PRESS RELEASE

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"Air Quality is Quality of Life"

Clever retrofit solutions and smart systems: "Best Air Quality" is a focal point of MANN+HUMMEL at the IAA TRANSPORTATION 2022.

Ludwigsburg, September 19, 2022 – According to WHO estimates, around seven million people worldwide die prematurely because of polluted breathing air. This makes air pollution one of the most significant health risks alongside high blood pressure, diabetes, tobacco consumption and obesity. Improving air quality, especially in urban areas, is therefore one of the major challenges of our time. At the IAA TRANSPORTATION 2022 in Hanover (September 20 to 25), MANN+HUMMEL presents a wide range of solutions (hall 13, booth C33).

Traffic is considered a major cause of fine dust, which is blamed for many respiratory and cardiovascular diseases. "Clean mobility is one of our corporate values," says Heinz Bühl, Vice President New Products at MANN+HUMMEL. "This also applies to the issue of fine dust, which is a huge problem, especially in metropolitan regions. Carbon dioxide has a damaging effect on the climate in the long term, but fine dust literally creates the bad air that you have to breathe every day. However, air quality is critical to quality of life."

"Brakes and tires generate most of the fine dust"
MANN+HUMMEL shows how the ambient air in commercial vehicle traffic can either be cleaned or prevented from fine dust pollution with an innovative, coordinated product range. Bühl: "With modern combustion engines, as well as with hydrogen and electric cars, the braking process and tire abrasion generate most of the fine particulate matter. There are three main approaches to filtering these harmful particles from the air: directly at the source, in the ambient air and, finally, in the interior of vehicles. By combining brake dust and fine dust particle filters, it is even possible to achieve a positive fine dust balance – meaning that a vehicle collects more fine dust than it emits through exhaust, brake, road and tire wear. That's the goal."

Introducing: fully encapsulated brake dust particle filter
At the IAA TRANSPORTATION 2022, MANN+HUMMEL is presenting for the first time a fully encapsulated brake dust particle filter for the heavy duty & industrial sector, which can be installed independently of the respective type of propulsion and without modifications to existing brake systems. The fine dust is captured directly at the brake disc. Thanks to its full encapsulation, the highly efficient element is a cost-effective and environmentally friendly retrofit solution that is part of the EU's AeroSolfd innovation project, which aims to accelerate the transition to clean mobility. Led by Ludwigsburg-based filtration specialist MANN+HUMMEL, the consortium brings together major industrial companies, renowned scientific institutes and pioneering demonstration projects from eight European countries.

PureAir roof box: powerful fine dust collector
An innovative solution for reducing fine dust in the ambient air is the PureAir roof box. "The world's first stationary solutions originated from our company and can be found, for example, at the Neckartor in Stuttgart, in Munich, and also in cities in India and South Korea," explains Bühl. "The PureAir roof box is the mobile version of this, so to speak, and can be mounted on the roof as a retrofit solution for existing vehicle fleets. In addition, we are also developing an integrated front-end solution for which finished concepts already exist." The roof box is intended for use on last-mile delivery vehicles, in local public transport or on waste disposal vehicles, for example. "The more severe the air pollution, the more fine dust the roof box collects per kilometer driven. But the integrated fan also cleans the air when the vehicle is not moving." A welcome economic side effect is that the design of the roof box can be customized, creating a positive corporate image.

Intelligent cabin air filter system: breathing freely in the driver's cab
Truck drivers, who often spend up to 45 hours a week behind the wheel, are particularly exposed to air pollution. On longer trips, the workplace becomes a temporary home. This makes the quality of the air inside the cab all the more important, as the level of unfiltered pollution can be up to four times higher than outside – with serious consequences for health and performance. The intelligent, multi-stage cabin air filter system from MANN+HUMMEL makes sure that there is no "thick air" in the driver's cab: in the event of extremely polluted outside air, a HEPA filter (High Efficiency Particulate Air Filter) is activated by sensor, which reliably removes up to 99.95 percent of all particles from the air, including bacteria, viruses as well as pollen and allergens in addition to fine dust. The smart sensor control, which also regulates the air supply and room temperature, is sustainable in several respects: it extends the replacement intervals of the valuable filters, saves electricity or gasoline – and, last but not least, increases the range of the vehicle.

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