



AIR PURIFICATION SOLUTION

Proven air purification for a safer and more pleasant rider's experience





RESTORING CONFIDENCE TO INCREASE RIDERSHIP

Keeping you safer from the things you can't see

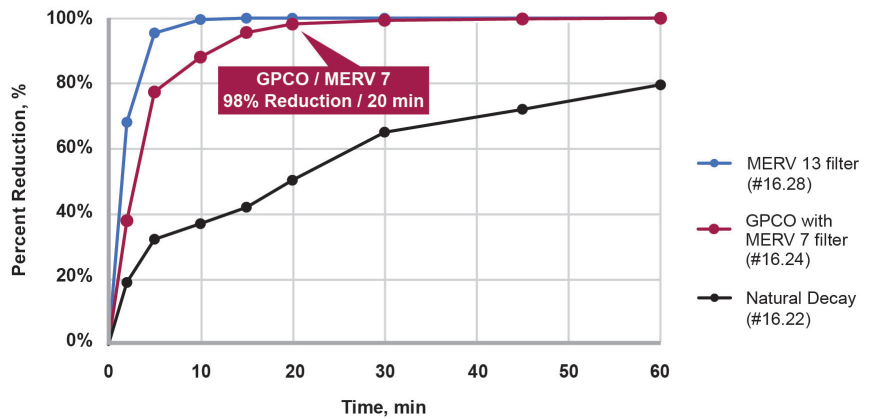
Improving the Indoor Air Quality (IAQ) within a bus is the first step to creating a safer and inviting environment for your passengers. Thermo King's air quality solution uses an active purification technology to inactivate viruses* and other microbes in the air and remove harmful chemicals to provide a safer and more pleasant rider experience in transit buses.

**Outcome based on testing using MS2 Bacteriophage, a common surrogate for SARS-CoV-2, the virus causing COVID-19. Thermo King's Air Purification Solution does not replace Personal Protective Equipment and does not protect riders from other riders.*

PROVEN EFFECTIVENESS

In order to provide you with the best solution possible, Thermo King has studied multiple technologies and their effectiveness in a transit bus environment. We offer an air purification solution that inactivates viruses and other pathogens in the air at a far greater rate than other comparable technologies and have validated our solution through **independent third-party testing**.

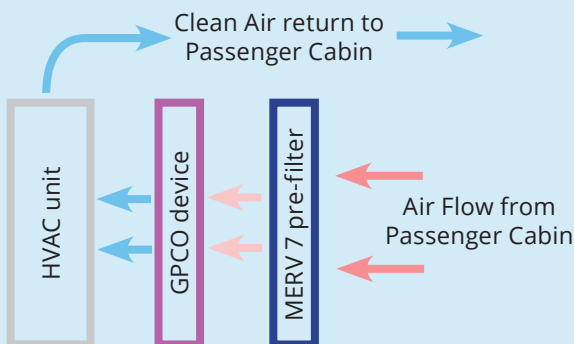
When combined with a MERV 7 pre-filter, our active solution has been proven to be **98% effective against in air viruses within 20 minutes of when the device is turned on**, offering one of the most effective active solutions within the high air flow restrictions of a transit bus HVAC system.



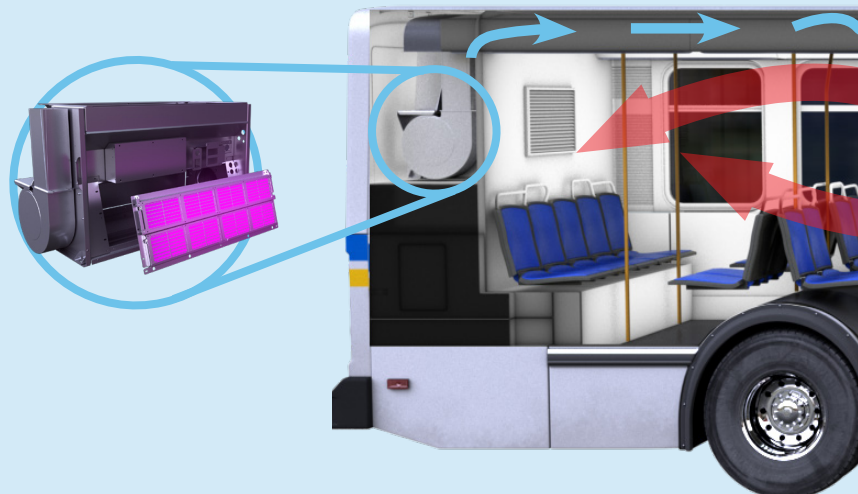
Inactivation of MS2 virus in air with air flow of 50 Air Changes/Hour. A complete report on the study findings can be located at thermoking.com/purification.

HOW IT WORKS

Air passes through a panel system of UV-A LED lights shining on graphene-enhanced catalysts, creating a chemical reaction that attacks viral particles and bacteria, inactivating them and removing them from the air.



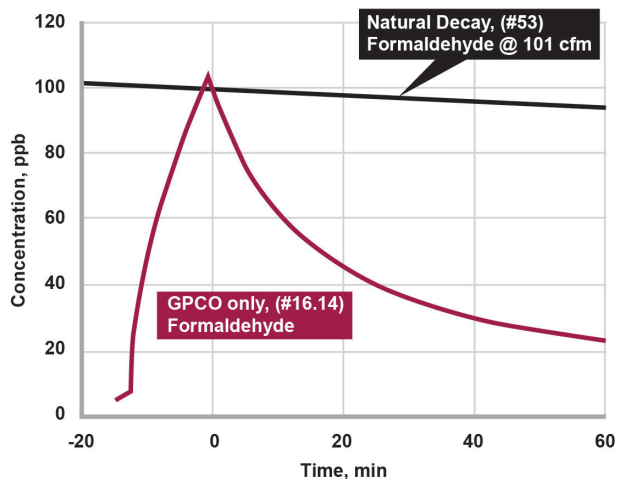
The Thermo King Air Purification Solution is a fully contained system located within the existing bus HVAC unit. As air is circulated from the passenger cabin into the HVAC system, it passes through a graphene-enhanced





CREATING A SAFER, MORE PLEASANT RIDING EXPERIENCE

The Thermo King Air Purification Solution is fully contained within the bus's HVAC area and does not increase the sound level significantly, keeping the cabin area quiet. The system uses UV-A LED lights which are not only the safest form of ultra violet light, but also more durable and longer-lasting than mercury vapor bulbs.



- 98% effective in viral inactivation within 20 minutes of operation
- In-duct solution keeps hardware out of the passenger compartment
- UV-A light is safer for human interaction than UV-C light, which is used in other active solutions
- Removes odor causing volatile organic compounds (VOCs) from the air

Our testing has shown that not only is our active solution effective against viruses, it can also remove bacteria and other VOCs from the cabin area (including formaldehyde). High concentrations of formaldehyde can be harmful and unpleasant to riders. Our GPCO solution has demonstrated strong efficacy in the oxidation and removal of formaldehyde from the passenger space at rates that far exceeded any other comparable technology.

photocatalytic oxidation (GPCO) device neutralizing harmful viral and bacterial elements. The cleaned air is then supplied back into the cabin area, where it forces contaminated air to be circulated back through the

bus's HVAC system for further cleaning. For more information on all our air quality products, go to thermoking.com/purification



INDUSTRY CERTIFICATIONS

Thermo King's Air Purification Solution has been thoroughly tested and proven in both lab and real world settings. As a result it has received multiple quality certifications in the industry.

California Air Resource Board (CARB)

State evaluation of performance and quality assurance for air cleaning devices used in California to limit the amount of ozone and emissions emitted into the air

UL 2998 certification

Evaluation of air cleaners which potentially generate ozone, are rated at 600 volts or less, and are intended to remove or aid removal of dust, other particles or pollutants from the air.

UL-900 flammability

Evaluation of flammability and smoke density of air filter units.

Environmental Rating IP44

Approval protection against solid objects that are bigger than 1mm and water splashing from all directions.

CREATING SAFER, HEALTHIER, MORE RESILIENT COMMUNITIES

The Center for Healthy & Efficient Spaces

Trane Technologies Center for Healthy & Efficient Spaces (CHES) convenes leading internal and external experts to advance indoor environmental quality policy, strategies and solutions establishing a roadmap for more resilient and sustainable communities and spaces.

The CHES is working with technology and innovation companies in the climate sector to evaluate and scale the latest advancements in indoor environments across transport, homes, and commercial buildings. It engages a global team of experts from the company's HVAC and transport refrigeration businesses, as well as an Advisory Council on Healthy Spaces made up of leading experts in the fields of medicine, epidemiology, academic research, and policy.

Through idea exchange, research, partnership development and advocacy, the Center guides our efforts, and those of our industry, on issues tied to the effect that indoor environments can have on the health, productivity and well-being of people, while continuing to advance sustainable outcomes for the world.

www.tranetechnologies.com



Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938. For more information, visit thermoking.com or tranetechnologies.com.

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