filters for Half & Full Face Masks:

Respirator filters approved to EN143 & EN14387 that have a DIN round thread connection to EN-148-1 can be used with half masks and full masks with the same filter connection.

If a half mask is used, the weight of the respiratory filter must not exceed 300g.
If a full face mask is used, the weight of the respiratory filter must not exceed 500g.

Filters for powered, air-purifying respirator (PAPR):

Breathing protection filters for powered, air-purifying respirators (PAPR) are approved according to EN12941 & EN12942 and may only be used with a PAPR that has been tested and certified in combination. The filters are especially designed for the corresponding PAPR and are only approved as a system.

e-breathe ecoPAD Filter system

Particularly with resources becoming increasingly limited, the sustainability of products is coming more and more into focus. With the ecoPAD filter system, e-breathe is treading this environmentally friendly path and goes one step further.

sustainable & efficient: the ecoPAD system

The ecoPAD filter is a reusable filter designed from a screw-on filter housing. Thus, the housing can be reused and the used ecoPAD (filter medium) can be replaced easily & quickly. As long as you reuse the intact filter housing, you only need new replacement ecoPADs for replacement.

The filter media used in the ecoPADs is exactly the same as used in standard encapsulated filters. The tight fit in the filter housing is achieved by a special rubber lining, which was developed especially for the ecoPAD system.

The various adapters of the ecoPAD system can be connected in no time. For the user, this means maximum protection, with minimal breathing resistance at the same time.

Construction e-breathe filter system: Combination filter

1. Filter holder (DIN-RG connection)
2. ecoPAD GF (gas filter medium)
3. gas filter adapter
4. ecoPAD P3 (particle filter medium)
5. Filter cover

modular exchange of the combination filter:

A modular exchange is possible when used with a combination filter if one filter is saturated. If necessary, only the particle or gas filter can be replaced separately. As a result, only the saturated filter can be replaced and the other filter can be used until saturated.

Space saving:

During the development of the ecoPADs, it was explicitly designed to be particularly flat and light. This means that only about one third of the space that would be required for storing conventional filters is required for storage.

Cost-effective:

The ecoPAD respiratory protection filters do not only score with space and cost savings in logistics and storage, but also protect the environment and material budget due to the reusable, modular design of the filter housing and the longer utilization of the particle or gas filter until saturation.

e-breathe e-Flow with PAD system:

The new e-breathe e-Flow with PAD-Box has an integrated ecoPAD holder directly into the housing. The corresponding ecoPAD is inserted directly into the blower and then closed tightly with the corresponding filter adapters.

The unique concept saves the DIN round thread connection, making the entire unit flatter and lighter. Depending on the ambient air and requirements, a particle, gas or combination filter can be used.

Unencapsulated filters with DIN round thread connection according to EN 143 / EN 14387 / EN 12941 / EN 12942

Filter	Art. no.	For use against:	Colour Code	Image
Particle Filter (consisting of ecoPAD P3 & filter housing)				
e-breathe Particle Filter P3 R / PSL	**322002109**	**Unencapsulated filter** for use against solid and liquid toxic, radioactive and harmful particles as well as microorganisms such as bacteria and viruses.		
Particle filter: ecoPAD PF (replacement particle PAD)				
e-breathe ecoPAD P3 R / PSL (PU 4)	**322002110**	**Replacement filter media** for e-breathe particle filters		
Gas filter: ecoPAD GF (replacement gas filter PAD)				
e-breathe **ecoPAD** GF A2	**322002144**	Organic gases and vapors, such as solvents, with a boiling point above 65 °C. - Replacement gas filter PAD		
e-breathe **ecoPAD** GF A2B2	**322002145**	Organic and inorganic gases and vapors. - Replacement gas filter-PAD		
e-breathe **ecoPAD** GF A2B2E2K1	**322002143**	Organic, inorganic and acid gases and vapors, as well as ammonia. - Replacement gas filter-PAD		
Gas filter (consisting of ecoPAD GF + gas filter adapter + filter holder)				
e-breathe Gas filter A2	**322002147**	Organic gases and vapors, such as solvents, with a boiling point above 65 °C.		
e-breathe Gas filter A2B2	**322002148**	Organic and inorganic gases and vapors.		
e-breathe Gas filter A2B2E2K1	**322002146**	Organic, inorganic and acid gases and vapors, as well as ammonia.		
Combination filter (consisting of particle filter & gas filter)				
e-breathe Combination filter A2-P3 R / PSL	**322012147**	Organic gases and vapors, such as solvents, with a boiling point above 65 °C, solid and liquid particles, radioactive and toxic particles, and microorganisms.		
e-breathe Combination filter A2B2-P3 R / PSL	**32201248**	Organic and inorganic gases and vapors, solid and liquid particles, radioactive and toxic particles, and microorganisms.		
e-breathe Combination filter A2B2E2K1-P3 R / PSL	**322012146**	Protects against organic, inorganic and acid gases and vapors, as well as ammonia and organic ammonia derivatives, solid and liquid particles harmful to health, such as radioactive and toxic substances and microorganisms.		
Components: e-breathe filter housing				
e-breathe Filter Cover	**322002131**	Screws onto e-Flow PAD box, filter holder or gas filter adapter to use / seal ecoPAD P3.		
e-breathe Gas filter - Adapter	**322002246**	Screwed onto the e-Flow PAD box or filter holder to use / seal the ecoPAD GF.		
e-breathe Filter Holder	**322002128**	A DIN round thread connection is required to use the filters with half / full mask or e-Flow filter box.		

Filter
encapsulated

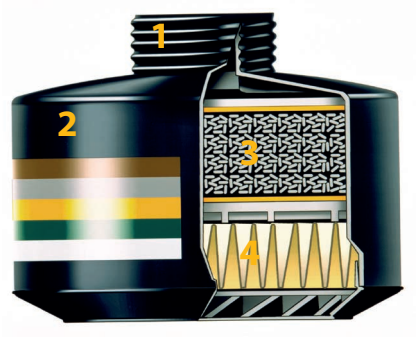
Encapsulated Filters - State-of-the-art Technology

In encapsulated filters, the filter media are firmly connected to the filter housing. As soon as the filter housing is saturated / used, the entire filter has to be disposed of. In combination filters, which consist of a particle and gas filter, the filter is disposed of as soon as one of the two parts is saturated. As a result, the component that could still be used is also disposed of.

Construction of an encapsulated Filter:

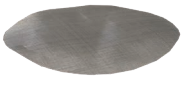
Example: Combination Filter

1. DIN round thread connection
2. Filter housing
3. Gas filter medium (activated carbon)
4. Particle filter medium (fleece)



Encapsulated filters with DIN round thread connection according to EN 143 / EN 14387 / EN 12941 / EN 12942				
Filter	Art. no.	For use against:	Colour Code	Image
Particle filter				
PM Particle Filter P3 R / PSL	**100052676**	Solid and liquid toxic, radioactive and harmful particles, and microorganisms such as bacteria and viruses.		
Combination filter				
PM Combination Filter A2-P3 R / PSL	**100043173**	Organic gases and vapours, such as solvents, with a boiling point above 65 °C, solid and liquid particles, radioactive and toxic particles, and microorganisms.		
PM Combination Filter A2B2-P3 R / PSL	**100043174**	Organic and inorganic gases and vapours, solid and liquid particles, radioactive and toxic particles and microorganisms.		
PM Combination Filter A1B2E2K2-P3 R / PSL	**100043191**	Organic, inorganic and acid gases and vapours as well as ammonia and organic ammonia derivatives, solid and liquid particles harmful to health, such as radioactive and toxic substances and microorganisms.		

Filter
Accessories

Accessories: Filter			
Filter	Art. no.	For use against:	Image
Compatible with PM Filters and e-breathe Filters:			
Closure cap for filter thread	**146042507**	The sealing cap is attached to the round thread of the filter and extends its service life. During storage, the cover protects against moisture and dust.	
Pre filter (PU 20)	**302052691**	The pre-filter captures coarse particles and extends the life of the particle filter. The prefilter is mounted between the filter and the prefilter holder.	
Only compatible with e-breathe Filters:			
e-breathe Odor Filter PAD (piece)	**On request**	The odor filter can be used against unpleasant odors that arise during disinfection or welding. The odor filter pad is mounted between the decon shower cap and the filter cover.	
e-breathe Prefilter holder (piece)	**322052606**	The pre-filter holder is clicked onto the filter cover and is required to use the pre-filter and the spark arrestor. The side openings of the pre-filter holder prevent direct suction.	
e-breathe Spark arrestor inserts (pair)	**322002138**	The spark arrestor inserts are mounted directly in the filter cover or pre-filter holder and are used during work involving flying sparks to prevent a filter fire (e.g. welding work.	
e-breathe Cover Cap for Filter Lid	**322002225**	The closure cover is clicked onto the filter cover and extends its service life. During storage, the cover protects against moisture and dust. During cleaning, it protects the fan.	
e-breathe Decon Shower Cap	**322002224**	The shower cap is clicked onto the filter lid and prevents water from entering the filter during showering / decontamination.	
Compatible only with PM Filters:			
PM Prefilter Set (Prefilter 6 pcs. + Prefilter holder 2 pcs.)	**100052692**	The prefilter keeps coarse particles out and thus extends the service life of the particle filter. The prefilter is mounted between the filter and the prefilter holder.	
PM Cover Cap for Filter	**500052693**	The closure cover extends the service life of the filter. During storage, the cover protects against moisture and dust.	
PM Decon Shower Cover	**500580013**	Cover cap for PM filter. Prevents water from entering the filter during showering / decontamination.	
PM Prefilter holder + Spark arrestor (pair)	**100052690**	The pre-filter holders and metal covers are attached to the blower filter and are used for work involving flying sparks (e.g. welding work).	

Isolating Respiratory Protection

In this chapter you will find our compressed air devices. Further information can be found in our separate product brochure.

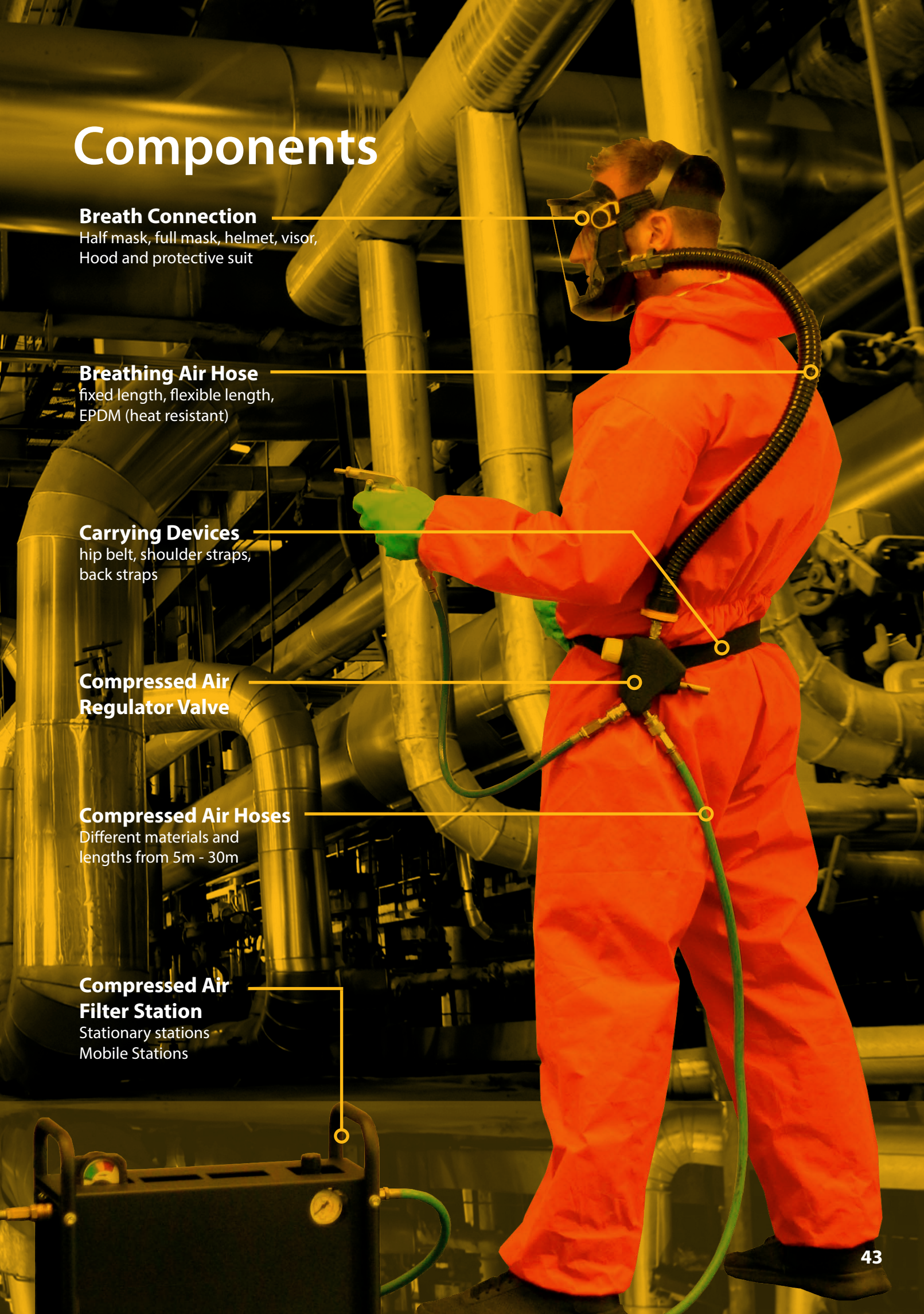
Compressed Air Hose Devices:
Consisting of: Compressed air hose, compressed air regulator valve, carrying device, breathing air hose, breathing connection and compressed air filter station, which processes the compressed air from the compressor into breathable air (according to EN 12021).

Compressed Air Hose Units are supplied with compressed air (e.g. from a compressor) at an overpressure of up to max. 10 bar to supply breathing air. This makes them independent of the ambient atmosphere and allows them to be used in areas where filter respiratory protection would be impossible (e.g. if the concentration of pollutants is too high).

The duration of use is generally not limited by a limited battery life or exhausted filter capacity. However, freedom of movement is restricted by the length of the compressed air hose.

A distinction is made between two classes:
Class A: light requirements max. length of compressed air hose 10m

Components



Breath Connection
Half mask, full mask, helmet, visor,
Hood and protective suit

Breathing Air Hose
fixed length, flexible length,
EPDM (heat resistant)

Carrying Devices
hip belt, shoulder straps,
back straps

Compressed Air Regulator Valve

Compressed Air Hoses
Different materials and
lengths from 5m - 30m

Compressed Air Filter Station
Stationary stations
Mobile Stations

e-breathe e-Line

Compressed Air Hose Device

Combined with an e-breathe headpiece or suit, the **e-Line CA Regulator** is a compressed air assisted breathing system with a continuous airflow. The e-Line Regulator is worn on a belt.

The required compressed air is generated by a compressor that delivers the compressed air to a filter station in the case of non-respirable and polluted air. The compressed air from the high-pressure network/compressor is converted by the filter station into breathing air for externally ventilated breathing protection systems. The filtered air passes the e-Line compressed air regulator valve through a breathing air hose to the user's head/suit. The generated overpressure in the head section prevents the ingress of harmful substances. The system protects the user reliably against pollutants such as particles, dust, fumes (aerosols), gases and vapours.

Isolating respirators can be used in environments where the use of filtering respirators is not possible as they operate independently of the ambient air. They are used, for example, when the concentration of pollutants exceeds the permitted limit value of the filters or during long, tedious work, as the operating time is not limited by the limited operating times of respiratory filters or battery-powered blower units.

Robust Design:
The e-Line system has a robust and durable construction which reliably protects the control unit inside. Thanks to its smooth surface, the housing is easy to clean. It can be easily opened for quick and easy maintenance.

Compressed Air Hose Adapter:
The union nut on the adapter rotates freely and prevents twisting of the breathing air hose for increased wearing comfort. In addition, an exchangeable silencer is installed in the hose adapter, which limits the noise level to max. 65 dB.

Individual Airflow:
The air flow can be adjusted by pressing the control button. It can be set individually as required by the user from 170 l/min - 280 l/min. This requires an operating pressure of 5-7 bar.

Alarm Device for maximum protection:
The e-Line compressed air control valve has an integrated warning whistle with a loud signal of 90 dB which sounds if the minimum operating pressure or the minimum air flow is not reached.

Various Carrying Devices:
The belt system allows individual adaptation to specific work requirements. The e-Line valve can be mounted on either the right or left side of the belt. Various carrying straps allow a wide range of applications, for example for standard work, welding or decontamination work.

Optional Tool Connection:
The e-Line system can optionally be supplemented with a tool connection to be able to supply compressed air tools or paint spray guns with compressed air. The compressed air and tool connection can be attached either to the left or right and is therefore ideally suited for left- and right-handed users.

Technical Specifications:

CA Regulator Valve Approvals:	e-breathe e-Line CE certified according to EN 14594 (3A / 3B / 4A)
Operating Pressure:	4 - 7 Bar
Air Flow: (continuous air flow)	adjustable on the device 170 - 300 l/min
Airflow warning:	< 170 l/min / < 3,5 Bar
Warning Signal / Alarm System:	> 90 dBa / acoustic alarm via warning whistle
Volume:	< 65 dBa
Temperature Range:	-10°C to +40°C <70% RH
Weight:	490g (without belt)

e-breathe e-Line

Compressed Air Hose Device

Product Characteristics:

- Ergonomic design with individual adjustment possibilities
- Suitable for right- and left-handed users
- Optional tool connection
- Adjustable air flow from 170-300 l/min
- Operating Pressure 4-7 Bar
- Warning Device in case of insufficient air supply
- Low volume thanks to silencer
- Standard breathing hose connection with DIN round thread for all e-breathe and PM Head Pieces
- Large selection of head pieces, masks and suits
- High breathing comfort and no inhalation resistance

Made in Germany:

- Developed in Germany
- Produced in Germany
- Certified in Germany

Breathing Devices:

- Face shields
- Limited-Use & Reusable Hoods
- Blower Suits
- Half masks & full face masks

Approvals:

- EN 14593: Class B
- EN 14594: Class B
- PPE Regulation

Areas of application:

- Industrial applications
- Oil, gas, chemical industry
- Pharmaceutical Industry & Laboratories
- Food industry
- Agriculture and Farming
- Machine and metal construction
- Automotive industry
- Welding operations
- Grinding & Spray Painting
- Metalworking industry

e-breathe e-Line

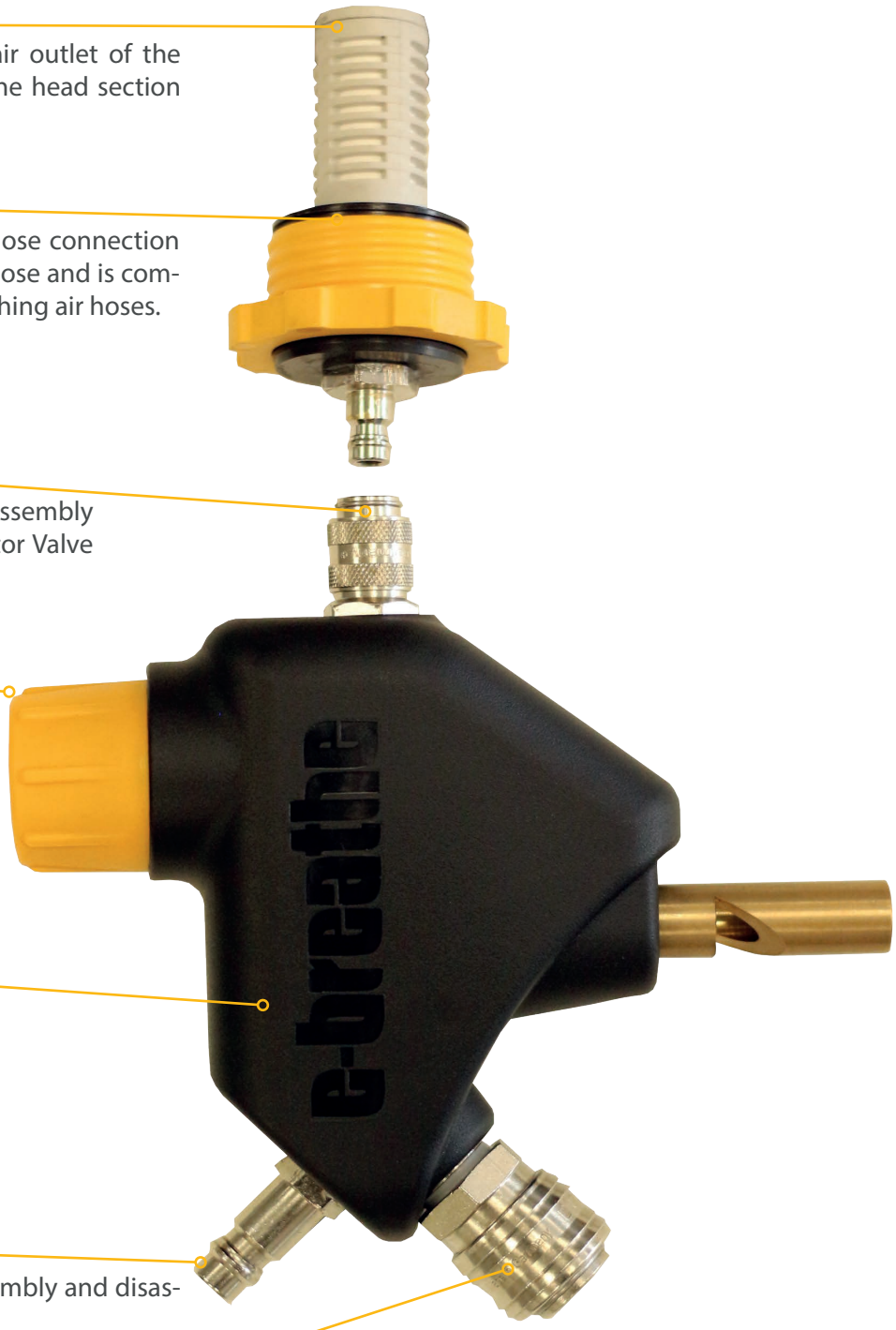
CA Regulator Valve

Silencer:
The silencer installed directly at the air outlet of the e-Line valve keeps the noise level in the head section to a minimum.

Compressed Air Adapter:
The freely rotating DIN round thread hose connection prevents twisting of the breathing air hose and is compatible with all e-breathe and PM breathing air hoses.

Safety Coupling:
Two-way safety coupling for quick assembly and safe connection of the CA Regulator Valve CA adapter.

Airflow:
Adjustable control button to adjust the air flow from 170-300 l/min. The built-in safety mechanism prevents accidental adjustment of the air flow.



Design / Material:
Robust and solid PA6 housing protects the components inside. Smooth housing for easy cleaning.

Compressed Air Connection:
Easy to reach safety plug for quick assembly and disassembly of the compressed air hose.

Various breathing air safety plugs available.

Tool Connection:
Optional connection for compressed air tools/ paint spray guns, which are also supplied with compressed air.

e-breathe e-Line

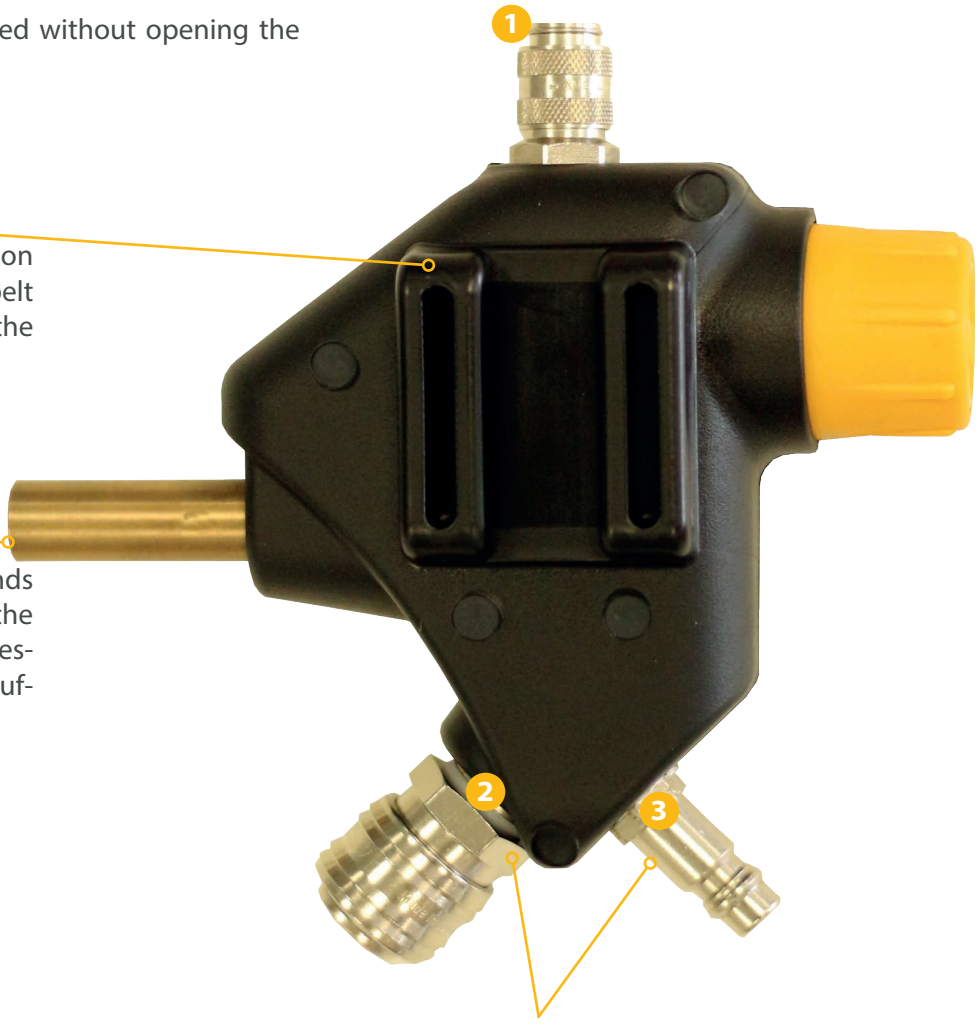
CA Regulator Valve

Maintenance (1-2-3):
Easy to operate and to maintain compressed air control valve.

All external parts can be easily replaced without opening the housing.

Carrying Device:
The e-Line regulator valve can be worn on the right or left side of the belt. The belt holder is compatible with all e-breathe belt systems.

Warning Whistle:
The integrated warning whistle sounds with a loud signal of 90 dB to warn the user when the minimum operating pressure or the minimum air volume is insufficient.



Adjustable for right and left handed users:
The connection side of the compressed air and tool connection can optionally be changed. This makes the e-Line system suitable for right-handed and left-handed users.

Compatible e-breathes Compressed Air Filter Station:
The e-Line compressed air regulator valve requires breathable compressed air according to DIN EN 12021 for operation. The e-breathe compressed air filter station for 1-3 users for mobile or stationary use was developed for the preparation of technical compressed air.

e-breathe e-Line

Compressed Air Hose Devices

The starter pack is designed for owners of headboards that are approved with the e-breathe e-Line.
Using the basic unit with the head piece, breathing air hose, compressed air hose and compressed air filter station, the starter pack provides all necessary components to put the system into operation.

Starter Packs: e-breathe e-Line		
Article Name:	Part Number	Image
e-breathe e-Line	**322007100**	
e-breathe e-Line Basic	**322007000**	

Accessory & Spare Parts: e-breathe e-Line		
Article Name:	Part Number	Image
e-breathe CRV Compressed AIr Adapter V.1.0	**100063794**	
e-breathe CRV Silencer	**100063990**	
e-breathe Union Nut	**322991005**	
e-breathe CRV Quick Coupling (1/4 AG / for separate compressed air tool)	**322007101**	
e-breathe CRV Breathing Air Safety Plug (1/4 AG)	**322007008**	
e-breathe CRV Safety Coupling (1/4 AG / for CA Adapter)	**322007009**	
e-breathe CRV Blind Plug (1/4 AG / for tool connection)	**322007011**	

e-breathe e-Line

Compressed Air Hose Devices

Accessory & Spare Parts: e-breathe e-Line		
Article Name:	Part Number	Image
e-breathe Belt Pro (textile)	**108062786**	
Gurt Decon decontaminable	**302062996**	
e-breathe Comfort Belt Pro V.2 (textile)	**322003003**	
e-breathable Carrying Devices	see chapter Smartbelt / Carrying devices	
e-breathe e-Line **Device Cover Limited-Use**	**116001043**	
e-breathe Service Box M **Storage Case**	**119458610** **119458616**	
PM Rescue Clean Disinfectant **Basic spray head for Disinfectant** (plastic)	**129001000** **129001001**	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	
e-breathe e-Line Ready-Packs	see chapter Ready-Packs	
e-breathe Compressed Air Hoses	see chapter Compressed Air Hoses	
e-breathe Compressed Air Filter Station	see chapter Compressed Air Filter	

e-breathe DFS PRO

Compressed Air Filter Station

The e-breathe compressed air filter station was developed for the preparation of technical compressed air. The high performance filters installed in the respective stations separate solid particles, aerosols, oil vapours and odours from the compressed air flowing through and remove these. Depending on the application, a 2-stage or 3-stage filter system is used.

The compressed air flowing through the high-pressure network/compressor is converted into breathing air for externally supplied respiratory protection systems. The breathable air is then led via a compressed air regulator valve via a hose to the head piece / suit of the device carrier. The station can only be used if the compressed air from the system poses no risk of harmful concentrations of carbon dioxide (CO2) and carbon monoxide (CO).

Filter Function:

The M* / S* filter elements separate solids by impact and the inertia effect. Oil and water aerosols are removed by the coalescence effect. Due to the gravity effect, filtered liquid particles are collected in the lower filter container and are automatically discharged from there. The filter element CA* adsorbs oil vapours and odours which accumulate in the activated carbon.

*M = Microfilter, S = Submicrofilter & CA = Activated Carbon Filter

e-breathe DFS 3 & DFS 3WH

Consisting of 3 Filter elements (M / S / CA), Pressure Regulator with Pressure Gauge, Differential Pressure Gauge, integrated Wall Mount and one output for one user (Optionally expandable to up to 3 users). In addition, the station has a robust housing to protect the filter elements and ensure a mobile operation. The station can be wall-mounted with a housing. Alternatively, the filter elements can be removed from the housing and mounted on the wall. Thus a WH3 station can be converted into a mobile filter station by installing it into a housing.

e-breathe DFS 2 & DFS 2WH

Consisting of 2 Filter Elements (S / CA), Pressure Regulator with Manometer, integrated Wall Mount and one output for one user (Optionally expandable to up to 3 users). In addition, the station has a robust housing to protect the filter elements and ensure a mobile operation. The station can be wall-mounted with a housing. Alternatively, the filter elements can be removed from the housing and mounted on the wall. Thus a WH2 station can be converted into a mobile filter station by installing it into a housing. In addition, the e-breathe DFS 2 / 2WH can be upgraded to a DFS 3 / 3WH with an additional filter if the operating conditions change.

Technical Specifications DFS PRO V.1:

Approval Filter Performance:	**ISO 8573-1 Class: 1** **EN ISO 12500**	
Inlet pressure:	**max. 16 Bar ü**	
Outlet pressure:	**max. 10 bar with compressed air control valve according to EN14594 (*ind. observe manufacturer's specifications.)**	
Maximum air volume / flow rate:	**1000 l/min**	
Inlet thread:	**Rp 3/8“ Female Thread**	
Outlet thread / Connection:	**Rp 3/8" Female Thread / Safety Coupling 95KS**	
Operating temperature:	**1,5 - 100 C°**	
Material:	**Filter Housing Aluminum / Cover Steel**	
Weight DFS 3 / WH3: **Weight DFS 2 / WH2:**	**12,4 kg / 5,0 kg** **9,0 kg / 3,7 kg**	
Dimensions DFS 3 / WH3: **Dimensions DFS 2 / WH2:**	**40 x 44 x 20 cm / 30 x 34 x 10 cm** **40 x 44 x 20 cm / 30 x 25 x 10 cm**	**(height x width x depth)**

e-breathe DFS PRO

Compressed Air Filter Station

Product Characteristics:

- Transformation into breathable air
- Filtering of aerosols, solid particles, water, oil vapours and odours
- High-quality filter housing made of aluminium
- Quick and easy filter change without tools
- Low differential pressure of the filter elements saves energy costs
- Differential pressure indicator indicates economical filter replacement
- Maximum air output 1000 l/min / Maximum operating pressure 16 bar ü
- For up to 3 users
- Available as a stationary version for wall mounting
- Available as mobile version with housing
- Compatible with all compressed air regulator valves according to EN 14593 / EN 14594

Approvals:

- The quality of the processed and filtered compressed air complies with ISO 8573-1: Class 1.
- The compressed air filters are tested according to EN ISO 12500.
- The leak test was 100% fulfilled for every compressed air filter.

Fields of Application:

- Industrial applications
- Oil, gas, chemical industry
- Pharmaceutical industry
- Chemical industry
- Laboratory applications
- Paint spraying / Paint shops
- Dealing with fibres
- Application of pesticides / fungicides
- Welding applications
- Foundry

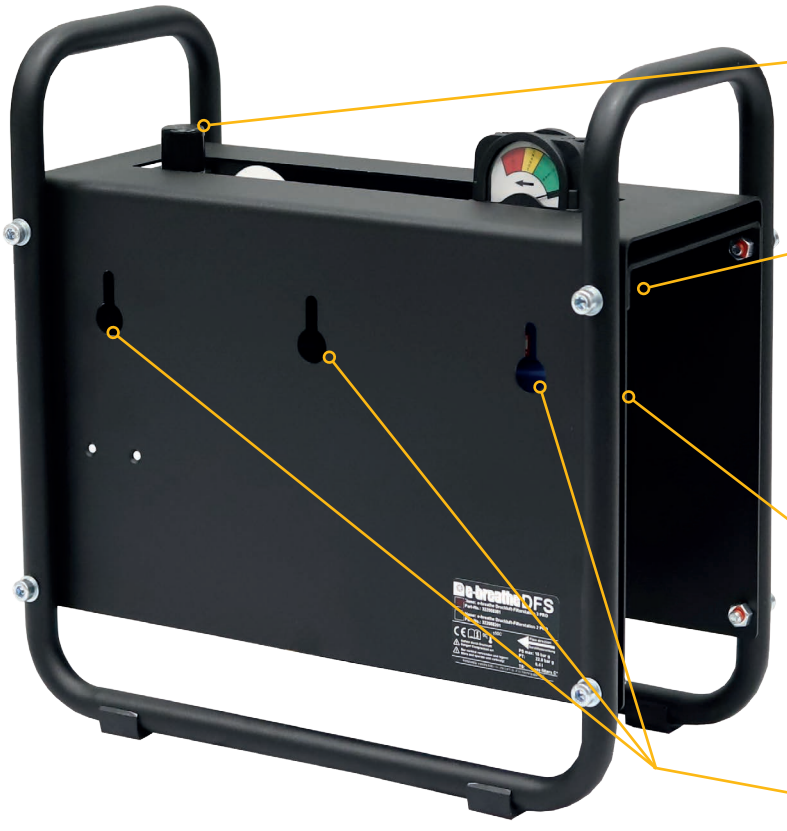
e-breathe DFS PRO
Compressed Air Filter Station

robust material:
Robust, stable and durable aluminium filter housing with a steel housing cover.

The surrounding frame on the housing cover provides protection of all elements in the event of overturning or falling.

Maintenance:
Easy to operate and maintain compressed air filter station. All components are available as spare parts.

Compatible CA Regulator Valves according to EN14594:
The e-breathe DFS can be used for all compressed air assisted breathing systems (according to EN 14593 and EN 14594) if the existing air volume and air/operating pressures are sufficient.



High-precision Pressure Regulators:
Pressure regulator with manometer for precise regulation of the outlet pressure from 0.5 to max. 16 bar.

Compressed Air Connection:
The easy-to-reach plugs and couplings ensure simple and quick assembly and disassembly of the compressed air hoses. Various breathing air safety plugs & safety couplings are available.

Filter Change:
The filter housings can be unscrewed from the station without tools and thus allow a simple exchange of the filter elements. The housing does not have to be dismantled.

Wall mounting:
The DFS 2/3 can also be mounted and fixed to the wall together with the housing thanks to the integrated wall bracket on the back.

e-breathe DFS PRO

Compressed Air Filter Station

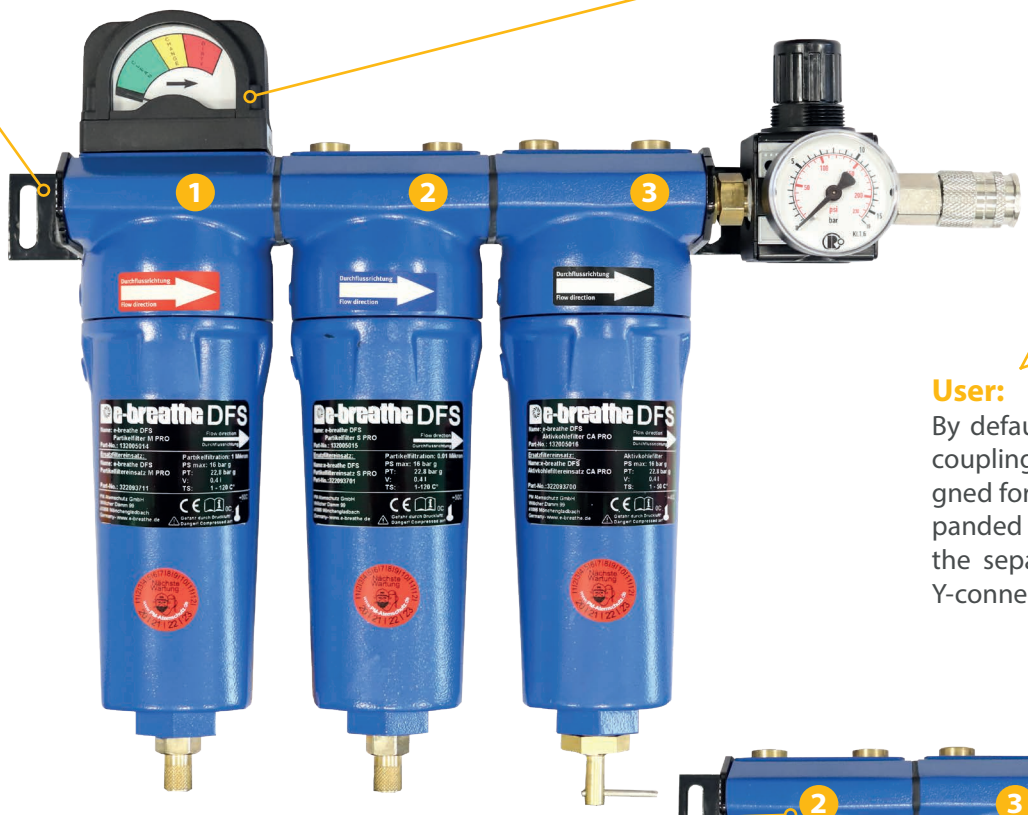
Wall Mounting:

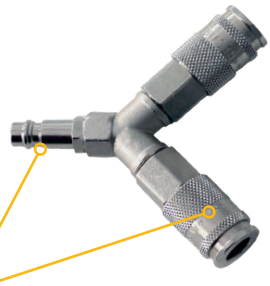
The 2WH and 3WH stations have a side wall bracket for stationary mounting.

The DFS 2/3 and its housing can also be mounted and fastened to the wall thanks to the integrated wall bracket on the back.

Differential Pressure Indicator / Filter Saturation:

The first filter element is fitted with a differential pressure indicator. It provides information on the most economical and best timing for the filter replacement.
(Can only be optionally extended with DFS 3/3WH PRO).





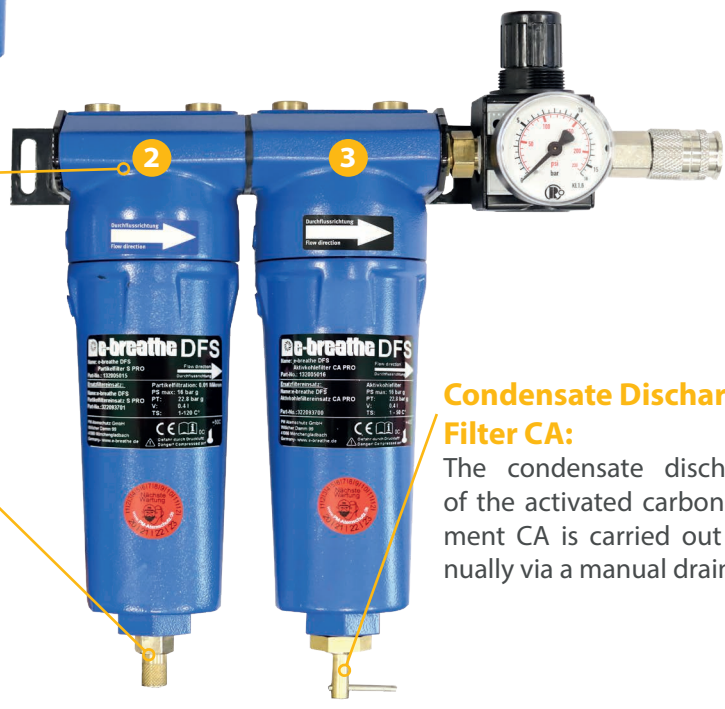
User:

By default, the station has an air safety coupling at the air outlet, which is designed for one user. The station can be expanded to 2 or maximum 3 users using the separately available e-breathe DFS Y-connector.

Modularity:

The e-breathe DFS 2 / DFS 2WH stations can be retrofitted to a 3 station.

The DFS 2WH & 3WH stations can be upgraded to retrofit into mobile stations.



Condensate Discharge Filter M/S:

The condensate discharge of the filter element S/M takes place automatically via a hose into a separation tank (not included in the scope of delivery).

Condensate Discharge Filter CA:

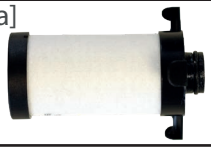
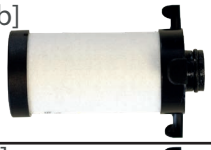
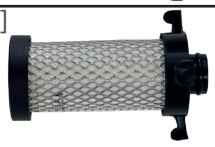
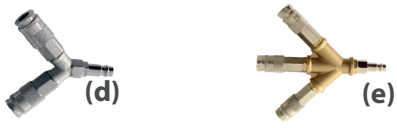
The condensate discharge of the activated carbon element CA is carried out manually via a manual drain.

Performance: Filter Element S / M / CA PRO

Type	Particle filtration	Residual oil content	Operating Temperature [°C]		Differential Pressure [mbar]			ISO Class CA quality according to ISO 8573-1	
	[Micron]	[mg/m3]	maximum	recommended	new	wetted	Change	Particle	Oil
DFS Activated Carbon Filter CA PRO	-	0,003	50	25	100	-	semi-annually	-	1
DFS Particle Filter M PRO	1	0,5	120	50	55	85	annually	2	3
DFS Particle Filter S PRO	0,01	0,01	120	50	75	110	annually	1	1

e-breathe DFS PRO
Compressed Air Filter Station

Compressed Air Filter (DFS): e-breathe e-Line Compressed Air Filter PRO		
Article Name	Part No.	Image
e-breathe Compressed Air Filter Station **- 2 PRO V.1** **- 3 PRO V.1**	**322008xxx** **201** **301**	
e-breathe Compressed Air Filter Station **- 2 WH PRO V.1** **- 3 WH PRO V.1** **(WH = wall mount)**	**322008xxx** **200** **300**	

Spare Parts & Accessories: e-breathe Compressed Air Filter Station		
Article Name	Part No.	Image
e-breathe DFS Particle filter cartridge S (compatible with e-breathe compressed air filter station) **e-breathe DFS Particle filter cartridge S PRO** [a] (compatible with e-breathe compressed air filter station PRO)	**322093701**	[a] 
e-breathe DFS Particle filter cartridge M (compatible with e-breathe compressed air filter station) **e-breathe DFS Particle filter cartridge M PRO** [b] (compatible with e-breathe compressed air filter station PRO)	**322093711**	[b] 
e-breathe DFS activated carbon filter cartridge CA (compatible with e-breathe compressed air filter station) **e-breathe DFS activated carbon filter cartridge CA PRO** [c] (compatible with e-breathe compressed air filter station PRO)	**322093700**	[c] 
e-breathe DFS Manometer **e-breathe DFS Pressure Regulator with Manometer**	**148001220** **148001210**	
e-breathe DFS Differential Pressure Indicator (Compatible only with e-breathe DFS particle filters S/M) **e-breathe DFS Differential Pressure Indicator PRO** (Compatible only with e-breathe DFS particle filters S/M PRO)	**132005016**	
e-breathe DFS Filter Station Housing V.1	**322008400**	
e-breathe DFS Y-Connector 2 (d) **e-breathe DFS Y-Connector 3 (e)**	**322008004** **322008002**	 (d) (e)
e-breathe DFS Breathing Air Safety Coupling (1/4 AG) **e-breathe DFS Breathing Air Safety Plug** (3/8 AG)	**115001005** **On request**	
e-breathe DFS Blind Plug (3/8 AG / for air inlet and air outlet)	**114802304**	

e-breathe Compressed Air Hoses

The compressed air hoses are designed for breathing air and are approved accordingly for respiratory protective devices. They are oil and chemical resistant and tested and certified according to EN 14594 / EN 14593. They are suitable for use with a compressed air regulator valve and compressed air filter station.

All hoses are equipped with a breathing air safety coupling and a breathing air safety plug and can be used at temperatures ranging from -10C° to +60C° and a maximum operating pressure of 10 bar. Please note: Do not connect or extend the available hose types and lengths. The maximum length is therefore 30m.

Compressed Air Hose				
Article Name:	Art.-No.	Material / Version	For use against	Image
e-breathe DFS CA Hose Black - 5m - 10m - 20m - 30m	**3020611xx** **05** **10** **15** **20** **25** **30**	**EPDM / fixed length**	**e-breathe e-Line, e-breathe DFS**	
e-breathe DFS CA Hose Blue - 5m - 15m - 20m - 30m	**3020612xx** **05** **10** **15** **20** **25** **30**	**PU + PVC / fixed length**	**e-breathe e-Line, e-breathe DFS**	
e-breathe DFS CA Hose Spiral - 2m - 4m - 6m - 8m	Coming Soon	**PU / flexible**	**e-breathe e-Line, e-breathe DFS**	

Isolating Respiratory Protection

In this chapter you will find our compressed air devices. For more information, please refer to our separate product brochure.

Fresh Air Pressure Hose Devices:

Consisting of: PAPR, particle filters, overpressure compensation valve, air supply hose, carrying device, breathing air hose and full mask.

Fresh Air Hose Devices are self-contained respiratory protective devices and are predominantly used in contaminated or low-oxygen working areas where the use of normal filter respiratory protection or compressed air respiratory protection is not possible. The required breathing air is led from an area outside the contaminated ambient atmosphere via an air supply hose to the breathing connection.rt.

A distinction is made between two classes:
Class 1: Devices with light mechanical resistance
Class 2: Devices with heavy mechanical resistance

Components

Breathing Connection
Half mask or full face mask

Breathing Air Hose
fixed length, flexible length,
EPDM (heat resistant)

Belt Unit
Leather belt with
Quick release system

Air Supply Hose
Different lengths
from 10m - 40m

Powered air-purifying respirator (PAPR)

e-breathe FDS Pro

Supplied Air Respirator (FDS)

Fresh Air Hose Devices are self-contained breathing apparatuses and are predominantly used in contaminated or low-oxygen working areas where the use of normal filter respiratory protection is not possible or where a supply of breathing air via compressed air cannot be established.

An example is in pits or silos due to contamination and/or low oxygen content. For these areas, fresh air hose devices are used, which can be divided into fresh air suction hose devices and fresh air pressure hose devices. Here, the required breathing air from an area outside the contaminated ambient atmosphere is conducted via supply hoses to the breathing connection.

Fresh Air Suction Hose Devices:
In fresh air suction hose units, the required breathing air is sucked through a hose by the lung force of the unit carrier. This creates a negative pressure in the entire system, into which pollutants can enter at possible leaks.

Fresh Air Pressure Hose Devices:
Fresh air pressure hose devices differ essentially from suction hose devices by the fact that the breathing air is supplied to the device under slight overpressure using a blower. This ensures a slight overpressure in the hose and in the downstream device system, which virtually excludes the penetration of pollutants at possible leaks.

Product Characteristics:

The e-breathe fresh air pressure hose device supports the breathing of the wearer using a powered air respiratory and thereby relieves the wearer.

The PAPR is positioned and fixed at the end of the hose in an area free of respiratory toxins. The blower leads the breathable air via the connected breathing tube into the full mask of the wearer. This ensures that the full face mask is constantly supplied with an overpressure of breathable air.

Technical Specifications:

Approvals: **(CE certified according to)**	**e-breathe Supplied AIr Respirator (FDS)**	EN 138 Class 2
	- PAPR	EN 12941 / EN 12942
	- Particlefilter	EN 12941 / EN 12942 / EN 143 P3 R / PSL
	- Full Face Mask	EN 136 Class 3 / EN 12942
Protection Class / VgdW:	**Class 2 / 1000**	
Air Capacity **(automatic readjustment):**	**Adjustable on the device in three stages:** **120 - 140 - 160 l/min Full Mask System**	
Airflow Warning: **Battery Warning:**	**< 120 l/min Full Mask System** **< 15 min remaining runtime**	
Battery:	**Lithium-Ion Battery: 14,4V / 3,4Ah / 49WH**	
Operating Time:	**approx. 6 to 10 hours** **(Depends on the concentration of pollutants and the adjusted airflow.)**	
Battery Recharging Time:	**2,5 hours (quick charge function enables rapid charging: 1 hours for 80%)**	
Temperature Range:	**-10°C to +40°C <70% RH**	
Weight:	**approx. 1100g (with battery / without filters / without belt)**	
Alarm System:	**optical alarm (Display of the alarm at the color display with corresponding error code.)** **acoustic alarm (≥ 75 dB)** **vibration alarm**	

e-breathe FDS Pro

Supplied Air Respirator (FDS)

Product Characteristics:

Full Face Mask:

Different full masks are available according to the user's requirements.

Breathing Air Hose:

Breathing air hose with round thread connection according to EN148-1 at both ends for full-face masks with round thread connection. Depending on the area of application, the breathing air hose can be connected directly to the blower filter unit. Various hose covers are optionally available to protect the hose.

multifunctional application possibilities of the FDS system:

In areas of application where filtering respiratory protection can be used, it is also possible to use only the full-face mask with a respiratory protection filter as an alternative. For this purpose, the filter is screwed directly into the full-face mask. Alternatively, the full-face mask can be used with the enclosed e-Flow as a blower filter system. In this case, the breathing air hose is used to connect the blower directly to the full-face mask. With just one system, the user can thus switch between an environment-independent isolation device or an environment-dependent filtering respirator, depending on the area of application.

Pressure Relief Valve:

A pressure relief valve is attached to the blower to ensure a constant airflow to the carrier.

Belt unit:

Leather belt with improved and free rotating quick coupling from air supply hose to breathing air hose. Optional accessories: fabric belt and decon belt.

Air Supply Hose:

The robust and very flexible plastic spiral hose is available in four different lengths (10, 15, 20, 30 or 40m).

PAPR:

Operated by the powerful „e-breathe e-Flow" respiratory protection blower with two e-breathe P3 R / PSL particle filters. With additional accessories (belt & breathing hose), the blower can also be used as a filter device for stall, plant protection or disinfection work.

Ground Anchor:

Robust ground anchor for safe fixation of the blower in a safe area.

e-breathe FDS Pro

Fresh Air Hose Devices

Starter-Pack e-breathe FDS		
Article Name:	Part Number	Image
e-breathe Fresh Air Hose Devices Consists of: e-flow with PAD box with battery and charger, breathing air hose, leather belt, coupling, overpressure compensation valve, e-flow cleaning kit and 4x e-breathe ecoPADs.	**322011001**	
Suitable air supply hoses in different lengths:		
e-breathe FDS Suction Hose 10m incl. coupling and ground anchor	**302011010**	
e-breathe FDS Suction Hose 15m incl. coupling and ground anchor	**302011015**	
e-breathe FDS Suction Hose 20m incl. coupling and ground anchor	**302011020**	
e-breathe FDS Suction Hose 30m incl. coupling and ground anchor	**302011030**	
e-breathe FDS Suction Hose 40m incl. coupling and ground anchor	**302011040**	
Plus Full Face Mask:		
PM Full Face Mask Panarea Pro	**701007000**	

Belt Unit & Breathing Air Hoses				
Article Name	Part No.	Material	For use with	Image
e-breathe FDS Belt Unit	322002232	Stainless steel	e-breathe FDS, e-breathe FDS Suction Hose	
Breathing Air Hoses for direct connection between e-Flow and Full Mask				
Breathing Air Hose e-breathe RG	302711100	PU - flexible	PM Full Mask Panarea Pro	
	302711103	PU - fixed length		
	302711108	EPDM		
Protective Cover for Hose	116001041	Limited-Use	compatible with all PM & e-breathe breathing air hoses	
	On request	Reusable		

e-breathe FDS Pro

Fresh Air Hose Devices

Accessory & Spare Parts: e-breathe FDS		
Article Name:	Part Number	Image
e-breathe FDS Pressure Relief Valve	**900014815**	
e-breathe FDS Leather Belt	**190062790**	
e-breathe Belt Pro (textile)	**108062786**	
e-breathe Carrying Devices	refer to chapter Smartbelt/ carrying devices	
e-breathe FDS Ground Anchors	**154014901**	
e-breathe Service Box M **PM Storage Case**	**119458610** **119458616**	
e-breathe FDS Storage Box + Lid for the entire FDS unit incl. suction hose (80cm l x 60cm b x 42cm h)	**117000200**	
Cleaning agents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	
e-breathe Filter	see chapter Filter	
Optional Accessories Fall arrest harness & safety rope (optimal for securing when entering slurry pits and silos):		
Safety harness	**140255902**	
Safety harness with snap hook **20m** **40m**	**140255920** **140255921**	

Which headboard do you need?

Various headpieces for individual applications and requirements.
Different work areas bear different requirements in terms of the selection of the right head protection. In addition to application-specific requirements, other factors such as comfort, personal preferences as well as configuration options play an important role in choosing the right head protection. Therefore, our program offers tailored solutions for you and your specific requirements.

Choose from limited-use hoods, reusable hoods, face shields or full-face masks to positive pressure protective suits. All headpieces can be used in combination with a respiratory protection blower as a filtering device or in combination with a compressed air control valve as an isolating device.

The following symbols provide guidance and indicate the protection offered by the headpiece and in which combination it can be used to meet application-specific requirements (for example, the need for head protection or hearing protection).


Hood


Mask


Eye / Face Protection


Head Protection


Hearing Protection


Full Body Protection

FACE SHIELDS P. 66

A face shield combines respiratory, eye and face protection in one and can be combined with hearing and/or head protection depending on the intended use and requirements. Thus, they protect against a wide range of hazards in the workplace and can be used in a wide range of applications. Their lightweight design is convincing and they offer special comfort due to the integrated ventilation.

A face shield is recommended in all areas where a high level of mechanical eye and head protection is required

The choice of different face seals, made of different materials, allows the headpiece to be optimally adapted to the individual needs and personal preferences of the user.

OVERPRESSURE HOODS P. 72

Overpressure hoods protect the eyes, face, head, shoulders and respiratory tract by the positive pressure generated by the air source. The lightweight positive pressure hoods are available with and without a head or helmet carrying frame and as a limited-use or reusable variant. A helmet carrying frame allows the hood to be combined with a helmet. The use of a hood is recommended in all areas where high mechanical eye protection is not required.

Limited-Use Hoods:
Can be used multiple times and are ideal for applications where the headpiece must be changed frequently and cleaning may not be economical.

Reusable / Premium Hood:
Consist of a reusable material and are suitable for multiple use. Cleaning and disinfection of the hood is possible. This saves money and protects the environment.

FULL FACE MASK P. 86

A face mask protects the eyes, face and respiratory tract.

They convince by their different application possibilities. A respiratory protection mask can be used as a negative pressure mask, where a respiratory protection filter is screwed directly onto the mask and the user independently sucks in the air through the filter using his lung power, or as a positive pressure mask. As a positive pressure mask, the mask is used in combination with an air source (blower or compressed air system). In this case, the filtered air is delivered directly into the mask by an air source without the use of the user's own lung power and without inhalation resistance, which significantly increases the wearing time and comfort.

The use of face masks is recommended in all areas where the mask must be worn for a short period of time (the wearing time limit of a mask is 105-150 minutes) and where the highest respiratory protection class is required due to the exposed hazardous substances.

OVERPRESSURE SUITS P. 88

A respiratory protective suit completely encloses the user's head and body. It supplies the wearer directly with filtered breathing air via an air source (blower or compressed air system). It thus provides protection of the respiratory tract and the entire body from pollutants and contaminants.

The use of a respirator suit is recommended in all areas where additional mechanical head and/or high eye protection is not required. They are used whenever the user's entire body, skin and respiratory tract need to be protected from infection and/or hazardous substances.

Depending on the application-specific field of use and purpose, respiratory protection suits have different material properties that affect the chemical resistance, as well as the mechanical properties.

Headboards, Masks & Overpressure Hoods

In this chapter you will find our head pieces and hoods which can be used with powered, air-purifying respirator (PAPR) and compressed air regulator valves.

A more detailed overview and further information can be found in our separate product brochures.

Protection Classes Respiratory Protection:

Protective performance is determined by the total leakage of the respiratory protection equipment. The breathing connection, respiratory protection filter, breathing air hose and the corresponding air source all contribute to the total leakage. The decisive factor for the protective performance is the total leakage specified in the respective

Device type	Device class	Norm	Leakage*	APF (D) VdgW**	NPF***	Wear time limit
Filtering Respiratory Protection						
Disposable mask	FFP1 FFP2 FFP3	EN 149	22 % 8 % 2 %	4 10 30	4 12 50	75 - 120 min
Half mask with respirator filter / & breathing hose	P1-Filter P2-Filter P3-Filter Gas-Filter	EN 140 EN 12083	2 %	4 10 30 30	4 12 48 50	120 min
Full face mask with respiratory filter / & breathing hose	P1-Filter P2-Filter P3-Filter Gas-Filter	EN 136 EN 12083	0,05 %	4 15 400 400	5 16 1000 2000	105 min
Powered filter unit with half mask	TM1 TM2 TM3	EN 12942	5 % 0,5 % 0,05 %	10 100 500	20 200 2000	150 min
Powered filter unit with full face mask	TM1 TM2 TM3	EN 12942	5 % 0,5 % 0,05 %	10 100 500	20 200 2000	150 min
Blower filter unit with helmet / hood / suit	TH1 TH2 TH3	EN 12941	10 % 2 % 0,2 %	5 20 100	10 50 500	-
Isolating Respiratory Protection						
Compressed air hose unit with ventilated suit	Klasse 1 Klasse 2 Klasse 3 Klasse 4 Klasse 5	EN1073-1	0,05 0,02 0,01 0,005 0,002	1000	2000 5000 10000 20000 50000	60 min
Compressed air hose unit with helmet / hood / suit	1A / 1B 2A / 2B 3A / 3B	EN 14594	10 % 2 % 0,5 %	5 20 100	10 50 200	-
Compressed air hose unit with half mask	1A / 1B 2A / 2B 3A / 3B	EN 14594	10 % 2 % 0,5 %	5 20 100	10 50 200	150 min
Compressed air hose unit with full mask	4A / 4B	EN 14594	0,05 %	1000	2000	150 min
Fresh Air Hose Devices with half mask	1/2	EN 138	2 %	100	50	150 min
Fresh Air Hose Devices with full mask	1/2	EN 138	0,05 %	1000	2000	150 min
Fresh Air Hose Devices with hood	1/2	EN 269	0,5 %	100	200	-

* Maximum percentage allowed for total inward leakage.
** Multiple of the limit value - DGUV Regulation 112-190 Use of respiratory protective equipment / APF D Assigned protection factor
*** Nominal protection factor - EN 529: Recommendation for selection of respiratory protective devices

Protection Classes Eye / Face Protection:

Device class	EN 166: Eye Protection
Optical classes:	
3	without major demands on visual performance and not for continuous use
2	for work with average demands on visual performance
1	for work with particularly high demands on visual performance, for continuous use
Mechanical strength classes:	
-	General basic mechanical strength
S	increased mechanical strength (5.1 m/s with 43g steel ball)
F	low energy impact (45 m/s with 86g steel ball)
B	medium energy impact (120 m/s with 86g steel ball)
A	high energy impact (190 m/s with 86g steel ball)

e-breathe Multimask Pro Concept

Gesichtsschutzschild

The innovative concept of the e-breathe Multimask Pro is based on a modularly developed and ventilated face shield, which can be operated with an air source (blower filter unit or compressed air). Together with an air source, the Multimask Pro constitutes a respiratory protection system. The air source builds up a constant positive pressure in the headpiece, preventing harmful substances from reaching the user.

During development, optimization requests from users were taken up and integrated into a new concept for respiratory protection devices. The result is convincing in terms of functionality and maximum comfort.

The Multimask Pro is designed to serve a wide range of applications. A wide range of compatible accessories ensures high functionality and flexibility. The lightweight mask frame is the basic unit and is identical in every version. This means that the mask can be assembled for the respective target application, as in a modular system, and thus adapted precisely to the user's needs.

The Multimask's innovative design includes a lot more than the user can see at first glance:
The upper section of the frame is designed in such a way that the Multimask Pro can be easily combined with other personal protective equipment, such as a standard industrial helmet and / or hearing protectors.

The Multimask Pro is equipped with a double-sided anti-fog painted cellulose actetate visor, for a permanently clear view. The visor is characterized by a particularly wide all-round view. Depending on the area of application, different visors are available for the user: temperature-, heat- or chemical-resistant. The shape of the mask frame prevents the mask from being accidentally placed on the visor. This keeps the field of vision protected from unnecessary scratches. Additional visor protection films are available to extend durability.

The Multimask collects another plus point through its very simple handling. All components of the masks such as headgear, visor and face seal can be replaced without tools. The mask can thus be quickly and easily disassembled, cleaned and serviced after use.

In terms of wearing comfort, the Multimask stands out as well. The face seals ensure a secure and comfortable fit. The new second-generation face seals feature an improved fit and a click-lock system for easier and faster assembly. A variety of face seals made of different materials are available and can be customized to meet the user's individual needs.

The Multimask Pro combines respiratory, face, hearing and head protection in one.

Multimask Pro - 2. Generation

Mesh

Silicone

Foam

Product Characteristics:

Face Seal:
• New click lock system for easier assembly
• New improved fit
• Easily replaceable and washable
• Materials: neoprene, silicone, foam, mesh

Head Strap:
• Eccentric screws for easy exchange
• Various replaceable head straps:
- Elastic two-point head strap (polypropylene)
- One-point head strap for helmet attachment
- Elastic two-point head strap (TPE/rubber) with adjustable straps

Visor:
• Eccentric screws for easy exchange of visor
• Different materials for various requirements:
cellulose acetate & polycarbonate
• tear-off visor protection films to protect against scratches

Exhalation Valve:
• Serves as a speaker membrane and eases communication
• Discharge of exhaust air

Breathing Air Hoses:
• To cover every field of application 3 different hose types are available:
PU - flexible, PU - fixed length, EPDM - fixed length.
- disposable, reusable - flame resistant, aluminized - heat resistant

Compatibility:
• Compatible with: standard industrial helmet
• Compatible with: hearing protection

Made in Germany:
• Developed in Germany
• Produced in Germany
• Certified in Germany

Air Sources:
• <u>Approval with 3 different PAPRs:</u>
- PM Proflow SC 160
- PM Proflow EX 160
- e-breathe e-Flow
• <u>Approval with Compressed Air Control Valve:</u>
- e-breathe e-Line

Technical Specifications:

Combinations:	e-breathe e-Flow	PM Proflow 2 SC / EX 160	e-breathe e-Line
Approvals:	CE certified acc. to EN 12941	CE certified acc. to EN 12941	CE certified acc. to EN 14594
Protection Class / NPF:	TH3 / 100	TH3** / 100 & TH2 / 20	3B / 100
Airflow:	160 - 180 - 200 l/min	160 l/min	160 - 300 l/min
Hose Connection:	Vario & MM	Vario & MM	Vario & MM
Temperature Range:	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH
Eye Protection:	EN 166 Class 1B	EN 166 Class 1B	EN 166 Class 1B
Exhalation Resistance:	2,05 mbar	2,45 mbar	2,05 mbar
Weight Headpiece:	360g	360g	360g
Fase Seal 1. Gen.:	Silicone, Neoprene	Silicone, Neoprene	Silicone, Neoprene
Fase Seal 2. Gen.:	Klick Foam, Mesh, Silicone	Klick Foam, Mesh, Silicone	Klick Foam, Mesh, Silicone
Mask material:	PCABS	PCABS	PCABS

** Only the 1st generation Multimask with silicone seal or the 2nd generation Multimask have protection class TH3.

e-breathe Multimask Concept

Face Shield

e-breathe Multimask Concept

Face Shield

1 Eccentric Closure

The eccentric closure fixes the visor by means of a rotary movement and holds the headgear.

The rotary movement presses the visor against the visor seal and thus additionally seals the mask.

Headgear and visor can be easily & quickly replaced without tools.

2 Hose Connection

The breathing air hose is attached to the Multimask with a simple click using the patented click adapter.

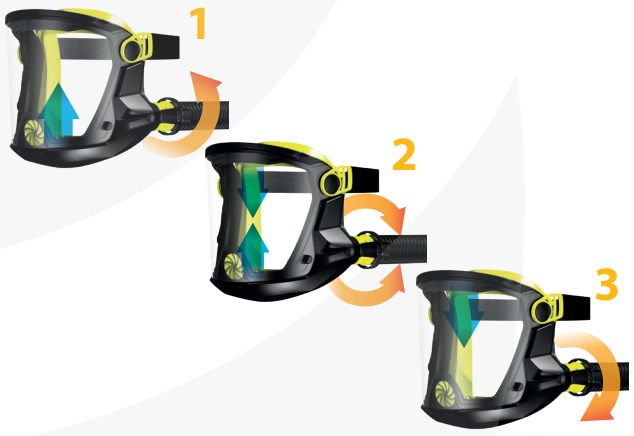
This prevents the breathing air hose from twisting during assembly. The breathing air hoses are available in three different materials, depending on the intended use.

3 Air Control

Thanks to the patented click adapter, the user can determine for himself which path the filtered air takes.

The air channels arranged with extreme precision inside the mask frame offer the user the possibility to regulate the air supply himself via three positions entirely according to his needs.

By turning the click adapter, the user can determine whether the air should flow from below (1), from above (3) or from both directions (2) simultaneously.



4 Exhalation Valve

The exhalation valve offers the safest way to remove the exhaled air. This prevents a dangerous excess of CO2 and, incidentally, fogging of the visor.

It is positioned close to the mouth, thus facilitating communication.

5 Click Face Seal

The new second generation face seals feature an improved fit and a click-lock system for easier and faster installation. The frame of the click face seals is simply pressed into the mask frame for this purpose.

To customize the mask to the user's needs, the new seals are available in a universal size made of three different materials.

6 Compatibility

The design of the mask frame is designed to allow the Multimask Pro to be combined with other PPE such as industrial helmets, climbing helmets and hearing protectors.

e-breathe Multimask Pro

Face Shield

Head Piece: e-breathe Multimask		
Article Name	**Part Number**	Image
2nd generation (from 2021)		
Multimask Pro Foam (with face seal click foam)	322003996	
Multimask Pro Mesh (with face seal click mesh)	322003995	
Multimask Pro Silicon (with face seal click silicone)	322003994	

Face Seal: e-breathe Multimask					
Article Name	**Part Number**		Size	Material	Image
Face Seals 2nd Generation (from 2021)					
Face Seal Click Foam - new with click in	**322004039**	**2. Generation**	**Universal**	**Foam**	
Face Seal Click Mesh - new with click in	**322004044**	**2. Generation**	**Universal**	**Mesh**	
Face Seal Click Silikon - new with click in	**322004060**	**2. Generation**	**Universal**	**Silicone**	
Face Seals 1st Generation (2016-2020)					
Face Seal Standard -> Model expires!	**322004018**	**1. Generation**	**Size M**	**Neoprene**	
	322094018	**1. Generation**	**Size M/L**	**Neoprene**	
Face Seal PRO V.3 -> Model expires!	**Cancelled**	**1. Generation**	**Universal**	**Silicone**	

e-breathe Multimask Pro

Face Shield

Spare parts & Accessories: e-breathe Multimask Pro		
Article Name	**Part Number**	Image
Breathing Air Hoses for Multimask	**see chapter Breathing Air Hoses**	
Multimask Mask Frame **e-breathe Silicone Valve Blade** **Multimask Visor Sealing**	**322004050** **322004045** **322004008**	
Multimask Standard Headgear **Multimask Comfort Headgear**	**322004020** **322004028**	
Multimask Headgear Buckle Set (Pro) **Headgear Straps (Pair)**	**322004038** **128076216**	
Goggle Adapter for Multimask **Goggle Frame (without lenses)**	**Upon request** **100012790**	
Multimask Hood Pro **- Disposable** **- Reusable** **- Heat protection**	 **116001040** **Upon request** **Upon request**	
Visor Polycarbonate:		
Visor PC - Standard **Visor PC - Scratch resistant** **Visor PC - Anti-Fog (coated)** **Visor PC Gold**	**322004009** **322004010** **322004011** **322004049**	
Visor Cellulose Acetate:		
Visor CA - Standard **Visor CA 2.0 - Anti-Fog (coated)**	**322004014** **322004043**	
Multimask Protective Foil (PU 10)	**101063094**	
Cleaning and Care		
e-breathe Cleaning Bag **PM Rescue Clean Disinfectant**	**322002108** **129001000**	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	

e-breathe Short & Long Hood

Overpressure hoods

The new overpressure lightweight hoods of the e-breathe Short & Long Hood series offer maximum comfort with the highest level of protection. They feature an attractive, ergonomic design and a soft-fitting face seal made of elastic material that adapts to different face sizes and shapes. The special design makes it possible to wear glasses under the hood without a noticeable, annoying draught.

An adjustable and fixed head support is located inside the hood, which enables immediate use. The hoods were designed for easy on and off. A loop at the front and back of the hood allows it to be adjusted and put down without touching the external material.

In combination with an air source (respiratory protection blower or compressed air control valve), a constant overpressure is built up inside the hood, preventing the penetration of harmful substances and achieving the highest protection class. The airflow passes inside the hood, along the visor, preventing any unpleasant drafts or noise. The excess and used air is exhausted by an exhalation valve positioned close to the mouth, minimizing CO2 concentration and significantly improving communication.

The hoods are available in two variants made of three different materials:

- **Short Hood:** Short Hoods are lighter and provide protection for the face and head area. The ears remain free.
- **Long Hood:** Long Hoods have an additional head & shoulder cover and thus protect the entire head, neck and shoulder area.
- **Limited-Use Hoods:** Consist of a low-noise, durable, wrinkle- and lint-free material that is disposed of directly after contamination/end of use.
- **Premium (reusable) Hoods:** Consist of a low-noise, robust, reusable and water-repellent material. After use, the hood can be cleaned and reused.
- **Chemical Hoods:** Consist of a low-noise, rugged, wrinkle-resistant, anti-static and chemical-resistant material that is disposed of directly after contamination/end of use.

Product features:

- Certified respiratory protection according to EN 12941 protection class TH3
- Certified respiratory protection according to EN 14594 protection class 3A
- Eye and face protection EN 166: 1S
- Breathing, face, neck and shoulder protection
- Headgear size S-XXL universally adjustable
- Distortion-free all-round vision
- Suitable for beard and spectacle wearers
- Extremely light weight
- No G26 medical checkup
- No wearing time limit
- Chemical resistant

e-breathe Short & Long Hood

Overpressure hoods

PRODUCT FEATURES:

Head holder
Thanks to the permanently installed, internal head holder, the hood is ready for immediate use. The lightweight head holder allows adjustment to different head sizes and ensures an optimum fit and maximum wearing comfort. The soft headband guarantees a comfortable fit and is replaceable.

New design
The newly developed hoods feature a wide and soft face seal. The soft, elastic material of the face seal optimally adapts to different face sizes and offers maximum wearing comfort and respiratory protection.

Variant: Short Hood - SH
The SH hoods have no additional shoulder cover and provide protection only for the face and head area. The ears remain free and allow a better perception of ambient noise.

Variant: Long Hood - LH
The LH hoods have an additional head & shoulder cover and provide protection of the entire head and neck area. The cover can be worn inside or outside the suit. Worn inside, the suit is supplied with excess air.

Airflow
The air distribution inside the hood has been designed to direct the airflow along the polycarbonate visor. This prevents permanent fogging of the visor and the user does not feel any unpleasant drafts. As a result, comfort is increased and noise is minimized.

Polycarbonate visor
The visor offers eye and face protection according to EN 166 F and is ergonomically shaped. It features an extra large, distortion-free field of vision. A visor protection film is available separately for the premium hoods.

Hood material
The hoods are made of low-noise, robust, wrinkle and lint-free material. Three different materials are available: Limited-Use, Chemical-Resistant and Reusable.

Exhalation valve with speech membrane
The exhalation valve provides the safest opportunity for direct exhaust of exhaled air and low CO2 concentration inside the hood. The speech membrane in the exhalation valve provides easier communication. The intelligently designed exhalation valve ensures minimal exhalation resistance and allows the hood to be used directly without a G26 medical check-up.

Hose connection
The breathing air hose is securely attached to the adapter of the headgear using the simple e-breathe click system.

e-breathe Multi-Hood (MH)

Overpressure Hoods

The new Multi Hood: individual - comfortable - safe

The new and innovative concept of the Multi-Hood convinces through versatility and highest wearing comfort. e-breathe's lightweight respiratory protection overpressure hoods can be optimally adapted to any application and different requirements.

In combination with an air source (powered air-purifying respirator or compressed air regulator valve) a constant overpressure is built up in the hood, thus achieving the highest protection class for the user.

Due to the unique and innovative concept of the **Multi-Hood**, the protective equipment can be adjusted to your requirements and is available as a limited-use hood as well as a reusable hood. The hood is made of a low-noise, robust, crease- and lint-free material.

The hood cover is available in different versions depending on the application and fits onto different holders. The individually selectable carrying systems enable usage of the **Multi-Hood** with a **head holder or helmet holder**. Practical magnetic buttons make it easy to mount the hood cover on the respective holder. The helmet holder can be used with almost any standard industrial helmet.

The Multi-Hood sets new standards in terms of wearing comfort:

The visor is ergonomically shaped and features an extra large, distortion-free field of vision. A textile neck seal with an elastic cord closes the Multi-Hood perfectly at the neck. The shoulder cover can be worn inside or outside the protective suit. Worn inside, the suit is supplied with excess air.

Product Characteristics:

- Certified respiratory protection according to EN 12941*
- Certified compressed air respiratory protection according to EN 14594**
- Highest Protection Class TH3* / 3B**
- Eye and face protection
- Head protection according to EN 397
- Respiratory, head, face, neck and shoulder protection
- Suitable for beard and spectacle wearers
- Distortion-free panoramic view
- Extremely low weight
- no G26 medical check-up
- no limits on application time

Technical Specifications:

Combination:	e-breathe e-Line	e-breathe e-Flow	PM Proflow 2 SC PM Proflow 2 EX
Approvals:	CE / EN 14594	CE / EN 12941	CE / EN 12941
Protection Class/NPF:	3B* / 200	TH3 / 500	TH3 / 500
Airflow:	160 - 280 l/min	160 - 180 - 200 l/min	160 l/min
Hose Connection:	e-breathe Klick-System	e-breathe Klick-System	e-breathe Klick-System
Temperature Range:	-10°C to +50°C <70% RH	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH
Exhalation Resistance:	0,40 mbar	0,35 mbar	0,37 mbar
Weight head piece: - with helmet holder - with head holder	 280 g 480 g	 280 g 480 g	 280 g 480 g
Material Limited-Use:	Polysafe Duoform	Polysafe Duoform	Polysafe Duoform
Reusable Material:	Bluesafe	Bluesafe	----

(*still in certification.)

e-breathe Multi-Hood (MH)

Overpressure Hoods

Product Features:

Wearing Comfort
Both with helmet and head holder, the Multi-Hood offers maximum comfort thanks to its ergonomic design and light weight.

The helmet holder is compatible with nearly any industrial helmet. The innovative and lightweight head holder can be adjusted to any head size thanks to the adjustable system. It offers an optimum fit and maximum wearing comfort.

Hood Material
Die Haube besteht aus einem geräuscharmen, robusten, knitter- und fusselfreien Material. Der Haubenüberzug lässt sich einfach & schnell auswechseln und ist als Limited-Use und Mehrweg Variante verfügbar.

Exhalation valve with speech membrane
The exhalation valve ensures direct discharge of the exhaled air and, thanks to the speech membrane, ensures good communication and a clear speech connection.

The intelligently designed exhalation valve avoids heavy respiratory resistance during breathing and enables the Multi-Hood to be used directly without a G26 medical check-up.

Intelligent Airflow
The air distribution inside the hood has been designed in such a way that the air flow runs directly along the polycarbonate visor. This prevents permanent fogging of the visor and prevents the user from feeling an unpleasant air flow in the neck.

Hose Connection
The breathing air hose is securely attached to the hood adapter using the simple e-breathe click system.

Polycarbonate Visor
The visor offers eye and face protection and is ergonomically shaped. It features an extra large, distortion-free field of view. The hood is supplied flat and without unwanted creases.

Design
The textile neck seal with elastic band closes the Multi-Hood perfectly on the neck. The shoulder cover can be worn inside or outside the suit. Worn inside, the suit is supplied with excess air.

e-breathe Multi-Hood System (MH)

Overpressure Hoods

Depending on the application and requirements, the hood cover of the Multi-Hood is available as a limited-use hood or reusable hood and is available separately.

Limited-Use-Hood:

Limited-use hoods can be used multiple times and are ideal for applications where the head piece needs to be changed frequently and cleaning may not be economical.

standard white

Material

Consists of a low-noise, robust, crease- and lint-free material.

chemicalresistant yellow

Material

Consists of a low-noise, robust, crease-resistant, antistatic and chemical-resistant material.

For details of the application time for use with chemicals, please refer to the permeation data sheet.

Reusable Hood:

The premium reusable hood version consists of a reusable, water-repellent material and is suitable for multiple use. Cleaning and disinfection of the hood is possible.In this way, money is saved and the environment is protected.

Premium blue

Material

Consists of a low-noise, robust, reusable, water-repellent material.

e-breathe Multi-Hood System (MH)

Overpressure Hoods

The individual carrying systems adapt to all requirements and working environments.

Head Holder:

The classic head holder is designed for use without a helmet. Thanks to the adjustable head holder, the carrying system adapts to any head shape and offers an optimal fit and highest wearing comfort.

Helmet Holder:

The innovative and lightweight helmet holder is compatible with almost any standard industrial helmet and is quick and easy to install.

PM Lab Hood AV (LH)

Overpressure Hoods

The improved PM Lab Hood AV offers the user high wearing comfort and effective protection. The complete hood consists of a particle-tight, low-noise and lint-free material with integrated eye protection and shoulder cover.

In combination with an air source (Powered air-purifying respirator or compressed air regulator valve) a constant overpressure is built up in the hood so that it is working self-supporting and without any headgear.

The overpressure in the hood ensures the highest protection class. while the airflow does not blow unpleasantly into the wearer's face. Because the air flows inside the hood along the inside of the large PC visor.

The headgear can be universally adjusted to any head. The flap can be worn outside or inside a protective suit. Worn inside the suit, the outflow air provides heat balance within the suit.

According to the directive for wearers of respiratory devices BGR 190 it is not necessary to carry out the medical examination G26 with this hood. Furthermore there are no limitations for use because the respirator provides a continuous airflow. That means no breathing resistance for the user.

Limited-Use-Hood:

Limited-use hoods can be used multiple times and are ideal for applications where the head piece needs to be changed frequently and cleaning may not be economical.

Reusable Hood:

The premium reusable hood version consists of a reusable, water-repellent material and is suitable for multiple use. The hood can be cleaned and disinfected. This is both economical and environmentally friendly.

Product Characteristics:

- Certified respiratory protection according to EN 12941 Protection Class TH3
- Certified respiratory protection according to EN 14594 Protection Class 3A
- breathing, face, neck and shoulder protection
- Headband universal adjustable from size S-XXL
- distortion free panoramic view
- suitable for beard and spectacle wearers
- Extremely low weight
- no G26 medical check-up
- no limits on application time
- sterile version available with product protection exhalation valve

Technical Specifications:

Combination:	e-breathe e-Line	e-breathe e-Flow	PM Proflow 2 SC PM Proflow 2 EX	e-breathe Smartblower One Filter-System
Approvals:	CE / EN 14594	CE / EN 12941	CE / EN 12941	CE / EN 12941
Protection Class/NPF:	3A* / 200	TH3 / 500	TH3 / 500	TH3 / 500
Airflow:	160 - 280 l/min	160 - 180 - 200 l/min	120 / 160 l/min	135 l/min
Hose Connection:	e-breathe Click-System	e-breathe Click-System	e-breathe Click-System	e-breathe Click-System
Temperature Range:	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH
Exhalation Resistance:	0,55 mbar	0,55 mbar	0,55 mbar	0,75 mbar
Weight Head Piece:	170g	170g	170g	170g
Material Limited-Use: Material Reusable:	Polysafe Bluesafe	Polysafe Bluesafe	Polysafe ----	Polysafe ----

(* still in certification)

PM Lab Hood AV (LH)

Overpressure Hoods

Product Features:

Headband
External headband allows individual adjustment to any head size.

Forehead Band
Fixes the hood and shapes the visor. The soft headband provides a high wearing comfort.

Hood Material
The hood is made of a low-noise, robust, crease- and lint-free material. The cover can be easily and quickly put on and is available as Limited-Use and Reusable Version.

Polycarbonate Visor
Comes flat, without unwanted creases and without reflection. Ergonomically shaped for a 320° distortion-free all-round view.

Exhalation Valve with Speech Membrane
The exhalation valve ensures direct discharge of the exhaled air and, thanks to the speech membrane, ensures good communication and a clear speech connection.

The intelligently designed exhalation valve avoids heavy breathing resistance and allows a direct use of the hood without a G26 medical check-up.

Design
Due to the textile neck seal with an elastic band, the PM Lab Hood AV fits perfectly to the neck. The shoulder cover can be worn inside or outside the protective suit. Inside, the suit is supplied with excess air.

Airflow
The airflow runs inside the hood on the inside of the PC visor. This prevents permanent fogging of the screen and prevents the user from feeling any unpleasant draught in the neck.

Hose Connection
The breathing air hose is securely attached to the hood adapter using the simple e-breathe click system.

PM Chemical Hood (LH)

Overpressure Hood

The improved **PM Chemical Hood** offers the user high wearing comfort and effective protection.

The complete hood is made of an antistatic, low-noise and chemical-resistant material with integrated eye protection and shoulder cover. (Please refer to the permeation data sheet for details of the operating time).

The hood is designed for higher risk work environments, including hazardous and toxic operations. The shoulder cover of the hood has been specially designed for these applications to be worn inside or outside of a protective suit. The optimum fit ensures a stable and comfortable fit even during movement and prevents the wearer from coming into contact with the skin-friendly inner material.

In combination with an air source (Powered air-purifying respirator or compressed air regulator valve) a constant overpressure is built up in the hood so that it is working self-supporting and without any headgear.
The overpressure in the hood ensures the highest protection class. The air runs inside the hood and along the inside of the large PC visor. The intelligent airflow prevents the air flow from blowing unpleasantly into the wearer's face.

According to the directive for wearers of respiratory devices BGR 190 it is not necessary to carry out the medical examination G26 with this hood. Furthermore there are no limitations for use because the respirator provides a continuous airflow. That means no breathing resistance for the user.

Limited-Use-Hood:

Limited-use hoods can be used multiple times and are ideal for applications where the head piece needs to be changed frequently and cleaning may not be economical.

Product characteristics:

- Certified respiratory protection according to EN 12941 Protection Class TH3
- Certified respiratory protection according to EN 14594 Protection Class 3A
- breathing, face, neck and shoulder protection
- Headband universal adjustable from size S-XXL
- distortion free panoramic view
- suitable for beard and spectacle wearers
- Extremely low weight
- no G26 medical check-up
- no limits on application time
- chemical resistant

Technical Specifications:

Combination:	e-breathe e-Line	e-breathe e-Flow	PM Proflow 2 SC PM Proflow 2 EX	e-breathe Smartblower One Filter-System
Approvals:	CE / EN 14594	CE / EN 12941	CE / EN 12941	CE / EN 12941
Protection Class/ NPF:	3A* / 200	TH3 / 500	TH3 / 500	TH3 / 500
Airflow:	160 - 280 l/min	160 - 180 - 200 l/min	120 / 160 l/min	135 l/min
Hose Connection:	e-breathe Click-System	e-breathe Click-System	e-breathe Click-System	e-breathe Click-System
Temperature Range:	-10°C to +50°C <75% RH	-10°C to +50°C <75% RH	-10°C to +40°C <70% RH	-10°C to +40°C <70% RH
Exhalation Resistance:	0,70 mbar	0,70 mbar	0,80 mbar	0,90 mbar
Weight Head Piece:	170g	170g	375g	375g
Material Limited-Use:	Duoform	Duoform	Duoform	Duoform

PM Chemical Hood (LH)

Overpressure Hood

Product Features:

Headband
Internal headband allows individual adjustment to any head size. Fixes the hood and shapes the visor. The soft headband provides a high wearing comfort.

Hood Material
Comes flat, without unwanted creases and without reflection. Ergonomically shaped for a 320° distortion-free all-round view.

Polycarbonate Visor
Flach geliefert, ohne ungewollte Knicke und ohne Spiegelung. Ergonomisch geformt, für eine 320° verzerrungsfreie Rundumsicht.

Exhalation Valve with Speech Membrane
The exhalation valve ensures direct discharge of the exhaled air and, thanks to the speech membrane, ensures good communication and a clear speech connection.

The intelligently designed exhalation valve avoids heavy breathing resistance and allows a direct use of the hood without a G26 medical check-up.

Design
Due to the textile neck seal with an elastic band, the PM Chemical Hood fits perfectly to the neck. The shoulder cover can be worn inside or outside the protective suit. Inside, the suit is supplied with excess air.

Airflow
The airflow runs inside the hood on the inside of the PC visor. This prevents permanent fogging of the screen and prevents the user from feeling any unpleasant draught in the neck.

Hose Connection
The breathing air hose is securely attached to the hood adapter using the simple e-breathe click system.

Overpressure Hood

Order Information

Overpressure Hoods:		
Article Name	Part No.	Image
e-breathe Short Hood (SH) / Long Hood (LH)		
e-breathe SH1 - Limited-Use **e-breathe SH2 - Premium**	**322000101** **322000102**	
e-breathe LH1 - Limited-Use **e-breathe LH2 - Premium**	**322000111** **322000112**	
e-breathe LH3 - Chemical resistant	**322000121**	
Lab Hood AV (LH)		
PM Lab Hood AV Limited-Use **PM Lab Hood AV Limited-Use - Sterile**	**700001008** Upon request	
PM Laborhaube AV Premium **(Reusable hood)**	**322015603**	
Chemical Hood (LH)		
PM Chemical Hood - Chemical resistant	**700001066**	
e-breathe Multi-Hood (MH)		
e-breathe Multi-Hood **Limited-Use (white) with helmet holder** **Limited-Use (yellow) with helmet holder** **Premium with helmet holder**	**322015501** **322015401** **322015601**	
e-breathe Multi-Hood **Limited-Use (white) with head holder** **Limited-Use (yellow) with head holder** **Premium with head holder**	**322015502** **322015402** **322015602**	

Overpressure Hood
Order Information

Spare Parts & Accessories: e-breathe Multi-Hood		
Article Name	Part No.	Image
e-breathe Short Hood (SH) / Long Hood (LH)		
e-breathe sweat / forehead replacement strap (for SH2 & LH2)	Coming Soon	
e-breathe Multi-Hood (MH)		
e-breathe Multi-Hood Head holder adapter	**322095504**	
e-breathe Multi-Hood Helmet holder adapter (without helmet)	**322095502**	
O-Ring Helmet holder	**14200201**	
Multi-Hood **Hood cover Limited-Use (white)** **Hood Cover Limited-Use (yellow)** **Hood Cover Premium**	**322095503** **322095500** **322095504**	
Overpressure Hoods		
e-breathe Klick Click Adapter Rings	**402010002**	
e-breathe Exhalation Valve **e-breathe Flutter Valve**	**23010300** **322004045**	
e-breathe Exhalation Valve Product Protection **e-breathe Product Protection Fleece (PU 50)**	**23010309** **101052692**	
e-breathe Hoods Visor Protection Film (PU 10)	Coming Soon	
Breathing Air Hoses for Overpressure Hoods	see chapter Breathing Air Hoses	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	

e-breathe Panarea Full Mask Pro

Full Face Mask

The Panarea Full Face Mask is ideally suited for all applications that require respiratory protection with a full face mask. The mask body is made of silicone and offers maximum wearing comfort. Due to the soft and skin-friendly silicone rubber, the mask combines pleasant wearing characteristics with a long durability.

The curved Anti-Fog panoramic visor made of polycarbonate offers an unlimited field of vision without restrictions. A scratch-resistant anti-fog screen is fitted as standard.

Due to the special fit, one universal size covers all sizes. The five-point banding enables easy and quick application and a very good sealing fit.

Filter Connection:
The single filter mask is equipped with a DIN standard 40mm round thread (RD40). Thus, all approved filters with a DIN round thread connection according to EN148-1 and a weight below 500g can be used. As a result, a large number of different filter types are available for specific applications.

Advantages of using e-breathable respiratory filters: Depending on the application, you can use the same filters for the mask and for the blower filter unit.

Respiratory support from different air sources:
The full face mask is approved with different air sources and can therefore also be used for overpressure operation with a PAPR or with a compressed air regulator valve.

The air source builds up a constant overpressure in the mask and supplies the user with breathable air. The breathing support extends the prescribed wearing time limit and significantly eases the user's work when wearing the equipment.

Important: In combination with a PAPR, the system offers maximum safety even in the event of a blower being switched off or in the unusual event of a blower failure. The system provides sufficient protection even when the blower is switched off, since breathing through the filters and the blower is still possible.

Technical Specifications

Combinations:	Full Face Mask	e-breathe Smartblower Full Mask-System	e-breathe e-Flow
Approvals:	CE / EN 136	CE / EN 12942	CE / EN 12942
Protection Class / NPF:	Class 3 / 1000	TM2 & TM3* / 200 & 2000*	TM3 / 2000
Airflow:	-	140 l/min	120 - 140 - 160 l/min
Airflow warning:	-	no	< 120 l/min
Battery warning:	-	< 15 min	< 15 min
Battery runtime:	-	ca. 6-8h (Lio-Ion 11,25 V/2,95 Ah)	ca. 6-8h (Lio-Ion 14,4V / 3,4Ah)
Filter / Hose connection:	DIN-round thread	DIN-round thread	DIN-round thread
Number of filters:	1 x Filter	1 x Particle Filter	2 x Filter
Operating temperature:	-20°C / +50°C <70% RH	-10°C / +40°C <70% RH	-10°C / +40°C <70% RH
Storage temperature:	0°C / +30°C <70% RH	0°C / +30°C <70% RH	0°C / +30°C <70% RH
Inhalation resistance:	0,6 mbar (95 l/min)	-	-
Exhalation resistance:	2,5 mbar	3,0 mbar	3,0 mbar
Weight of head piece:	700 g	700 g	700 g
Mask material:	Silicone	Silicone	Silicone

(* still in certification)

e-breathe Panarea Full Mask Pro

Full Face Mask

Product Characteristics:

- Clear view: visually perfect, distortion-free visor with unrestricted field of view (98 %)
- High wearing comfort due to soft and skin-friendly silicone rubber of the full mask
- Low operating costs / low acquisition costs
- Highest full face masks protection class: class 3
- Extension of the maximum wearing time, by respiratory support with an additional air source
- Easy decontamination and cleaning: all components are washable
- Reliable working material: durable and high-quality equipment

Fields of Application:

- Removal of asbestos
- Demolition & maintenance work
- Nuclear industry
- Pharmaceutical Industry & Laboratories
- Oil, gas, chemical industry
- Sanding & Spray Painting
- Agriculture and Farming
- Authorities / Public Security / Police / Military
- Fire brigade
- Relief and rescue organisations
- Pest control
- Steel industry

Air Sources:

- PAPR e-breathe Smartblower Full Mask Mode
- PAPR e-breathe e-Flow

Approvals:

- EN 136: Class 3
- EN 12941: TH3 with PAPR

e-breathe Panarea Full Mask Pro

Full Face Mask

Full Face Mask: Panarea Full Mask		
Article Name	Part No.	Image
PM Panarea Pro	**701007000**	

Spare Parts & Accessories: Full Face Mask		
Article Name	Part No.	Image
Protective foils (PU 10)	**101063094**	
Panarea Headband	**701007001**	
Panarea Visor	**701007002**	
Panarea exhalation valve	**701002004**	
Panarea inhalation valve	**701002006**	
PM Rescue Clean Disinfectant **Basic Spray Head for Disinfectants (plastic)**	**129001000** **129001001**	
e-breathe Cleaning Bag (Wash bag for full face masks and multimask)	**322002108**	
Detergents, Cleaning & Storage Accessories	see chapter Cleaning & Storage	
e-breathe Filter	see chapter Filter	
Breathing Air Hoses for Full Face Masks & Half Masks	see chapter Breathing Air Hoses	

Overpressure Suits

In this chapter you will find our overpressure protective suits which can be used with our powered, air-purifying respirators (PAPR) and compressed air regulator valve.

A more detailed overview and further information can be found in our separate product brochure. Data on material properties can be found in our protective clothing database.

Overpressure Protective Suits:
A respiratory protective suit is a suit that completely surrounds the head and body and supplies the wearer directly with breathing air via a breathing air supply. It thus protects the respiratory tract and the entire body from contamination. The respiratory air supply generates an overpressure inside the suit, whereby a high volume flow with optimized air flow can reduce the heat accumulation in the suit. The exhaled and excess air exits the suit through one or more exhalation valves into the ambient air.

To meet additional requirements such as protection against gases and vapours, liquids, radioactive contamination by solid particles or infectious agents, additional requirements / standards for chemical protective clothing must be achieved (see table).

Overpressure Protective Suit Types:

Different overpressure suits for individual applications and requirements. You can choose between limited-use suits and multi-use reusable suits. All overpressure suits can be used as filter devices with a PAPR or as insulated devices with a compressed air regulator valve.

The following symbols serve as a guide and show what protection the headpiece offers and in which combination it can be used to extend the requirements with, for example, head protection or hearing protection.


Respiratory Hood


Respiratory Mask


Eye- / Face Protection


Head Protection


Hearing Protection


Full Body Protections-

European Standards for Chemical Protective Clothing

Norm	Description	Symbol
Kat. III	**Protective clothing for high risks** Protective suits designed to protect against high hazards and fatal hazards. The user must be able to rely on the PPE due to the danger.	
Type 1 **EN 943-1 & 2**	**Gas-tight chemical protective suits** Protective suits against liquid and gaseous chemicals, aerosols and solid particles.	
Type 2 **EN 943-1**	**Non-gas-tight chemical protective suits** Protective suits that maintain a constant overpressure to prevent the ingress of dust, liquids and gases.	
Type 3 **EN 14605**	**Liquid-tight protective suits** Protective suits that protect against strong and directed jets of liquid chemicals.	
Type 4 **EN 14605**	**Spray-tight protective suits** Protective suits that protect against strong and directed jets of liquid chemicals.	
Type 5 **EN ISO 13982-1**	**Particle tight protective suits** Protective suits that protect against saturation with liquid chemicals.	
Type 6 **EN 13034**	**Conditionally spray-tight protective suits** Protective suits that provide limited protection against light spray and liquid chemicals.	
	Protective clothing against radioactive particles / contamination	
EN 1073-1	Ventilated protective clothing against contamination by radioactive solid particles.	
EN 1073-2	Protective clothing against contamination by radioactive solid particles	
B **EN 14126**	**Protective clothing against infectious agents** The addition of the letter „B“ (e.g. Type 3B) to the type indicates conformity with this European Standard.	
EN 1149-5	**Antistatic properties** Protective clothing with antistatic properties.	

The various respiratory protection classes can be found in a separate table in the chapter Headpieces & Overpressure Hoods.

e-breathe PAPR-Suits

Overpressure protective suit

The new overpressure protective suit series from e-breathe consists of three different materials to meet the requirements for different purposes and operating conditions.

The one-piece overpressure respiratory protection suits provide the highest level of protection against gases, vapors, liquid chemicals, radioactive contamination, as well as solid and liquid aerosols, particles and biological infectious agents. The suits are used in combination with an approved respiratory protection blower (e-breathe e-Flow with DIN round thread connection), which supplies the suit with breathable air under a constant positive pressure.

Inside Suits: Internal respiratory protection blower

The air supply, the respirator blower, is worn inside the suit (only the filters are outside) to avoid a contamination of the blower. The blower supplies a constant, adjustable airflow of 160-180-200 l/min, via the breathing air hose into the air duct of the integrated hood. In this way, the user is supplied reliably with sufficient breathable air. The overpressure created in the suit ensures the removal of the used and exhaled moist and warm air from the suit via the four exhaust valves.

New design for high safety and more flexibility

The suit is equipped with a large panoramic visor for a complete and distortion-free all-round view with extra good downward visibility. This also provides quick identification of the user.

The tapered sleeves enable a fluid-tight connection between the glove and the suit, which can be achieved either by taping or by using the e-breathe glove adapter system. This provides the possibility to safely use a variety of different gloves for the respective application and to adapt the correct glove size to the user.

The suit is optionally equipped with booties with or without outsole and boot cover, for use with safety boots or with hard-wearing, non-slip outsole.

Maximum comfort thanks to new T & Y cut

The suit is made in a combination of T- & Y-cut, allowing the user maximum freedom of movement. The special cut allows the user to reach inside the suit at any time e.g. for drinking, scratching or gripping the emergency hose. In order to ensure good decontaminability, great care was taken in the design of the cut to ensure little to no wrinkling. This cut allows for easy discarding after use and prevents the wearer from coming into contact with the outer suit material.

Adjustable neck seal

The air-permeable and adjustable neck seal with drawcord not only provides optimal airflow in the headgear, but also allows excess air to escape into the body area of the suit, providing indirect cooling and improved air circulation. Donning the suit is made much easier by opening the neck collar and prevents other accessories, such as headsets or goggles, from getting lost or slipping out of place.

Emergency function with emergency hose

In the exceptional circumstance of a blower failure or if the danger zone cannot be left in time, the user can supply himself with breathable air using the breathing air hose attached to the front of the suit. A mouthpiece is attached to the end of the breathing air hose for this purpose. In an emergency, the user can use his own lung power to draw in breathable and filtered air through the breathing air hose and the fan connected to it and safely leave the danger zone.

e-breathe PAPR-Suits

Overpressure protective suit

Product Features:

- Panoramic visor with distortion-free field of view
- Emergency exit: quick removal in emergency situations
- Optimal balance between protection and comfort with sufficient distribution of outflowing air in the suit
- Maximum protection against gases, vapors, solid and liquid chemicals, and radioactive contamination
- Integrated footies with or without outsole
- High quality materials with high durability and good wearing comfort

Fields of application:

- Industrial applications/cleaning
- Oil, gas, chemical industry
- Pharmaceutical industry & laboratories
- Sanding & spray painting
- Authorities / public safety
- Police / Military / Hospitals
- Fire department (ABC department, Decon)
- Relief and rescue organizations
- Agriculture

e-breathe PAPR Suit MicroMax NS - B

e-breathe PAPR Suit ChemMax 1 - ABC

e-breathe PAPR Suit ChemMax 3 - CBRN

Approvals:

- EN 12941: TH3 with blower filter unit
- EN 14605: Type 3 liquid-tight protective suits
- EN 14605: Type 4 spray-tight suits
- EN 13982: Type 5 particle-tight suits
- EN 13034: Type 6 conditional spray-tight protective suits
- EN 1073-2: Protection against solid radioactive particles
- EN 14126: 3B/4B/5B/6B Protection against infectious agents
- EN 1149-1: antistatic properties
- EN 13688: protective clothing general requirements

Mechanical Properties		Micro-Max NS	Chem-Max 1	Chem-Max 3
Norm		Class 1 - 6		
EN 530	Abrasion resistance	2	2	3
ISO 7854	Flexural strength	1	1	2
ISO 9073-4	Tear resistance	3	4	4
EN ISO 13938-1	Bursting strength	-	-	-
EN ISO 13934-1	Tensile strength	3	3	4
EN 863	Puncture resistance	2	2	3
EN ISO 13935-2	Seam strength	3	4	4
EN 13274-4	Flame Resistant	self extinguishing		

e-breathe Chemical Suits

Overpressure protective suit

Panoramic visor
The visor provides the user with a large and distortion-free all-round view with a wide field of view downwards and good visibility of the user. Steady airflow in the hood prevents fogging of the visor.

Neck seal
Adjustable, air-permeable neck collar for adequate airflow inside the head cover. Allows excess air, for cooling, to flow into the body area for a comfortable climate. Opening of the neck collar allows easier removal of the suit.

e-breathe Glove adapter system
The e-breathe glove adapter system allows the use with a wide range of gloves. Thanks to the Protect Clip adapter, any glove can be connected to the suit in a fluid-tight manner.

Integrated booties + Boot cover
The integrated booties without outsole are worn inside the boot/shoe.

The boot cover is worn over the boot and prevents liquid from penetrating the boot/shoe.

Emergency supply / Breathing air hose
The flexible breathing air hose can be attached above the hood or directly in front of the mouth. Optionally, a replaceable mouthpiece can be mounted on the breathing air hose for emergency situations.

Emergency exit
Designed for quick release in emergency situations or in the event of unexpected shortness of breath.

Entry / Front zipper
Horizontal front entry with double self-adhesive zipper cover.

Integrated footies + Outsole
The integrated booties are made with a durable, non-slip outsole without a boot cover. This allows the wearing of safety shoes in the bootie.

e-breathe Chemical Suits

Overpressure protective suit

Exit
Suit can be taken off alone (not recommended). Easy removal possible by cutting open the back of the suit.

Inside variant:
Inside blower
The blower is worn inside the suit and delivers air at 160-180-200 l/min into the suit via a breathing hose.

Display window inside the suit showing filter status, current remaining run time in h/min, and current flow rate.

PAPR:
- DIN round thread filter connection
- has 3 warning devices
- low noise level
- exchangeable battery
- optional with filter shower caps

Four exhalation valves on the suit (1-4).
Two valves on the head area and two on the legs regulate the air pressure and ensure a low CO_2 concentration. They also facilitate and allow full freedom of movement without creating strong pressure fluctuations. Additional splash cover made of suit material.

e-breathe Chemical Suits

Overpressure protective suit

Overpressure protection suits:					
Item name:					Part no.
Model: Internal blower e-Flow, Tapered sleeve, booties with boot coverlet					
e-breathe PAPR-Suit MicroMax NS	Size S	Body height: 164-170cm	Chest width: 84-92cm	Waist width: 82-88cm	**322000001**
e-breathe PAPR-Suit ChemMax 1					**322000021**
e-breathe PAPR-Suit ChemMax 3					**322000041**
e-breathe PAPR-Suit MicroMax NS	Size M	Body height: 170-176cm	Chest width: 92-100cm	Waist width: 88-94cm	**322000002**
e-breathe PAPR-Suit ChemMax 1					**322000022**
e-breathe PAPR-Suit ChemMax 3					**322000042**
e-breathe PAPR-Suit MicroMax NS	SizeL	Body height: 176-182cm	Chest width: 100-108cm	Waist width: 94-100cm	**322000003**
e-breathe PAPR-Suit ChemMax 1					**322000023**
e-breathe PAPR-Suit ChemMax 3					**322000043**
e-breathe PAPR-Suit MicroMax NS	Size XL	Body height: 182-188cm	Chest width: 108-116cm	Waist width: 100-106cm	**322000004**
e-breathe PAPR-Suit ChemMax 1					**322000024**
e-breathe PAPR-Suit ChemMax 3					**322000044**
e-breathe PAPR-Suit MicroMax NS	Size XXL	Body height: 189-188cm	Chest width: 116-124cm	Waist width: 106-112cm	**322000005**
e-breathe PAPR-Suit ChemMax 1					**322000025**
e-breathe PAPR-Suit ChemMax 3					**322000045**
Model: Internal blower e-Flow, Conical sleeve, Footies with outsole					
e-breathe PAPR-Suit MicroMax NS	Größe S	Body height: 164-170cm	Chest width: 84-92cm	Waist width: 82-88cm	**322000011**
e-breathe PAPR-Suit ChemMax 1					**322000031**
e-breathe PAPR-Suit ChemMax 3					**322000051**
e-breathe PAPR-Suit MicroMax NS	Größe M	Body height: 170-176cm	Chest width: 92-100cm	Waist width: 88-94cm	**322000012**
e-breathe PAPR-Suit ChemMax 1					**322000032**
e-breathe PAPR-Suit ChemMax 3					**322000052**
e-breathe PAPR-Suit MicroMax NS	Größe L	Body height: 176-182cm	Chest width: 100-108cm	Waist width: 94-100cm	**322000013**
e-breathe PAPR-Suit ChemMax 1					**322000033**
e-breathe PAPR-Suit ChemMax 3					**322000053**
e-breathe PAPR-Suit MicroMax NS	Größe XL	Body height: 182-188cm	Chest width: 108-116cm	Waist width: 100-106cm	**322000014**
e-breathe PAPR-Suit ChemMax 1					**322000034**
e-breathe PAPR-Suit ChemMax 3					**322000054**
e-breathe PAPR-Suit MicroMax NS	Größe XXL	Body height: 189-188cm	Chest width: 116-124cm	Waist width: 106-112cm	**322000015**
e-breathe PAPR-Suit ChemMax 1					**322000035**
e-breathe PAPR-Suit ChemMax 3					**322000055**
Model: Training version					
e-breathe PAPR-Suit Inside Training / Exercise Suit For training and practice purposes, a special trainer version with Velcro closure is offered so that the suit can be opened again. It is for training and education purposes only.			On request		On request

e-breathe Chemical Suits

Overpressure protective suit

e-breathe PAPR Suit MicroMax NS - B

e-breathe PAPR Suit ChemMax 1 - ABC

e-breathe PAPR Suit ChemMax 3 - CBRN

e-breathe Chemical Suits

Overpressure protective suit

The e-breathe Chemical Suit series consists of three different materials to meet the requirements for different purposes and operating conditions.

The one-piece overpressure respiratory protection suits provide the highest level of protection against gases, vapors, liquid chemicals, radioactive contamination, and protection against solid and liquid aerosols and particulates. The suits are used in combination with an approved respiratory protection blower or compressed air control valve. They are available in two versions each, with internal blower or external air source.

Inside model: Internal respiratory blower

The respiratory protection blower is worn inside the suit (only the filters are outside) to avoid contamination of the blower. The associated respiratory protection blower supplies a constant (adjustable) fresh air flow of 160-180-200 liters per minute, via the breathing air hose into the air duct of the integrated hood. This reliably supplies the user with sufficient breathable air. The exhaled air is led out of the suit via four exhaust valves.

Outside model: External respiratory protection blower or compressed air control valve

The air supply is worn outside the suit. This option is required for rapid change (disaster response) of the air sources and is therefore suitable for a variety of other air sources. The suit can be dressed and undressed easily & quickly. The system can be changed without removing the suit. The air source delivers a (adjustable) fresh air flow of 160-180-200 liters per minute, the associated compressed air control valve delivers a constant (adjustable) fresh air flow of 160-300 liters per minute, via the breathing air hose into the air duct of the integrated hood.

High safety and flexibility

Equipped with a visor, booties and tapered sleeve, it provides high safety and flexibility. The suit has booties with boot covers and can be used with all suitable boots. The tapered sleeve allows for a fluid-tight connection between the glove and the suit, either by taping with chemical-resistant tape or by using the e-breathe glove adapter system.

Maximum comfort

The suit is made in a Y-cut, allowing the user maximum freedom of movement. The special cut allows the user to reach inside the suit at any time (e.g. to drink) and easily take it off without coming into contact with the outer suit material. The air-permeable neck seal not only ensures optimal airflow inside the headgear, but also allows excess air to escape into the body area of the suit, providing indirect cooling and improved air circulation.

Grey: CBRN protective suit for the toughest conditions

The grey Tessaform material consists of a high-quality, special laminate. Due to the resulting durability and mechanical strength, the suit finds versatile applications in all fields. The laminate provides protection against chemical warfare agents (such as sarin, mustard gas).

White: Suit material (sterile version)

The white Puntiform material is low-noise, robust, crease- and lint-free, and has high durability and mechanical strength. The material is permeable to air and water vapor ("breathable") to minimize the risk of heat stress in the suit and thus increase wearer comfort. The suit is available in a sterile version with product protection exhalation valve if required. Due to its material properties, the suit has versatile application possibilities in different areas.

Optional training version:

For exercise and training purposes, a trainer version with Velcro fastener on the cover is available. It is used exclusively for training purposes. It is available in different colours and materials to prevent a confusion.

e-breathe Chemical Suits

Overpressure protective suit

Product Features:

- Panoramic visor with distortion-free field of view.
- Emergency exit: quick removal in emergency situations
- Optimal balance between protection and comfort with sufficient distribution of outflowing air inside the suit
- Maximum protection against gases, vapors, solid and liquid chemicals, and radioactive contamination
- Integrated footies with or without outsole

Fields of application:

- Industrial applications/cleaning
- Oil, gas, chemical industry
- Pharmaceutical industry & laboratories
- Sanding & spray painting
- Authorities / public safety
- Police / Military / Hospitals
- Fire department (ABC department, Decon)
- Relief and rescue organizations
- Agriculture

e-breathe Chemical White - B

PM Chemical Grey - CBRN

Approvals:

- EN 12941: TH3 with blower filter unit
- EN 14605: Type 3 liquid-tight protective suits
- EN 14605: Type 4 spray-tight suits
- EN 13982: Type 5 particle-tight suits
- EN 13034: Type 6 conditional spray-tight protective suits
- EN 1073-2: Protection against solid radioactive particles
- EN 14126: 3B/4B/5B/6B Protection against infectious agents
- EN 1149-1: antistatic properties
- EN 13688: protective clothing general requirements

Mechanical Properties		Grey	White
Norm		Class 1 - 6	
EN 530	Abrasion resistance	**6**	**3**
ISO 7854	Flexural strength	**4**	**6**
ISO 9073-4	Tear resistance	**5**	**3**
EN ISO 13938-1	Bursting strength	**2**	**3**
EN ISO 13934-1	Tensile strength	**3**	**3**
EN 863	Puncture resistance	**2**	**2**
EN ISO 13935-2	Seam strength	**4**	**4**
EN 13274-4	Flame Resistant	**self-extinguishing**	

e-breathe Chemical Suits

Overpressure protective suit

Panoramic visor
The visor provides the user with a large, distortion-free field of view. Steady airflow in the hood prevents fogging of the visor.

Emergency exit
Designed for quick release in emergency situations or in the event of unexpected shortness of breath.

Neck seal
Adjustable, air-permeable neck collar for adequate airflow inside the head cover. Allows excess air, for cooling, to flow into the body area for a comfortable climate. Opening of the neck collar allows easier removal of the suit.

Entry / Front zipper
Horizontal front entry with double self-adhesive zipper cover.

Exit
Suit can be taken off alone (not recommended). Easy removal possible by cutting open the back of the suit.

e-breathe Glove adapter system
The e-breathe glove adapter system allows the use with a wide range of gloves. Thanks to the Protect Clip adapter, any glove can be connected to the suit in a fluid-tight manner.

Integrated booties + Boot cover
The integrated booties with durable outsole are worn inside the boot/shoe.

The boot cover is worn over the boot and prevents liquid from penetrating the boot/shoe.

Optional with outsole
On request the suit can be made with with a hard-wearing, non-slip outsole without boot cover. It is possible to wear safety shoes in the footling.

e-breathe Chemical Suits

Overpressure protective suit

Four exhalation valves on the suit (1-4).
Two valves on the head area and two on the legs regulate the air pressure and ensure a low CO2 concentration. They also facilitate and allow full freedom of movement without creating strong pressure fluctuations. Additional splash cover made of suit material.

External Variant:

External air source
The air source (blower or compressed air control valve) is worn outside the suit and delivers air at 160-300 l/min into the suit via a breathing hose.

Hose connection
Der flexible Atemluftschlauch wird oberhalb der Haube am Adapter über das einfache **e-breathe Klick-System** sicher befestigt.

Inside variant:

Internal blower
The blower is worn inside the suit and delivers air at 160-200 l/min into the suit via a breathing hose.

Display window inside the suit showing the
filter status, the current remaining run time and the current volume flow.

Hose connection / Breathing air hose
Inside, the flexible breathing air hose can be attached above the hood or directly in front of the mouth.

Optionally, a replaceable mouthpiece can be mounted on the breathing air hose for emergency situations.

e-breathe Chemical Suits

Overpressure protective suit

Overpressure Suit: Chemical Inside				
Article Name:			Art.-No.	Art.-No.
Inside with e-Flow PAPR				
e-breathe Chemical Inside Size S	Body height: 164-170cm	Chest width: 84-92cm	**Grey**	**White**
Model: Internal blower e-Flow, Tapered sleeve, Boot cover booties			**322009121**	**322009141**
Model: Internal blower e-Flow, Conical sleeve, Footies with outsole			On request	On request
e-breathe Chemical Inside Size M	Body height: 170-176cm	Chest width: 82-100cm		
Model: Internal blower e-Flow, Tapered sleeve, Boot cover booties			**322009122**	**322009142**
Model: Internal blower e-Flow, Conical sleeve, Footies with outsole			On request	On request
e-breathe Chemical Inside Gr. L	Body height: 176-182cm	Chest: 100-108cm		
Model: Internal blower e-Flow, Tapered sleeve, Boot cover booties			**322009123**	**322009143**
Model: Internal blower e-Flow, Conical sleeve, Footies with outsole			On request	On request
e-breathe Chemical Inside Size XL	Body height: 182-188cm	Chest: 108-122cm		
Model: Internal blower e-Flow, Tapered sleeve, Boot cover booties			**322009124**	**322009144**
Model: Internal blower e-Flow, Conical sleeve, Footies with outsole			On request	On request
e-breathe Chemical Inside Size XXL	Body height: 188-203cm	Chest: 122-135cm		
Model: Internal blower e-Flow, Tapered sleeve, Boot cover booties			**322009125**	**322009145**
Model: Internal blower e-Flow, Conical sleeve, Footies with outsole			On request	On request
PM Chemical Inside Training / Exercise Suit For training and practice purposes, a special trainer version with Velcro closure is offered so that the suit can be opened again. It is for training and education purposes only.			On request	On request
Inside with PM Proflow PAPR				
PM Chemical Grey Inside Size S	Body height: 164-170cm	Chest: 84-92cm	**Grey**	
Model: Internal blower Proflow, Tapered sleeve, booties with boot covers			**700009121**	-
Model: Internal blower Proflow, Conical sleeve, Footies with outsole			On request	-
PM Chemical Grey Inside Size M	Body height: 170-176cm	Chest: 82-100cm		
Model: Internal blower Proflow, Tapered sleeve, booties with boot covers			**700009122**	-
Model: Internal blower Proflow, Conical sleeve, Footies with outsole			On request	-
PM Chemical Grey Inside Size L	Body height: 176-182cm	Chest: 100-108cm		
Model: Internal blower Proflow, Tapered sleeve, booties with boot covers			**700009123**	-
Model: Internal blower Proflow, Conical sleeve, Footies with outsole			On request	-
PM Chemical Grey Inside Size XL	Body height: 182-188cm	Chest: 108-122cm		
Model: Internal blower Proflow, Tapered sleeve, booties with boot covers			**700009124**	-
Model: Internal blower Proflow, Conical sleeve, Footies with outsole			On request	-
PM Chemical Grey Inside Size XXL	Body height: 188-203cm	Chest: 122-135cm		
Model: Internal blower Proflow, Tapered sleeve, booties with boot covers			**700009125**	-
Model: Internal blower Proflow, Conical sleeve, Footies with outsole			On request	-
PM Chemical Grey Inside Training / Exercise Suit For training and practice purposes, a special trainer version with Velcro closure is offered so that the suit can be opened again. It is for training and education purposes only.			On request	

e-breathe Chemical Suits

Overpressure protective suit

Overpressure Suit: PM / e-breathe Chemical Outside				
Article Name:			Art.-No.	Art.-No.
Outside with PAPR e-breathe e-Flow & PM Proflow				
Chemical Outside Size S	Body height: 164-170cm	Chest: 84-92cm	**Grey**	**White**
Model: External air source, Tapered sleeve, Boot cover booties			**700009211**	**322009131**
Model: External air source, Tapered sleeve, Footies with outsole			On request	On request
Chemical Outside Size M	Body height: 170-176cm	Chest: 82-100cm		
Model: External air source, Tapered sleeve, Boot cover booties			**700009212**	**322009132**
Model: External air source, Tapered sleeve, Footies with outsole			On request	On request
Chemical Outside Size L	Body height: 176-182cm	Chest: 100-108cm		
Model: External air source, Tapered sleeve, Boot cover booties			**700009213**	**322009133**
Model: External air source, Tapered sleeve, Footies with outsole			On request	On request
Chemical Outside Size XL	Body height: 182-188cm	Chest: 108-122cm		
Model: External air source, Tapered sleeve, Boot cover booties			**700009214**	**322009134**
Model: External air source, Tapered sleeve, Footies with outsole			On request	On request
Chemical Outside Size XXL	Body height: 188-203cm	Chest: 122-135cm		
Model: External air source, Tapered sleeve, Boot cover booties			**700009215**	**322009135**
Model: External air source, Tapered sleeve, Footies with outsole			On request	On request
Chemical Outside Training / Exercise Suit For training and practice purposes, a special trainer version with Velcro closure is offered so that the suit can be opened again. It is for training and education purposes only.			On request	On request

e-breathe Splash Inside

Overpressure Suit

The e-breathe Splash is a one-piece overpressure respiratory protection suit that provides the highest level of protection against solid and liquid chemicals as well as radioactive contamination. The suit is used in combination with an approved air source: e-breathe e-flow PAPR

Inside: Internal PAPR

The blower is worn inside the suit (only the filters are outside) to avoid a contamination of the blower. The associated PAPR provides a constant (adjustable) fresh air flow of 160-200 litres per minute, via the breathing hose into the air duct of the integrated hood. This ensures that the user is reliably supplied with sufficient breathable air. The exhaled air exits the suit via four exhaust valves.

Protective Suit for hardest conditions

The material of the e-breathe Splash consists of a high-quality elastomer fabric with a special foil laminate. Due to the resulting durability and mechanical resilience, the suit can be used in a wide range of applications.

high safety and flexibility

Equipped with a visor, booties and conical sleeves, it offers high safety and flexibility. The suit is equipped with booties and can be used with all suitable boots. The conical sleeve enables a liquid-tight connection between glove and suit either by taping with chemical-resistant tape or by using the e-breathe glove adapter system.

Emergency function with emergency hose (not suitable for compressed air)

In the exceptional event of a blower failure or if the danger zone cannot be left in time, the user can supply himself with breathable air by using an emergency hose. For this purpose, a mouthpiece is attached to the end of the breathing air hose. In an emergency, the user can use his own lung power to suck in breathable and filtered air through the breathing air hose and the connected blower.

maximum comfort

The suit is manufactured in a Y-cut and allows the user maximum freedom of movement. The particular shape allows the user to reach inside the suit at any time. The air-permeable neck seal with drawstring not only ensures an optimum air flow inside the hood, it also allows the excess air to flow into the body area of the suit, thereby providing indirect cooling and improved air circulation.

Optional add-ons and individual customization:

The equipment can optionally be provided with individual marking on arm, back and chest in black lettering on customer request. A special and more economical trainer version is available for exercise and training purposes. It is made of a non-chemical-resistant PVC coating on polyester fabric and is used exclusively for training purposes.

Made in Germany

In order to guarantee a high quality of the products the production of the suit takes place in Germany. Also the complete service, maintenance and repair of the suits is carried out in Germany. In this way, downtimes due to long transport routes and/or poor availability of spare parts are minimised and the rapid re-use of a defective suit is guaranteed.

e-breathe Splash Inside

Overpressure Suit

Product Features:

- made in Germany
- high chemical & mechanical resistance
- maximum protection and comfort
- clear PC visor offers a large all-round view
- exchangeable gloves and booties for use with different boots and gloves
- suitable for beard and spectacle wearers

Application areas:

- Fire Department
- Emergency and Rescue Organisations
- Industrial Applications
- Oil, gas, chemical industry
- Sewage industry
- Authorities / Public Safety
- Police / Military

Approvals:

- EN 12941: TH3 with blower filter unit
- EN 14605: Type 3B liquid-tight protective suits
- EN 14605 type 4B spray-tight protective suits
- EN 1073-2: protection against solid radioactive particles
- EN 14126: Type 3B / 4B protection against infectious agents
- EN 13688: Protective clothing General requirements

Mechanical properties		Vautex Elite
Norm		Class
EN 530	Abrasion resistance	6
ISO 7854	Flex cracking resistance	5
ISO 7854	Flex cracking resistance at low Temperatures (-30 °C)	2
ISO 9073-4	Trapezoidal tear resistance	5
EN ISO 13938	Burst strength	6
EN ISO 13934-1	Tensile strength	6
EN 863	Puncture resistance	3
EN 13274-4	Ignition resistance	3
EN ISO 13935-2	Seam strength resistance	6

e-breathe Splash
Overpressure Suit

Panoramic Visor
The Anti-Fog visor offers a large field of vision.

Neck Collar
Adjustable, air-permeable neck collar for sufficient airflow in the hood. Allows excess air to flow into the body area for cooling.

Compressed Air Supply (optional)
In an emergency, the user can be supplied with compressed air via the emergency valve using a compressed air adapter.

Liquid-tight Zipper
Access at the front with flexible and liquid-tight zipper.

e-breathe Glove Adapter System
The e-breathe glove adapter system enables the use with different gloves. Thanks to the Protect Clip Adapter, each glove can be connected liquid-tight to the suit.

Reinforcements at Knees & Elbows
Reinforced arms and legs for toughest working conditions.

Inner Chest Pocket (optional)
The suit optionally has a breast pocket inside the suit, e.g. for walkie-talkie.

Integrated booties + boot cover (optional)
The booties are worn in boots or shoes.

Optionally, the suit can be made with a boot cover. The covers prevent liquid from running into the boots.

Attached Boots (optional)
The boot can be manufactured optionally with attached safety boots.

Material
- High chemical resistance
- Strong mechanical strength

Elastomer-coated film/fabric carrier; polyamide carrier fabric; butyl inner layer; welded seams

e-breathe Splash

Overpressure Suit

Inside Suit:
Hose Connection / Breathing Air Hose

The flexible breathing air hose can be attached above the hood or directly in front of the mouth. Optionally, a replaceable mouthpiece can be attached to the breathing air hose for emergency situations.

Inside Suit:
Internal PAPR

The blower is worn inside the suit and supplies fresh air at a rate of 160-200 l/min into the suit via a breathing tube.

Display window inside the suit indicating the filter status, the current remaining operation time and the current volume flow.

- 3 warning devices
- low noise level
- exchangeable battery
- optionally with filter shower caps

Four Exhalation Valves (1-4)

Two valves at the head and two at the legs regulate the air pressure and ensure a low CO2 concentration. In addition, they allow full freedom of movement.

e-breathe Splash Inside
Overpressure protective suit

Overpressure protective suit: e-breathe Splash Inside				
Item name:				Item no.
Inside with PAPR e-Flow				
e-breathe Splash Inside Size S	Body height: 150-165cm	Chest: 84-114cm	Waist: 74-106cm	
Model: Internal PAPR, Footies, Conical sleeve				On request
Model: Internal PAPR, Conical sleeve, attached Boots (specify size)				On request
e-breathe Splash Inside Size M	Body height: 160-175cm	Chest: 84-114cm	Waist: 74-106cm	
Model: Internal PAPR, Footies, Conical sleeve				On request
Model: Internal PAPR, Conical sleeve, attached Boots (specify size)				On request
e-breathe Splash Inside Size L	Body height: 170-185cm	Chest: 84-114cm	Waist: 74-106cm	
Model: Internal PAPR, Footies, Conical sleeve				**322008143**
Model: Internal PAPR, Conical sleeve, attached Boots (specify size)				**322008133**
e-breathe Splash Inside Size XL	Body height: 180-205cm	Chest: 104-124cm	Waist: 96-112cm	
Model: Internal PAPR, Footies, Conical sleeve				**322008144**
Model: Internal PAPR, Conical sleeve, attached Boots (specify size)				**322008134**
e-breathe Splash Inside Gr.XXL	Body height: 200-215cm	Chest: 104-124cm	Waist: 96-112cm	
Model: Internal PAPR, Footies, Conical sleeve				On request
Model: Internal PAPR, Conical sleeve, attached Boots (specify size)				On request
e-breathe Splash Training / Exercise Suit A special and more economical trainer version is offered for exercise and training purposes. It is made of a non-chemical resistant PVC coating on polyester fabric and is for training and education purposes only.				On request

Individual Suit Extras: e-breathe Splash	
Item name:	Item no.
e-breathe Splash Chest Pocket Inside Size 1 = 70 x 35 x 95 / Size 2 = 80 x 50 x 190 / Size = 90 x 65 x 220 / Size = 90 x 40 x 300	On request
e-breathe Splash Labelling Outside max. height of letters 100 mm / max. length 500 mm	On request

e-breathe Chemical Suits / Splash

Spare Parts & Accessories

Spare Parts & Accessories: e-breathe Chemical Suits / Splash		
Article Name:	Part No.	Image
e-breathe Exhalation Valve **e-breathe Flutter Valve**	**23010300** **322004045**	
e-breathe Exhalation Valve Product Protection **e-breathe Product Protection Fleece (PU 50)**	**23010309** **101052692**	
e-breathe Exhalation Valve Closure Caps	**230103010**	
e-breathe GSA Adapter	**116010806**	
e-breathe Adapter Emergency Ventilation **e-breathe ESA Sealing Plug**	**322004051** **322004052**	
e-breathe ESA Adapter **e-breathe ESA Emergency CA Adapter**	**322004053** **322004058**	
Breathing Air Hoses for Overpressure Protective Suits	see chapter Breathing air hose	

Accessories: e-breathe Chemical Suits / Splash		
Article Name	Part No.	Image
Protective Boots Suitable protective boots are available on request, depending on requirements.	On request	
Protective Gloves Suitable protective gloves are available on request, depending on requirements.	On request	
Undergarment Moisture-absorbing garments for more comfort when working with protective suits.	70001260x Size M-XL	

Respiratory Accessories

In this chapter you will find our accessories which can be used with our respiratory protection systems. More information can be found in our separate product brochure.

Breathing Air Hose
Fixed length
Flexible length
EPDM (heat resistant)

Protective covers for breathing hoses
- Limited-Use
- Reusable
- Aluminized

Carrying Devices
Smartbelt Back Belt System
Belts
Comfort Belts
Shoulder Straps
Back Straps

e-breathe
Glove Adapter System
For overpressure protective suits and Type 3 protective suits.

e-breathe Glove Adapter System

Respiratory Accessories

The e-breathe glove adapter system enables a liquid-tight connection of elastomer gloves with all protective suits of class III type 3, 4, 5 or 6.

The black sealing ring ensures a firm connection between suit and glove. Depending on the selected glove and the thickness of the suit material, the sealing ring can be attached or removed.

The ring is attached to the white adapter ring and snaps firmly into the front groove of the ring. The adapter ring is completely clamped into the glove with the sealing ring in the front groove. The prepared glove is then inserted into the sleeve of the suit until the adapter ring reaches the sleeve hem.

Finally, the yellow Protect clip is clicked from the outside over the sleeve onto the adapter ring. The clip on the Protect-Clip is used to loosen the glove adapter after use. A glove adapter that has not been damaged by use can be used again and again.

Adapter Ring + **Distance Ring** + **Protect-Clip**

e-breathe Glove Adapter System

Respiratory Accessories

e-breathe Lock-Tool (Assembly Tool)

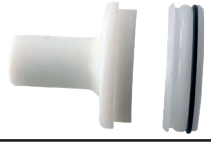
The e-breathe Lock Tool is available as an optional tool. It is designed to assist with the assembly/preparation of suits and to speed up work processes.

It is particularly suitable for locations where users need to prepare many suits for operation (e.g. fire brigades, hospitals and laboratories) and simplifies the workflow.

e-breathe Opener (Unlocking Tool)

The e-breathe Opener is available as an optional unlocking tool. It is designed to facilitate and accelerate the disassembly of the glove adapter.

Especially for very thick gloves or larger applications, for users who have to disassemble many suits after use (e.g. fire brigades or hospitals), the Opener simplifies workflows.

Spare Parts & Accessories: e-breathe Glove Adapter System		
Article Name	Part No.	Image
e-breathe Glove Adapter System (PU 2)	**302001115**	
e-breathe Protect-Clip (PU 2) **e-breathe Protect-Clip without clip(PU 2)**	**230002002** **302991115**	
e-breathe Distance Ring (PU 2)	**142002005**	
e-breathe Adapter Ring (PU2)	**230002001**	
e-breathe Opener Optional unlocking tool	**322002116**	
e-breathe Lock-Tool V 2.0 Optional assembly tool	**322002115**	

e-breathe Smartbelt Backbelt System

Respiratory Accessories

Individual adaptation thanks to modular design

The Smartbelt is a back carrying system which can be optimally adapted to the individual needs of the user. The system is characterized by a modular design. This ensures the highest possible flexibility for the user. The modules can be combined with each other depending on the intended use and thus enable five different carrying options.

The safety push buttons allow the modules to be assembled without additional tools. This simplifies assembly for the user and saves time.

Ergonomics & Comfort

The core of the carrying system forms the so-called wings in connection with the innovative e-breathe Banjoonett-closure. The locking system has a double function as a swivel joint for the wings and at the same time as a connecting element for the Y-connector. Due to the central and symmetrical position in every combination, the swivel joint always ensures a balanced weight distribution.

The contour of the back padding and the breathable functional foam ensure constant ventilation of the back. As a result, warm air and moisture are better removed. The honeycomb structure ensures a secure hold and comfortable wearing comfort even during longer periods of use.

Product Characteristics:

- Quick mounting of the Smartblower
- High wearing comfort
- Optimum weight distribution
- Five different carrying combinations
- Simple, fast & tool-free assembly/disassembly
- Maximum freedom of movement

e-breathe Smartbelt Backbelt System

Respiratory Accessories

Backpack Harness
The straps are made of an air-permeable material and are adjustable in size.

Bayonet Closure
Adapter for the Y-connector and the swivel joint, in order to to adjust the smartbelt.

Back Cushion
For a small contact surface and maximum air circulation.

Y-Connector
Used for 2-filter operation of the Smartblower.

SVE Strap
Mounting bracket for the SVE:
- Horizontal: hip position
- Vertical: Backpack position

Safety Buttons
Safety buttons to adjust the different carrying positions.

Blower Mount
Quick and safe mounting for blower units.

e-breathe Smartbelt Backbelt System

Respiratory Accessories

Spare Parts & Accessories: e-breathe Smartbelt		
Article Name	Part No.	Image
Smartbelt Backbelt System Consists of: Backpack harness, wings, buckle strap, blower belt & storage bag	**322003002**	
Smartbelt Backbelt Consists of: Backpack harness & wings	**322003008**	
Smartbelt Hipbelt Consists of: Buckle strap & wings	**322003009**	
Components:		
Blower Belt For use with: BeltClip & Smartbelt Backpack	**322003003**	
Smartbelt Backpack Harness	**322003004**	
Smartbelt Wings	**322003005**	
Smartbelt Buckle Strap	**322003006**	
Smartbelt Belt Extension	**322003010**	
Smartbelt Storage Bag	**322003013**	

Carrying Devices
Order Information

Respiratory Accessories: Carrying Devices			
Article Name	Part No.	For use with	Image
e-breathe Comfort Belt Pro • High wearing comfort • Back cushion with small contact surface and max. air circulation • Optimum weight distribution	**322003003**	e-breathe e-Flow, PM Proflow SC	
e-breathe Shoulder Strap Pro • High wearing comfort for long-term use • Free choice of blower position by adjusting the back straps • Hose penetration	**302063596**	e-breathe e-Flow, PM Proflow SC	
Shoulder Strap Dekon • Easy and quick cleaning • Free choice of blower position by adjusting the back straps • Good weight distribution	**302001012**	e-breathe e-Flow, PM Proflow SC	
e-breathe Back Carrying Plate Pro • High wearing comfort for long-term use • Back cushion with small contact surface and air circulation • Optimum weight distribution • Quick and safe mounting of the blower unit	**322001057**	e-breathe e-Flow, PM Proflow SC	
e-breathe Belt Pro **e-breathe Belt Pro (+ Metal buckle)** • Easily adjustable size • Belt textile woven • Belt buckle made of plastic or metal	**108062786** **108062787**	e-breathe e-Flow, PM Proflow SC, e-breathe e-Line, e-breathe FDS	
e-breathe Leather Belt • Optimal for welding work • Quick and safe mounting of the blower unit • Leather belt	**190062790**	e-breathe e-Flow, e-breathe e-Line, e-breathe FDS	
e-breathe Belt Dekon • Easy and quick cleaning • PVC belt	**302062996**	e-breathe e-Flow, PM Proflow SC, e-breathe e-Line	

e-breathe Breathing Air Hoses

Respiratory Accessories

Breathing Air Hose Vario:

The hose is attached to the multimask via a simple click connection.
By rotating the Vario connection, it is possible to regulate the air flow over three positions completely according to your own requirements via the air ducts arranged inside the mask frame.

Breathing Air Hose MM:

The hose is attached to the multimask via a simple click connection. The blade and arresting point of the MM connection have been removed. This results in a constant flow of air into the mask. By removing the arresting point, the hose rotates better, thus preventing the hose from twisting.

Breathing Air Hoses: e-breathe Multimask

Article Name	Part No.	Material	For use with	Image
Air Hose Vario Connection with air control	322000996	PU- flexible	e-breathe Multimask / e-breathe Multimask Pro	
	302711105	PU - fixed length		
	302711107	EPDM		
Breathing Air Hose MM free-rotating connection	322000997	PU- flexible	e-breathe Multimask / e-breathe Multimask Pro	
	302711104	PU - fixed length		
	302711106	EPDM		

Breathing Air Hose Round Thread:

The breathing air hose is equipped with a DIN standard 40 mm round thread (RD40).

The breathing air hose can be used with full masks and half masks with a DIN round thread connection according to EN148-1.

Breathing Air Hoses: with DIN connection

Article Name	Part No.	Material	For use with	Image
Breathing Air Hose e-breathe RG	302711100	PU- flexible	Full Masks & Half Masks with DIN round thread-connection	
	302711103	PU - fixed length		
	302711108	EPDM		

e-breathe Breathing Air Hoses

Respiratory Accessories

Breathing Air Hose Inside:

The flexible breathing hose can be placed at the top of the hood of the Inside suit or directly in front of the mouth.

Breathing Air Hose ESA:

Optionally, a replaceable mouthpiece can be attached to the breathing air hose for emergency situations. In the exceptional event of a blower failure or if the danger zone cannot be left in time, the user can supply himself with breathable air using the emergency hose.

Breathing Air Hoses: e-breathe Overpressure Suits Inside

Article Name	Part No.	Material	For use with	Image
Breathing Air Hose ESA without Mouthpiece	322004055	PU- flexible	Chemical Inside, e-breathe Splash Inside	
	322004056	PU - fixed length		
	322004054	ESA Mouthpiece		
Breathing Air Hose e-breathe Inside	302001110	PU - flexible	Chemical Inside, e-breathe Splash Inside	
	302001111	PU - fixed length		

Breathing Air Hose Click:

The breathing air hose can be securely attached using the simple e-breathe Click System. Two adapter rings are attached to the outside of the head caps of the overpressure hoods and overpressure suits for this purpose. The adapter rings are screwed from the inside and outside between the hood material.
The connection can rotate freely in the adapter rings so that twisting of the breathing air hose is prevented.

Breathing Air Hoses: e-breathe Overpressure Hoods / e-breathe Suits Outside

Article Name	Part No.	Material	For use with	Image
Breathing Air Hose e-breathe Click	302001109	PU - flexible	e-breathe Multi-Hood, PM Lab Hood AV, PM Chemical Hood, Chemical Outside, Splash Outside	
	302011109	PU - fixed length		

Breathing Air Hoses: Accessories & Spare Parts

Article Name	Part No.	Material	For use with	Image
Protective cover for breathing air hoses	116001041	Limited-Use	compatible with all e-breathe breathing air hoses	
	500700062	Reusable		
	223100403	Aluminized		
Safety Rubber for Hose (PU 4)	322000995	EPDM	compatible with Multimask & Click breathing air hoses	
Hose Adapter Internal Thread	23010100	PA	compatible with DIN round thread-connections	

Cleaning & Storage

In this chapter you will find products for cleaning and storing of your respiratory protection equipment.

Care & Maintenance Periods:

Protective equipment that is in use day after day is exposed to many conditions and impacts, such as dust, heat, fumes, moisture and general wear and tear. To ensure your safety and extend the life of your protective equipment, it should be properly stored, regularly cleaned and professionally maintained according to the prescribed intervals.

For professional cleaning and storage, we have created special cleaning and storage kits for you.

Our cleaning kits and detergents protect your equipment and prevent damage during cleaning.

Our storage boxes and service box are used for proper storage of your equipment and protect it from external influences. You can also easily send your equipment in the service box to your authorized service partner for annual maintenance.

System components	Tasks	Before use	After use	quarterly	semiannual	Annual	If required
Breathing connection	Visual, leak and function test	x			x		
	Functional test / check by the user	x					
	Cleaning and disinfection		x			x	x
	Have maintenance carried out by e-breathe Service					x	x
Face seal	to be replaced depending on condition			x			x
Visor seal	to be replaced depending on condition, every six months at the latest				x		x
Breathing air hose	Visual, leak and function test	x			x		
	Functional test / check by the user	x					
	Cleaning and disinfection		x			x	x
	Have maintenance carried out by e-breathe Service					x	x
Filter	Check of expiry date	x					
	Visual inspection	x					
	Check filter capacity	x					x
Blower unit (incl. battery and charger)	Visual inspection by user	x					
	Check battery charge level	x					
	Recharge battery	x	x		x		x
	Battery replacement						x
	Filter replacement				x		x
	Check volume flow and warning devices	x					x
	Replacing the seals					x	
	Cleaning and disinfection		x			x	x
	Have maintenance carried out by e-breathe Service					x	

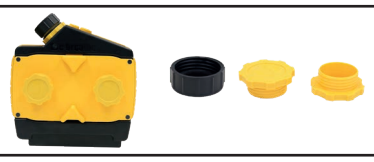
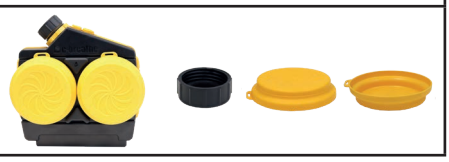
Important notice:
Please note that the stated replacement intervals are recommendations. If necessary, the equipment components must be replaced at shorter intervals.

e-breathe Cleaning & Storage

Respirator maintenance

Cleaning & Storage Kits

The sealing cap closes the air inlets (filter connections) and the air outlet (hose connection) of the respirator blower. This prevents water and detergent from entering the interior of the unit during cleaning, protecting the unit from possible damage. During storage, the caps prevent moisture or contaminants from entering the inside of the device. The caps provide optimal protection for your device against external influences and increase the service life of your device and ensure that it can be used quickly.

Accessories: Cleaning & Storage		
Article name:	Art. no.	Image
Cleaning & Storage Kits for Respirator Blowers:		
e-breathe Smartblower Cleaning / Storage Kit	**500510046**	
Proflow Cleaning / Storage Kit	**500510046**	
e-breathe e-flow Cleaning / Storage Kit - Filter-Box	**500510048**	
e-breathe e-flow Cleaning / Storage Kit - PAD-Box	**500510049**	

Cleaning caps

The caps allow sealing of round thread connections according to EN 148-1. This allows sealing of the filter connection on filters, which protects the filter from moisture and dust and increases its service life. They can also be used to close airways on breathing air hoses, full face masks or half masks.

Accessories: Cleaning & Storage		
Article name:	Art. no.	Image
Cleaning & Storage Kits for Respirator Blowers, Breathing Air Hoses, Full & Half Face Masks:		
e-breathe Cleaning Cap RT External Thread	**322002223**	
e-breathe Cleaning Cap RT Female Thread	**200510047**	
e-breathe Cap for e-Flow PAD Box / Filter cover	**322002225**	

e-breathe Cleaning & Storage

Respiratory Accessories

Cleaning Bag:

The quick dry wash bag features a simple drawstring for quick and easy opening and closing and can be used for cleaning full face masks, half masks and face shields in a washing machine. The bag allows cleaning of the head parts in the washing machine without a previous disassembly of the individual parts and prevents damage or scratching of the visor and mask during cleaning in a washing machine.

Detergent

Liquid disinfectant concentrate for the disinfection of respiratory protection equipment. For manual cleaning with a cloth and sponge or for disinfection in an immersion bath.

Accessories: Cleaning & Storage		
Article name:	Art. no.	Image
Cleaning accessories		
e-breathe Cleaning Bag (Washing bag for full face masks and multimask for cleaning in a washing machine).	**322002108**	
Detergent		
PM Rescue Clean Disinfectant	**129001000**	
PM PSA Ultra Immersion Disinfectant	**129001003**	
Basic Spray Head for Disinfectant	**129001001**	

Service Box:

The service box allows proper storage of your entire respiratory protection system (blower unit, headpiece & breathing air hose). The handle makes the service box easy to transport. In addition, your respiratory protection equipment can be easily sent in for annual maintenance with the service box.

Accessories: Cleaning & Storage		
Article name:	Art. no.	Image
Storage boxes		
e-breathe Service Box M - 40cm long x 30cm wide x 22cm height	**119458610**	
e-breathe Service Box L - 40cm long x 30cm wide x 33cm height	**119458611**	
PM Storage case - 42cm long x 32cm wide x 17cm height	**119458616**	

Ready-Packs

In this chapter you will find our Ready Packs.

Ready-Packs consisting of:

For those who don't already have respiratory protection equipment, our Ready Packs are a convenient all-in-one solution. These consist of a complete air source* with belt, headpiece, matching breathing air hose and a storage box.

*** Blower unit incl. battery, charging station, belt, cleaning kit, pre-filter holder & pre-filter. (Filters must be ordered separately)**

*** Compressed air control valve incl. DRV adapter and belt (Compressed air filter station / hoses must be ordered separately)**

NEW: Optimal protection for your system.
All our Ready Packs are equipped with our practical service boxes. These protect your equipment from external influences during storage and are ideal when shipping your equipment for annual maintenance.

Ready-Packs

Order Information

Ready-Packs: PAPR e-breathe e-Flow		
Article Name	Part No.	Image
Set consists of: Blower unit, PAD box, Li-Ion battery, charging station, comfort belt, cleaning kit, 2x e-breathe pre-filter holders, 20x e-breathe pre-filters, breathing air hose + head section and e-breathe service box.		
e-breathe Ready-Pack e-Flow with **Multimask Pro** Foam	**322005240**	
e-breathe Ready-Pack e-Flow with **Multimask Pro Mesh**	**322005250**	
e-breathe Ready-Pack e-Flow with **Multimask Pro Silicone**	**322005260**	
e-breathe Ready-Pack e-Flow with **SH1 Limited Use** with **SH2 Premium**	**3220061xx** **00** **50**	
e-breathe Ready-Pack e-Flow with **LH1 Limited Use** with **LH2 Premium**	**3220062xx** **00** **50**	
e-breathe Ready-Pack e-Flow with **Multi-Hood Premium** & Head or helmet holder	**3220056xx** Helmet H. =00 Head H. = 10	
e-breathe Ready-Pack e-Flow with **PM Laborhaube Limited-Use** with **PM Laborhaube Premium**	**3220053xx** **00** **01**	
e-breathe Ready-Pack e-Flow with **PM Panarea Pro**	**322005900**	

Ready-Packs: PAPR PM Proflow SC		
Article Name	Part No.	Image
Set consists of: Blower unit, rechargeable battery, charger, comfort belt, breathing air hose + headpiece & service box.		
PM Proflow 2-SC 160 l/min. Set with **Multimask Pro Foam** with **Multimask Pro Mesh** with **Multimask Pro Klick**	**322064xxx** **304** **305** **401**	
PM Proflow 2-SC Set with **PM Laborhaube Limited-Use** with **PM Laborhaube Premium**	**3020010xx** **21** **32**	

Ready-Packs
Order Information

Ready-Packs: PAPR e-breathe Smartblower		
Article Name	Part No.	Image
Set consists of: Motor, SVE hood operation (battery), charging station, belt blower, belt clip, SVE spiral cable 2.0 DV, cleaning kit, 1x e-breathe particle filter P3, 1x pre-filter holder, 20x pre-filters, breathing air hose click flexible + hood & service box.		
Ready Pack One Filter-System with **PM Chemical Hood** with **PM Laborhaube AV**	**322002120** **322002119**	
The Ready-Pack consists of: Motor, SVE full mask operation (rechargeable battery), charging station, belt blower, SVE spiral cable 2.0 DV, cleaning kit, 1x e-breathe particle filter P3, 1x pre-filter holder, 20x pre-filters, full mask Panarea Pro & service box.		
Ready Pack Full Mask-System with **Full Mask Panarea Pro**	**322002133**	
The Ready-Pack consists of: Motor, SVE hoods / single filter operation (rechargeable battery), charging station, SVE spiral cable 2.0 DV, Smartbelt hip belt, Y-connector, cleaning kit, 2x e-breathe particle filter P3, 2x pre-filter holder, 20x pre-filter, breathing air hose + hood & e-breathe service box.		
Ready-Pack Two Filter-System with **PM Chemical Hood** with **PM Laborhaube AV**	**322002127** **322002126**	

Ready-Packs: e-breathe e-Line Compressed Air Control Valve		
Article Name	Part No.	Image
Set consists of: e-breathe e-Line DRV, belt, DRV compressed air adapter, breathing air hose + headpiece and e-breathe Service Box		
Ready-Pack e-breathe e-Line with **Multimask Pro Foam**	**322007110**	
Ready-Pack e-breathe e-Line with **Multimask Pro Mesh**	**322007120**	
Ready-Pack e-breathe e-Line with **Multimask Pro Silicon**	**322007130**	
Ready-Pack e-breathe e-Line with **PM Laborhaube AV Premium**	**322007140**	
Ready-Pack e-breathe e-Line with **Multi-Hood Premium** **& Head- or Helmet Holder**	**3220071** Helmet H. =50 Head H. = 60	

Recommendations for the selection of Filters

Please note that there may be more than one suitable filter type for many gases and vapours. For this reason, always refer to a current substance database (e.g. Gestis substance database) for this recommendation. Please do not hesitate to contact us if you have any questions regarding application and filter selection.

1. Use combination filter (combination of particle and gas filter)
2. P3 filter: only use once against radioactive substances & microorganisms
3. AX filters may only be used for one working shift
4. Substance is carcinogenic
5. Substance is absorbed through the skin: use overpressure protective suit
6. Substance may be considered as a sensitiser
7. Mercury filter: maximum application time 50 hours

Substance	CAS-Nr	Filter	Komm.
acetaldehyde	75-07-0	AX	3 / 4
acetamide	60-35-5	A+ P3	1 / 4
acetone	67-64-1	AX	3
acetylene	74-86-2	Isoliergerät	
acetyl chloride	75-36-5	B	
acrolein	107-02-8	AX	3
acrylamide	79-06-1	A+ P3	1 / 4 / 5
acrylonitrile	107-13-1	A	4
acrylic acid	79-10-7	B	
adipic acid	124-04-9	P3	
Aliphat. KW solution	8052-41-3	A	
allyl alcohol	107-18-6	A	
allylamine	107-11-9	K	5
allyl chloride	107-05-1	AX	3 / 5
aluminium chloride	7446-70-0	B+ P3	1
aluminium oxide	1344-28-1	P3	
formic acid	64-18-6	E	
ammonia	7664-41-7	K	
amyl acetate	628-63-7	A	
aniline	62-53-3	K	4 / 5
Antimony and Oxides	7440-36-0	P3	
antimony hydrogen	7803-52-3	B	
argon	-	Isoliergerät	
hydrogen arsenide	7784-42-1	B	4
arsine	7784-42-1	B	
asbestos	-	P3	2
barium	7440-39-3	P3	
benzaldehyde	100-52-7	A	
benzene	71-43-2	A	4
gas	86290-81-5	AX	3
benzotriazole	95-14-7	A+ P3	1
benzoyl chloride	98-88-4	B	
benzyl alcohol	100-51-6	A	
benzyl chloride	100-44-7	B	4
beryllium	7440-41-7	P3	4 / 6
prussic acid	74-90-8	B	5
Lead (inorg. verb., smoke & dust)	7439-92-1	P3	
bromine	7726-95-6	B	
butyl acetate	123-86-4	A	
Butanol (butyl alcohol)	71-36-3	A	
butyraldehydes	123-72-8	A	
Cadmium and inorganic compounds	7440-43-9	P3	4
calcium oxide	1305-78-8	P3	
chlorine	7782-50-5	B	
chlorine dioxide	10049-04-4	B	
chloroform	67-66-3	AX	3 / 4
hydrogen chloride	7647-01-0	B	
Chromic acid and chromates	1333-82-0	P3	4 / 6
Cobalt & anorg. verb. Dust & Smoke	7440-48-4	P3	6
cumene	98-82-8	A	5
Cyanides (CN)	57-12-5	B+ P3	1
cyclohexanol	108-93-0	A+ P3	1
cyclohexanone	108-94-1	A	
cyclopropane	-	Isoliergerät	
diacetone alcohol	123-42-2	A	
dichloroacetylene	-	Isoliergerät	
dichlorofluoromethane	-	Isoliergerät	
diphenyl	92-52-4	A+ P3	1
Diglycid ether (DGE)	2238-07-5	A	6
1,2-dichloroethane	107-06-2	A	
dimethylformamide	68-12-2	A	4 / 5
dimethyl sulfate	77-78-1	A	4 / 5
dioxane	123-91-1	A	4 / 5
Nitrous oxide (laughing gas)	-	Isoliergerät	
EDTA	60-00-4	P3	
ferric chloride	-	B+ E+ P3	1
Iron oxide (smoke)	1309-37-1	P3	
epichlorohydrin	106-89-8	A	4 / 5 / 6
acetic acid	64-19-7	B	
acetic anhydride	108-24-7	B	
Ethanol (ethyl alcohol)	64-17-5	A	
ethyl acetate	141-78-6	A	
ethyl acrylate	140-88-5	A	4 / 5 / 6
ethyl bromide	74-96-4	AX	3
ethyl chloride	75-00-3	AX	4
ethylenediamine	107-15-3	K	6
ethylene glycol	107-21-1	A	
ethylene oxide	75-21-8	AX	3 / 4 / 5
ethyl ester	60-29-7	AX	3
fluorine	7782-41-4	B	
Fluorides (F)	-	P3	
fluorosilicic acid	16961-83-4	B+ P3	1
hydrogen fluoride	7664-39-3	B	
formaldehyde	50-00-0	B	4 / 5 / 6
Freon 113	76-13-1	Isoliergerät	
furfural	98-01-1	A	
glutaraldehyde	111-30-8	A	6
glycol monobutyl ether	111-76-2	A	5
glycol monometylether	109-86-4	A	5

If the possibility exists, isloating devices can be used instead of the filters. If the gas concentration exceeds 0.5 vol% / 5000 ppm, isolation devices must be used.
However, compressed air hose equipment must not be used in environments where the concentration of contaminants is so high that life and limb are in immediate danger.

Substance	CAS-Nr	Filter	Komm.
Hydrazine	302-01-2	K	4 / 5 / 6
Hydrogen (hydrogen gas)	1333-74-0	Isoliergerät	
Hydroquinone	123-31-9	A+ P3	4 / 6
Isophorone	78-59-1	A	
Iodine	7553-56-2	P3	
Potassium hydroxide	1310-58-3	P3	
Potassium permanganate	7722-64-7	P3	
Carbon disulfide	124-38-9	Isoliergerät	
Carbon disulfide	75-15-0	AX	3 / 5
Carbon monoxide	630-08-0	Isoliergerät	
Cresol	-	A+ P3	1
Crystobalite	14464-46-1	P3	4
Copper	7440-50-8	P3	
Maleic anhydride	108-31-6	B+ P3	1 6
Manganese and anorganic compounds (mn)	7439-96-5	P3	
Melamine	108-78-1	Isoliergerät	
Methanol	67-56-1	AX	3 / 5
Metylamine	74-89-5	K	
Methyl acrylate	96-33-3	A	5 / 6
Methyl bromide	74-83-9	AX	3 / 5
Methylene bisphenyl isocyanate (MDI)	101-68-8	B+ P3	1 6
Methylene chloride	75-09-2	AX	4
Methyl ethyl ketone (MEK)	78-93-3	A	5
Methyl isobutyl ketone (MIBK)	108-10-1	A	5
Methyl iodide	74-88-4	AX	3 / 4 / 5
Methyl chloride	74-87-3	AX	3 / 4
Methyl chloroform	71-55-6	A	
Methyl metacrylate	80-62-6	A	5 / 6
Monomethylamine	74-89-5	K	
Morpholine	110-91-8	A	5
Sodium fluoride	7681-49-4	P3	
Sodium hydroxide	1310-73-2	P3	
Sodium hypochlorite	7681-52-9	B+ P3	1
Sodium perborate	10486-00-7	P3	
Sodium carbonate	497-19-8	P3	
Sodium silicate	6834-92-0	P3	
Nickel, metal	7440-02-0	P3	4 / 6
Nickel carbonyl	13463-39-3	Isoliergerät	4 / 5
Nitrobenzene	98-95-3	A	5
Nitrogen (nitrogen gas)	7727-37-9	Isoliergerät	
Nitroglycerin (glycerol trinitrate)	55-63-0	A	5
Nitroglycol	628-96-6	A	5
2-Nitropropane	79-46-9	A	4
Nitrous gases	-	Isoliergerät	
Octanes	111-65-9	A	
Organic peroxides	-	A+ P3	1
Oxalic acid	144-62-7	P3	
Ozone	10028-15-6	B	
PCBs (polychlorinated bi-phenyls)	-	A+ P3	1 / 4 / 5
Pentachlorophenol	87-86-5	P3	4 / 5
Perchloroethylene (tetrachloroethylene)	127-18-4	A	4 / 5
Perchloric acid	7601-90-3	B+ E	
Phenol	108-95-2	B+ P3	1 / 5

Substance	CAS-Nr	Filter	Komm.
p-Phenylenediamine	106-50-3	P3	6
Phosphine (hydrogen phosphide)	7803-51-2	B	
Phosphoric acid (vapors)	7664-38-2	B+ E+ P3	1
Phosgene (carbonyl chloride)	75-44-5	B	
Phthalic anhydride	85-44-9	P3	6
Piperazine	110-85-0	K+ P3	1 / 6
Piperidine	110-89-4	K	
2-propanol	67-63-0	A	
Propanoic acid	79-09-4	B	
Pyridine	110-86-1	A	
Quartz	14808-60-7	P3	4
Mercury (vapors)	7439-97-6	HG+ P3	5 / 6 / 7
Mercury (alkyl comp.)	7439-97-6	HG+ P3	5 / 6 / 7
Mercury (other than alkyl) (Hg)	7439-97-6	HG+ P3	5 / 6 / 7
Nitric acid	7697-37-2	B	
Sulfur dioxide	7446-09-5	E	
Sulfuric acid (vapors)	7664-93-9	E+ P3	1
Hydrogen sulfide	7783-06-4	B	
Selenium sulfide	7782-49-2	P3	4
Hydrogen selenide	7783-07-5	B	3
Silver nitrate	7761-88-8	P3	
Dust, inert	-	P3	
Nitrogen oxydul (laughing gas)	10024-97-2	Isoliergerät	
Nitrogen dioxide	10102-44-0	Isoliergerät	
Nitric oxide	10102-43-9	Isoliergerät	
Styrene	100-42-5	A	5
Sulfamic acid	5329-14-6	B+ P3	1
Turpentine (oil)	8006-64-2	A	5 / 6
Turpentine substitute	8052-41-3	A	
Tetraethyl lead (Pb)	78-00-2	A+ P3	1 / 5
Tetrahydrofuran	109-99-9	A	
Tetramethyl lead (Pb)	75-74-1	A+ P3	1 / 5
Tetrachloromethane	56-23-5	A	4
Tetrachloroethylene	127-18-4	A	5 / 6
Toluene	108-88-3	A	5
toluene diisocyanate (TDI)	91-08-7	Isoliergerät	4 / 6
Tributyl phosphate	126-73-8	A	
Tridymite	15468-32-3	P3	
Trichloroethane	71-55-6	A	
Trichloroethylene	79-01-6	A	4
Trimethylbenzene	526-73-8	A	
Trisodium phosphate	7601-54-9	P3	
Vanadium oxide dust	1314-62-1	P3	
Vinyl acetate	Vinylacetat	A	
Vinylidene chloride	75-35-4	AX	3
Vinyl chloride	75-01-4	AX	3 / 4 / 5
Vinyl toluene	25013-15-4	A	
Hydrogen fluoride	7664-39-3	B+ P3	1
Hydrogen peroxide	7722-84-1	Isoliergerät	
Xylene	1330-20-7	A	5
Zinc chloride, smoke	7646-85-7	P3	
Zinc oxide, smoke	1314-13-2	P3	
Zinc stearate	-	P3	

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