Cabin Air Filters for Finest Dust and Nanodust: HYDAC CabinAirCare.
Nano – the big hazard from the little sizes.

Due to the consistently increasing utilisation of combustion engines on the one hand and due to antiquated legislation on the other, pollution with respirable finest and nanodust particles in the ambient air is alarmingly high – in spite of the exhaust regulations, which have in the meantime been tightened.

In vehicle interiors, work cabins and in passenger compartments, too, high concentrations of dangerous nanoparticles can be measured.

Depending on its particle size, nanodust does not just penetrate into the lungs, but also goes dangerously deep into the entire organism – the smaller the particles, the more dangerous they are.

As with the tightening of the soot particle emission limits for diesel vehicles, restrictions are also likely to be imposed on the assessment of internal space air in vehicles and working devices.

For this reason, and not least for a healthy climate which promotes working performance, HYDAC already provides highly effective air filter systems for equipping and retrofitting.

Extract from the Technical Regulations (TRGS).

Branch-independent technical regulations for hazardous substances (TRGS), plus the construction branch:

- BGI 581: Driver’s cabins with systems for respiration air supply on earth-moving machines and special machines for underground engineering
- BGI 583: Acting instructions for risk assessment acc. the German Ordinance on Biological Substances (BioStoffV)
  - For activities involving ground, groundwater and soil remediation work
- BGI 858: Hazards to health through biological working agents during building refurbishments
- BGI 893: Risk assessment for biological working agents during work on landfill sites

Derived rules from the Construction Worker’s Liability Indemnity Insurance:

- BGR 127 & BGR 218 for landfill sites and contaminated areas

Military environment:

- BGI 833: Acting instructions for risk assessment and determination of protective measures for clearance of explosive ordnance

Agrarian economy / agriculture:

- DIN EN 15695: Agricultural tractors and self-propelled plant protection equipment – Protection of the operator (driver) against hazardous substances
Perfect in Technology, Performance and Installation.

**Technical Data.**

Complete system with fan and filter units in an impact-resistant housing for external connection to mobile work cabins:

<table>
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<tr>
<th>Filter</th>
<th>G4 pre-filter (DIN EN 779)</th>
<th>F7 fine filter (DIN EN 779)</th>
<th>Nanofilter</th>
<th>Gas Filters</th>
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<tbody>
<tr>
<td><strong>Cleansing effect</strong></td>
<td>Separation rate for particles &gt;10 µm approx. 90%</td>
<td>Separation rate between 97% for particles &gt;1 µm and approx. 75% for particles &gt;0.3 µm</td>
<td>Separation for particles &lt;0.3 µm approx. 99%</td>
<td>Separation for gaseous hazardous substances</td>
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**Air flow rate:**
30 - 120 m³/h

**Possible overpressure in vehicle cabin:**
25 Pa to 300 Pa

**Pressure differential via filter:**
between <1 mbar and approx. 10 mbar

**Power supply:**
24 V DC or 12 V DC

**Weight:**
approx. 22 kg (with filter elements)

**Dimensions (LxWxH):**
720 x 300 x 180 mm

**Variable clamping mechanism for filter cassettes**

**Removable and sealed housing cover**

**Service life of filter stages in regular use:**
up to one year, depending on specific application

**Dedusting within a few minutes**

The cabin air filter CabinAirCare by HYDAC cleanses polluted room air of hazardous finest particulate matter and nanodust. Depending on the room size and quantity of filters used, the area can be cleansed within a few minutes.

* Dependent on the cab size and number of filters used