

# Corrugated filter medium for optimized cleanability: Viledon Surface-loading Filter Cartridges GTC 327 and GTC 445 range

## The application

Surface-loading filter cartridges are used in supply air filtration systems for gas turbines and turbo-compressors both on and off-shore.

## The concept

Viledon surface-loading filter cartridges with a patented, corrugated high-performance filter medium are an ideal solution for pulse-jet systems which have to cope with very high dust concentrations and/or fine, pourable dusts, entailing stringent requirements for cleanability.



viledon®

## The special features and benefits

- ▶ The corrugated polyester filter medium with microfibers and a sinusoidal cross-section achieves very high collection efficiency and uniform dust loading in the cartridge even for fine dusts, thanks to its homogeneous fiber structure, and it offers a larger effective filter area than flat media. By reason of its all-over thermal bonding, it also exhibits a smooth surface, and is thus particularly easy to clean.
- ▶ The low pressure drop of the corrugated filter medium enables cycle times to be prolonged and cleaning intervals extended, with concomitant gains in operational cost-efficiency.

- ▶ The corrugation keeps the pleat geometry exceptionally stable, preventing the pleats from collapsing even under high volume flows and alternating loads in the cleaning phases.

- ▶ This enhanced mechanical stability renders an external support cage superfluous, which in turn facilitates cleaning and significantly reduces the risk of icing-up.

- ▶ Viledon surface-loading filter cartridges offer excellent cleanability over long periods, using pulse-jet routines and, if desired, even additional appropriate washing, plus high functional dependability, providing sustainedly favourable operating

### Key data for GTC 327 S66 and GTC 445 K66

Filtering area	14/ 14.5 m <sup>2</sup>
Average arrestance *	> 99 %
Average efficiency for 0.4 µm *	96 %
Nominal volume flow rate	1000 m <sup>3</sup> /h
Initial pressure drop	approx. 110 Pa
Recommended final pressure drop	800 Pa
Dust Class of the filter medium to EN 60335-2-69 Annex AA	M
Thermal stability	80 °C
Moisture resistance, rel. humidity	up to 100 %

conditions coupled with low energy and maintenance costs.

- ▶ For a leak-free configuration, the pleated filter medium and the powder-coated support cage are cast into the cover and base of the filter cartridge, both made of galvanized or powder-coated steel.

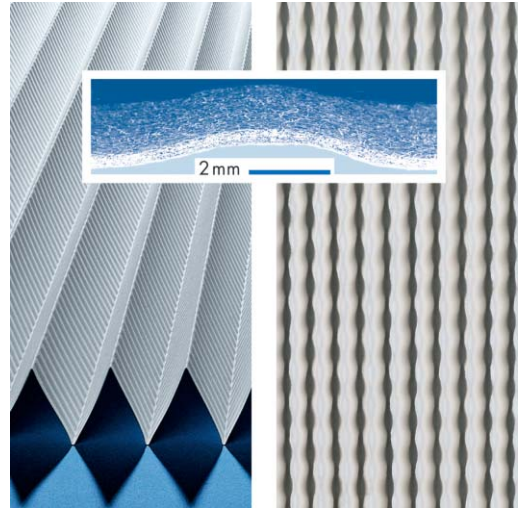
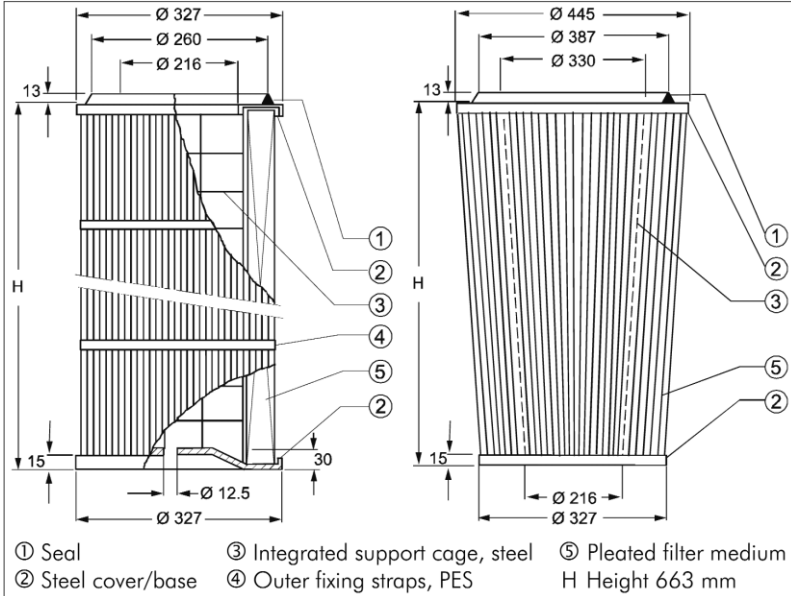
The foamed-on polyurethane gasket ensures optimized sealing with the mounting plate.

- ▶ The filter medium meets Dust Class M to EN 60335-2-69 Annex AA (Testing of cleanable filter media).

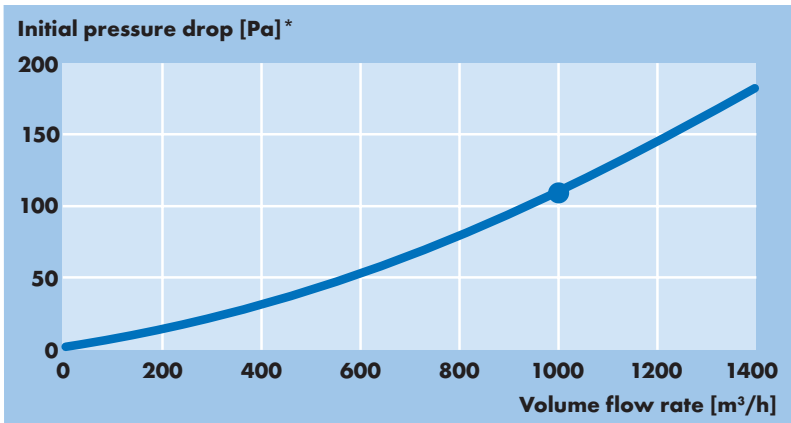
\* in broad conformity with EN 779

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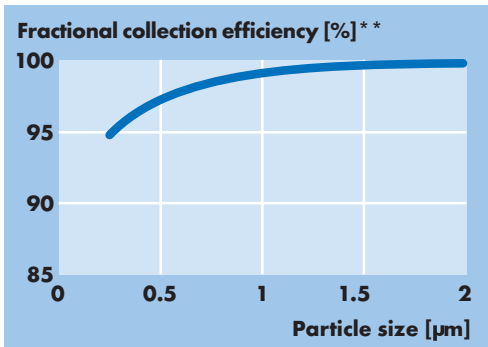
# Design assets of the Viledon surface-loading filter cartridges GTC 327 and GTC 445



Corrugated high-performance filter medium



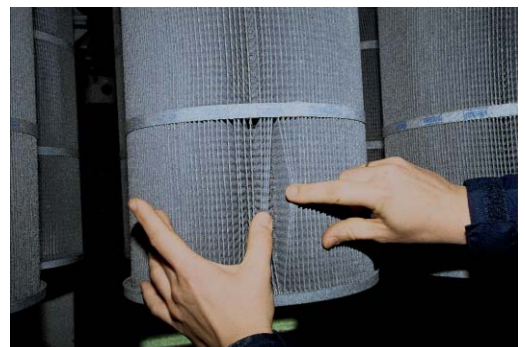
\* These initial pressure drop values can differ from values measured in installations, as deflectors, diffusors or venturi-nozzles create an additional pressure drop.



\*\* Test conditions:  
 Test at nominal volume flow rate  
 Operational pressure drop: 260 Pa  
 Test aerosol: DEHS  
 Test with laser particle counter  
 in test channel in broad conformity  
 with EN 779  
 Deposited dust: ASHRAE



Gas turbine intake air filtration in a chalk plant (GTC 327)



Full utilization of the filtering area (gas turbine intake air filtration in a chemical plant with GTC 327)

Further variants and adapters (bayonet, etc.) are available on request.

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The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case.