

P R E S S R E L E A S E

Improved air quality in busses and coaches for safe and comfortable transportation

- Three-step-solution for virus inactivation in bus AC systems
- Particulate Filters for air filtration and Polarised Media Electronic Air Cleaner for air purification
- UV-C (Ultraviolet-C) LED modules for air sterilization

Esslingen (Germany), 22 February 2021 – Thermal management expert Eberspaecher strives to improve air quality in public transport and coach travel. To make travelling by bus and coach safer, Eberspaecher has developed a three-step-solution to provide clean air inside buses: Particulate Filters and the Polarised Media Electronic Air Cleaner in the bus AC system capture contaminated water droplets. UV-C LED modules are an ideal solution to inactivate viruses. Thus, Eberspaecher's clean air solutions provide complete air purification and a safer environment not only for passengers, but also for vehicle operators and maintenance personnel.

The number of pathogens can increase considerably in enclosed spaces. Hence regular and increased ventilation reduces the risk of infection. Ventilation also improves interior climatic conditions and, by increasing air humidity, prevents dryness in the mucous membranes in the nose and mouth, which in turn gives better protection against pathogens. Providing fresh air or increasing the amount of fresh air is therefore a worthwhile measure – also while using busses or coaches. The AC systems therefore help to improve air quality in busses. To fully benefit from this potential, the Eberspaecher Bus & Coach Business Unit has developed a three-step-solution to treat 100 percent of the air moving through a bus HVAC system.

Particulate Filter solution for improved air filtration

The Particulate Filter is a pleated-type filter that fits adjacent to the evaporator coil, replacing the existing polyurethane foam filter for a low to medium filtration level. Besides dust, pollen, mold, and soot, these filters will also collect the water droplets that contain viruses that are distributed by aerosol transmission. Water droplets vary in size from 0,6 µ to 10 µ: Eberspaecher Particulate Filters can trap up to 74 percent of particles size 0,5 µ and up to 90 percent of particles size 10 µ. The filters are installed within the roof-mounted air-conditioning system.

Polarised Media Electronic Air Cleaner for enhanced air purification

The Polarised Media Electronic Air Cleaner (EAC) offers a medium to high filtration level. In comparison with the Particulate Filters, it is more effective at removing particles and therefore, can trap up to 97 percent of particles size 0,3 µ and up to 99 percent of particles size 10 µ. The EAC is a high-efficiency filtration solution with low static pressure drop. It is placed within the return air grille under the AC unit and starts to work automatically when the AC system is turned on. Eberspaecher offers the EAC in seven different sizes to suit mainly in-line units and has already been successfully using this solution for several years with customers.

UV-C LED Module for air sterilization

The UV-C LED Module is the most efficient solution from Eberspaecher. 100 percent of the air inside the bus moving through the air-conditioning unit is treated and up to 99.9 percent of this is sterilized by the UV-C LED modules. It consists of 4 to 6 modules with up to 198 UV-C-LEDs to inactivate viruses within the airflow. Independent tests confirmed the qualification for disinfection of influenza viruses (strains H1N1 and H3N2). The modules can be used either inside the roof-mounted air-conditioning system or within the bus air ducts. Thus, this solution can be adapted to almost any kind of air-conditioning system. Thanks to a visible indicator light, passengers or the vehicle operator can see when the UV-C modules are switched on without exposing themselves to any risk through the UV-C light.

Captions:

- *The UV-C-LED-module-solution from Eberspaecher sterilizes up to 99.9 percent of the air moving through the bus air-conditioning unit.*
- *Graphic showing the Eberspaecher three-step-solution.*

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About Eberspaecher:

With approximately 10,000 employees at 80 locations worldwide, the Eberspaecher Group is one of the automotive industry's leading system developers and suppliers. The family business, headquartered in Esslingen am Neckar, stands for innovative solutions in exhaust technology, automotive electronics and thermal management for a broad range of vehicle types. Eberspaecher components and systems provide more comfort, greater safety and a cleaner environment on or off the road. In 2019, the Group generated revenue of more than 4.9 billion euros.