



Air-Purifying Respirators

[Ambient-Air-Dependant Respiratory Protection]



Filtering respiratory protection is dependent on the ambient atmosphere. Local regulations concerning the use of filtering devices must be observed.

In order to use filtering respirators, the type, properties and composition of the hazardous agent in the ambient air must be known and the oxygen content in the inhalation air must be sufficient.

When using particle filters, no hazardous gases may be present; when using gas filters, no hazardous particles. In case of doubt, a combined filter must be used.

The most frequently used filters are of the ABEK type, which protect against many hazards at the same time, due to the wide range of protection that they provide.

High-grade multiple range filters have an even greater sphere of application, as e. g. the combined filter 89 ABEK CO ISO Hg/St or 89 A2B2E2K2 Hg/St.

To help you select the right filter, see leaflet “Respiratory Filters” [ID 05-100.2].

Powered Air-Purifying Respirators

When long-term breathing protection is necessary, a Powered Air-Purifying Respirator [PAPR] is the way to go. Breathing remains easy and free from resistance even after hours of work. Maximum safety, flexibility and ease-of-handling allow the user to concentrate on his work.

Full Face Masks & Half Masks

MSA's expertise in breathing protection is very evident in its range of full face masks and half masks. Comfort and quality, useful accessories and an unbelievable range of filters meet every challenge. The APR masks are designed for use with filters and powered air-purifying devices.

Respiratory Filters

The service time of respiratory filters depends on the conditions of use. For gas or combined filters that are used against gases, the end of a filter's service life can usually be detected by odour, taste or irritation during inhalation. Some filters have a specified maximum service time.

Filtering Escape Devices

For a safe escape in case of sudden unexpected outbreaks of toxic gases or vapours or persons endangered by smoke and gases generated by fires, MSA offers a full range of equipment for escape purposes. These compact filter devices can be stored unopened for a long period of time, yet be ready for use immediately.

Filtering Face Pieces

MSA offers a full range of disposable masks for both professional and DIY [Do-It-Yourself] use. Different types of masks cover the protection levels FFP1 to FFP3 to enable safe work in various applications. The "Odour-Removal" [OR] versions offer relief from unpleasant odours.

This brochure is just an excerpt from our comprehensive product portfolio. For more information please see last page.





OptimAir 3000 EX

OptimAir® 3000

[Easy to Use with Built-in Safety]

The PAPR OptimAir 3000 protects against hazardous particles, gases and vapours. It can be customised with a wide range of head tops, filters and other options to match specific demands. OptimAir 3000 is available in three different versions.

OptimAir 3000: Standard unit for various applications

OptimAir 3000 A: High flow unit for decontamination of asbestos

OptimAir 3000 EX: ATEX approved to classes II 2G Ex ib IIB T4 and II 2D Ex ibD 21 T130 °C for use in potentially explosive environments, in combination with all MSA headpieces. No special accessories required.

Benefits	Advantages	Features
Operator can concentrate fully on work	Advanced microprocessor-controlled features ensure proper use	→ Electronic airflow-control → Automatic head top detection → Automatic calibration procedure → Patented technology sends acoustic alarm signals through the hose directly to head top
Optimum working comfort	Ergonomic and compact design	→ Low weight [1.3 – 2.2 kg] and well-balanced → Comfortable padded belt → Shower-proof for easy decontamination [IP54]
Ease of operation	Reduced need for training	→ 3 different systems – same operating principle → One-button operation → Clear info display
Flexibility	- Reduced stock - Up to 12 hours service time*	→ Economical stackable filter system → Optional OptiBat E [long-life battery]**

*Depending on blower, filter and battery combination

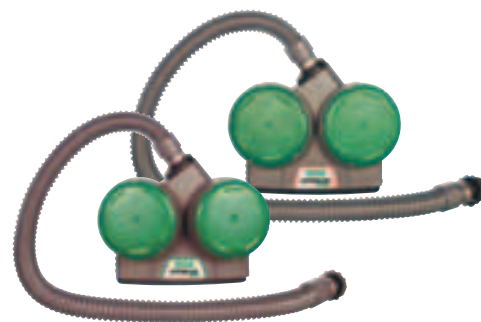
**Only for OptimAir 3000 and OptimAir 3000 A

[Ordering Information]

EN 12941, EN 12942

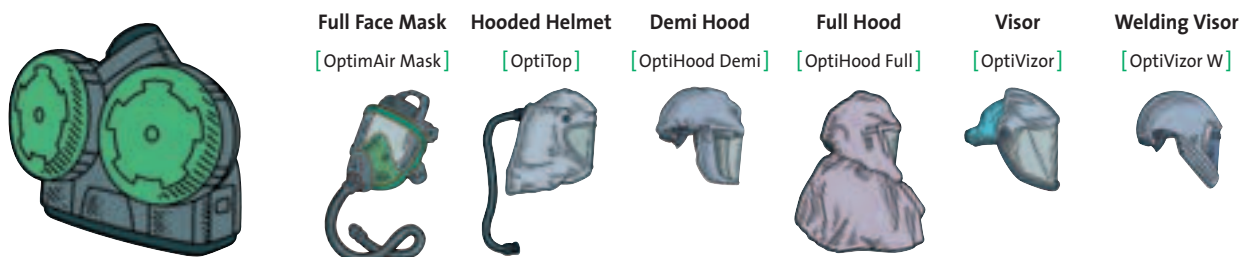
10049557	OptimAir 3000 [Standard unit with 130 l airflow, NiMH Battery, Standard Charger and Comfort Belt]
10049558	OptimAir 3000 A [Unit with 160 l airflow, OptimAir Mask w/Hose, Particle Filter [pack of 10], NiMH Battery, Standard Charger and Decon Belt]
10049559	OptimAir 3000 EX [Unit with 130 l airflow, NiMH EX Battery, EX Charger and Comfort Belt]
10085224	OptimAir 3000 DVD, Instructions for use

For detailed information and an overview of all available filters and accessories please see leaflet 10-402.2



OptimAir 3000 and OptimAir 3000 EX

[Available Headpieces – Examples of Applications]



Protection level*	TM3 [EN 12942]	TH3 [EN 12941]	TH2 [EN 12941]	TH2 [EN 12941]	TH2 [EN 12941]	TH2 [EN 12941]
Part. No.	10051810	10051807	10051805	10051806	10049638	10049639
Agriculture/horticulture		■	■	■	■	
Aluminium & light metal works	■	■				
Animal husbandry			■	■	■	
Asbestos abatement	■					
Chemical plants	■	■		■		
Building & construction	■	■			■	
Do-It-Yourself Applications		■		■	■	■
Electrical & Electronics			■	■	■	
Food Industry	■	■	■	■	■	
Light & heavy metal foundries	■	■			■	■
Isocyanates	■					
Laboratories	■		■	■	■	
Lead processing	■	■				
Medical	■		■	■		
Mining	■	■				
Nuclear	■	■		■		
Pest control	■			■	■	
Petrochemical	■	■		■		
Pharmaceutical manufacture	■		■	■	■	
Sewage	■	■	■	■	■	
Shipyards	■	■				
Spray Painting	■		■		■	
Steel industry	■	■				
Tunneling	■	■				
Waste disposal	■	■		■		
Welding						■
Wineries	■	■	■	■	■	

■ Gas or Combination Filters

■ Particle Filters only

*For the protection level of the complete apparatus according to EN 12941 and 12942, please refer to the instruction manual.



Advantage 3200 & Advantage 3100

Advantage 3000 Series

[Superior Comfort & Fit in a Modern Design]

The full face mask series Advantage 3000 provides both protection and unparalleled comfort. Choose between **Advantage 3200** with bayonet connection and **Advantage 3100** with standard filter connection, both available in three sizes.

Donning the Advantage 3000 with the patented Advantage harness is unbelievably quick, simple and accomplished without painful hair pulling.

Benefits	Advantages	Features
Excellent wearer comfort	■ Quick and easy to use	→ Innovative Advantage harness [simplified donning and doffing, no painful friction with hair]
	■ Extremely comfortable and safe fit	→ Soft and large sealing line made of hypoallergenic silicone provides pressure-free fit
		→ Lightweight [just 490 g]
Optimal protection	■ Perfect adaptation to different face shapes	→ Available in 3 sizes
	■ Undisturbed field of view	→ Panoramic view lens
Economical to buy and operate	■ Easy cleaning	→ Quick [dis]assembly
	■ Reduced test and training costs	→ One design – two versions [twin and single connection]
	■ Rationalisation of stocks	→ Bayonet filters also suitable for Advantage 200 LS

[Ordering Information]

EN 136

10027727	Advantage 3211 “twin”, small
10027726	Advantage 3221 “twin”, medium
10027728	Advantage 3231 “twin”, large
10027724	Advantage 3111 “single”, small
10027723	Advantage 3121 “single”, medium
10027725	Advantage 3131 “single”, large
10026179	Advantage Container

For detailed information please see leaflet 05-517.2

Also available with Advantage harness with silicone strap



Advantage 3200 with Advantage Gas Filter



Advantage 3100 with ABEK Gas Filter



Advantage Container

Advantage 200 LS

[Soft & Safe Fit]

The Advantage 200 LS is a comfortable, efficient and economic half mask. It is ideal for applications where workers are exposed to various hazards from job to job, such as high concentrations of fumes, mists and gases.

The Advantage 200 LS comes in three sizes and has a complete and exclusive filter programme to protect against harmful particles and/or gases.



Advantage 200 LS

Benefits	Advantages	Features
High wearer comfort	■ Pressure-free fit	→ Low weight [just 83 g] → Well-balanced design
Ideal protection	■ Excellent face-piece-to-face fit ■ Perfect adaptation to different face shapes	→ MultiFlex [soft sealing line with robust mask body] → Anthrocurve pre-formed nosepiece → Adjustable head harness → Available in 3 sizes
Optimal operation	■ Easy to clean ■ Serves various applications	→ Low maintenance design → Wide range of filters
Economical	■ Rationalisation of stocks	→ Advantage filters also suitable for Advantage 3200



Advantage 200 LS with TabTec and FLEXIfilter



Pouch for Advantage 200 LS

[Ordering Information]

EN 140

430357	Advantage 200 LS, small
430356	Advantage 200 LS, medium
430358	Advantage 200 LS, large
10016038	Advantage 200 LS Pouch

For detailed information please see leaflet 05-517.2

Advantage & TabTec® Filters

[Latest Filter Technology for Advantage 200 & 3200]

The **Advantage** filter line is a complete line of particulate, chemical and combination cartridges, providing the best in light-weight and high-performance filters.

The patented **TabTec** filter technology allows the design of high-performance filters that require only minimal housing.



Advantage Filter Range

Benefits	Advantages	Features
Increased safety	Extremely shock resistant [always keeps perfect distribution of carbon]	→ TabTec with bonded carbon [avoids premature breakthrough of toxic substances]
Economical to buy and operate	- Rationalisation of stocks - Reduction in weight, volume and environmentally-harmful materials	→ Suitable for Advantage 200 LS and Advantage 3200 → Can be combined with particle filters → Environmentally-friendly TabTec technology



TabTec and FLEXIfilter

[Ordering Information]

EN 143, EN 14387

430375	P3 R Advantage Particle Filter
430371	A2 Advantage Gas Filter
430374	A2B2E1K1-P3 R Advantage Combined Filter
10030511	A2 TabTec Gas Filter
10038476	A2B2E1K1 TabTec Gas Filter

For detailed information and more filter versions please see leaflet 05-517.2

R = Reusable according EN 143:2000/A1:2006

Standard Thread Filters

[Reliable Filter Technology]

The greatest experience and know-how, as well as one of the widest ranges in the market make MSA filters the first choice for users in all industries.

The new high-performance particle filter P3 PlexTec and all combination filters have now been upgraded using MSA's PlexTec filter media. The significantly increased filtering surface reduces breathing resistance and results in slightly more relaxed breathing as well as more compact filter housings.



Advantage 3100 with Particle Filter P3 PlexTec

Benefits	Advantages	Features
Optimal safety	■ Reliable protection	→ Proven and optimized filter technology
	■ Good mechanical resistance	→ Robust metal housing
Flexibility and reduced cost	■ Suitable for all applications	→ Complete filter program [including special filters]
	■ All products from one source	
High operational performance and comfort	■ Up to 6 years storage for gas filters	→ Special packaging provides longer shelf life
	■ Exceeds performance requirements of EN 14387	→ Highly efficient filter media
	■ Low breathing resistance	→ New PlexTec particle filter technology with increased filtering surface
	■ Easy and reliable pressure fit test	→ Filter opening easy to cover [even when wearing gloves]

Colour mark	Type	Application
	A	Organic gases and vapours [boiling point > 65°C]
	B	Inorganic gases and vapours [not CO], e.g. chlorine, H ₂ S, HCN...
	E	Sulfur dioxide and acidic gases and vapours
	K	Ammonia and organic ammonia derivatives
	AX	Organic gases and vapours [boiling point < 65°C] of low boiling substance groups 1 and 2
	Hg-P3	Mercury vapours and particles
	P	Particles

[Ordering Information]

EN 14387

10094376 Particle Filter P3 PlexTec* [pack of 10]

D1041000 Gas Filter 87 AB

D1070000 Combined Filter 89 AB/St

D1070707 Combined Filter 89 ABEK2 Hg/St

For detailed information and more filter versions please see leaflet 05-100.2

*Reusable according to EN 143:2000/A1:2006



miniSCAPE

miniSCAPE

[Practical, Quick & Easy to Use]

Using the patented TabTec filter technology, the miniSCAPE is an escape device for one off use against chemical hazards. It protects against toxic gases and vapours, and has an operational duration of 5 minutes.

The miniSCAPE is equipped with mouthpiece and nose clip. Small and handy, it fits into the pocket of a lab overall or any kind of work clothing. It can also be belt- carried, with the very practical integrated belt clip.

Benefits	Advantages	Features
Ready for immediate use	■ Easy to wear on the belt or in the pocket ■ Very quick donning	→ Small and lightweight housing [just 190 g] → Sealed robust plastic case with practical clip → No adaptation needed
Ideal protection	■ Wide-ranging protection against toxic substances ■ Secure fit	→ TabTec filter cartridge → Well-balanced design
Reduced need for training	■ Intuitive use	→ Equipped with mouthpiece and nose clip
Economical and practical	■ Easy distribution to different persons, e.g. visitors or workers ■ Universal fit [even suitable for persons with beards etc.]	→ Hygienic and convenient plastic case → Mouthpiece [no face seal required]

[Ordering Information]

ABEK-5 DIN 58647-7

10038560 miniSCAPE in plastic housing

For detailed information please see leaflet 10-312.2



miniSCAPE

S-CAP

[Most User Friendly & Safe Escape Unit]

In case of fire, the S-CAP hood effectively protects eyes, head and particularly the respiratory tract against carbon monoxide and other toxic smoke and gases. Even for those who wear spectacles, the donning of the device is very fast and easy.

S-CAP is available with different packaging options.



S-CAP

Benefits	Advantages	Features
Immediately operational	■ Intuitive handling ■ Ease-of-use	→ Quick and easy donning → No need for any preliminary set-up → One size fits all
Superior protection	■ Additional safety margin ■ Safe fit [even when running] ■ Improved sealing ■ Adaptable to different head sizes	→ High filter performance → Rigid, securely-fixed inner mask → Self-adjusting cotton neck-seal → Adjustable head harness
Economical	■ Up to 10 years storage life ■ Maintenance-free for 4 years	→ Packed in a vacuum-sealed aluminised foil bag
Optimal solution	■ Suitable format for every application	→ Various packaging options [cardboard box, wall box, pouch]



Cardboard box



Wall box



Pouch

[Ordering Information]

EN 403:2004 [15 minutes]

10064644 S-CAP in cardboard box

10064645 S-CAP in wall box

10081637 S-CAP in pouch

10085223 S-CAP CD, Instructions for use

For detailed information please see leaflet 10-201.2



Affinity FR

Affinity Series

[Fit, Comfort, Value]

The filtering face pieces **Affinity FR** [foldable] and **Affinity Plus** [cup shaped] provide reliable protection, meeting and exceeding the newest European standards requirements. They are available in protection classes FFP1 to FFP3 allowing personnel to work safely in a variety of applications. The “Odour-Removal” [OR] versions offer relief from unpleasant odours.

Benefits	Advantages	Features
Optimal protection	■ Superior dust load performance ■ Immediate availability ■ Quick identification of protection level	→ Dolomite tested → Hygienic pocket-size packaging [Affinity FR] → Colour coding according to filter class
High wearer acceptability	■ Adaptation to different face and head sizes ■ Comfortable fit	→ Adjustable elastic band → Pre-formed nose clip → AnthroCurve sealing flange [Affinity Plus] → Smooth material
Optimal operational performance	■ Improved breathing comfort	→ Low breathing resistance → Exhalation valve [removes warm exhaled breath]
Cost effectiveness	■ Less inventory and easy selection	→ Universal size

[Ordering Information]

EN 149:2001

10035771	Affinity FR-V FFP1 D, green [pack of 15]
10026716	Affinity FR-V FFP2 D, yellow [pack of 15]
10035772	Affinity FR-V FFP3 D, red [pack of 15]
10069902	Affinity Plus-V FFP3 D, red [pack of 5]

For detailed information and more mask versions please see leaflet 28-100.2

D = Dolomite Tested
V = With Valve



Affinity Series

[Examples of Applications]

Activity	Type of particle	Filter class
Wood working		
Sanding – hardwood, softwood	Wood dust, fine dust	FFP2D
Wood cutting – hardwood, softwood	Fine particles, wood dust	FFP2D
Wood staining [stain containing copper, chrome or arsenic]	Fine paints mists	FFP3D
Paint removal	Fine paints particles	FFP2D
Paint removal when chrome	Fine paints particles	FFP3D
Sanding/Grinding		
Rust/corrosion removal	Rust/corrosion and metal dust	FFP2D
Masonry/concrete	Stone dust	FFP1D
Masonry/concrete when high amounts of quartz particles	Stone dust	FFP2D
Hard and soft wood	Wood dust	FFP2D
Synthetics/plastics	Synthetic dust	FFP2D
Paint	Paint particles	FFP2D
Paint when chrome	Paint particles	FFP3D
Iron/steel	Metallurgical dust	FFP2D
Stainless steel Metallurgical dust	FFP3D	
Adhesive removal	Fine dust	FFP2D
Construction		
Painting with water-soluble paints	Large paint particles	FFP2D
Sprayable varnish	Paints mists	FFP2D
Demolition	General dust	FFP2D
Foundation setting	Concrete dust	FFP2D
Asbestos handling	Asbestos particles	FFP3
Cement pouring	Concrete dust	FFP2D
Plastering	Fine plaster dust	FFP2D
Insulation installation	Dust and fibres	FFP2D
Roofing and tiling	Roof tile dust	FFP2D
Surveying and removal of asbestos [not including demolition of walls, etc.]	Asbestos dust	FFP3D
Metal processing		
Welding		
Zinc	Zinc and general metallurgical fumes	FFP3D
Aluminium	Aluminiumoxide fumes	FFP3D
Stainless steel	Metal oxide fumes	FFP3D
Manual arc welding	Sparks, fumes	FFP3D
Laser welding	Sparks, fumes	FFP3D
Hard soldering	Fumes	FFP3D
Drilling	Metallurgical dust	FFP1D
Sawing	Metallurgical dust	FFP1D
Waste disposal		
Waste disposal	Dust	FFP2D
Cleaning tasks in low level dust environments	Dust non toxic	FFP1D
Sweeping grounds	Dust non toxic	FFP1D
Disposal of waste and sewage	Bacteria/fungi	FFP2D
Disposal of medical waste	Bacteria/virus	FFP3D

This guide is designed to help in selecting the most appropriate Affinity for a given application. Please read carefully the instructions prior to use.



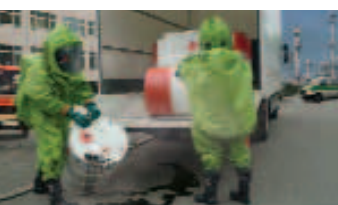
SUPPLIED AIR RESPIRATORS



AIR-PURIFYING RESPIRATORS



HEAD, EYE & HEARING PROTECTION



BODY PROTECTION



THERMAL IMAGING



GAS DETECTION



SERVICE & WORKSHOP SOLUTIONS



SOFTWARE SOLUTIONS

Completely Committed to Your Safety

A touchdown for your safety.

When it concerns personal safety equipment, with us you'll always be ahead of the field. Our comprehensive product range covers all areas:

- Supplied Air Respirators
- Air-Purifying Respirators
- Head, Eye & Hearing Protection
- Body Protection
- Thermal Imaging
- Gas Detection
- Service & Workshop Solutions
- Software Solutions



Speed, flexibility and the highest quality are what count when you play in the top league. Together with our distributors we deliver the right safety solution to the right place, at the right time.

MSA is the world's leading manufacturer of high-quality Safety Products and Gas Detection System Solutions, protecting people throughout the world for over a century. Where safety is paramount, MSA offers total support – from simple to high-tech solutions. The great breadth of technologies, products and services we offer is unique to the market.

For detailed information on our product portfolio please ask for our safetySCOPE catalog.

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