

Room air cleaner TAC V+

High-performance air cleaner "Made in Germany": Efficient reduction of suspended matter and aerosol clouds in heavily frequented public areas



TRT-INPB1-TACV+-WM-01-EN



- **Permanent air pollution control and virus filtering in areas with high public traffic**
- **Protects customers and employees in checkout areas, fresh food counters, promotional areas or running zones:** spontaneously occurring droplet and aerosol clouds caused by coughing, sneezing etc. are filtered out faster by the high air exchange rate, the area of activity is permanently flushed with large amounts of virus-free room air and thus the risk of infection in the transfer zone significantly reduced
- **Protects checkout staff through permanent clean air purging of the checkout area**
- **Unique worldwide and exclusively at Trotec:** Automatic filter regeneration through thermal virus decontamination of the specially developed, heat-resistant high-performance HEPA filter of class H14 with a degree of separation of 99.995 % with a particle size of 0.1 to 0.2 μm
- **Variably adjustable discharge directions** for uniform flooding of the clean air within the protection zones
- **Ease of use:** Fully automatic, low-maintenance around-the-clock operation; no external controls
- **High quality materials and workmanship:** "Made in Germany" - Original Trotec production
- **Resource-saving:** 100% environmentally friendly, no chemicals, no personnel costs, low energy consumption (approx. 6 kWh / 12 h)



A joint Finnish research project led by Aalto University has investigated the transport and spread of the coronavirus by air. The researchers modeled a scenario in which a person coughs in a corridor between shelves, such as that found in grocery stores, taking ventilation into account. Preliminary results suggest that aerosol particles that carry the virus may remain in the air longer than originally thought. In the 3D model, a person coughs in a corridor delimited by shelves under representative indoor air flow conditions. As a result of the cough, an aerosol cloud travels to the corridor in the air. It takes up to several minutes for the cloud to spread and scatter.

Image quote from a video publication of the research community from Aalto University, the Finnish Meteorological Institute, the Technical Research Center of Finland VTT and the University of Helsinki

The zone air purifier TAC V+ reduces the dwell time and intensity of spontaneous aerosol and suspended matter clouds, thus creating an area for customers and employees in which the risk of infection is significantly reduced.



Current scientific studies indicate that "unprotected coughed pathogens spread over several meters within a few seconds and hover infectiously in the air for up to 5 minutes".

The mobile high-performance air purifier TAC V+ was specially designed for such environments and enables the establishment of transfer and stay zones for customers and employees with virus-filtered ambient air. The target areas are permanently flushed with cleaned air, which significantly reduces the risk of infection within these zones compared to untreated areas.

The heat-resistant special filter developed exclusively by Trotec is characterized by a degree of separation of 99.995% with particle sizes from 0.1 to 0.2 μm .

This filter efficiency ensures that out of 100,000 microparticles floating in the air, 99,995 particles are effectively filtered out by the TAC V+ with H14 filtering!

And because virus strains such as SARS-CoV, MERS-CoV or SARS-CoV-2 have similar sizes - current studies, for example, specify the particle size of the coronavirus to 120 to 160 nanometers, i.e. 0.12 to 0.16 μm - allow such particle sizes to be determined. Separate the H14 high-performance filter of the TAC V+ extremely effectively, especially since viruses in the air generally appear in combination with saliva or suspended matter as larger aerosol conglomerates.

Unique in the world and only at Trotec:

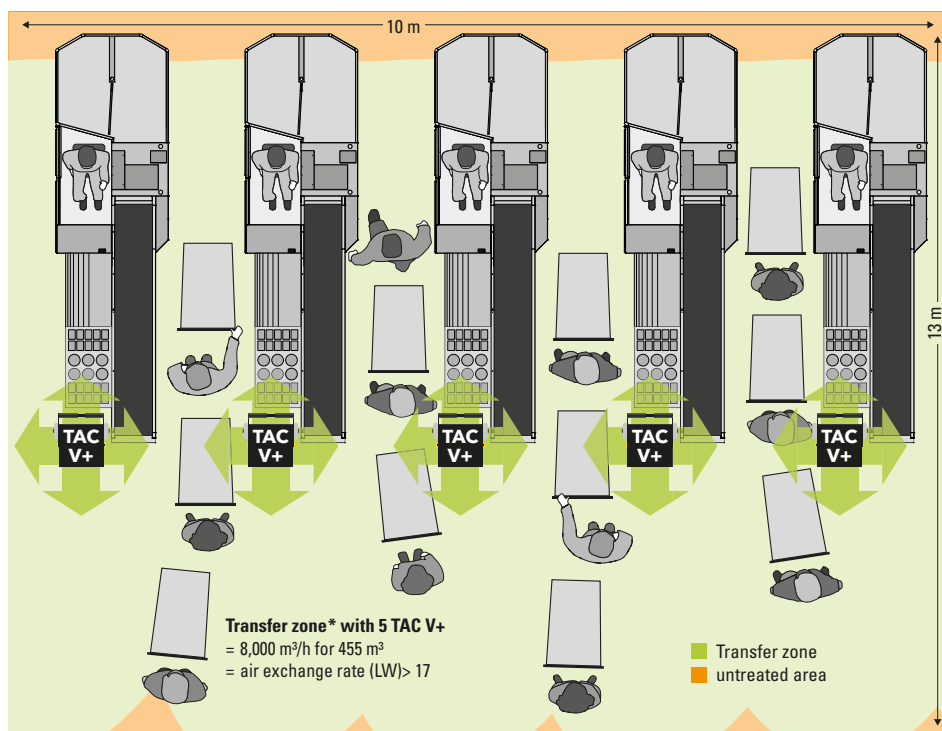
The TAC V+ has an automatic thermal self-regeneration function of the HEPA special filter, which at regular intervals inactivates all viruses that have been separated in the filter and thus 100% "decontaminates" the filter again.

Thanks to this unique combination of filter and decontamination technology, the TAC V+ significantly and safely reduces an airborne infection risk in supermarkets, drug stores, hardware stores or even fitness studios.

By installing several TAC V+, clean air lock areas can be set up as low-aerosol transfer, stay or waiting zones for your customers and employees!



The TAC V+ enables large-volume intake of polluted room air with effective H14 HEPA filtering and flexible flushing of the room, free of airborne aerosols.



By arranging the TAC V+ in rows in checkout areas, transfer zones for customers and checkout staff with virus-filtered ambient air can be established. The permanent flushing with filtered air significantly reduces the risk of infection in these zones.

* With an area of 10 x 13 m and a room height of 3.5 m, the checkout zone shown as an example has an air volume of 455 m³, which 5 TAC V+ can circulate more than 17 times per hour (air capacity 8,000 m³/h), which is one Air exchange rate (LW/h) > 17 corresponds.

Technical data room air cleaner TAC V+

Air flow rate freely blowingmax. 2,300 m ³ /h
Air flow rate with HEPA H141,600 m ³ /h
Realizable Clean-Zone-Areadepending on the selected air exchange rate per hour (LW/h), see table on front
Air filter pre-filterF7 (EN 779:2002), ePM10 85 % (ISO 16890)
HEPA air filterTrotec HEPA-H14 Heat Resistant
Exemplary energy consumptionapprox. 6 kWh / 12 h with 2 regeneration cycles daily and 12 h operating time
Sound level54 dB(A) at 1,100 m ³ /h, distance 1 m
Power supply220-240 V 50 / 60 Hz 2,950 W
L x W x H / weight580 x 620 x 1,300 mm / 79 kg

¹ Filter efficiency class H14 $\leq 1,200$ m³/h certified according to DIN EN 1822

** with a room height of 3.5 m

Required air exchange rates: The higher the air exchange rate (LW), the lower the dwell time of aerosol-bound viruses in the ambient air and the associated risk of infection. As a non-binding recommendation, 15 LW offer a medium, 20 LW a high and 25 LW a significant risk protection.