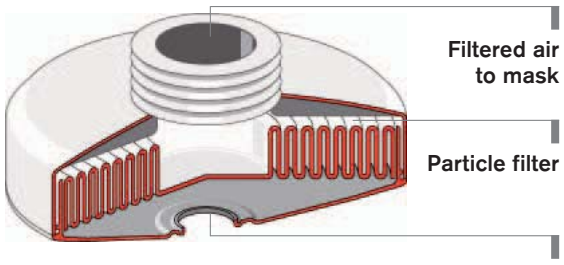
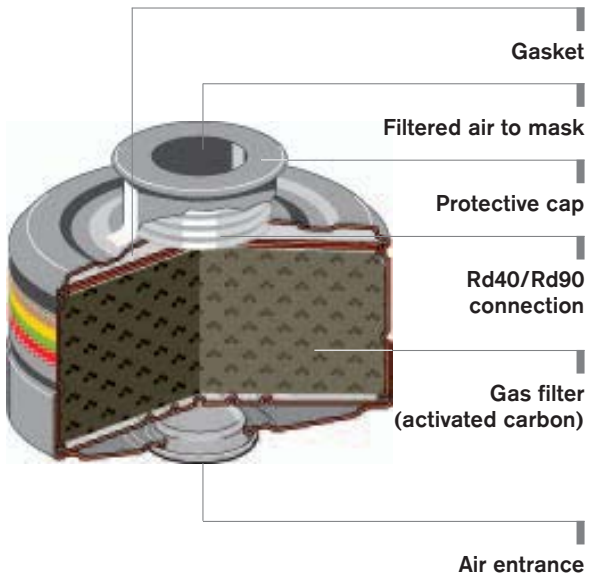
Dräger X-plore® filters

Cross section Dräger X-plore® filters

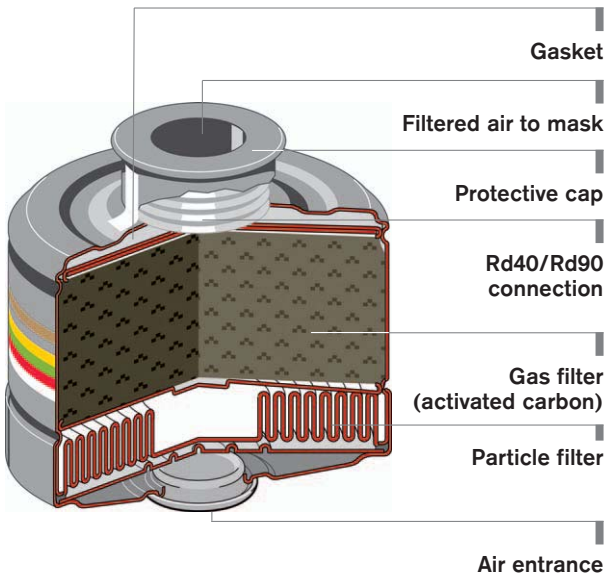
PARTICLE FILTERS



GAS FILTERS



COMBINATION FILTERS



Filter selection

Contaminants come in different forms – generally: aerosols (dusts, mists, fibres, fumes, microorganisms) or gases or vapours. You can choose between the filter types to protect against one of these forms or a combination of both of them. The following table shows you the colour coding of filters according to EN 14387 – which helps you to determine which filter-type is needed for the contaminants you are dealing with.

FILTER COLOUR IDENTIFICATION

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

Differentiation of filter types

Filters are split in different classes according to their capacity (gas filters) or their efficiency (particle filters). The class of a particle filter indicates how efficient the filter is in filtering out particles: **class 1:** 80%, **class 2:** 94%, **class 3:** 99.95%

FILTER TYPE

Filter type	Filter class	Protection against	Maximum permissible concentration of toxic substance
Gas filter		Gases and vapours Capacity:	50 times the OEL with half masks / 2000 times the OEL with full face masks, but maximal:
	1	Small	0.1 vol. % (1000 ppm)
	2	Medium	0.5 vol. % (5000 ppm)
	3	Large	1.0 vol. % (10000 ppm)
Particle filter	Particle Efficiency (separation ability):		
	1	Small	4 times the OEL with half masks / 5 times the OEL with full face masks
	2	Medium	12 times the OEL with half masks / 16 times the OEL with full face masks
	3	Large	48 times the OEL with half masks / 1000 times the OEL with full face masks
Combined filter	Gases, Vapours, Particles 1-P2 2-P2 1-P3 2-P3	Appropriate combined gas and particulate filters	Appropriate combined levels

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

According to EN143:2006/A1 particle filters have to be marked regarding reusability:
NR (**N**on **R**eusable) if the filter is limited to single shift only
R (**R**eusable) if the filter is re-usable

Warning: Never use any kind of filtering respiratory protection device:
– in oxygen deficient atmosphere (see local legislation for further guidelines e.g. UK less than 19 vol. % O_2)
– in poorly ventilated areas or confined spaces, such as tanks, small rooms, tunnels, or vessels
– in atmospheres where the concentrations of the toxic contaminants are unknown or are immediately dangerous to life or health (IDLH)
– when the concentration of a contaminant is higher than the maximum permissible concentration and/or the filter class capacity

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