



# TÖNNIES

## TROTEC Case Study

### Customer:

TÖNNIES Holding ApS & Co. KG  
www.toennies.de

### Sector:

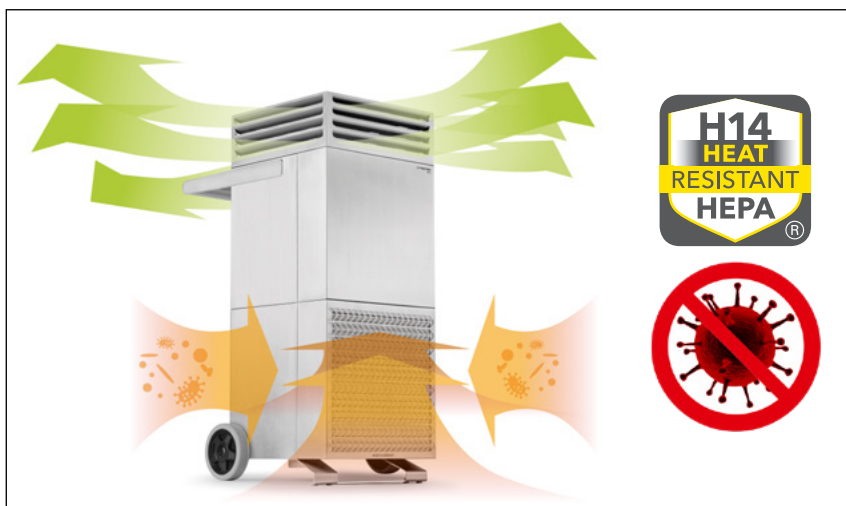
Meat-processing industry,  
food industry

### Trotec product:

High-performance air purifier TAC V+ with H14 virus filter (certified according to EN 1822)

### Benefits of Trotec's solution:

99.995 % virus-filtered room air and aerosol concentrations presenting no danger to the health of employees in the meat production - scientifically proven. Approved in hygiene concepts of the industry, administration and healthcare sector. Automatic virus killing and filter regeneration.



## Effective aerosol and virus filtration of the room air

After the Corona infections, Germany's largest meat producer Tönnies has introduced a new hygiene concept based on Trotec's high-performance air purifiers TAC V+, providing a nearly aerosol- and virus-free room air.

**Founded in 1971, the family-owned company Tönnies today employs about 16,500 people in 8 different business areas. The core business of the internationally operating company group includes slaughtering, cutting and processing of pigs and cattle.**

Trotec is an internationally operating company developing, producing and selling machines for climate conditioning for the industry and commercial sector. Customers are provided with innovative solutions for dehumidification, heating, air conditioning, air purification and ventilation both online and in the international subsidiaries. Trotec offers individual solutions for all phases of product processing in the food industry.

**After the Corona infections in the Rheda-Wiedenbrück plant, Trotec now ensures aerosol- and virus-free room air at Tönnies to optimally prevent infections among employees.**

Wherever many people work together in small spaces, the risk of a mass infection increases. For when breathing, talking, singing, coughing or sneezing, people emit aerosol mixtures which may be contaminated with viruses (e.g. SARS-CoV-2). These tiny aerosol particles remain in the air

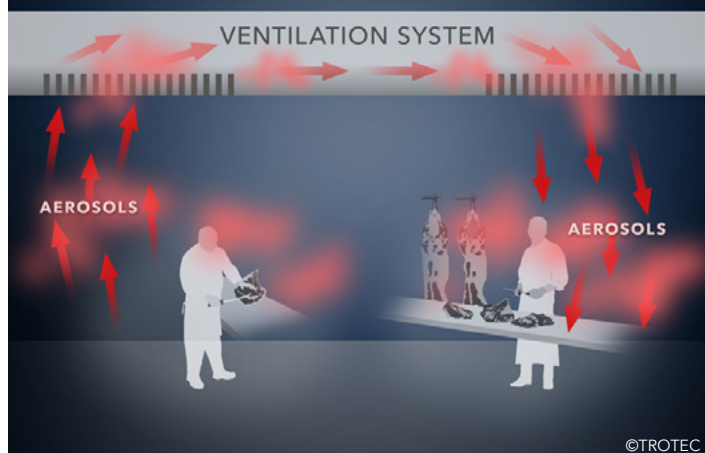
for hours and can spread across the room over large distances. Such a "superspreading event" is what happened at a Tönnies slaughterhouse in the district of Gütersloh, where more than 1,500 employees have become infected with the COVID-19 virus SARS-CoV-2.

**New hygiene concept at Tönnies: The high-performance air purifier TAC V+ filters 99.995 % of aerosol particles and viruses from the room air.**

The new hygiene concept of the Tönnies company, developed in collaboration with Trotec, focusses on one particular aspect: indoor air hygiene. Therefore, Tönnies has decided for Trotec's globally unique air purification solution TAC V+ in order to remove aerosols carrying viruses from the indoor air almost completely by way of effective HEPA filtration with class H14 filters (certified according to EN 1822).

The high air flow rate of the high-performance air purifier TAC V+ permanently dilutes the aerosol concentration in the room air to a safe level and filters aerosol particles and the contained viruses from the room air. Additionally, the unique thermal filter decontamination, which is exclusively available at Trotec, automatically eliminates the viruses deposited in the H14 filter.

**THE PROBLEM:** The virus-laden aerosol clouds used to be distributed throughout the room by the ventilation system and even transported into other rooms. This has resulted in numerous infections.



Another advantage: The flexible high-performance air purifier TAC V+ can easily be integrated in production areas with already existing ventilation systems.

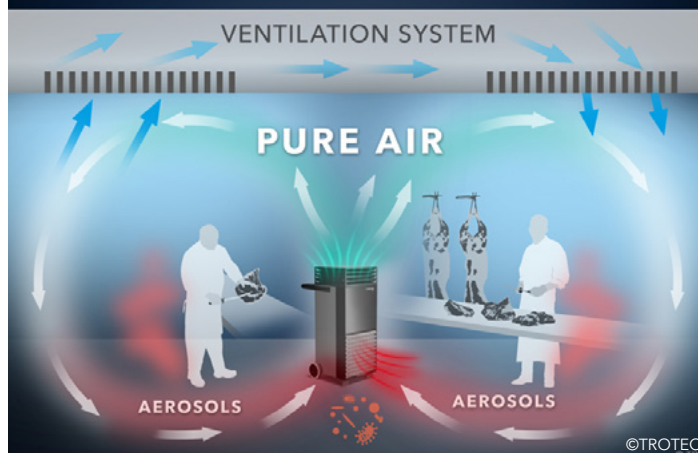
Efficient air purification by means of an H14 filter (according to EN 1822) is the perfect solution for maximum infection protection. The high-performance air purifier TAC V+ filters 99.995 percent of viruses and bacteria from the room air. The viruses bound in the H14 filter are destroyed by automatically heating the filter to 100 °C for 30 minutes. This thermal filter decontamination is unique on the market and guarantees a constantly high effectiveness of the virus filter.

### Scientifically proven effectiveness

Based on studies, the Director of the Institute for Hygiene and Public Health of the University of Bonn, Professor Martin Exner, has demonstrated that e.g. viruses and infectious aerosols cannot be filtered out of the air by a conventional ventilation system, but – quite on the contrary – that they are even further distributed in the room. Therefore, an efficient absorption of pathogens from the room air can only be achieved by special air cleaners such as the TAC V+.

Scientific studies conducted by leading German institutes and universities have confirmed that the high-performance air purifier TAC V+ decreases the virus load in the room air to almost zero and thus also reduces the infection risk caused by pathogenic viruses in aerosols to a minimum. Prof. Dr. Kähler of the University of the German Federal Armed Forces in Munich has also examined the effectiveness of the TAC V+ in a study reaching the following conclusion: *(see quote in the grey box)*

**TROTEC'S SOLUTION:** Trotec's high-performance air purifier TAC V+ dilutes the air that is contaminated with aerosols and viruses, sucks it in, filters it, and then emits the ultraclean air, thus generating ultraclean air zones in the room.



### Tangible improvements thanks to Trotec's solution

- Maximum possible protection against pathogenic aerosols, viruses and bacteria in the air (together with additional mandatory hygiene measures)
- Optimum air quality for employees, processes and products
- Large clean air capacity and high air change rates instead of simple air circulation
- Low investment costs thanks to mobile use and/or supplement for the existing ventilation system

This solution for reducing the risk of an airborne corona infection can also be applied to other companies of the meat-processing industry with comparable working conditions as well as, more generally, to companies from the food sector, e.g. **slaughterhouses and cutting plants**. Moreover, the mobile high-performance air purifier TAC V+ is also ideally suited for use in canteens, staff rooms, meeting rooms or accommodations.



**"If you run this system (TAC V+)\* continuously, no one will manage to generate an aerosol concentration of an infectious level in a room."**

**Prof. Dr. Christian J. Kähler,**  
Institute for Fluid Mechanics and Aerodynamics

\* Trotec's note

der Bundeswehr  
**Universität München**

Read the entire study:

[www.unibw.de/It7-en/indoor\\_air\\_cleaner.pdf](http://www.unibw.de/It7-en/indoor_air_cleaner.pdf)





### Product video

All infos on the TAC V+ in this video



[uk.trotec.com/tacv-plus-video](http://uk.trotec.com/tacv-plus-video)



### Sector-specific infos

Virus-free room air in the meat industry



[uk.trotec.com/tacv-plus-meat](http://uk.trotec.com/tacv-plus-meat)

## High-performance air purifier TAC V+

- Effective high-performance filtration of aerosols and viruses with the highest HEPA filter class H14 (certified according to EN 1822)
- Reliable filtration of virus-laden aerosols from the room air with a filtration efficiency of 99.995 % for particle sizes of 0.1 to 0.2 µm
- Effectiveness scientifically proven by leading German research institutes and universities
- Approved in hygiene concepts of the industry, administration and healthcare sector
- Unique:** fully automatic thermal filter decontamination – viruses in the filter are destroyed at 100 °C
- Unique:** fully automatic thermal regeneration function extends the filter lifetime
- FlowMatic to ensure a constant volumetric flow / air change rate
- Hygienic stainless steel housing
- Most silent air cleaner in its class
- Flexibly applicable; allows for connection to existing ventilation systems



Stainless steel for hygienic areas



Basalt grey



White



Bronze



Yellow

### Optionally also available in other colours

For use in canteens, offices, meeting rooms or collective accommodations, the TAC V+ can also be ordered in basalt grey, white, bronze or yellow.

## High-performance air purifier TAC V+ DUAL – specially optimized for virus filtration in large halls

For virus-free air purification of even very large hall areas we recommend using the TAC V+ Dual. This special model that blows out clean air at both sides offers you all advantages of the TAC V+ basic model, including the unique thermal filter decontamination and regeneration function. With its high-pressure fan and the special filter equipment, the effectiveness of which has been proven, the Dual design, which draws in air at the floor side and blows it out on two sides, makes it possible to extensively flush even spacious hall areas with virus-free, filtered clean air. C profiles integrated on both sides allow you to flexibly mount the TAC V+ Dual on the ceiling or wall, in the process of which you can also remove the control panel of the TAC V+ from the unit and attach it near the floor by cable, for example on mounting columns or the hall wall, also making it possible to easily control the high-performance air purifier from a distance even if the TAC V+ Dual has been mounted at a great height.

With the stainless steel version you can even use the TAC V+ Dual, which is available with a variety of clean air capacities on request, in hygiene-sensitive areas without any restrictions.

