



***Energy-efficient – Separating the Useful from the Harmful for
Cleaner Mobility and Cleaner Air***

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To separate the useful from the harmful: that is MANN+HUMMEL's mission and passion. It is why MANN+HUMMEL exists; it is what we are, and what we do. Since 1941, MANN+HUMMEL has been known for their dedication to the automotive, heavy duty and industrial segments, but in the late 2000's, we realized that our contributions can reach to a much greater level. We committed ourselves to growing in the Life Sciences & Environment segments, providing filtration solutions to provide cleaner air and cleaner water.

Separating the useful from the harmful is always linked with energy. The process of “filtration” requires energy to force a fluid through a porous media structure, which collects particles and thereby cleans the fluid. Hence, developing filter media with low pressure drop but high efficiency and dust holding capacity has been a primary development task from the beginning. For HVAC applications, EuroVent provides a certificate on rating the energy consumption.

To separate the useful from the harmful can be based on application directly linked to energy e.g., filters for gas turbines or power generation. In a broader sense, this comprises air intake filters, fuel, and oil filters as well for internal combustion engines. With the transition to e-mobility, new kinds of filters are becoming key enablers for greener technologies. In addition, smart and intelligent filtration solutions based on data science and AI are emerging for reducing energy consumption while staying at the same high level of cleaner air or cleaner water.

In this plenary, we will provide a brief survey on various aspects of energy-efficient filtration while focusing on cleaner mobility and cleaner air. We will present and discuss examples of energy efficient filter media for HVAC applications, latest filtration technology for HD off highway engines as well as recent innovations for e-mobility. We will show examples and discuss new and smart filtration solutions for cleaner mobility and cleaner air. We are convinced that filtration makes the difference today, and in the future.