

# Dräger



D-5181-2009

**A mask for every task**  
Dräger X-plore® Twinfilter Series

Dräger. Technology for Life®



## Dräger X-plore® Twinfilter masks – Comfortable safety

If you combine Dräger's extensive knowledge of Dräger in respiratory protection technology with the sound practical knowledge of industrial and trade users, the result is an innovative respiratory protection series excelling in wearing comfort and versatility: the Dräger X-plore® Twinfilter series. Two half masks (Dräger X-plore® 3300 and Dräger X-plore® 3500) and one full face mask (Dräger X-plore® 5500) are usefully complemented by a wide range of bayonet filters offering suitable protection for many applications. The modern, compact design and the swept back position of the filters ensure unrestricted vision making the masks of the Dräger X-plore® Twinfilter masks the ideal companion for daily or periodic work. Special highlights include such accessories such as the Dräger X-plore® Pure adapter allowing the mask/filter combination to be individually configured to meet your specific application.

### Double-Layered Face Seal

Combined with triple sealing edges it provides secure protection and a tight fit for almost every face shape – in one mask!

### Large Visor

Made from polycarbonate or triplex allowing a large field of vision and ideal visibility while working. The Triplex material is characterised by high scratch, chemical and temperature resistance.

### 5-Point Head Harness

Provides fast and simple donning and doffing of the mask without catching and pulling on the hair.



### Dräger X-plore® 5500

The ideal full face mask for comprehensive respiratory and eye protection. Developed on the basis of proven and reliable technology.



### Dräger "FlexiFit" Head Harness

Pliable material ensures an excellent fit for varying head sizes. No pressure points and fits well under head gear.

### Innovative "X"-Guided Strap System

An easy to adjust harness that ensures ideal weight distribution resulting in comfortable wearing characteristics.



### New "DrägerFlex" Mask Body Material – X-plore® 3500

Especially developed for Dräger to provide the ultimate in skin comfort with excellent resilience.

#### Dräger X-plore® 3300

A durable economical half mask. The right choice for anyone requiring affordable and comfortable respiratory protection.

#### Dräger X-plore® 3500

A comfortable half mask for long term use in demanding environments. An innovative "drop down" system permits the removal of the mask without e.g. having to remove the head protection equipment.

The Dräger X-plore® Twinfilter masks combine flexibility, safety and comfort at the highest level:

- Selected materials for high-level protection and comfortable wearing sensation
- High wearing tolerance due to a fresh and appealing design
- Dräger-specific bayonet connection for easy and safe filter installation
- Even weight distribution on account of side filter connection
- “Swept back” concept for a wide and unrestricted field of vision

## OVERVIEW OF MASKS

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<b>Masks</b>	<b>Size</b>	<b>Order no.</b>
Dräger X-plore® 3300	S	R 55 331
	M	R 55 330
	L	R 55 332
Dräger X-plore® 3500	S	R 55 351
	M	R 55 350
	L	R 55 352
Dräger X-plore® 5500	Polycarbonate lens, universal size	R 55 270
	Triplex lens, universal size	R 56 655

# Particle filters

Where dust or particles arise a particle filter can provide perfect respiratory protection. Since filters are divided into different classes, the particle concern, and on occasion the concentration level, must be identified in advance. The particle filter classes indicate how efficient particles are filtered from the ambient air.

<u>Filter class</u>	<u>Particle efficiency (separation rating)</u>	<u>Max. permissible concentration of contaminants</u>
1	small	4x limit value with half masks / 5x limit value with full face masks
2	medium	12x limit value with half masks / 16x limit value with full face masks
3	large	48x limit value with half masks / 1000x limit value with full face masks

Values are the Nominal Protection Factors, taken from EN 529.  
Additional national and local regulations must be followed.

## Particle filters with housing

- P3 version
- Robust plastic housing for optimum protection of the filter media





## Pure filter: Particle filters without housing

- Light-weight and flexible
- Teardrop shape and eccentric connection for unrestricted view
- Flat design for ideal combination under a single visor
- Extremely versatile – can be used as a pure particle filter or in combination with gas filters
- Additional odour version for the filtration of nuisance odours below the permissible limit value

## Particle filter pads

- Versatile use: can be used as particle filters or in combination with Dräger X-plore® Gas filters and the pad cap
- Economic solution for frequent filter replacement

## OVERVIEW OF PARTICLE FILTERS











<u>Filter type</u>	<u>Filter class</u>	<u>Colour code</u>	<u>Order no.</u>
 Dräger X-plore® Pure	P2 R	<input type="checkbox"/>	6738353
	P3 R	<input type="checkbox"/>	6738354
 Dräger X-plore® Pure Odour	P3 R	<input type="checkbox"/>	6738391
 Particle filter with housing	P3 R	<input type="checkbox"/>	6738011
 Particle filter pad	P1 NR	<input type="checkbox"/>	6738001
	P2 R	<input type="checkbox"/>	6738002

R = particle filter is suitable for use during several work shifts  
NR = particle filter may only be used for max. one work shift

# Gas filters

Gases and vapours are often invisible, odourless and tasteless. Therefore, it is especially important to wear the correct respiratory protection when working with hazardous substances. These respiratory protection devices must demonstrate high wearing comfort – low weight, low breathing resistance and straightforward operation. The gas filters are identified by a colour code for easy and unmistakable identification.

## FILTER COLOUR CODES

Colour code	Filter type	Contaminants present
	A	Gases and vapours of organic compounds, boiling point > 65°C
	AX	Gases and vapours of organic compounds, boiling point ≤ 65°C
	B	Gases and vapours of inorganic compounds, e.g. chlorine, hydrogen sulphide, hydrogen cyanide
	E	Sulphur dioxide, hydrogen chloride
	K	Ammonia and organic ammonia derivatives
	CO	Carbon monoxide
	Hg	Mercury vapour
	NO	Nitrous gases including nitrogen monoxide
	Reactor	Radioactive iodine including radioactive iodomethane
	P	Particle

Filter class	Gas and vapours Capacity	Max. permissible contaminant concentration <sup>1)</sup>
1	small	0.1 vol.-% (1000 ppm) <sup>2)</sup>
2	medium	0.5 vol.-% (5000 ppm) <sup>2)</sup>
3	large	1.0 vol.-% (10000 ppm) <sup>2)</sup>

<sup>1)</sup> max. 50x limit value with half mask / max. 2000x limit value with full face mask (EN 529)

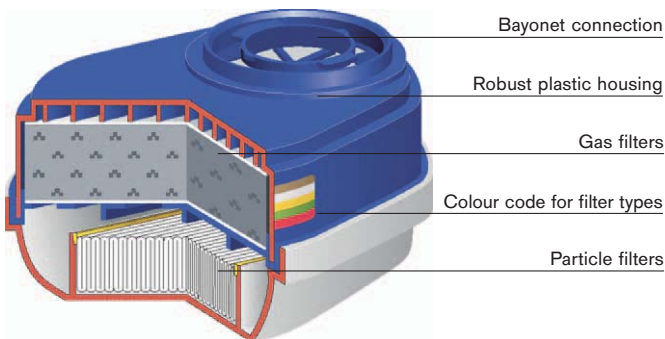
<sup>2)</sup> Values taken from EN 14387

- The gas filters of the Dräger X-plore® Bayonet series offer
- very long service life with low respiratory resistance
  - expansions of gas to combination filters
  - minimum shelf-life of 4 years

## OVERVIEW OF GAS FILTERS

Filter type / class	Colour code	Order no.
 A1		6738005
 A2		6738006
 A2B2		6738358
 A1B1E1		6738359
 A1B1E1K1		6738007

# Combination filters













In many applications particles, gases and vapours occur simultaneously. In such cases combination filters are used. Combination filters consist of a gas filter with an upstream particle filter.

For both filter components the same filter classes apply as for the individual gas or particle filters.

Ready-to-use combination filters are available for easy and safe handling. They contain both particle and gas filters in a plastic housing. In addition, the desired combination filter can be individually put together as in a modular system from gas and particle filters using an adapter (see: Accessories and combination options). The benefits of the Dräger X-plore® combination filters:

- Compact and light-weight
- Robust plastic housing
- With marking "R": approved for re-use during more than one work shift
- With marking "D": clogging test passed, i.e. even at high dust concentrations the breathing resistance remains low over a prolonged period of time
- Optional pre-filter prevents fast clogging of the particle filter with coarse dust and thus extends its service life

## OVERVIEW OF COMBINATION FILTERS






Filter type / class	Colour code	Order no.
 A1-P3 R D		6738015
 A2-P3 R D		6738016
 A2B2-P3 R D		6738368
 A1B1E1K1 Hg-P3 R D		6738017
 A2B2E2K2 Hg-P3 R D <sup>1)</sup>		6738369

<sup>1)</sup> only for use with full face mask

# Accessories and combination options

Flexibility and economy are important success factors in industry and trade. With the innovative accessories of the Dräger X-plore® Bayonet series gas and particle filters can be individually combined with each other to be able to respond flexibly and easily to changed conditions. This makes complete economic sense.

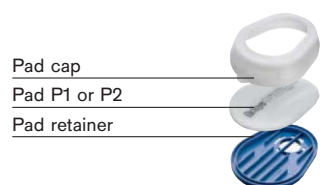
## ACCESSORIES

Filter type	Order no.
 Dräger X-plore® Pure Adapter	6738356
 Pre-Filter	6738159
 Pre-Filter cap	6737576
 Pad cap for the use of pads	6738038
 Pad retainer for the use of pads	6738039

The following diagram shows a small selection of the different combination options.

## COMBINATION OPTIONS

### Pad as particle filter



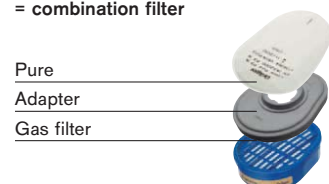
Pad cap  
Pad P1 or P2  
Pad retainer

### Pad in combination with gas filter = combination filter



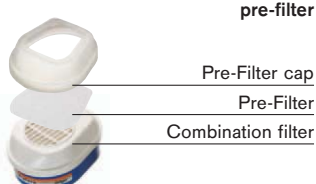
Pad cap  
Pad P1 or P2  
Gas filter

### Pure in combination with gas filter = combination filter



Pure  
Adapter  
Gas filter

### Combination filter with pre-filter



Pre-Filter cap  
Pre-Filter  
Combination filter



# Sets

For typical applications in industry and trade we have put together the appropriate sets. This simplifies the suitability decision-making process. Each set consists of a half mask of the Dräger X-plore® Twinfilter series and the corresponding filters.



### Painter set:

Specially designed for working with paints and varnish. Consisting of the half mask Dräger X-plore® 3300 (size M) and two filters A2-P3 R D. To reduce the rate at which the particle filter becomes clogged a pre-filter can individually be combined using a pre-filter cap.<sup>1</sup>



### Chemical work set:

When handling chemicals comprehensive protection is required. The half mask Dräger X-plore® 3300 (size M) and two filters A1B1E1K1 Hg-P3 R D provide adequate protection during daily work.



### Construction set:

Dusty work is found in many professions – as well as in the domestic environment. Here too, respiratory protection is required for one's own health. With the construction set, consisting of a half mask Dräger X-plore® 3500 (size M) and two Pure P3 R filters, you are well protected for several hours.



## ORDERING INFORMATION

Set	Order no.
Painter set <sup>2)</sup>	R 55 686
Chemical work set <sup>2)</sup>	R 55 740
Construction set <sup>2)</sup>	R 56 960

<sup>1)</sup> Not included in the set

<sup>2)</sup> For all sets a wide selection of replacement filters can be purchased separately

Health risks from organic solvents, isocyanates and particles during the processing of paints are frequently underestimated today. However, they harbour material health risks, even if the damage to health only becomes evident after 10 to 15 years period. Don't let it get that far – use the correct respiratory protection!

## USE

<b>Spray painting, coating</b>	<b>Contaminants</b>	<b>Filters</b>
Water soluble wood coating with copper, chrome or arsenic <sup>1)</sup>	Fine paint mist	P3
Paints containing solvents, synthetic enamel, bleach	Solvent vapours, paint particles	A2-P2
Latex paint	Paint particles	P2
Latex paint with residual solvents or odours	Solvent vapours, paint particles	A2-P2
Isocyanate	Solvent vapours, paint particles	A1-P1 / A2-P2
Varnishes, wood preservatives	Organic vapours	A1-P1 / A2-P2

<sup>1)</sup> Use of a full face mask recommended

<b>Brush/roller application</b>	<b>Contaminants</b>	<b>Filters</b>
Water soluble paint	Large paint droplets, vapours	A1 / A1-P1
Paints containing solvents, enamel, wood preservatives	Solvent vapours	A1 / A1-P1
Anti-fouling paint	Solvent vapours	A1 / A1-P1

### SPECIAL SOLUTIONS FROM DRÄGER

#### Painter set

- Half mask Dräger X-plore® 3300 and two A2-P3 filters

#### Pre-filter

- Reduces the rate at which the particle filter becomes clogged
- Individually replaceable, thus extended service life of the combined filter

#### Combination filter of gas and Pad P2 filter

- Alternatively to the "ready-made" filter a filter A2-P2 can be made from an A2 gas filter and a Pad P2 filter
- Pad can be replaced independently of the gas filter

#### Full face mask (with Triplex visor)

- The full face mask Dräger X-plore® 5500 offers optimum protection (including your eyes)
- Suitable protection if working with a spray gun overhead

#### Visor films for full face mask

- Protect the visor of the full face mask from soiling
- Easy removal and disposal



# Metal working

The activities in metal working are diverse. Whether you drill, grind or saw, weld, solder or glue: hazardous gases and particles pose a risk for the respiratory organs. How convenient if one mask with the corresponding filter protects securely against contaminants in all applications. The half and full face masks of the Dräger X-plore® Twinfilter series are a good choice in all applications. Dräger X-plore® masks provide the suitable protection – not only in metal working.

## USE

<b>Welding</b>	<b>Contaminants</b>	<b>Filter</b>
Aluminium	Aluminium oxide	P3 / A-P3
Automobiles	Metal vapours, ozone, No <sub>x</sub>	AB-P2
Manual arc welding with covered stick electrodes, laser beam welding	Metal dust, vapours	P3
<b>Welding, Rivetting</b>	<b>Contaminants</b>	<b>Filter</b>
Construction steel, zinc	Metal dust, welding vapours	P2 / ABE1-P2 P3 / A-P3
Stainless steel (thodium electrode) <sup>1)</sup>	Metal dust, metal oxide vapours	P3 / ABE1-P3
<b>Soldering</b>	<b>Contaminants</b>	<b>Filter</b>
	Vaporised particles	P2
With soldering paste	Vaporised particles, gases	ABEK-P2
<b>Grinding, cutting, drilling</b>	<b>Contaminants</b>	<b>Filter</b>
Rust	Rusty dust, metal dust	P1 / P2
Metals	Metal vapours	P1 / P2
Iron	Metal vapours	P1
Steel	Metal vapours	P1 / P2
Stainless steel (high alloy)	Metal vapours	P2 / P3
<b>Galvanising</b>	<b>Contaminants</b>	<b>Filter</b>
	Possibly hydrogen cyanide	AB-P2

<sup>1)</sup> Use of a full face mask recommended

### SPECIAL SOLUTIONS FROM DRÄGER

#### Construction set

- The suitable solution where only particle protection is required
- Half mask Dräger X-plore® 3500 with two Pure P3 particle filters

#### Protective visor for welding

- For the full face mask Dräger X-plore® 5500 Triplex version (optional)
- The lens frame of the mask is completely surrounded by the visor
- Tool-free attachment of the protective visor for welding to the lens frame of the mask

#### Pad P2

- Economic alternative for all applications requiring particle protection of class P2
- The pad retainer, pad P2 and pad cap combines into a P2 filter
- Pad retainer and pad cap can be reused



During the machining and processing of wood and wooden materials dust hazardous to health can arise – especially beech and oak wood can cause cancer in humans. Besides activities relating only to wood, there are also a multitude of tasks where other materials are added. Here a gas filter might also be necessary in addition to the pure particle protection. We have compiled the most important activities for you in the table below and combined them with the recommended filter.

## USE

Paint removal	Contaminant	Filter
Burning off old paint	Gases, vapours,	A1 B1-P2
Stripping off old paint using agents containing solvents	Solvent vapours	A1 / ABEK
Stripping off old paint using agents containing ammonia	Solvent vapours, ammonia	ABEK
Grinding, brushing off old paint, coatings	Fine paint particles	P2
Grinding, brushing off old paint, coatings containing chrome <sup>1)</sup>	Fine paint particles	P3

<sup>1)</sup> Use of a full face mask recommended

Adhesive removal	Contaminant	Filter
Scraping off, grinding e.g. polyester resin	Fine particles	P2

Gluing	Contaminant	Filter
Substances containing solvents	Solvent vapours	A2
Substances containing solvents (spray glue)	Adhesive mist, solvent vapours	A2-P2

Grinding, cutting, drilling	Contaminants	Filter
Wood	Wood dust particles	P2
Beech and oak wood	Wood dust particles	P3

### SPECIAL SOLUTIONS FROM DRÄGER

#### Construction set

- Set consisting of half mask Dräger X-plore® 3500 with two Pure P3 particle filters
- Optimum protection in dusty environments due to particle filter class P3

#### Pad P2

- Economic alternative for all applications requiring particle protection
- The pad retainer, pad P2 and pad cap combines into a P2 filter



When working with chemicals the most varied substances can pose a health hazard. Often several contaminants occur simultaneously and thus pose a special challenge for the correct respiratory protection. The combined filters of the Dräger X-plore® Twinfilter series cover a wide range of hazardous gases and vapours. If required, a multi-range protection is available in a filter with simultaneous high filter performance and long service life for additional safety.

## USE

Activity	Contaminants	Filter
Handling chemicals	Particles, substances to be identified	ABEK Hg-P3
Sampling	Particles, substances to be identified	P3 / ABEK Hg-P3
Inspection	Particles, substances to be identified	P3
Measurements	Particles, substances to be identified	P3 / ABEK-P3
Mixing of epoxy and polyester resins	Organic vapours	A1
Disinfection	Organic vapours	A1-P2
Disinfection using aldehydes	Organic and inorganic vapours	AB-P2
Handling petroleum ether, Nitrothinner	Solvent vapours	A2
Cleaning with acids	Acids	ABE-P2
Transport of hazardous goods <sup>1)</sup>	Various	ABEK2 Hg-P3

<sup>1)</sup> Use of a full face mask recommended

### SPECIAL SOLUTIONS FROM DRÄGER

#### Chemical work set

- Half mask Dräger X-plore® 3300 and two filters A1B1E1K1 Hg-P3
- Provides respiratory protection against a multitude of hazardous substances
- Optimum visibility due to lateral bayonet filters in flat design

#### Full face mask with A2B2E2K2 Hg-P3 filter

- Optimum safety where an increased gas protection is required
- Additional protection for your eyes



# Working with dust

On building sites and when working at home a lot of dust is generated. This may sound unspectacular, but it causes constant stress for the respiratory tracts. Work not immediately associated with dust, such as mixing dry mortar or tile adhesive, can also cause high concentrations of dust. This remains in the breathing air for hours and as a result is hazardous.

## USE

<b>Pouring, spraying</b>	<b>Contaminants</b>	<b>Filter</b>
Concrete, cement	Concrete dust	P2
<b>Redevelopment</b>		
Asbestos work	Asbestos fibre	P3
<b>Grinding, cutting, drilling</b>		
Brickwork, concrete, stone and plaster	Stone dust	P1
Brickwork, concrete, stone and plaster with high silica content	Stone dust	P2
Cement	Dust particles	P1
Filler	Dust particles	P1
<b>Road topping</b>		
Tar	Organic vapours, particles	A1-P2 / A2-P2
<b>Finishing</b>		
Processing of glass and mineral fibre	Dust particles and fibre	P2
Plasterwork, roof laying, tile laying	Dust	P2
Sealing, Clinkering (adhesive)	Organic vapours	A1-P2 / ABE1-P2
<b>Preparation</b>		
Digging off contaminated, dirty soil	Gases, solvents, dust particles	ABE1-P2
General demolition of brickwork, concrete and stone	Dust particles	P2

### SPECIAL SOLUTIONS FROM DRÄGER

#### Construction set

- Half mask Dräger X-plore® 3500 with two Pure P3 particle filters
- Particle class P3 provides optimum protection in dusty environments

#### Pad P2

- Economic alternative for all applications requiring particle protection
- The pad retainer, Pad P2 and pad cap combines into a P2 filter

#### Gas filter with Pad P2

- The gas filter and Pad P2 with cap is quickly turned into a combination filter
- The particle filter can be replaced separately if clogged



There are few industries where safety is more important than in mining. For more than 100 years Dräger has worked together with the mining industry and has contributed considerably to the safety of their employees.

In surface mining dust is a considerable health risk. Irrespective of whether the dust is generated by blasting or thrown up by vehicles, the miners must be protected against the dust – for health reasons. The Dräger X-plore® Twinfilter series makes your work safer. Also, even below ground the use of respiratory masks may be necessary – to protect against dust and particles.

## SPECIAL SOLUTIONS FROM DRÄGER

### Construction set


- Half mask Dräger X-plore® 3500 with two P3 particle filters
- With particle class P3 always on the safe side

### Pad P2

- Economic alternative for all applications requiring particle protection of class P2
- The pad retainer, pad P2 and pad cap combines into a P2 filter
- Only the pad needs replacing if it is clogged, pad retainer and pad cap can be reused

### Cover cap for the Dräger X-plore® 3000 series

- Cover cap for the half masks of the Dräger X-plore® Twinfilter series prevents the clogging of the exhalation valve; ideal for overhead work especially when working with water
- The cover cap can be snapped onto the mask easily without tools

 All filter recommendations serve only as a guide for orientation during the selection of the correct respiratory protection device. They do not absolve from the observance of the national application rules and laws. The recommendations are no replacement for the observance of the instructions for use accompanying the products.



# Dräger VOICE

Dräger. Technology for Life<sup>x</sup>/sup> Windows Internet Explorer

http://80.77.215.31/voice/default.do?country=MT&language=en

Dräger



When you use respiratory protection you want to be sure, of course, that you have made the right choice and are optimally protected. To make the correct choice the following factors must be known:

- The contaminant present and the characteristics of the environment in which the application takes place
- Limits of the use and protection of the devices

The solution is simple: The contaminant database Dräger VOICE 5.0. With Dräger VOICE we offer you the unique option to search for approx. 1,750 contaminants and their chemical properties in a compact database.

The special features of Dräger VOICE: In addition to information and properties of the substance you receive further recommendations for suitable products to measure these contaminants (from a simple single gas measuring instrument to mobile multiple gas measuring instruments or stationary gas measuring technology) and for options to protect effectively against these substances.

Important information and notes on the handling and use of the recommended products are, of course, also included, such as instructions for use, further product information and related products.

If a substance searched for cannot be found or you have special queries, you can contact our experts by email with a single click for further help. More than 30,000 users globally already use the contaminant database Dräger VOICE – some of them every day.

Test Dräger VOICE yourself and utilise the information to make your workplace safer! [www.draeger.com/voice](http://www.draeger.com/voice)

Dräger VOICE





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