

Introducing Hydro-Maxx® Technology

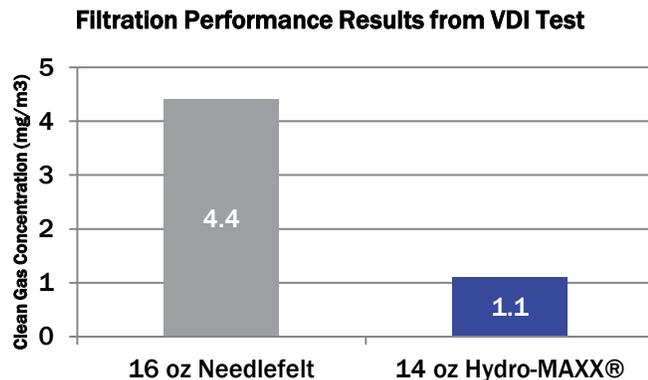
Revolutionary filtration media specifically designed for industrial dust collection and other filtration applications

National Media Filter is proud to introduce a new technology to the industrial dust collection market, produced from a unique process technology which delivers superior filtration performance versus incumbent materials. Historically, various fiber types are formed into various weights of filtration media through a traditional needle loom which has met market needs with a specific balance of properties. However, today's utilities and industrial users are demanding higher performance filtration; filters which deliver improved collection efficiency with lower operating costs in a filtration system.

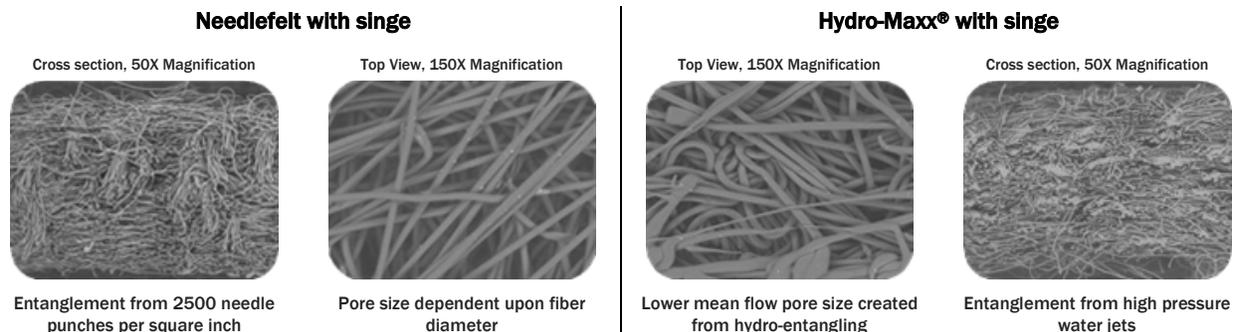
Hydro-Maxx® filter media, available only from National Media Filter, combines the benefits of needle loom fiber entangling with revolutionary hydro-entangling technology to deliver industry leading dust collection performance. The phenomena of entangling fibers with high pressure water jets creates a unique balance of lower mean pore size in a mass-efficient structure. Hydro-Maxx® represents a new paradigm in filtration media by delivering a product with dramatically improved filtration efficiency, an inherent ability to promote surface dust collection, lower pressure drop over time, and reduction in pulse cycle times.

Filtration Performance

Filtration performance characteristics are best demonstrated through the VDI test, a test apparatus specifically designed to characterize filter media performance in a bag house application. Using the VDI test to compare a typical 16 oz/yd² Needlefelt from the market with a lighter weight 14 oz/yd² Hydro-Maxx® filtration felt, the results show dramatic improvement in filtration performance as measured by clean gas concentration (mg/m³).



Fundamental gains in filtration efficiency is a result of fiber entangling technology. The impact of hydro-entangling results in lower mean flow pore size and improved consistency versus traditional needlefelt. The improved fiber entangling can be observed through comparison of SEM images, as shown below.



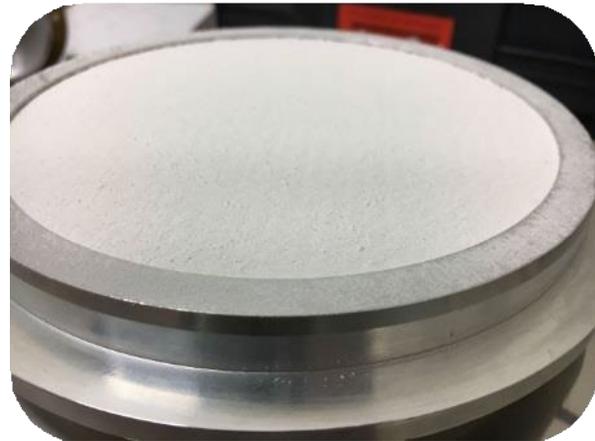
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Surface Dust Collection

Technically savvy end-users know that filter media which promote surface dust collection deliver improved bag house performance through more effective cleaning from bag pulses. Additionally, in applications where gas stream reagents and sorbents are used, surface dust collection helps create a platform where the chemistry can be allowed to perform most effectively. The images below were taken after execution of the VDI test, where standardized test dust becomes imbedded in the needle felt, resisting the effect of the bag pulses.



Traditional needlefelt



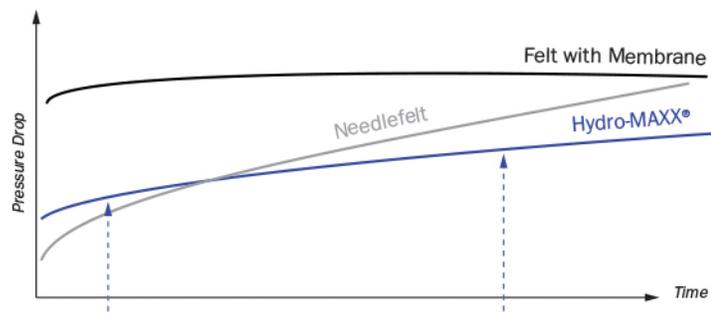
Hydro-Maxx® Filtration Felt

Clean-ability

The Hydro-Maxx® media promotes surface dust collection in a way that responds more effectively to bag pulses, leaving the surface much cleaner and ready to perform during the next cycle. VDI data from a series of tests is characterized with the model shown at the right. When comparing pressure drop performance over time of membrane, needlefelt and Hydro-Maxx® media, the Hydro-Maxx® media demonstrates improved ΔP over time delivering lower operating costs to users.

Hydro-Maxx® is available in all fiber types commonly used in needlefelt including PPS, PET and Aramid.

Pressure Drop Performance Model Observed from VDI Testing



Hydro-Maxx® demonstrates higher ΔP than needlefelt initially due to lower mean pore size, but ΔP always lower than membrane

Hydro-Maxx® surface collection phenomena delivers improved bag house performance through more effective cleaning from bag pulses, delivering lower ΔP over time than membrane and needlefelt

Contact Us

Interested in exploring how Hydro-Maxx® could improve your filtration performance? Please contact us at to discuss how to work with your preferred filter bag supplier to execute a bag test in your application.