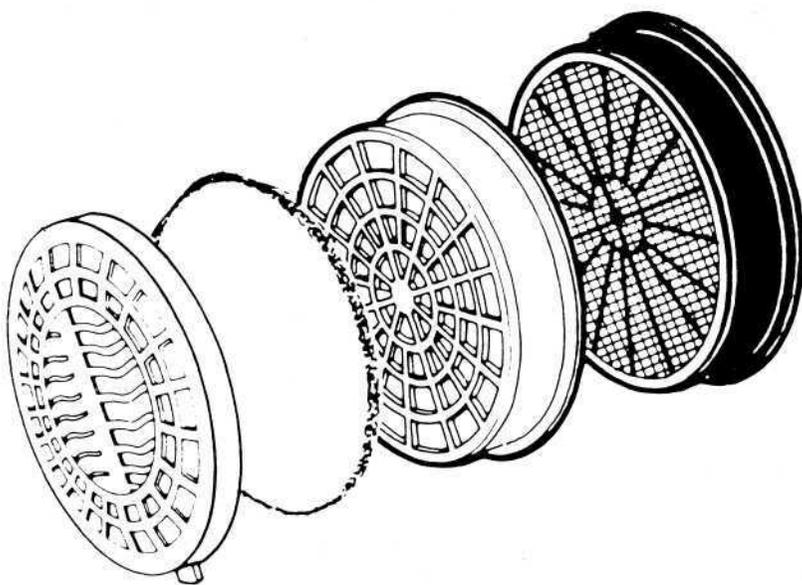


Personal
Breathing
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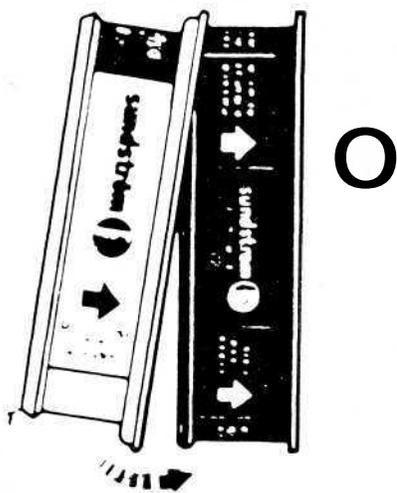


FILTERS



ALL ABOUT FILTERS

Gas and particle filters



There are two major types of filters: **gas** filters and **particle** filters.

Gas filters protect **ONLY** against gas or vapour.

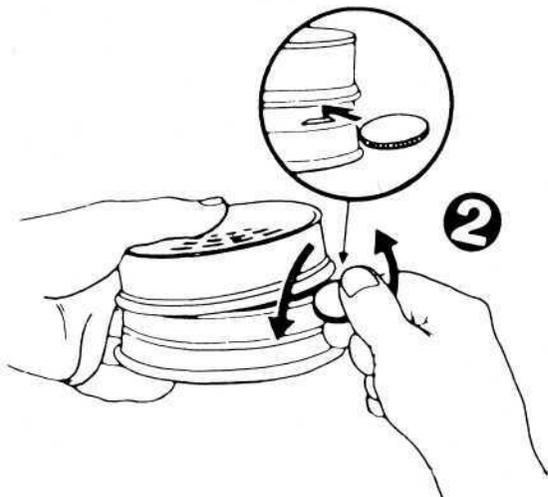
Particle filters protect **ONLY** against particles, such as dust, smoke, aerosols, mould, bacteria and so on.

If the atmosphere contains both gas and dust, both types of filters must be used.

Why?

A particle filter is a very fine fibre mesh which captures dust particles while letting clean air through (much like a handkerchief over your mouth). But it will not stop gas or vapour from getting through.

A gas filter contains activated carbon, which works like blotting paper: it absorbs the gas molecules and binds them to the carbon before it can reach your lungs. However, the carbon is not an effective barrier to fine dust particles.



Filter types

Whereas high efficiency particle filters provide protection against all types of particles, there are different gas filters for different gases.

The most common applications that require different gas filters are *organic vapour (solvents)*; *ammonia*; *acid gas*; and *sulphur dioxide*.

The various filters can be recognised by **their colour** and their type **identification**. Here is a list of the most common filters:

Colour	ID	Type
White	P	Particles
Brown	A	Organic vapour
Green	K	Ammonia
Grey	B	Acid gas
Yellow	E	Sulphur dioxide

If a filter has two or more codings, it is designed to protect you from more than one type of substance.

Filter classes - particle filters

Particle filters come in various classes, indicating the capacity of the filter to separate very small particles. Common classes are 1, 2, and 3. A class 3 filter protects against extremely fine particles. Lower classes protect against coarser particles. For instance, if the atmosphere contains sawdust, a class 1 filter may be sufficient; if it contains polishing dust or bacteria, a class 3 filter may be necessary.

Filter classes - gas filters

Gas filters come in various classes, indicating the relative life span of a filter. The common classes are AUS, 1, 2, and 3.

It is important to remember that a higher filter class does not indicate that the filter is "better" than a lower class filter. It simply will last longer.

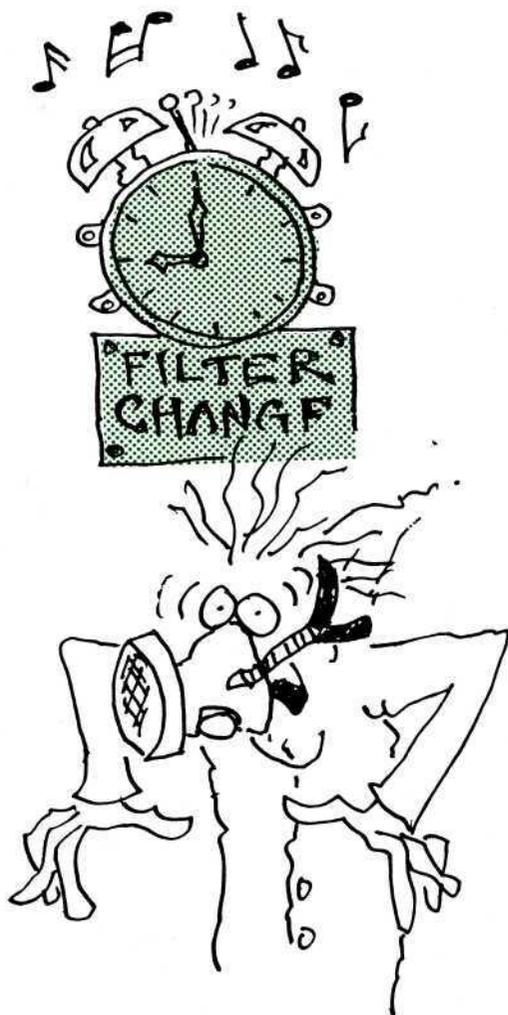
A higher class filter is harder to breathe through, but can be used longer.

A lower class filter is easier to breathe through, but has to be replaced more often.

When is a filter "finished"?

A particle filter should be replaced as soon as it 'clogs up' and becomes hard to breathe through.

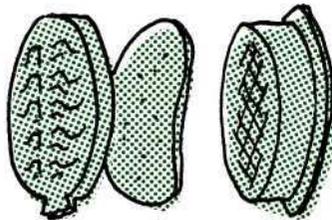
A gas filter should be replaced when the carbon cannot absorb any more gas. When this happens, the filter simply stops working, and harmful gas is let through. There is no significant increase in breathing resistance: that is why a *gas filter must be replaced according to a time schedule!*



Pre-filter

The pre-filter is designed to filter out all coarse particles before the air hits the main filter. It extends the life of both gas and particle filters.

The pre-filter is a disposable item which should be exchanged at least every day.



Special filters and combination filters

If you need protection from both dust and gas, you have two solutions:

Special filters

Special filters already have two or several filter types in-built into a single filter. The colour marking and the type ID indicate where the filter can be used.

Combination filters

A particle filter can be attached to a gas filter simply by pressing the two filters together with both hands, using even pressure until the two filters lock together with a sharp snap.

Attach the particle filter in the normal way.

The two filters may be separated with a coin or the buckle of the head harness.

How often should I change filters?

The **pre-filter** should be replaced every day the mask is used.

Particle filters should be replaced as soon as you notice an increased breathing resistance. There is no precise gauge as to how long a particle filter will last, but a guideline is 4-6 weeks, provided you use pre-filters.

Gas filters should be replaced according to a time schedule, depending on the concentration of contaminant and duration of use.

Remember: an exhausted gas filter lets hazardous vapour through without any decrease in breathing resistance. You **must** change filters regularly.

Filter storage

Gas filters continue to absorb contaminants in the air even when you are not wearing the mask.

It is important to store the filters in an air-tight bag or container. Don't open sealed packaging until you need the new filter.

