Protective respirators
The GVS Group is one of the world’s leading manufacturers of microfiltration devices. GVS Filter Technology produces a wide range of filters and components, including GVS innovative in-house filtration media development, covering many applications in the Healthcare, Life Sciences, Automotive, Appliance, Safety, Chemical & Carbon, Cosmetic and Building applications. GVS Safety Filtration division provides a custom design and manufacture capability in addition to an already extensive proprietary range.
The Elipse range of face masks, designed and developed in the UK by GVS, represent a major advance in mask design. As one of the lightest on the market in its class, its ergonomic shape provides maximum visibility to wearers, can safely be worn with goggles, helmets and hearing protection, and the ability to replace filters extends the masks overall working life.

These compact profile masks are made of hypo-allergenic materials and the replaceable filters offer a minimum efficiency of 99.95% or higher at 0.3 microns particle size.

ANATOMICAL DESIGN

Range of extremely lightweight masks that fit perfectly to the face, without hindering the user. The compact profile of the body and filters allows all ELIPSE® range masks to perfectly seal to the face and ensure the greatest possible field of vision during use, without interfering with other eye or ear protections which users choose to wear. Elipse come in 2 sizes.

COMFORTABLE and HYPO-ALLERGENIC

Unique comfort, thanks to the flexible and soft characteristics of the TPE (Thermo Plastic Elastomer), used in the ELIPSE® masks, making them very comfortable even for extended use. The materials that make up the mask are odourless and hypo-allergenic, ”FDA” compatible, latex and silicone free.

REPLACEABLE FILTERS

Unique, small, thin, flexible, strong, lightweight filters, which are patented, innovative and extremely effective. The development of the elipse pioneering filters are specifically designed to be the smallest, lightest filters with the lowest breathing resistance to that of a similar size particulate filters.

HIGH PROTECTION AND RESISTANCE

Maximum protection from vapours, dust, metal fumes, oil and water mists, micro-organisms with a minimum efficiency of 99.95%.

The use of HESPA® filter media, a special synthetic material developed by GVS-NFC, ensures high efficiency and low breathing resistance, therefore less resistance to air flow, ensuring less fatigue for the user.

The materials used in the construction of the mask are classified as F1 in accordance with standard DIN 53438, which determines the class of fire resistance and flame retardancy.
GUIDE TO RESPIRATORY PROTECTION

Indications for the choice of respiratory protection devices are based on current knowledge. Before each use of the ELIPSE respirator devices, the buyer and user must ensure that the masks and filters used are those specified for the type of pollutant and its concentrations. The ultimate responsibility concerning selection and use of products lies solely with the buyer and user.

- - - TYPES OF FILTERS
Dust filters are able to retain airborne particulates and are offered in various constructions, which enhance the filters characteristics with use of various types of filter material with different thickness, porosity and surfaces, to protect against particulates, gases and nuisance odours. Activated carbon cartridge filters contain specific activated carbon, which retain certain gases and vapours by adsorption, while combined filters can remove both gases, vapours and particulates.

- - - TECHNICAL CHARACTERISTICS OF FILTERS
There are various types of particulate dust filters which have different filtration efficiency. Depending on which you choose, you can have the most suitable means of protection against environmental pollution conditions. The airborne particles are retained by the filter by means of mechanical and/or electrostatic action.

In the case of gas filters, substances are retained by the chemical-physical action of activated carbons in the filter, able to adsorb and neutralise contaminants. It is assumed that the efficiency of gas and vapour interception on adsorbent material is 100%, at least until the completion of the capacity of the filter material. For gas filters, we refer to; time to completion or, rather, the period beyond which the filter is saturated and the pollutant begins to pass through the filter. This ‘breakthrough’ time depends on the quantity of adsorbent material used, on its filtration capacity against the pollutant and on environmental concentrations.
Respiratory filters have 3 classes of protection with increasing efficiency, normally expressed with a Nominal Protection Factor (NPF) which is the ratio between concentration of the contaminant in the environment and inside the mask. The resulting factor indicates how many times the device can reduce the external concentration.

<table>
<thead>
<tr>
<th>classes of efficiency of dust respirators</th>
<th>Minimum total filtration efficiency</th>
<th>NPF</th>
<th>Max external concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFP1/P1 (Facial Anti-Dust Filter class 1/filter class 1)</td>
<td>80%</td>
<td>4</td>
<td>Up to 4 x TLV</td>
</tr>
<tr>
<td>FFP2/P2 (Facial Anti-Dust Filter class 2/filter class 2)</td>
<td>94%</td>
<td>10</td>
<td>Up to 10 x TLV</td>
</tr>
<tr>
<td>FFP3/P3 (Facial Anti-Dust Filter class 3/filter class 3)</td>
<td>99.5%</td>
<td>40</td>
<td>Up to 40 x TLV</td>
</tr>
</tbody>
</table>

Anti-dust filters are distinguished by the colour WHITE.

Protection against gases and vapours

GASES AND VAPOURS: gases and vapours are molecules, so small that they penetrate particulate filters. You need to use a chemical filter against these.

Anti-gas respirators have activated carbon filters which, for physical or chemical adsorption, withhold the harmful substances that are distinguished by identifying letters and colours:

<table>
<thead>
<tr>
<th>Type</th>
<th>Protection</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>organic gases and vapours with a boiling point above 65°C</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>B</td>
<td>inorganic gases and vapours [excluding carbon monoxide]</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>E</td>
<td>acids / acid gases</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>K</td>
<td>ammonia and organic ammonia derivatives</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>AX</td>
<td>organic gases and vapours - boiling point ≤65°C - groups of low-boiling substances 1 and 2</td>
<td></td>
</tr>
</tbody>
</table>

There are three protection classes for each type of anti-gas filter, depending on the amount of contaminants that the filter is able to adsorb. The choice is therefore determined by the predicted concentration of the pollutant:

<table>
<thead>
<tr>
<th>Classe</th>
<th>Capacity</th>
<th>Limit of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>low</td>
<td>1.000 ppm</td>
</tr>
<tr>
<td>2</td>
<td>medium</td>
<td>5.000 ppm</td>
</tr>
<tr>
<td>3</td>
<td>high</td>
<td>10.000 ppm</td>
</tr>
</tbody>
</table>

Combined filters (gas and dust), besides the colour of the specific gas/es, include a white band and their marking show all the distinctive letters with their relative efficiency classes.
**GUIDE TO CHOOSING**

### Construction, grinding, cutting, drilling
- **Fire Fighting**
- **Construction**

### Wood processing

### Painting
- **Welding, cutting, sandpapering**

### Maintenance, Decoration
- **Removal / Separation waste**
- **Agriculture**

### Agriculture
- **Food Industry**
- **Pharmaceutical industry**

### Allergies

### Contact
# RESPIRATORY AND FILTERS

## HARMFUL SUBSTANCE / RISK

<table>
<thead>
<tr>
<th>Activity / Substance</th>
<th>P3</th>
<th>P3</th>
<th>A1P3</th>
<th>B1P3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spray foam insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rust, iron, stucco/filler material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry/ concrete</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cement, wood, steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paints/varnishes/anti-rust paints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Anti-fouling paints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with asbestos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with fibre glass and mineral fibres</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand blasting</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Boiler maintenance</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sanding - Sandpapering soft / hard wood</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Woodcutting</td>
<td></td>
<td></td>
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<tr>
<td>Particles / Fine wood powder</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Wood colours [dye containing copper, chromium or arsenic]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Removing thin layers of paint,</td>
<td></td>
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<td></td>
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<tr>
<td>Water-borne paint [with solvent residue]</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Water-based paint</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood protection</td>
<td></td>
<td></td>
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<tr>
<td>Colour dispersion via spray painting</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Water-based paint</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Adhesives with solvents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pest control, cleaning</td>
<td></td>
<td></td>
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<tr>
<td>Lubricant spray</td>
<td></td>
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<tr>
<td>Glue spray, foam, paint, adhesives</td>
<td></td>
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<tr>
<td>Bacteria, spores, odours</td>
<td></td>
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<tr>
<td>Insecticides, Pesticides</td>
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<tr>
<td>Spreading of insecticides by spraying</td>
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<tr>
<td>Manual arc welding with electrodes or laser welding, Hard soldering</td>
<td></td>
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</tr>
<tr>
<td>Structural steel, zinc</td>
<td></td>
<td></td>
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<tr>
<td>Chrome paint removal, Thin paint particles</td>
<td></td>
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<tr>
<td>Poultry / meat and dairy products, Pet foods, Fermentation</td>
<td></td>
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<tr>
<td>Active substances treatment</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pollen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flours</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Mould/spores</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bacteria in case of tuberculosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel soot/smoke</td>
<td></td>
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</tr>
</tbody>
</table>
Designed to fit the contours of your face
RESPIRATORS PROTECTION CLASS - P3
with replaceable filters for dust, fumes and mists

● ● ● DESCRIPTION
Compact, lightweight and flexible design which adapts perfectly to the face and offers a full range of vision without
interfering with other eye or ear protections which users choose to wear.
Large central non-return valve which allows for a reduction of the user’s breathing resistance and moisture build-up
inside the mask to a minimum.
Lightweight, non-slip strap that is easily adjusted in 4 positions for improved comfort and to allow safe use even in high
humidity or wet conditions. Ellipse come in 2 sizes.

● ● ● PROTECTION PROPERTIES
Effective against dust and fumes containing substances such as micro-organisms, marble, gypsum, titanium oxide,
soapstone, rock wool, wood, detergents, textile fibres, spices, salt, feed, etc. ...
Protects against dust that can cause lung disease. In particular, protects against coal, silica, cotton, iron ore, graphite,
kaolin, zinc, aluminium dusts. Protects against harmful dusts such as asbestos, bauxite, coal, silica, iron, and against
toxic dusts such as manganese, lead and chromium.
Pleated, interchangeable P3 filters have a minimum efficiency of 99.95%, at 0.3 microns and a breathing resistance of
4.2 mbar at a flow of 47.5 L/min for each filter. Maximum breathing resistance after loading is 7mbar.

● ● ● FIELDS OF APPLICATION:
Mining, steel mills, foundries, mechanical, pharmaceutical, cement, glass, ceramics, chemicals, textile
industries. Shipyards, battery manufacturing, toxic waste elimination, with asbestos fibres, reclamation,
heavy metals (lead, nickel, chromium), active manipulation.

● ● ● CERTIFICATIONS
Mask conforms to EN140: 1998
Filters conform to BS EN143:2000/A1 P3 ( R D )
Masks and filters are CE certified.

● ● ● TYPE OF FILTER/ CLASS
HESPA (High Efficiency Synthetic Particulate Airfilter) + P3( R D ) * →99.95% (minimum efficiency)

● ● ● MATERIALS
The materials used for masks and filters are hypo-allergenic, odourless, medical grade and without latex or silicone.

● ● ● TEMPERATURE RANGE:
-5°C  +55°C

● ● ● STORAGE LIFE: ELLIPSE P3 (R)
5 years, for mask and filters.
**Elipse Mask P3**

**P3** - Half-mask for protection from dust, metal fumes, oil and water mists and micro-organisms, i.e. bacteria and viruses.

**Mask Materials**
- Body: TPE (Thermo Plastic Elastomer)

**Filter Materials**
- HESPA®

**Dimensions**
- Filter: 12mm x 94mm x 50mm
- Mask: 93mm x 128mm x 110mm

**Weight**
- Mask + Filter: 132 g
- Mask body: 97.6 g

---

**Elipse Filters P3**

**P3 Filter (R) HESPA** - smaller, thinner, more flexible, innovative encapsulation™ design.

**Materials**
- HESPA® P3 (R), Encapsulation™ TPE

**Filter dimensions**
- 12mm x 94mm x 50mm

**Filter weight**
- 17.2 g

---

**Elipse Mask P3 Nuisance Odour**

**P3 Nuisance Odour** - Half-mask for Anti-odour protection against nuisance odour, dust, all types of fumes, oil and water mists and micro-organisms i.e. bacteria and viruses.

**Mask Materials**
- Body: TPE (Thermo Plastic Elastomer)

**Filter Materials**
- HESPA® P3 (R)

**Dimensions**
- Filter: 12mm x 94mm x 50mm
- Mask: 93mm x 128mm x 110mm

**Weight**
- Mask + Filter: 132 g
- Mask body: 97.6 g

---

**Elipse Filters P3 Nuisance Odour**

**Filters P3 Nuisance Odour (R) HESPA** - with Carbons to eliminate low level nuisance odour.

**Materials**
- HESPA® P3 (R) Nuisance Odour Non woven Carbon pad

**Filter dimensions**
- 12mm x 94mm x 50mm

**Filter weight**
- 17.2 g
Designed to fit the contours of your face
ELIPSE COMBINED RESPIRATORS
with filters for most organic and inorganic vapour hazards

- Description
Compact, lightweight and flexible design which adapts perfectly to the face and offers a full range of visibility without interfering with other eye or ear protections which users choose to wear.
Large central non-return valve which allows for a reduction of the user’s breathing resistance and keeps moisture build-up inside the mask to a minimum.
Lightweight, non-slip strap that is easily adjusted in 4 positions for improved comfort and to allow safe use even in high humidity or wet conditions. Elipse come in 2 sizes.

- Adsorption
The activated carbon has a selected pore structure for maximum adsorption efficiency and a selected pore size for an optimised breathing resistance.
The respirator is supplied with two specific activated carbon filtering elements for the protection against a range of gases, vapours, dust and mists. Once these are finished, they can be replaced with replacement filters.
These offer versatile protection against substances in concentrations up to 1,000 ppm...xTLV and from dust and mists up to 50 TLV.

- Type of Filter/Class
- A1P3 (R) & FFA1P3: For protection against certain organic gases and vapours with a boiling point ≥ 65 degC as specified.
- B1P3: For protection against inorganic gases and vapours.

- Materials
The materials used for masks and filters are hypo-allergenic, odourless, FDA compatible and Non latex or silicone.

- Temperature Range
-5°C +55°C

- Storage Life
3 years, for mask and filters.
Elipse EN405 Disposable Safety Respirator A1P3

FFA1P3 - Half-mask for Protection against most organic gases and vapours, dust, metal fumes, mists and micro-organisms, i.e. bacteria and viruses.

Filter Type / Grade
EN405 FFA1P3 R D

>99.95% Efficiency HESPA+
High Activated Carbon Element
Non maintenance

Respirator Construction
FDA Compatible Facepiece, Grey TPE (Thermoplastic Elastomer), Latex & silicone free, odour-free, non-allergenic material. Unique profiled carbon filters, compact design, incorporating close-pleated low profile HESPA® P3 ( R D ) media.

Dimensions
Mask: 97 x 128 x 140mm
Weight
257.7 g

Certifications
Conforms to EN405: 2001 + A1:2009

Elipse Mask with replaceable Combined filters A1P3

A1P3 - Half-mask for Protection against most organic gases and vapours, dust, metal fumes, mists and micro-organisms, i.e. bacteria and viruses.

Mask materials
Body: TPE (Thermo Plastic Elastomer)

Filter materials
A1 immobilised Carbon filter incorporating HESPA® P3 ( R ) low profile particulate filter

Dimensions
Mask: 97 x 128 x 140mm
Filters: 48.5 x 94.5 x 60mm
Weight
Mask + A1 P3 Filters: 257.7 g
Mask body: 97.6 g
A1P3 Filters: 83.4 g each

Certifications

Elipse Filters SPR341

A1P3 Filters - Combined replacement filters to protect against most organic vapours, dust, metal fumes, mists and micro-organisms, i.e. bacteria and viruses.

Filter Construction
Activated Carbon filter incorporating P3|R| HESPA® low profile particulate filter

Dimensions
48.5 x 94.5 x 60mm
Weight
83.4 g each

Certifications
Elipse Mask with replaceable filters B1P3

**B1P3** - Half mask for protection against most inorganic gases and vapours, dust, metal fumes, mists and micro organisms, i.e bacteria and viruses.

**Mask Construction**
Body: TPE (Thermo Plastic Elastomer)

**Filter materials**
B1 immobilised carbon filter incorporating HESPA® P3 ( R D )
low profile particulate filter/

**Dimensions**
Mask: 97 x 128 x 140mm
Filters: 48.5 x 94.5 x 60mm

**Weight**
Mask + B1P3 Filters: 269.5g
Mask Body: 97.6g
B1P3 Filters: 89.3g each

**Certifications**

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**Elipse Filters B1P3**

**B1P3 Filters** - Combined replacement filters to protect against most inorganic gasses and vapours, dust, metal fumes, mists and microorganisms, i.e. bacteria and viruses.

**Filter Construction**
Activated Carbon filter incorporating P3 ( R D ) HESPA® low profile particulate filter

**Dimensions**
48.5 x 94.5 x 60mm

**Weight**
89.3g each

**Certifications**

---

<table>
<thead>
<tr>
<th>Code</th>
<th>SPR426</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>B1P3</td>
</tr>
<tr>
<td>Packaging</td>
<td>6 sets of 2 filters</td>
</tr>
</tbody>
</table>

---
ELIPSE RANGE OF COMBINED GAS FILTERS

The Elipse Vapour Gas filter range combines a particulate and carbon filter designed to protect against vapours, solids and oil mists in accordance with EN regulations. Typical applications would include timber spraying [preservatives and coatings], solvent and paint spraying, crop spraying, and foundaries.

ELIPSE Vis-Air

The Elipse Vis-Air provides eye and respiratory protection against gas, vapour and particulate, metal fumes, mists, and vapours. Many potential eye injuries can be avoided by wearing the Vis-Air integrated safety goggles and respirator. Use the Elipse Vis-Air whenever there is the possibility of objects striking the eye, such as particles, glass, or metal shards.