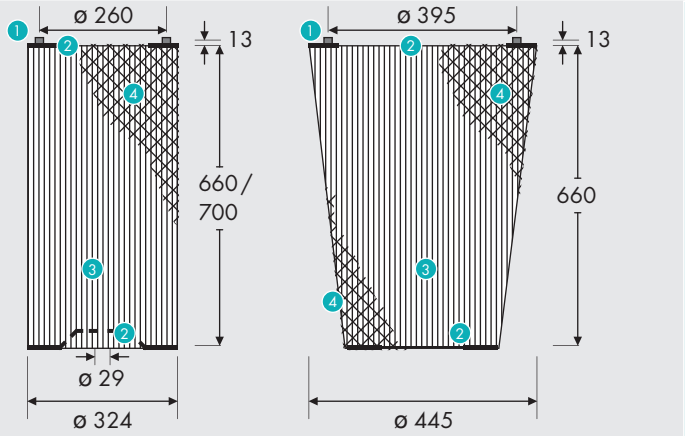
High filtering performance for turbomachinery systems

Depth-loading filter cartridges – GTG series

viledon®

Construction / Dimensions



The application

Depth-loading filter cartridges of the GTG series are used in supply air filtration systems for gas turbines and turbo compressors.

The concept

GTG depth-loading cartridges with their **optimum pressure drop characteristics and maximized useful lifetimes, significantly enhance the cost** efficiency of turbomachinery systems. They are particularly successful whenever the cleaning of surface filter cartridges does not produce any effective reduction in pressure drop, because the dust concentrations are too low and/or the dusts concerned are too sticky.

The characteristics and the benefits

- Innovative high strength synthetic micro-glass-fiber nonwoven with **water repellent coating and uniform pleat spacing** for maximum dust holding capacity.
- The filter medium offers **excellent initial efficiency** (of Filter class F 9 level), **high dust holding capacity, low pressure drop and high cost efficiency**. This makes the GTG cartridges particularly suitable for locations with high fine dust concentrations in the ambient air.
- GTG cartridges have been **optimized in terms of filtering area, pleat depth and number of pleats** which means the active filtering area remains completely effective over its entire operating lifetime.
- The pleat pack, plus the inner and outer support cages are cast into the steel-galvanized or stainless steel end caps in a **leakproof configuration**. The foamed-on EPDM gasket ensures optimum sealing against the mounting plate.
- Besides the versions shown, GTG depth-loading cartridge filters can be obtained in a **variety of other dimensions**, stainless steel end caps and support cages.
- The Freudenberg Filtration Technologies product range comprises other cartridge solutions for pulse applications.

Technical data

Cartridge dimension / outer diameter	mm	 GTG 324-445 W66S0-Set	 GTG 445 K66S0	 GTG 324 W66S0
Overall height	mm	1,330	660	660
Filter medium		Synthetic micro-glassfiber nonwoven		
Filtering area	m^2	approx. 40.1	approx. 22.0	approx. 18.1
Material for cover, base, support cages		Steel, galvanized		
Gasket		EPDM		
Moisture-resistance (rel. hum.)	%	100		
Thermal stability: continuous stress / temporary peaks	°C	70 | 80		

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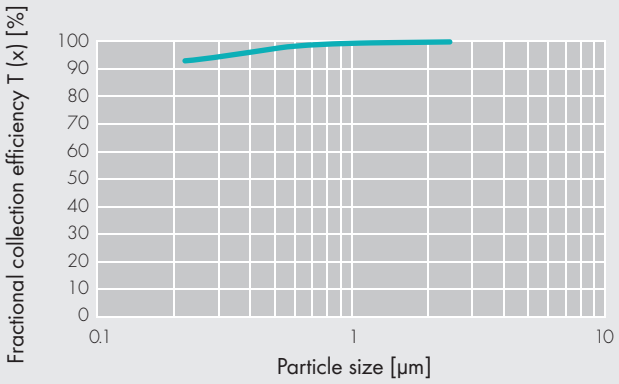
Technical filter test data

Fractional collection efficiency curve

GTG 324 W66S0

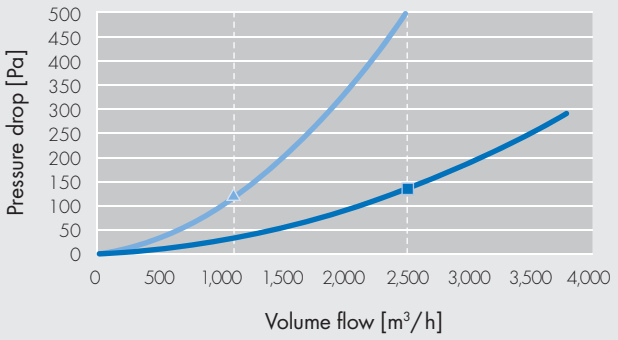
***Test conditions:**
Test at nominal flow rate: 1,100 m³/h, dust load 200 g, test aerosol: DEHS, test with laser particle counter in test channel in broad conformity with EN 779.

Fractional collection efficiency* GTG 324 W66S0



Pressure drop curves

GTG 324 W66S0
GTG 324-445 W66S0-Set



Technical filter data in broad conformity with EN 779

Type		GTG 324-445 W66S0-Set	GTG 445 K66S0	GTG 324 W66S0
Initial arrestance	%	99.9	–	99.9
Average arrestance	%	> 99.0	–	> 99.9
Initial efficiency	%	84	–	84
Average efficiency	%	98	–	98
Filter class (800 Pa)		F9	–	F9
Dust holding capacity (ASHRAE / 450 Pa)	g	approx. > 1,750	–	approx. > 800
Nominal volume flow rate	m³/h	2,500	1,400	1,100
Maximum volume flow rate	m³/h	3,500	2,000	1,500
Initial pressure drop at nominal volume flow rate	Pa	135	–	120
Recommended final pressure drop	Pa	800	–	–

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.

Subject to technical alterations.

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