

S1.2.2 IMPROVED INDOOR AIR QUALITY WITHOUT INCREASING COST

Bastian Keil, Hollingsworth & Vose

Growing urbanization, industrialization, and motor vehicle traffic are dramatically increasing pollution in many parts of the world. As a result, indoor air quality (in buildings) can often be significantly worse than the outside air. It has been proven that good filtration systems can greatly improve the situation. Today, poor indoor air quality contributes to 4.3 million premature deaths globally.

Increasingly, people are becoming more concerned with fine particle pollution, and as a result, the global trend in HVAC is moving toward higher efficiency filtration. Air filtration standards have been enacted to ensure that minimum performance levels are met. In order for building owners/operators to compare different solutions energy labels and certification programs have been established. Depending upon the applicable standard, the question about a mechanical or electrostatically charged media has to be considered. Despite all the information that is available to compare filtration solutions, many end-users and building owners/operators associate higher filtration system efficiency with higher costs. The highest performing filtration systems provide high indoor air quality, long filter life, and competitive operating costs.

Hollingsworth & Vose is committed to provide high performing filter media which offer distinct benefits. Therefore we developed media which offers extended surface area, using finer fiber and a multi-layer structure. These concepts combined result in reduced air resistance contributing to a low every requirements, like seen in NanoWave®. Due to its mechanical design, even when discharged, it maintains a higher MERV rating than traditional Meltblown media. By presenting real-life data we compare the benefits to improve indoor quality. In order to allow filter manufacturers taking advantage of this technology beyond pocket filtration in other filter configurations, new concepts will be introduced to assess the impact of further pressure drop reductions and improved durability.