

## **Pressure drop optimization of air filters with multi-layered nonwoven materials.**

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### Abstract

The high efficiency at a low pressure drop of a filter is the ultimate goal throughout the filtration industry. The pressure drop has a bearing on the energy consumption as well. There is a trade-off between these two parameters. The lower initial pressure drop of a filter generally gives the higher dust holding capacity and a long life. The filters with multi-layered nonwoven material generally increase the dust holding capacity if it is designed appropriately. The experimental results with mini-pleat filters and cartridge filters showed some interesting trends to optimize the pressure drop of these filters.