

**Air sterilisation filter
LEKF**
for indoor air sterilisation



Our solution for indoor air sterilisation

Reliable reduction in viral load thanks to innovative two-stage strategy with HYDAC element technology and UV-C disinfection

Description

The HYDAC LEKF is used to reliably and safely sterilise indoor air, significantly helping to reduce the risk of infection in enclosed spaces. Test results have shown that 99.99% of coronaviruses are killed.* Unlike conventional UV-C devices, the LEKF works with a two-stage cleaning process in conjunction with the layered ventilation strategy (displacement ventilation). This combination considerably reduces the risk of aerosols and viruses mixing over a large area inside the room. For this purpose, HYDAC employs a combination of tried-and-tested HYDAC Processmicron® element technology and UV-C disinfection.

Function

The LEKF uses a layered ventilation strategy with the indoor air being drawn through the filter element from above. The pre-filtered air is then conveyed into the lower part of the housing via the UV-C disinfection stage and the cleaned and disinfected air flows out at floor level. This prevents harmful turbulence in the indoor air that would allow aerosols to spread over a large area inside the room. Furthermore, a CO₂ sensor continuously monitors the current air quality. An LED (red/green) on the housing visually indicates the corresponding air quality and signals a recommendation for an exchange of air.

**Stage 1 | Pre-filter**

Processmicron® filter element for separating aerosols, liquid drops, pollen and ultrafine particles

Stage 2 | Disinfection

UV-C disinfection ensures that the remaining viral load is killed

**Stage 3 |
Cleaned & disinfected air**

Outlet at floor height prevents harmful turbulence in the indoor air



Technical data

Part number	4569952
Type	LEKF 270/410/570.0-4571936
Voltage	230–240V/N/PE 50 Hz
Current	0.7 A
Fuse	6.3 mm x 32 mm, T3A/250V
Power	165 W
Wavelength	254 nm
Inactivation rate	99.99% of coronaviruses (feline coronavirus) at levels 1/2/3, confirmed by an independent S2 laboratory
Filter element	Processmicron® 100% polypropylene incl. antimicrobial coating
Filter area	Approx. 7 m ²
Filter efficiency	>95% of particles 0.3–0.5 µm
Flow rate	Level 1 (normal operation) → 270 m ³ /h Recommended indoor space: 50–80 m ³ Level 2 (booster level/*) → 410 m ³ /h Recommended indoor space: 80–130 m ³ Level 3 (booster level/*) → 570 m ³ /h Recommended indoor space: 110–200 m ³ <small>*For rapid room circulation / for industrial workplaces</small>
Dimensions	Height: 1843 mm diameter: 334 mm
Weight	Approx. 35 kg
Noise level	Approx. 40–60 dB(A) (free field 1 m)
Ozone load	0.000 ppm (ozone-free)
CO ₂ warning	At 1000 ppm and above

Installation

Place it in the centre of the room or next to groups of tables. In larger spaces with a higher number of people, multiple devices should be combined and distributed evenly throughout the room.

Areas of application

- Medicine/healthcare sector
- Public and municipal buildings, schools, nurseries
- Office buildings
- Meeting rooms/break rooms, canteens
- Trade & commerce

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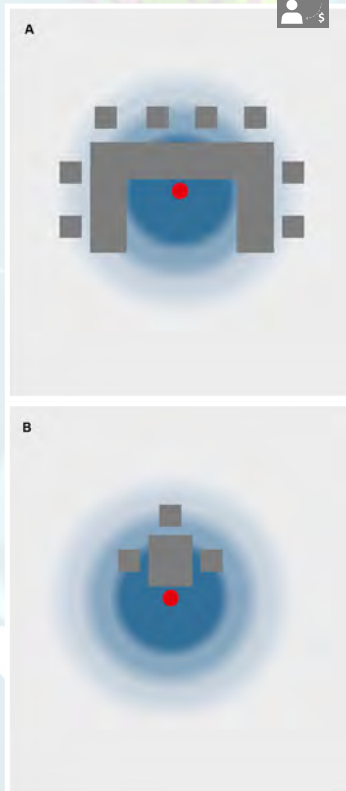
hydac.com/de-de/luftentkeimung.html

Advantages

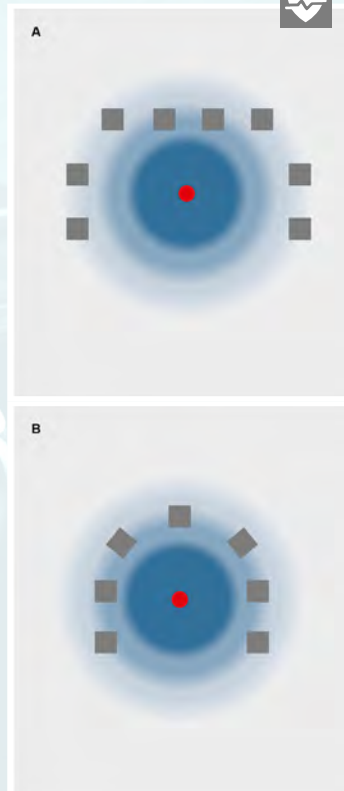
- Inactivation rate of 99.99%
- Removes reliably viruses, bacteria and germs
- No indoor air turbulence thanks to the two-stage layered ventilation strategy → reduced risk of virus spread inside the room
- Straightforward start-up → no costly remodelling needed
- Plug & play: ready-to-operate unit
- Optimised overall separation and high cleaning efficiency thanks to integrated pre-filter
- No draughts → air outlet at floor level
- Ozone-free
- Individually adjustable speed levels
- Low operating costs
- Integrated CO₂ sensor incl. visualisation
- Element surface incl. antimicrobial coating

Recommended installation

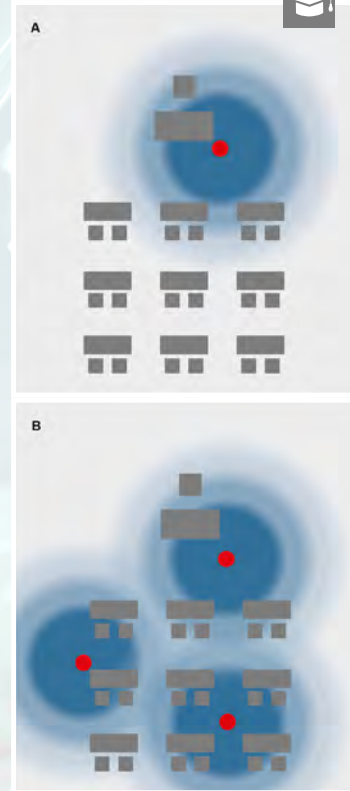
Meeting room



Waiting room



Classroom



LEKF

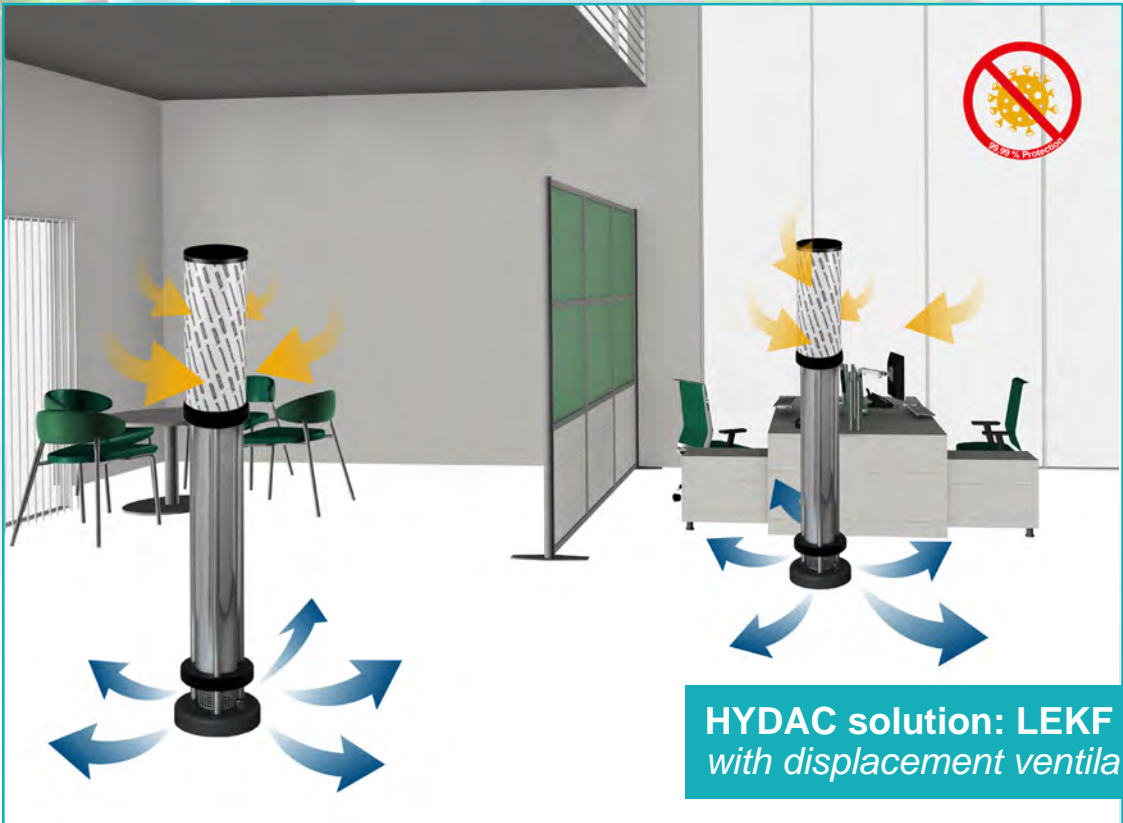
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Conventional indoor ventilation
with turbulent mixing ventilation



HYDAC solution: LEKF
with displacement ventilation strategy



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Note

The information in this brochure relates to the operating conditions and applications described.

For applications and / or operating conditions not described, please contact the relevant technical department.

All technical details are subject to change without notice.