

Room air purifier TAC V+

High-performance air purifier "Made in Germany" for virus filtering in gyms, sports halls, indoor sports facilities



- Effective air purification and virus filtering:** developed for permanent operation in gyms, indoor sports facilities or rehabilitation centres - 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 self-regeneration through thermal virus decontamination. First the viruses are separated in the special heat-resistant filter and then they are 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 m ³ /h	2,500	
Outlet air volume in m ³ /h with HEPA-H14 filter	1,600	
Clean zone area in m ³ at 5 air changes/hour	320	SECURITY LEVEL ↓
Clean zone area in m ³ at 10 air changes/hour	160	
Clean zone area in m ³ at 15 air changes/hour	107	
Clean zone area in m ³ at 20 air changes/hour*	80	

* Clean room airline standard

With the TAC V+, you can decide for yourself which security level is best suited to your requirements: the higher the air circulation and thus the rate of air exchange (LW), the lower the time viruses remain in the room air and thus the lower the risk of infection. The level of the air exchange rate also determines the radius of action of each individual high-frequency air purifier. A basic protection can be achieved from 5 LW, but for significant risk protection in fully occupied rooms we recommend air exchange rates between 10 and 20 LW, because the primary goal is to prevent the breathing air of different persons as far as possible. And to maintain the desired level of protection for a higher number of people, for example during well-attended courses, simply place an additional TAC V+ in that room.

NEW

The TAC V+ high frequency air purifier reduces the risk of aerosol infection in gyms, indoor sports facilities and rehabilitation centers

Although gyms have been able to reopen under strict conditions, leading virologists are concerned 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

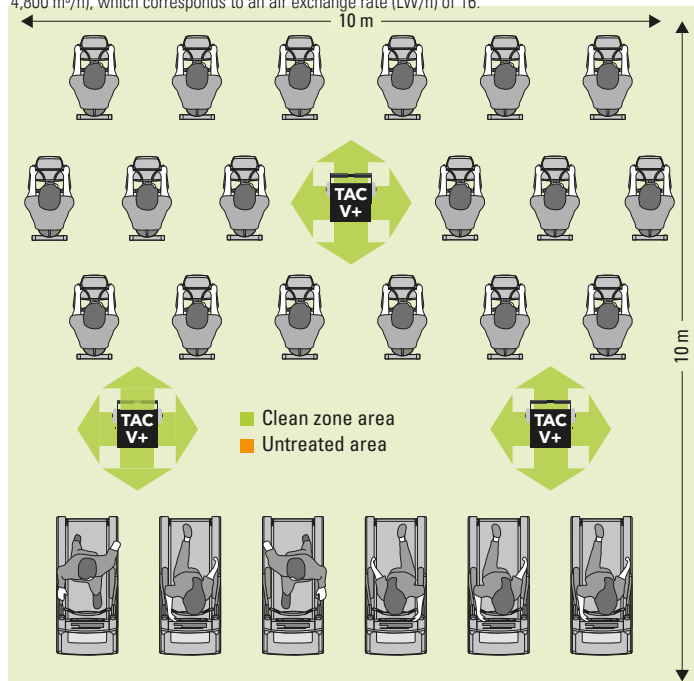
If the air in a room can be kept largely free of germs and viruses, the risk of aerogenic infection in reception or training areas is minimized.

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 members.

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

Application example for a gym: With an area of 10 x 10 m at a room height of 3 m, the training zone shown has an air volume of 300 m³, which 3 TAC V+ can circulate 16 times per hour (air capacity 4,800 m³/h), which corresponds to an air exchange rate (LW/h) of 16.



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.



with effective H14 HEPA filtration and a flexibly adjustable outlet grille to blow out 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 gym safely, airline style:

Airlines may also occupy the middle seats. Their argument is: frequent air changes with efficient HEPA air cleaning. Suction in the floor area, filter the air and then blow it back into the cabin from above. **Exactly the air cleaning principle of the TAC V+!** With one difference: On a fully occupied A320, 0.51 m² of space is available for each passenger, much less than is possible in a fitness centre, although only 19.3 m³ of clean air is generated per hour for each passenger. In contrast, three TAC V+s in the gymnasium in the example with 24 people training (pictured below) produce 200 m³ of clean air per person per hour – 10 times more than the plane! **What is possible in the sky must also be possible on the ground!**

Technical data room air cleaner TAC V+

- Air output freely blowingcontinuously up to 2,500 m³ / h
- Clean air output HEPA H13 / H141,900 / 1,600 m³ / h
- Realizable Clean-Zone-Areadepending on the selected air exchange rate per hour (LW/h), see table on front
- Air filter pre-filterF7
- 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 m³ / h, distance 1 m
- Connection voltage230 V 50/60 Hz / 16 A
- L x W x H / weight580 x 620 x 1,300 mm / 79 kg



Carte blanche for the planes. What about the gyms?

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 also 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 reoccupy the centre seats again.

Full occupancy for full sales after all, without sufficient space it would hardly be possible to work profitably - which every gym owner can sign up for immediately - and there would be no need at all for a free middle seat, as well as other precautions, because the risk of infection on board is extremely low due to the special air conditioning filters (HEPA) and the vertical laminar flow air discharge from the cabin ceiling to the floor, the air is practically as germ-free as in an operating theatre.

Punishment only for fitness clubs?

If there were similar solutions for the fitness industry, nobody would understand that different rules apply here - what is possible in the sky must also be possible on 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 aircraft:

With Trotec's solution, suspended particles containing viruses are not simply captured in the filter, as is the case with aircraft filters. The filter is also 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.

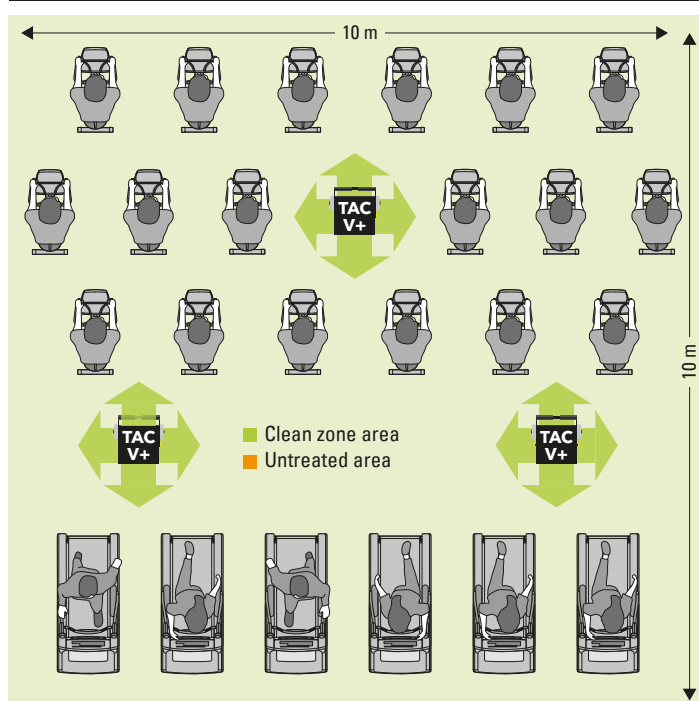
Same technique, equal rights!

The clean air performance of the TAC V+ in multi-unit operation easily exceeds the fresh air supply rates achievable in a wide-body aircraft by a factor of 10, as shown in the example graphs below!

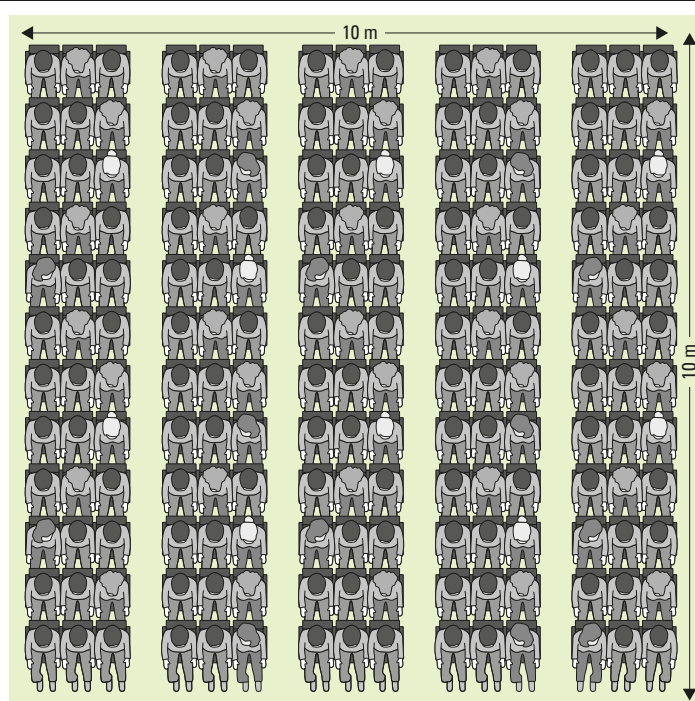
But if airlines are now allowed to reoccupy every available seat, i.e. more than 2 people per square meter of cabin space, because they have air filtration technology that neutralizes the aerogenic risk of infection from a certain type of air filtration, the fitness industry should not be denied the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

The cash registers are suffering at the Fitness Centers but what about 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 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 gym occupation: With an area of 10 x 10 m at a height of 3 m, the training area shown has an air volume of 300 m³, which 3 TAC V+ can circulate 16 times per hour (air capacity of 4,800 m³/h) - this corresponds to an air exchange rate of 16 (clean air volume of 200 m³ per guest with 24 occupied training areas) - a factor 10 times higher compared to the airplane!



Example of occupancy in large-capacity jet: airlines are allowed to place the equivalent of 196 people on the same area - 0.51 m² of space per passenger - although only 19.3 m³ of clean air is generated per hour per passenger - not even one tenth of the clean air output per person in the example of the adjacent fitness room!