



viledon[®]

VILEDON SINTEXX PLUS FILTER CARTRIDGES

**HIGHEST EFFICIENCY AGAINST
SMOKE AND FINEST DUSTS**



THE INNOVATION: VILEDON SINTEXX PLUS

THE FREUDENBERG CORRUGATION WITH A NANOFIBER LINING IS WHAT MAKES ALL THE DIFFERENCE

The innovative Viledon® sinTexx Plus filter cartridges made of a polyester medium with Freudenberg corrugation and a nanofiber lining protect both humans and machines, and cut your energy costs significantly. They achieve optimum values when dealing with fine and difficult-to-handle dust and smoke, outperforming customary media, thus providing users with an unprecedented level of efficiency.

Viledon® sinTexx Plus filter media can be installed in all filter cartridge geometries used at Freudenberg Filtration Technologies.



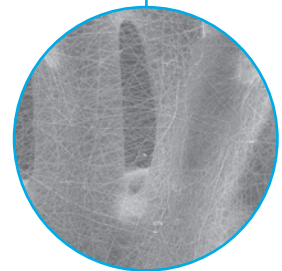
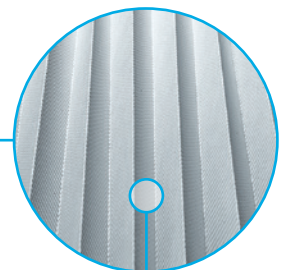
You recognize Viledon® sinTexx Plus filter cartridges by this symbol

Viledon® sinTexx Plus filter cartridge

Ready-to-install dust removal filter made of polyester with Freudenberg corrugation and a nanofiber lining.

Filter medium

The pleated material with Freudenberg corrugation exhibits optimum cleaning behavior.



Nanofiber

1,000-fold magnification (SEM photo) renders visible the new type of nanofiber lining.

Viledon® sinTexx Plus filter cartridges have been developed specifically for removing dust from fine smoke produced in welding, thermal cutting and coating processes. Compared to conventional filter materials and ePTFE membranes, the sinTexx Plus filter medium combines the advantages of nanofiber structures with the ideal cleaning behavior of the Freudenberg corrugation. Thus, sinTexx Plus filter cartridges offer four key advantages:



Maximum safety

Thanks to the certified collection efficiency >99.95% provided by the Viledon® sinTexx Plus filter cartridges, threshold limit values for the workplace can be reliably complied with. Employees and the environment are lastingly protected from harmful emissions.

Higher performance right from Day One

With Viledon® sinTexx Plus filter cartridges, a higher collection efficiency is assured right from the very first second of being in operation. Numerous filter media, by contrast, do not achieve good values until they have been in operation for quite some time. The reason: pores clog up and so-called dust cakes are deposited on the filter's surface, leading to the unwanted effect of reduced air permeability.

Lower operating costs

Compared to conventional media, the polyester media with Freudenberg corrugation and a nanofiber lining are more efficient. This significantly reduces the consumption levels for power and compressed-air in filter systems fitted with Viledon® sinTexx Plus, and extends their useful lifetime, thus improving energy efficiency and ensuring cost savings.

Easy to use

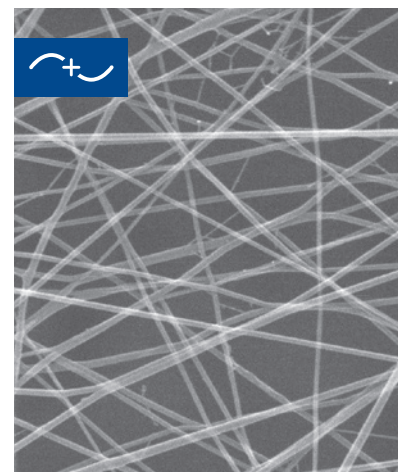
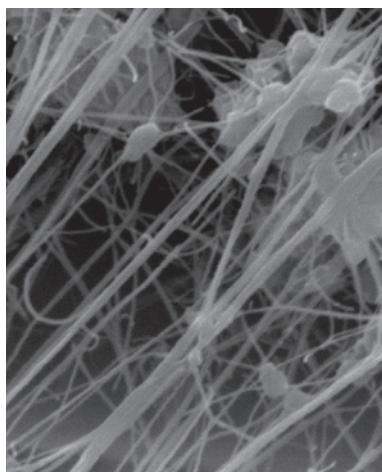
sinTexx Plus filter cartridges do not require a pre-coating. In this process may entail faults that with Viledon® sinTexx Plus filter media are totally precluded. The new Viledon® sinTexx Plus filter cartridges are easier to handle, they require less maintenance, and the costs can be reduced.

Salient advantages obtained with Viledon® sinTexx Plus filter cartridges

- Certified collection efficiency >99.95% right from day one
- Lower pressure drop
- Downsized particle deposits / less clogging-up
- No pre-coating with FHM 1500, particularly in laser- and plasma-cutting applications and those involving welding smoke
- The corrugated nonwoven's excellent characteristics are combined with upgraded filtration properties
- Improved energy balance for the system's operator

Nanofiber and ePTFE membrane compared

Rendered visible by photos taken with the scanning electron microscope (SEM): conventional ePTFE membranes exhibit an inhomogeneous pore pattern with impermeable points in the membrane structure (illustration on the left), which leads to higher differential pressures. Not so with the Viledon® sinTexx Plus filter cartridges: the polyester medium with Freudenberg corrugation and a nanofiber lining (illustration on the right) shows a uniform, tightly meshed structure.



CASE STUDY

Consummately persuasive in field trials

The Viledon® sinTexx Plus filter cartridges' superiority over conventional filters fitted with ePTFE membranes is vividly demonstrated in actual operation. The polyester medium with Freudenberg corrugation and a nanofiber lining exhibits optimum values when it comes to the filtration of ultra-fine, difficult-to-handle dusts and smokes.

DESCRIPTION	
Application	Laser cutting
Requirements	No filter clogging, stable pressure differential

TECHNICAL PARAMETERS	
Volume flow	14,000 m ³ /h (Status: December 2017)
Dust type	Laser cutting dust from steel and aluminum

TWO FILTER MEDIA COMPARED – ADVANTAGE FOR VILEDON SINTEXX PLUS	
Filter cartridges, fitted with smooth polyester material	Viledon® sinTexx Plus, fitted with Freudenberg corrugation and a nanofiber lining
One compartment with 12 cartridges, Ø 324 mm	One compartment with 12 cartridges, Ø 324 mm
Result Filtering area _{total} = 300 m ² Face velocity = 0.78 m/min Pressure drop > 2,700 Pa	Result Filtering area _{total} = 300 m ² Face velocity = 0.78 m/min Pressure drop = 900 Pa
No significant cleaning effect, frequent cartridge changes.	Maintenance-free operation for more than 5 years. No cartridge change required.

Two designs marked with one symbol

You recognize Viledon® sinTexx Plus filter cartridges with Freudenberg corrugation and a nanofiber lining by their blue fixing straps showing the white Freudenberg and Viledon® logo as well as the sinTexx Plus symbol.

Viledon® sinTexx Plus filter cartridges with antistatic finish have been developed specifically for arresting explosive dusts. You recognize these variants by the appropriate black fixing straps.

