

Filter technology



clean air | in every situation |

INTERSPIRO

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Particle filter



Combination filter

Gas filter



Spiromatic 400 N



Spiromatic 400 Pro N

Full face masks for filter use

> Spiromatic 400 N and Spiromatic 400 Pro N.

Mask and filter combinations

Filter model	Half mask	Order no.	Full face mask	Order no.
IS 100	Polimask GAMMA	96849	Spiromatic 400 N ^{*1} *2	96803-01
	Polimask GAMMA SILICONE	96850	Spiromatic 400 Pro N ^{*1} *2	96804-01
IS 200	Polimask BETA	96847		
	Polimask BETA SILICONE	96848		
IS 230 & 500	Polimask ALFA	96845	Spiromatic 400 N ^{*1}	96803-01
	Polimask ALFA SILICONE	96846	Spiromatic 400 Pro N ^{*1}	96804-01

*1 All full face mask meets EN 148/1 *2 Requires adapter, order no. 43383220, thread according to EN 148/1



We are talking about market leading filter technology

Hazardous situations, harmful particles, high concentrations and long duration operations. In these situations there is no room for compromise when it comes to respiratory protection equipment. The secure and comfortable fitting of the mask and the safe performance of the filter must be perfect for the absorption and removal of toxic substances from breathable air.

Toxins may occur in the form of particles, in vapours (solid and liquid aerosols) or gases. Particle, gas or combined filters will provide breathable air in every situation. In order to select the best respiratory protection unit (filter and mask), you have to be aware of the type of toxins you are faced with, working conditions, operation and protection limits of your equipment.

The INTERSPIRO filter series covers the complete range of particle, gas and combined filters, plus masks (available as half and full face masks), with these products meeting the requirements of the relevant EN standards and being CE certified.

How to choose the correct type of filter



Please take the following points into consideration:

- > Does the ambient air provide sufficient oxygen, at least 17 % by volume?
- > What type of toxins is present?
- > Value of their atmospheric concentration
- > What are the applicable TLV (threshold limit value) and IDLH (immediate dangerous for life and health) values?
- > Type and characteristics of the toxic substances: particles, gas or in combinations?
- > Can you perceive any smell or taste of the toxins?
- > Is additional protection required, e.g. for eyes/ears or/and skin?

How to find the correct filter unit

In order to calculate the required minimum protection factor, you need to know the concentration and the limit value of the toxin.

$$\text{Min. protection factor} = \frac{\text{Concentration}}{\text{Limit value}}$$



Appropriate protection in every situation

High quality – latest technology. All filters have a shock-resistant casing (IS 230, IS 200, IS 100 with plastic casing, IS 500 with aluminium casing).

The resistant casing prevents dents and protects the internal parts. The range of operating temperatures is between -40°C to +70°C.

Masks are available as half masks or full face masks. Full face masks are particularly appropriate when highly toxic and aggressive substances are present and when the face needs protection too.

There are three different designs of half masks: ALFA, BETA and GAMMA available either in rubber or silicone material.



Application time

The application time of a filter depends on its filter class and the ambient conditions.

Influencing factors > Air consumption of the person wearing the equipment > Humidity > Temperature > Concentration value of toxins in the ambient air > Composition of toxins

Signs of reduced filter performance

- > With gas filter – when tastes or odours are perceived
- > With particle filter – when detecting increased breathing resistance
- > With combined filter – when tastes or odours are perceived, or you feel a significant increase in breathing resistance

All Particle -
and Combined
filters Kl. P3 with
BIOSTOP

Our range of filters – effective and compatible

Particle filter

- > Meet EN 143, divided into 3 performance classes: P1, P2 and P3.
- > All series IS 100, 200 and 230 P3 filter include the BIOSTOP, a specially treated filter insert to prevent fungus and mould formation after biological particles have been suspended.
- > Type IS 200 filters is used in duplicate for half masks. Its advantages include optimum weight distribution, increased comfort, reduced respiratory resistance and better visibility.
- > Type IS 230 and IS 500 with EN 148/1 threaded connector can be used for all half and full face masks supporting this connection.
- > Extremely water-repellent filter element.

Gas filter

- > Single or multi-type filter
- > Provides protection against toxic substances of class A, B, E and K
- > AX filter – for organic gases or vapours with a boiling point of less than 65°C
- > NO filter – for nitric dioxides
- > Hg filter to protect against mercury vapours

Combined filter

- > Will filter gases, vapours and particles. Before inhalation the air flows through the particle filter and then through the gas filter.

The IS 230 and IS 500 gas and combined filter series have a threaded connector according to EN 148/1 and can therefore be used with any half or full face mask supporting this connection.

	Filter type	Colour code	Field of application	Filter model	Filter class	Order no.
Particle	P		Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	P3	96816
				IS 200	P3	96830
				IS 100	P3	96844
	A		Organic gases and vapours, e.g., solvents with a boiling point > 65°C.	IS 230	A2	96811
				IS 200	A1	96825
				IS 100	A2	96831
B		Inorganic gases and vapours, e.g., chlorine, hydrogen sulphide, hydrogen cyanide (prussic acid).	IS 230	B2	96812	
			IS 200	B1	96826	
			IS 100	B2	96832	
E		Acidic gases and vapours, e.g., sulphur dioxide, hydrogen chloride.	IS 230	E2	96813	
			IS 200	E1	96827	
			IS 100	E2	96833	
K		Ammonia and organic ammonia derivatives.	IS 230	K2	96814	
			IS 200	K1	96828	
			IS 100	K2	96834	
AX		Organic gases and vapours with boiling point ≤ 65°C.	IS 230	AX	96815	
A-P		Organic gases and vapours with a boiling point > 65°C. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	A2 P3	96817	
			IS 100	A2 P2	96836	
			IS 100	A2 P3	96840	
B-P		Inorganic gases and vapours. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 500	B2 P3	97016	
			IS 230	B2 P3	96818	
			IS 200	B1 P3	97013	
			IS 100	B2 P2	96837	
			IS 100	B2 P3	96841	
B-Hg-P		Inorganic gases and vapours. Mercury and mercury compounds. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 500	B2 Hg P3	97018	
E-P		Acidic gases and vapours. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	E2 P3	96819	
			IS 100	E2 P2	96838	
K-P		Ammonia and organic ammonia derivatives. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	K2 P3	96820	
			IS 100	K2 P2	96839	
A-B-P		Organic gases and vapours with a boiling point > 65°C. Inorganic gases and vapours. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	A2 B2 P3	96821	
			IS 100	A2 B2 P3	96842	
AX-P		Organic gases and vapours with boiling point ≤ 65°C. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	AX P3	96822	
AX-B		Organic gases and vapours with boiling point ≤ 65°C. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 500	AX B2	97015	
Hg-P3		Mercury and mercury compounds. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 230	Hg P3	96823	
A-B-E-K		Organic gases and vapours with a boiling point > 65°C. Inorganic gases and vapours. Acidic gases and vapours. Ammonia and organic ammonia derivatives.	IS 200	A1 B1 E1 K1	96829	
			IS 100	A2 B2 E2 K1	96835	
A-B-E-K-P		Organic gases and vapours with a boiling point > 65°C. Inorganic gases and vapours. Acidic gases and vapours. Ammonia and organic ammonia derivatives. Solid and liquid particles, radioactive and toxic particles, bacteria and viruses.	IS 500	A2 B2 E2 K2 P3	97017	
			IS 230	A2 B2 E2 K2 P3	96824	
			IS 200	A1 B1 E1 K1 P3	97014	
			IS 100	A2 B2 E2 K1 P3	96843	

Combination

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