

Room air purifier TAC V+

The speciality of Our house for "rescuing gastronomy"



- Effective air purification and virus filtering:** developed for permanent operation in restaurants, cafés and bars, clouds of virus-contaminated aerosols are sucked in, viruses are filtered and clean air is blown out
- "Clean-Zones-Areas":** Establish safe areas with filtered, virus-free air at airline standard, individually sized according to the number of devices and people and the established air exchange rate
- "Plug & Play"** – set up, plug in, switch on, done. Room filtration, independent of existing air-conditioning and ventilation systems.
- Saving resources:** 100 % environmentally friendly, no chemicals, simple installation required
- Effective air filtration:** F7 pre-filter and HEPA H14 main filter with 99.995 % separation efficiency for particle sizes from 0.1 to 0.2 µm
- Unique in the world and exclusive to Trotec:** automatic filter regeneration through thermal virus decontamination – first the viruses are separated in the heat-resistant special filter and then regularly thermally inactivated there!
- High-quality materials and workmanship:** "Made in Germany" – original Trotec manufacture, virus special filter with individual testing and test certificate
- Flexible positioning:** simply place the mobile TAC V+ where it is needed

H14 clean air capacities	TAC V+	
Maximum discharge air volume without filter in m³/h	2,500	
Outlet air volume in m³/h with HEPA-H14 filter	1,600	
Clean zone area in m³ at 5 air changes/hour	320	SECURITY LEVEL ↓
Clean zone area in m³ at 10 air changes/hour	160	
Clean zone area in m³ at 15 air changes/hour	107	
Clean zone area in m³ at 20 air changes/hour*	80	

* Clean room airline standard

With the TAC V+ you decide what level of safety best suits your needs: the higher the air circulation and therefore the air exchange rate (AC), the less time the viruses remain in the room air, and the associated risk of infection. The level of the air exchange rate also determines the radius of action of each high frequency air purifier. Basic protection can be achieved from 5 AC, but to keep the risk low in fully occupied rooms, we recommend air exchange rates between 10 and 20 AC, because the main objective is to prevent the breathing of air from different people as much as possible. And if a client expresses concern that a higher degree of protection is required, for example, if they belong to a certain risk category, then this can be adjusted individually for the clean zone area in which that client is located.

NEW

The TAC V+ high frequency air purifier reduces the risk of aerosol infection in restaurants, bars, cafeterias and bakeries

Although restaurants have been able to reopen under strict conditions, virologists still have serious concerns that the risk of airborne infection is underestimated, as half of all virus transmissions occur through aerosols emitted by breathing, talking or coughing.

Keep the risk low with high frequency air purification

From the very beginning, Trotec has been promoting the fight against indoor aerosols as an effective measure and, as we are the leader in professional air treatment solutions, we present to you the first highly effective air purification device with integrated virus decontamination!

Virus-free air reduces the aerogenic risk of infection to almost zero

If the air in a room can be kept largely free of germs and viruses, the risk of aerogenic infection in service counters and dining rooms is minimized.

Our TAC V+ high-frequency air purifier was developed precisely for this task, because it effectively and quickly reduces the dwell time and intensity of aerosols and clouds of suspended particles in closed rooms, thus creating an environment with a very low risk of infection for both employees and guests.

Exterminate aerosol clouds within minutes

The mobile high frequency air purifier creates a "clean zone area" with clean virus-filtered air. In these zones, the ambient air remains largely free of airborne germs and viruses, because the TAC V+ allows the entry of large volumes of contaminated air with effective H 14 HEPA filtration and a



The TAC V+ enables the large-volume intake of polluted room air with effective H14 HEPA filtration and a flexibly adjustable flushing of the room, free from airborne aerosols.

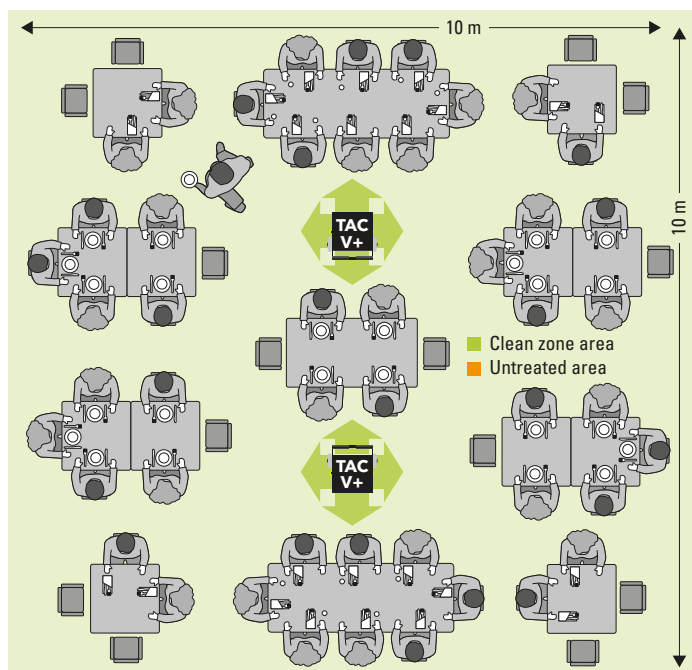
flexibly adjustable outlet grille to blow the air with virus-filtered air, free of aerosol particles.

Worldwide unique filter decontamination

The special filter used in the TAC V+ not only reliably retains 99.995 % of all aerosol particles larger than 0.1 µm, the filter is also heated cyclically, which inactivates all viruses separated in the filter and thus, 100 % "decontaminates" the filter again. **This thermal self-regeneration function of the special H14 filter is unique in the world and only available from Cross Hire in Ireland!**

Neutralize the danger of infection quickly and fill your restaurant safely, airline style:

Airlines may also occupy the middle seats – their argument: frequent air changes with efficient HEPA air cleaning. Suction in the floor area, filtering the air and then blowing it back into the cabin from above. **Exactly the air cleaning principle of the TAC V+!** With one difference: In a fully occupied A320, each guest has 0.51 m² of space available - much less than the catering industry is allowed, even though only 19.3 m³ of clean air per hour is generated for each passenger. In contrast, two TAC V+ in the restaurant example (see below) generate 66.6 m³ of clean air per guest per hour - a factor of 3.5 compared to the aircraft! And even if all 62 restaurant seats were occupied, it would still be 51.6 m³/h. This still corresponds to almost 3 times the amount of clean air that is available to each guest in the aircraft. **What is possible in the sky must also be possible on the ground!**



Application example: With a surface area of 100 m² and a height of 3 m, the displayed guest room has an air volume of 300 m³, which two TAC V+ can filter almost 11 times per hour virus free (air capacity 3,200 m³/h) – this corresponds to an air exchange rate (LW/h) of 11 (clean air volume of 66.6 m³ per guest with 48 occupied seats).

Technical data room air cleaner TAC V+

Air output freely blowing	continuously up to 2,500 m ³ /h
Clean air output HEPA H13 / H14	1,900/1,600 m ³ /h
Realizable Clean-Zone-Area	depending on the selected air exchange rate per hour (LW/h), see table on front
Air filter pre-filter	F7
HEPA air filter	Trotec HEPA-H14 Heat Resistant
Exemplary energy consumption	approx. 6 kWh / 12 h with 2 regeneration cycles daily and 12 h operating time
Sound level	54 dB (A) at 1,100 m ³ /h, distance 1 m
Connection voltage	230 V 50/60 Hz / 16 A
L x W x H / weight	580 x 620 x 1,300 mm / 79 kg



Airlines have approval to have full occupation but what about the restaurants?

Consensus on problem analysis

More and more experts recognize that an airborne viral infection is probably the most decisive route of infection. Current studies suggest that viruses can be released into the environment as aerosol clouds, especially when speaking, and can remain in the air for hours.

The problem is in the air, and so is the solution

If viral sprays float in the room air, there is an increased risk of infection. Viruses do not follow distance rules and easily overcome physical barriers such as partitions. If room air can be kept free of viruses, the aerogenic risk of infection is reduced.

The coup of the aviation industry

With this argument of clean air, the aviation industry has recently managed to take the middle seat again.

Full occupancy for full turnover, after all, without sufficient space it would hardly be possible to work cost-effectively - which any caterer can sign up for immediately - and a free middle seat as well as other precautionary measures would not be necessary at all, because the risk of infection on board is extremely low due to the special air conditioning filters (HEPA) and air purification with laminar air flow vertically from the cabin ceiling to the floor, the air is practically as germ-free as in an operating theatre.

Punishment only for restaurateurs?

If there were similar solutions for gastronomy, nobody would understand that different rules apply here. What is possible in the sky must also be possible on the ground!

The TAC V+ air cleaned as if in flight

And there is such a solution: With the TAC V+, Trotec has developed a high-frequency air cleaner that follows the same flow principle as that used by the aviation industry: Potentially contaminated air is sucked in close to the floor, filtered with HEPA and then returned to the room from above in a virus-filtered form. The TAC V+ is also equipped with a powerful H14 class HEPA filter, but it also has a feature that is unique to Trotec and not available on any other aircraft:

With Trotec's solution, suspended particles containing viruses do not simply remain in the filter, as is the case with aircraft filters. In addition, the filter is cyclically heated so that all the viruses trapped in the filter are inactivated, which in turn "decontaminates" the filter 100%. This thermal self-healing function of the special H14 filter is unique in the world, only available at Trotec and not on any aircraft.

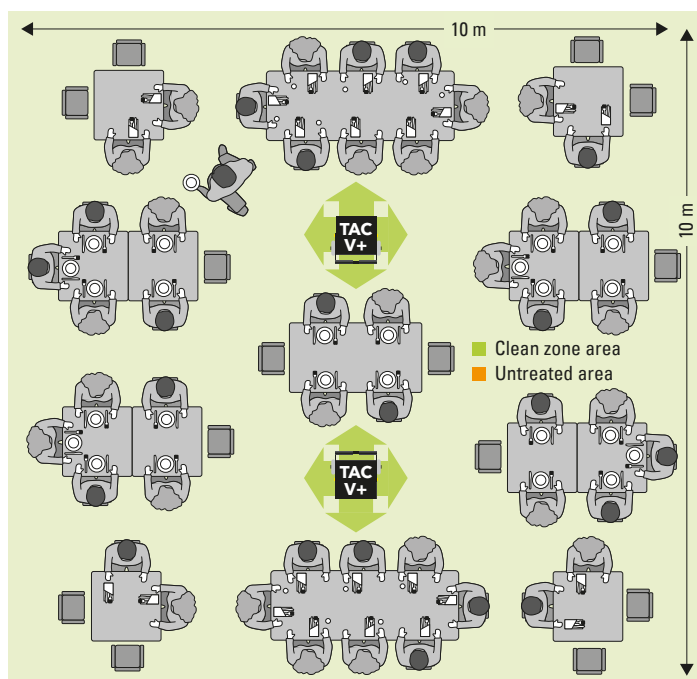
Same technique, equal rights!

The clean air performance of the TAC V+ in combination with several units easily exceeds the achievable fresh air supply rates in a wide bodied jet by a factor of 3, as shown in the example diagrams below!

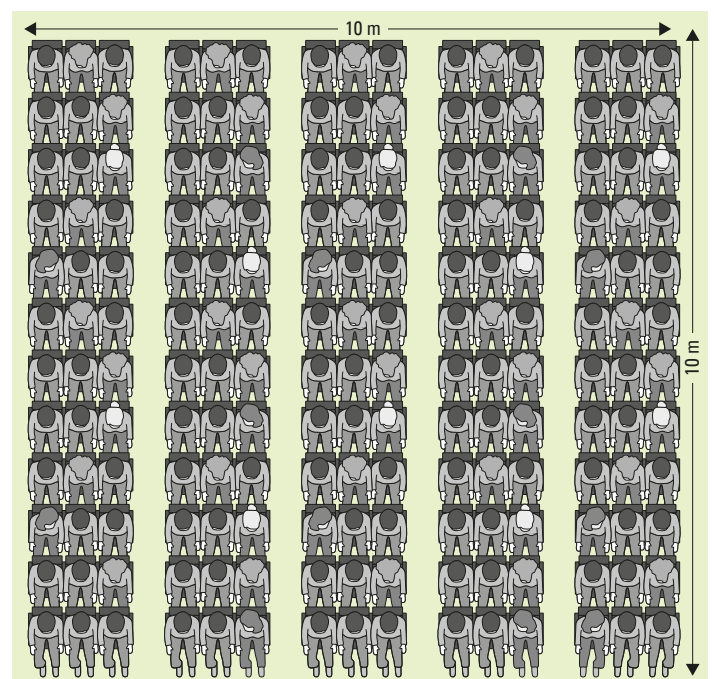
However, if airlines are now allowed to reoccupy every seat down to the last one, i.e. more than 2 persons per square meter of cabin space, because they have air filtration technology that neutralizes the aerogenic risk of infection through a certain type of air filtration, the catering industry should not really be denied the opportunity to make the same principle of room air filtration an integral part of the hygiene concept!

The cash registers suffer in the restaurants, but what about the aviation subsidies?

Contact your Member of Parliament, your district administrator, your mayor and demand a statement on this unequal treatment. You may have to go up to the sky first to get a level playing field. With the same hygiene rules, the sky should not be the limit and different rules should not apply to "ground staff"! There should therefore be concepts of subsidies for cleaning the air "at the base", just as there should be for supporting the aviation industry, which is worth billions!



Example of occupancy in the catering sector: With a surface area of 100 m² at a height of 3 m, the restaurant room shown has an air volume of 300 m³, which two TAC V+ can filter almost 11 times per hour (air capacity of 3,200 m³/h) – this corresponds to an air exchange rate of 11 (clean air volume of 66.6 m³ per guest with 48 occupied seats) - a factor of 3.5 compared to the airplane!



Example of occupancy in a large-capacity jet: airlines are allowed to place the equivalent of 196 people on the same area - 0.51 m² of space per passenger – even though only 19.3 m³ of clean air per hour is generated for each passenger. In the example guest room, however, it would still be 51.6 m³/h per guest, even if all 62 restaurant seats were occupied – still almost a factor of 3 compared to the aircraft!