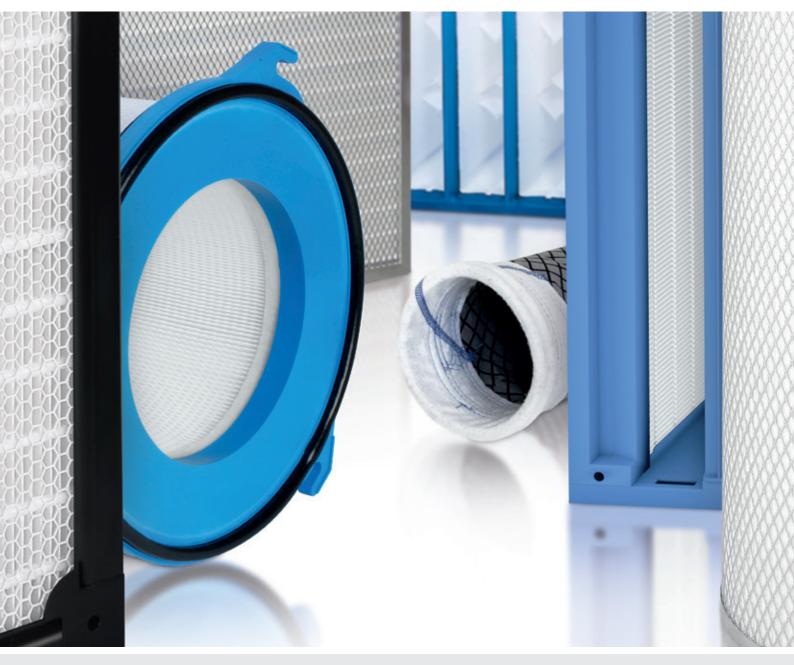


Product catalogue 2015/2016 Air and liquid filtration



Industrial Filtration



# Product range overview















93-95





Filter cartridges





### Always up-to-date

Simply scan the QR code to see all product information at a glance on a daily basis.



www.freudenberg-filter.com

2

# Contents



- 4 About Viledon®
- 15 Air filter classification index
- 16 Product overview by filter classes

### Air filtration

- 19 Filter mats Filter mats, filter panels, roll filters, paint mist arrestors
- 25 Filter cells
- 27 Pocket filters Compact, WinAir
- 37 Cassette filters MaxiPleat, NanoPleat, eMaxx, MVP, MVPGT

### 51 EPA | HEPA | ULPA filters

Aluminum frame, plastic frame, MDF frame, steel sheet frame, high volume flow, cartridges, plastic plenum hood, accessories

### 81 Gas phase filters

Cassette filters (CarboPleat/DuoPleat), ChemControl filters, activated-carbon cartridges, ChemControl modules, HM<sup>®</sup> modules, ChemControl pellets, ChemControl systems, ChemWatch

- 93 **Filter cartridges (turbomachinery)** Pulse-jet, depth-loading filters
- 97 High-temperature filters HT filter mats, HT filter packs, HiProtec cassette filters,

HT cassette filters

### 103 Filters for dust removal

Filter cartridges, filter bags, filter plates, filter media

### Liquid filtration

- 110 **nutritexx** Filters for food and beverage
- 112 **cooltexx** Filters for coolants and lubricants
- 116 **pluratexx** Filters for oil, urea and fuel
- 117 **novatexx** Membrane support media

### Accessories

- 121 **Extras** Mounting frames, seals, accessories for dust removal filters
- 131 Order | order inquiry form Information | legal notes

### Notes on technical specifications

Filter classes

Groups G to F according to EN 779:2012 Groups E to U according to EN 1822:2009 / ISO 29463

**Energy efficiency classes | Energy consumption** According to EUROVENT 4/21 measured at 3,400 m<sup>3</sup>/h



# A comprehensive performance package

for industrial filtration



Protecting people, optimizing processes



Making industrial processes more efficient



Protecting the environment and resources



Improving the quality of life

### 60 years of experience in filtration

As a technology leader with over 60 years experience, we understand the complexity in industrial filtration, we know the high demands of our customers and have the right solution package for each application.

Freudenberg Filtration Technologies offers a comprehensive range of top-quality and reliable filtration products, technical design and installation expertise, consulting skills and an extensive service program. Thanks to this complete package, we are able to develop system solutions with high energy efficiency, specifically tailored to the needs of our customers. In this way, we ensure savings on energy costs and help our customers to reduce  $CO_2$  emissions.

With Freudenberg Filtration Technologies, you can always rely on the highest quality: from the initial design stage through manufacturing and delivery to technical application advice and services. We always think one step ahead. As a driver of innovation, our constant new developments deliver both progress in the market and competitive advantage for our customers.



Discover the fascinating world of Freudenberg Filtration Technologies in just three minutes – simply scan the QR code to view our image film.



www.freudenberg-filter.com/ en/imagefilm

### 4

# Superior filtration solutions

for a better quality of life





One of the big challenges facing society today is safeguarding the cleanliness of air and liquids. Innovative solutions are called for and Freudenberg Filtration Technologies has the answers. We develop solutions that make processes more efficient, save resources and protect our environment, thereby raising the quality of life.

# Environmental responsibility begins in the development and production stages

We are committed to responsible management as a cornerstone of our sustainable business success. We are convinced that economic efficiency, social responsibility and the protection of the environment are intimately linked. We pledge to promote sustainable technologies and product solutions that also provide the best possible product quality. Our activities in this area are wide-ranging. We avoid waste, reduce our use of materials and energy, increase the share of recycled raw materials and develop disposal-friendly and space-saving product alternatives.

Sustainable production processes and products are not always obvious at first glance for customers. This is why we actively support the "Blue Competence" initiative of the VDMA (German Engineering Federation). This initiative has defined reliable sustainability criteria and standards, which are in turn confirmed by the actions of the membership. In this way, Blue Competence provides increased transparency, facilitates orientation and provides security for anyone looking for sustainable products or companies that work in a sustainable way.

# Our contribution to your improved energy efficiency and climate protection balance

Ventilation systems require a relatively large amount of energy. In office buildings, the proportion is about 40% of total consumption. In cleanrooms, it can be as high as 80%. A large part of the energy expenditure of variable-speed fans in ventilation (HVAC) systems is attributable to pressure drops, half of which are caused by the filters themselves. For this reason, acting responsibly in this area means reducing the pressure drop in air filtration systems to save valuable energy, avoid unnecessary costs and reduce  $CO_2$  emissions. The new EUROVENT guideline on energy efficiency classification, EUROVENT 4/21, in which Freudenberg Filtration Technologies was closely involved, provides a first port of call when choosing energy-efficient Viledon<sup>®</sup> products. The construction of the entire filtration system is crucial and you can count on our competent advice in this.

Numerous case studies have shown that our customers make a valuable contribution to energy saving and climate protection by using our filtration solutions.



Our customers gladly use the energy efficiency logo in their documentation, which effectively says: "We save energy and reduce  $CO_2$  emissions with Viledon<sup>®</sup> air filters." As a partner of Freudenberg Filtration Technologies, you too can benefit from the added value of our solutions. For example, by using the Viledon<sup>®</sup> energy efficiency logo. Contact your Viledon<sup>®</sup> representative for more details.







# Protecting people and the environment

Optimizing industrial processes



With our innovative and powerful concepts for air and liquid filtration, Freudenberg Filtration Technologies combines effective protection against contamination with maximum cost-efficiency.

### Industry and production

Throughout the world, the Viledon® brand stands for the very highest standards in industrial air and liquid filtration. A successful combination of know-how, innovation and technical and scientific resources results in future-proof system solutions. These are used, among others, in the fields of turbomachinery / compressors, surface treatment, food and beverage production, general air-conditioning and cleanroom technology, pharma industry, gas phase filtration and dust extraction technology.



### Comfort and healthcare

Our Viledon<sup>®</sup> filter media help to effectively protect people against dust, gases and pathogens. In this segment we develop innovative preventive healthcare concepts for interiors and sensitive areas (e.g. for the living area, households, the office, respiratory protection and medical technology) together with our partners from many branches of industry.



### Automobiles and transport

micronAir<sup>®</sup> is the number 1 in automotive cabin air filters. Our filters ensure clean air in the vehicle and increase driving comfort and safety – especially for allergy sufferers. Made from fully synthetic filtration materials, micronAir<sup>®</sup> engine intake air filters protect against contaminants in the outside air and therefore ensure optimal combustion processes in the engine while also preventing damage to highly sensitive sensors.

### Some of the many industries we support

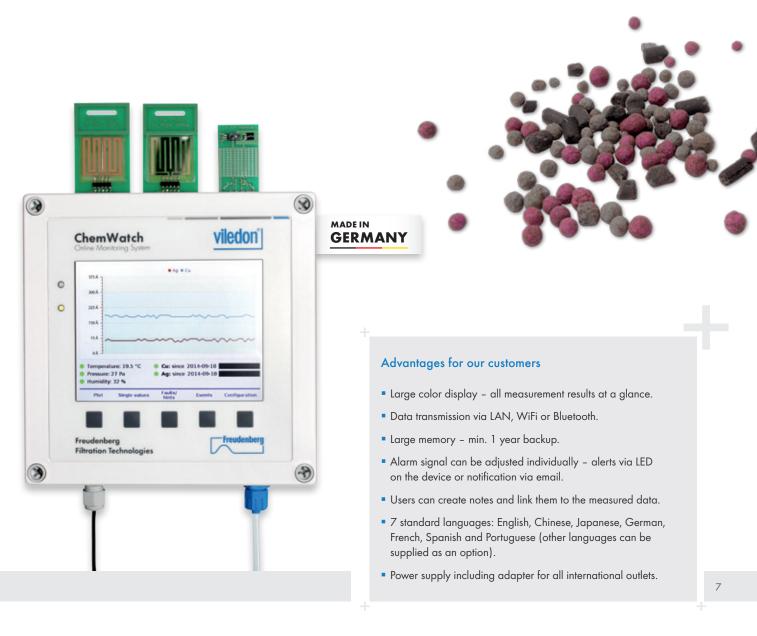
- Automotive
- Cement
- Chemicals
- Cleanrooms
- Dust removal technology
- Energy
- Food and beverage production
- Health services
- Manufacturing
- Microelectronics
- Mining
- Office buildings
- Paper and pulp
- Pharma

- Residential buildings
- Steel
- Surface technology
- Transport (rail, sea and air)
- Wood industry

# Innovative technologies Viledon® ChemWatch Online Monitoring System

Capture, monitor and control corrosiveness in sensitive areas – and protect your electrical and electronic equipment against corrosion. The new Viledon® ChemWatch Online Monitoring System offers an excellent solution for achieving these aims. This device measures the corrosion class for gaseous media in accordance with ANSI/ ISA-71.04-2013. To support targeted analysis, temperature, relative humidity and room pressure can also all be determined. Thanks to the use of innovative sensor technology for resistance measurement, the Viledon<sup>®</sup> ChemWatch Online Monitoring System enables continuous monitoring and rapid results. During this process, the device remains insensitive to vibrations and temperature fluctuations.

It can be simply installed and handled. All data are automatically recorded from the start. Individual settings can also be easily carried out - either directly on the device or via PC. With its sealed housing, the device features a large color display for direct reading of information. Thanks to the generous storage capacity, the measurement data of a whole year can be saved.





# Maximum purity

for liquid filtration



Freudenberg Filtration Technologies provides a comprehensive product range of high-quality filter media for maximum purity and reliability.

# nutritexx

### For food and beverage filtration

Under the hydrotexx brand, Freudenberg Filtration Technologies develops filter mats consisting of 100% food-grade fibers. This makes them ideal for the filtration of food, hot and cold beverages as well as drinking water. Physiologically harmless materials in combination with the most modern production technologies guarantee a filter medium that meets the stringent requirements of the food industry in terms of hygiene, efficiency and extractable ingredients, every time.

# cooltexx

### For coolant and lubricant filtration

cooltexx provides durable, application-specific nonwoven fabrics for all vacuum, pressure and gravity belt filter systems, in all the popular roll widths and lengths. This filtration media is custom-matched to the intended machining process, materials and process fluids in terms of filter mesh size, fiber type and media structure. These include, for example, emulsions and oils, washing, phosphating and coagulation baths.

# pluratexx

### For oil, urea and fuel filtration

Modern hydraulic filter systems require excellent filter media which, with their high mechanical and chemical resistance, are able to withstand extremely high differential pressure, pressure peaks and volume flows. Modern diesel injection systems operate at extremely high pressures and require excellent particle and water separation. With pluratexx, we have developed filter media that can perfectly fulfil all these demanding requirements.



novatexx

### Membrane support media

Polymer-based membranes in many cases require additional mechanical reinforcement. This is the only way to ensure that they can withstand the physical stresses of production, further processing and operational use. In these terms, novatexx is well-proven as an effective support and drainage medium. The brand is synonymous with customized filtration media for liquids from the industrial and food sectors, as well as for products required in the production of membranes and filter cartridges.

8

# Viledon<sup>®</sup> filterCair

Filters plus service plus consultancy – the complete air quality management system



# viledon<sup>®</sup>

### Viledon<sup>®</sup> filterCair service

To ensure that you get maximum value out of our top-quality filters in your complex and sensitive systems, we have developed a unique and comprehensive filter management system: Viledon<sup>®</sup> filterCair - an individually bundled package consisting of a comprehensive filter range plus services and warranties.

### Advantages for our customers

- Reduction of inventories and warehousing costs
- Lower ordering costs
- Improved and stable air quality
- Long-term quality assurance
- Fewer suppliers
- Continuous improvements
- Complete cost control

### Some examples of our Viledon® filterCair services

- Particle measurements by laser particle counter (stationary or as ProSim measurement).
- Determination of rates of descent, cabin balance, balance ventilation, temperature and humidity.
- Paint inclusion and dirt-in-paint analysis on site or at the Viledon<sup>®</sup> laboratories (SEM, EDX, IR microscopy).
- Computational fluid dynamics (CFD) analysis in advance of reconstruction, redesign or realignment.
- Use of a mist generator for the visualization of air streams.
- Measurement of electrostatic charging and discharging processes.
- Hygiene inspections and hygiene controls in accordance with VDI 6022, using trained personnel.

- Changing filters, cleaning and disposal including acceptance testing according to DIN 1946-4.
- Technical service and maintenance of mechanical and electrical system components (such as differential pressure monitoring, anti-icing system, etc.).
- Testing and calibration of differential pressure gauges and transmitters.
- Technical analysis of filter and ventilation systems (e.g. by measuring separation levels, air power, fit testing, etc.).
- Checking the technical condition of the equipment, vulnerability analysis.
- Filter procurement, stockholding, disposition.
- Filter comparison measurements.
- Energy efficiency measurements.



# Viledon<sup>®</sup> system solutions

for air, water and gas

Freudenberg Filtration Technologies offers a comprehensive range of reliable and energy-efficient filtration solutions in addition to technical development and installation know-how for complete industrial filtration systems. Our system solutions are combined with an extensive program of services. This ensures the optimum efficiency of our filter systems for our customers.



### Air filtration systems

Viledon<sup>®</sup> Engineering is our complete service and installation program, which includes all construction elements for building or converting air filtration systems, particularly in the fields of clean room technology, process air and turbomachinery.

Components include single or multi-stage energyefficient filter system solutions, innovative antiicing systems (Viledon<sup>®</sup> IceProtect) as well as combined intake air filtration and cooling systems (Viledon<sup>®</sup> eee.Sy), which are each tailored to the specific requirements of the customer and the location.

### Water filtration systems

Sustainable use of the precious resource water is becoming increasingly important. With the Aquabio system technology, Viledon® Water Solutions has positioned itself as a competent development partner and supplier of membrane bioreactor (MBR) systems that enable economic recycling of process water and waste water.

Reliable separation of solid particles and bacteria is especially important for the food and beverage industry, the pharmaceutical industry, waste disposal sites and tanneries. Thanks to the space-saving design of our water filtration systems, existing plants can be upgraded or extended without problems.

### Gas phase filtration systems

Toxic gases, which occur in many industrial processes, can cause corrosion. Even small disturbances of electronic components lead to power loss, high maintenance and repair costs or unplanned downtime. Freudenberg's Viledon<sup>®</sup> ChemControl system solutions provide protection against corrosion.

Producers of pulp and paper, operators of refineries or customers in the chemical and pharmaceutical industries enjoy the benefits of a complete solution tailored to their specific application: We provide the design and construction of the filter systems including all filter stages for particle and noxious gas filtration – including all technical services.



Freudenberg Filtration Technologies

# Performance and certified quality

that you can rely on



Freudenberg Filtration Technologies is committed to delivering the highest quality. For you, this means increased safety during everyday use. Our consistent commitment to the highest standards is also reflected in the diversity of the certification and quality improvement initiatives we deploy. Others achieve the minimum requirements. We offer our customers more. This is why we do not restrict ourselves to completing externally required inspections – we are committed to even more stringent internal quality criteria. We are certified according to DIN EN ISO 9001. Our overall integral management system is based on the current ISO/TS 16949 regulations (requirements of the automotive industry), ISO 14001 (environmental management) and OHSAS 18001 (occupational health and safety). Six Sigma is an integral part of our corporate culture. Extremely rigorous testing in the Freudenberg filter laboratory ensures the consistent quality of all our filters.

# Increased transparency: EUROVENT certification for fine filters

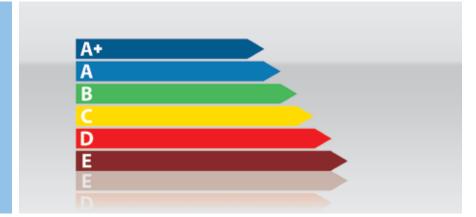
Not all filters deliver what their manufacturers promise. It is not uncommon to find features in the product information that are never achieved in reality. But now, you can protect yourself. As an independent institution, the EUROVENT Certification Company has developed an international certification program for fine filters of groups M and F (according to EN 779:2012), which gives the user security. All Viledon® fine filters are certified by EUROVENT.





# Energy efficiency classification according to EUROVENT 4/21

Increased transparency in choosing filters



### Significant cost reduction

Rising energy costs and the need to reduce  $CO_2$  emissions are increasingly focusing attention on the energy consumption of air-conditioning systems. In fact, there is a substantial potential for savings because ventilation systems require a disproportionate amount of energy. In office buildings, the proportion is around 40% of the total consumption; in cleanrooms, it is even 80%.

### Energy-efficient air filters at a glance

Energy-saving measures include the use of highly efficient frequencycontrolled fans. In addition, a relatively simple and effective method of achieving significant cost reduction is the use of top-quality, energy-efficient air filters. To make it easier for users to choose the most energy-efficient air filters, experts at Freudenberg Filtration Technologies introduced their own energy efficiency classification system some years ago. Based on this work, a European energy efficiency classification system for air filters was developed by the European Committee of manufacturers of air handling and drying equipment (EUROVENT). This is described in the revised EUROVENT Guideline 4/21 (valid from 01.01.2015). Class A+ stands for excellent energy efficiency values, class E for very poor.

### Determination of energy efficiency classes

In the laboratory method for testing air filters described in the European standard EN 779:2012, both filtration efficiency and pressure difference as a function of dust loading are measured at 3,400 m<sup>3</sup>/h. This testing procedure uses the synthetic ASHRAE test dust. From the mean pressure difference averaged over the course of dust loading, a representative energy consumption level can be calculated. On the basis of these figures, it is then possible to simulate the energy performance of a filter over an operating period of one year in a laboratory. This representative energy value is used for a classification of air filters into energy efficiency classes.



Classific	ation as per EUROVENT	4/21 following laborate	ory testing for annual en	ergy consumption at 3,4	00 m³/h
Filter class*	M 5	Μ6	F7	F8	F9
ME**	-	-	≥ 35 %	≥55%	≥70%
	M <sub>G</sub> = 25	50 g ***		M <sub>F</sub> = 100 g ***	
A+	0 – 450 kWh	0 - 550 kWh	0 – 800 kWh	0 – 1,000 kWh	0 – 1,250 kWh
Α	> 450 - 600 kWh	> 550 - 650 kWh	> 800 - 950 kWh	> 1,000 - 1,200 kWh	> 1,250 - 1,450 kWh
В	> 600 - 700 kWh	> 650 - 800 kWh	> 950 - 1,200 kWh	> 1,200 - 1,500 kWh	> 1,450 - 1,900 kWh
	> 700 - 950 kWh	> 800 - 1,100 kWh	> 1,200 - 1,700 kWh	> 1,500 - 2,000 kWh	> 1,900 - 2,600 kWh
D	> 950 - 1,200 kWh	> 1,100 - 1,400 kWh	> 1,700 - 2,200 kWh	> 2,000 - 3,000 kWh	> 2,600 - 4,000 kWh
E	> 1,200 kWh	> 1,400 kWh	>2,200 kWh	>3,000 kWh	>4,000 kWh

\* According to EN 779:2012 \*\* Minimum efficiency \*\*\* Threshold of dust loading with ASHRAE test dust

# Sustainability through energy efficiency

Reduce energy costs with Viledon®

Businesses across many industries and applications profit from the use of energy efficient Viledon<sup>®</sup> filter solutions. You too can achieve significant energy cost savings while contributing to the reduction of  $CO_2$  emissions.



We will be pleased to send you documented case studies. Simply contact us.

Example: 4.4 t less CO <sub>2</sub> emissions per	year with Viledon®.
1st filter stage: 9 × conventional M 6 pocket filters 2nd filter stage: 9 × conventional F9 cassette filters Volume flow: 30,000 m³/h	1st filter stage: 9 × M 6 Viledon® Compact pocket filters T60 2nd filter stage: 9 × F9 Viledon® MaxiPleat cassette filters MX98 Volume flow: 30,000 m³/h
Conventional filters	Viledon <sup>®</sup> system
Power consumption 27,820 kWh/year	Power consumption 19,930 kWh/year
Electricity costs* (27,820 kWh × 0.10 € / kWh) 2,782 € 789€ Cost so with Vi	vings
CO₂ emission** (27,820 kWh × 0.559 kg/kWh) ≈15,551 kg/year CO₂ rec with V	CO <sub>2</sub> emission** (19,930 kWh × 0.559 kg/kWh) redon <sup>®</sup> ≈11,140 kg/year

 \* Electricity costs for industry (0.10 €/kWh), Source: BDEW Bundesverband der Energie- und Wasserwirtschaft e.V., correct as of 2011

\*\* Specific carbon dioxide emissions of the German electricity mix in 2011 (0.559 kg/kWh of CO<sub>2</sub> emission factor), Source: German National Environment Office, FG/2.5., correct as of April 2012

> **44** € Cost savings per filter/year

Viledon® aiı	filters for the energy	v efficient use in HVA	C systems	
Viledon® product	Туре	Filter class*	Energy efficiency class**	Annual energy consumption***
F 50	Pocket filter	M 5	Α	600 kWh
Т60	Pocket filter	M6	Α	620 kWh
Т90	Pocket filter	F7	В	1,060 kWh
MF 90	Pocket filter	F7		1,500 kWh
MF 95	Pocket filter	F 8		1,650 kWh
MX 85	Cassette filter	F7		1,240 kWh
MX 95	Cassette filter	F 8	В	1,300 kWh
MX 98	Cassette filter	F9	В	1,830 kWh
MV 85 HSN	Cassette filter (synth.)	F7		1,500 kWh
MV 95 HSN	Cassette filter (synth.)	F 8		1,700 kWh
MVP 85	Cassette filter	F7	В	1,100 kWh
MVP95	Cassette filter	F 8	Α	1,200 kWh
MVP98	Cassette filter	F9	В	1,470 kWh

### Significant cost reduction

The fan in an HVAC system consumes electrical energy during operation, for example, to overcome the filter's resistance. In the case of variable-speed fans, energy consumption will continually increase as a result of the air filters' pressure drop. Many conventional filters display unfavorable resistance behavior. Not Viledon®: our filters have a large dust storage capacity and the pressure drop increases only slowly.



<sup>\*</sup> according to EN 779:2012

<sup>\*\*</sup> according to EUROVENT 4/21, rated at 3,400 m<sup>3</sup>/h \*\*\* The indicated annual energy consumption results from a laboratory test procedure with synthetic test dust at 3,400 m<sup>3</sup>/h and only refers to the portion of total energy consumption which is caused by the flow resistance of the filter. The annual energy consumption of an HVAC system may therefore differ significantly in actual operation.

# A partnership for your long-lasting success

With Viledon® at your side

### Your direct route to us

To find your customer service contact details for your region, please visit our website www.freudenberg-filter.com and go to "<u>Contact"</u>.

Apart from top-quality filter solutions, our portfolio also includes a comprehensive range of services to help our customers make optimum use of their filter systems in every respect. Our services at a glance:

- Personal, expert on-site advice
   Our network of filtration consultants has numerous branches and distribution partners in Europe and worldwide.
- Reliable delivery service Delivery reliability is a key factor in our performance spectrum.
- Filter program comprising more than 10,000 articles
   You will find the right product for every need in our product range.
- Tailored filtration solutions on demand Individual solutions lead to better results. We develop them together with you.
- Accessories

A large number of extras support the effective use of our top-quality filters.

Viledon<sup>®</sup> academy

In seminars, we pass on practical know-how and theoretical background knowledge related to all areas of filtration.

Filter measurement technology

Using the latest test rig technologies, we subject our filters to standardized performance tests in accordance with national and international standards, as well as more stringent tests in our own test laboratory.



# Our product portfolio also includes high-quality accessories, for example:

- Mounting frames of stainless steel or galvanized sheet steel with force-locking press-in spring system and rubber seal.
- Differential pressure gauges: display and switching device for basic to very challenging applications.
- Rotational nozzle systems for effective cleaning of filter cartridges.
- Pressure surge reflectors to optimize pulse-jet cleaning.
- Supporting baskets to prevent deformation of filter cartridges.
- Particulate filter accessories: terminal housings, hood modules, fan-filter units, safe-change housings.



# Air filter classification index



	15O 29463	Filter classes										I	ISO 15E	ISO 25E	ISO 35H	ISO 45H	ISO 55 U	ISO 65 U	ISO 75 U
	M	Local value of penetration in the MPPS in %										I	I	I	≤0.25	≤0.025	≤0.0025	≤0.00025	≤0.0001
JLPA	s 5) ominal air fle	in the MPPS in %										I	I	I	≥99.75	≥99.975	≥99.9975	≥99.99975	≥99.9999
EPA, HEPA and ULPA	EN 1822:2009 (Parts 1 to 5) of filter performance at nomi	Integral value of penetration in the MPP3 in %										≤ 15	≤5	≤0.5	≤0.05	≤0.005	≤0.0005	≤0.00005	≤0.000005
EP/	EN 1822:2009 (Parts 1 to 5) Evaluation of filter performance at nominal air flow	Integral value of efficiency in the MPPS in %										≥85	≥95	≥99.5	≥99.95	≥99.995	≥99.9995	≥99,9995	≥99.99995
	Evaluatio	Test aerosol												DEHS	(Di-Ethyl- Hexyl-	Sebacate) MPPS	0.1-0.3 µm		
		Filter classes										E 10	E 11	E 12	H 13	H 14	U 15	U 16	U 17
		Minimum efficiency for particles 0.4 microns in %	ı	I	ı	I	I	I	35	55	70								
ntilation	formance low)	Average efficiency (E <sub>m</sub> ) for particles of 0.4 microns in %					40 ≤E <sub>m</sub> < 60	60 ≤E <sub>m</sub> < 80	80 ≤E <sub>m</sub> <90	90 ≤E <sub>m</sub> < 95	95 ≤E <sub>m</sub>		٩٢		. fela	r Tilter		lter	
Particulate air filters for general ventilation	EN 779:2012 evaluation of filter performance at 0.944 m³/s (or nominal air flow)	Average arrestance (A <sub>m</sub> ) compared with test dust in %	50 ≤A <sub>m</sub> < 65	65 ≤A <sub>m</sub> < 80	80 ≤ A <sub>m</sub> < 90	90 ≤ A <sub>m</sub>	I	I	I	I	I		EPA: Efficient Particulate Air filter		. v	nera: nign emiciency ramiculate Air mirer		ULPA: Ultra Low Penetration Air filter	
filters	/s (o	Final pressure drop in Pa	250	250	250	250	450	450	450	450	450		cient Po			ETTICIEN		a Low	
articulate air	l 779:2012 ev at 0.944 n	Test αerosol						DEHS	yl-Hexyl-	Sebacate) 0.2-3.0 µm			EPA: Effi		רובהא. נוייג	пега: підп		ULPA: Ultr	
	E	teub teaT					ASHRAE dust	5											
		Filter classes	ں 1	G2	с С	G4	M5	M 6	FΖ	F 8	F9								
Filter application	Test	noitongisəb quot		C	0		3	ξ		ш			ш		2	C		⊃	
Filte	Suitable for			Fine dust Coarse dust									o pəp						
					lion) Iage	ter s filtra	1 <sup>3 f</sup> [								tage tage	lter s filtrc	final 3⊾ fi	)	
											ts ritter tiltrat								

# Product overview

by filter classes

								Filter	mats	Filter cells	Pocke	t filters		Ca	issette fil	ters		
		Suitable for	Group designation		Filter standard	Filter classes acc. to EN 779:2012	Filter classes acc. to ISO 29463	Filter mats (p. 20+21)	Roll filters (p. 23)	MP45 (p. 26)	Compact (p. 28 - 31)	WinAir (p. 32 – 35)	MaxiPleat (p. 38 - 42)	NanoPleat (p. 43)	eMaxx (p. 44+45)	MVP (p. 46+47)	MVPGT (p. 48+49)	
					ency	G1												
-	on)	Coarse dust	U	EN 779	stance effici	G2		٠										
e e e	I <sup>st</sup> tilter stage (pretiltration)	Coar		Z	Average arrestance efficiency	G3		•	•	•	•	•						
-	stage (p					G4		•		•	•	•						
	l <sup>st</sup> tilter		Z	EN 779	Average efficiency with 0.4 µm	M 5		•			•	•						
		Jst		Ľ	Averag with	M 6		•			•	•	•	•		•		
tion)		Fine dust		6	ncy with nefficiency	F7					•	•	•	•		•	•	
2 <sup>nd</sup> filter stage (fine filtration)			ш	EN 779	Average efficiency with 0.4 µm / Minimum efficiency	F 8					•		•	•		•	•	
tage (fi					Avei 0.4 μπ	F9							•	•	•	•	•	
d filter s						E10							•		•		•	
2			E (EPA)			E11	ISO 15 E						•		•			
-	tion)	st		sgral value)		E12	ISO 25 E						•					
13	3 <sup>ra</sup> tilter stage (tinal tiltration)	Suspended dust	H (HEPA)	EN 1822 ce efficiency (inte	:63	H13	ISO 35 H											
	age (tir	Suspen	H (HEPA) EN 1822 Total arrestance efficiency (integral value) ISO 29463		ISO 29463	H14	ISO 45 H											
12	tilter st			Total arre	<u></u>	U 1 <i>5</i>	ISO 55 U											
Č	, N		U (ULPA)	₹		U16	ISO 65 U											
						U17	ISO 75 U											

			EPA   HE	Pa   Ulpa	A filters				Gas phase filters	Filter co	ırtridges	High-te	mperatur	e filters
Aluminum frames (p. 52 - 60)	Aluminum frame with silgel seal (p. 61+62)	Plastic frame (p. 63+64)	MDF frame (p. 65 - 70)	Steel sheet frame (p. 71)	High volume flow (p. 72)	Cartridge (p. 73+74)	Plastic plenum hood (p. 75)	Fan-filter unit (p. 77)	DuoPleat (p. 82)	Pulse-jet (p. 94)	Depth-loading filters (p. 95)	HT filter mats (p. 98)	HiProtec cassette filters (p. 100)	HT cassette filters (p. 101)
								•						
												•		
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17

# Air filtration

# **Filter mats**

Filter mats, filter panels, paint mist arrestors, roll filters



Viledon<sup>®</sup> filter mats are progressively structured, with the density of the fiber layers increasing towards the clean air side. This ensures an optimum in terms of defined filter performance and dust holding capacity, coupled with a low pressure drop. All filter mats are produced using an eco-friendly formula. They are moisture-resistant up to 100% relative humidity and thermally stable up to at least 100°C.



# **Filter mats** Filter mats | Coarse dust



Specifications	
Filter medium	P15 and T3/290 S: Polyolefin fibers; PSB: Polyester fibers
Recommended final pressure drop	250 Pa
Thermal stability	up to 100 °C
Moisture resistance	100% rel. hum.
Fire class	F1 acc. to DIN 53438
Packing	1 roll

### **PSB** series

### Application

The PSB filter mats are used for intake air filtration in air-conditioning systems of all kinds, particularly for coarse dust arrestance or as a prefilter stage.

The PSB range comprises of

- PSB/145 S
- PSB/275 S
- PSB/290 S

### Special features of the PSB series

- By virtue of their high dust holding capacity and their long lifetime, PSB filter mats are exceptionally cost-efficient.
- All types in this series prove their worth in application categories where stable arrestance performance is required when coping with a large dust loading and a high air flow rate.
- When used in exhaust air filtration, one of the advantages of the PSB series is that arrestance efficiency and dust holding capacity are ideally matched to each other.

### P15 series

### Application

All types in this series can cope with heavy-duty operation and are suitable for filtration in air-conditioning systems of all kinds.

The P15 series features the familiar Viledon® filter mats

- P15/150 S
- P15/350 S
- P15/500 S

### Special features of the P15 series

- High arrestance efficiency right from the start over the entire operational lifetime, for maximized operational dependability.
- The material's high mechanical strength ensures good dimensional stability, even when subjected to large air volumes, over the entire operational lifetime.
- Thanks to the polyolefin fibers used, P15 filter mats are largely resistant to chemicals such as solvents, acids and lyes. They must be protected against continuous UV irradiation.
- The filter mats can be cleaned by careful washing, beating or spraying; even after being washed, they remain dimensionally stable and retain their technical filtering characteristics. Our eco-friendly series of filters is much in demand among users prioritizing waste avoidance and filtration cost savings.

### T3/290 S

This ultra-efficient G 4 filter mat is suitable for filtration in confined spaces, e.g. in control cabinets or electrical equipment. Thanks to the use of polyolefin fibers, it is highly resistant to chemicals, and hydrophobic.

### **Delivery** notes

All the filter mats we supply are airtight packed as roll goods in standard dimensions in plastic sheets. Other dimensions are available as roll goods or blanks. Special shapes like die-cuts and bags, welded or sewn, are available on request.

Article	Article number	Dimensions (W × L) [mm/m]	Thickness approx. [mm]	Weight per unit area approx. [g/m²]	Filter class	Nominal media velocity [m/s]	Initial pressure drop [Pa]	Average arrestance [%]	Dust holding capacity [g/m²]
PSB/145 S 40/2000	7833647	2,000/40	10	120	G2	2	22	70	600
P15/150 S 40/2000	8039227	2,000/40	8	100	G2	2	30	75	600
PSB/275 S 30/2000	53375688	2,000/30	15	180	G3	1.5	22	83	700
P15/350 S 30/2000	8039427	2,000/30	14	200	G3	1.5	30	84	600
PSB/290 S 20/2000	8019407	2,000/20	20	300	G4	1	22	91	750
P15/500 S 20/2000	8040248	2,000/20	20	350	G4	1	30	94	600
T3/290 S 40/2000	8105365	2,000/40	8	200	G4	0.25	14	96	250

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# Filter mats Filter mats | Fine dust

Specifications		
Filter medium	Polyester fibers	1977
Recommended final pressure drop	450 Pa	4 10 -
Thermal stability	up to 100 °C; PA/ProfAir: Briefly up to 120 °C	#
Moisture resistance	up to 100% rel. hum.	
Migration test class	\$0	
Fire class	F 1 acc. to DIN 53438	/

### A3/300 S

### Application

The A 3/300 S filter mat is designed primarily for high-quality final filtration in air-conditioning devices and systems, and as prefilters in multi stage intake air systems.

### **Special features**

- The special smoothing of the clean air side increases the rigidity of the filter mat, rendering it sturdy and installation-friendly.
- By virtue of its very good arrestance performance, the A3/300 S filter mat can be used universally in all applications in which high-quality filtration in the fine dust range is demanded in order to protect both people and machinery.

### ProfAir

### Application

ProfAir is a fine filter for final filtration of intake air in repair paint-spray booths. The filter mat ensures high arrestance performance for particles > 10 µm and thus provides a high degree of protection against paintwork damage.

### PA/500-10, PA/560 G-10 and PA-5 micron

### Application

The PA/500-10 and PA/5560 G-10 filter mats, acknowledged as the standard in surface treatment technology, are used for final filtration of the intake air in paint shops und paint-spray booths. The principal application category for the PA-5 micron filter mat is final filtration of the intake air in paint-spray processes with particularly stringent requirements for air purity.

### Special features of the PA series

- PA/500-10 and PA/560 G-10 assure practically 100% arrestance of particles > 10 μm, which are able to cause visually perceptible surface blemishes. This offers their users maximized security against paintwork defects.
- With practically 100% arrestance of particles > 5 µm, the PA-5 micron filter mat meets even the most stringent of requirements in surface treatment technology and offers its users maximized dependability in the production process.
- The adherent surface of each individual fiber in the filter media can be relied upon to retain already-arrested particles over the entire operational lifetime.
- Thanks to the adherent surface of the fibers, the PA-5 micron is able to lastingly bond more than 3 kg/m<sup>2</sup> of pourable aloxite dust.
- PA/560 G-10 and PA-5 micron additionally possess a reinforcing mesh fabric on the clean air side, which increases the filter mat's stability and reduces the risk of the clean air side being damaged during installation.
- All PA filter mats are resistant to solvent vapours and contain no silicone.

### **Delivery** notes

All the filter mats we supply are airtight packed as roll goods in standard dimensions in plastic sheets. Other dimensions available on rolls or as blanks.

Special shapes like die-cuts and bags, welded or sewn, are available on request

Article	Article number	Dimensions (W × L) [mm/m]	Thickness approx. [mm]	Weight per unit area approx. [g/m²]	Filter class	Nominal media velocity [m/s]	Initial pressure drop [Pa]	Average efficiency [%]	Average arrestance [%]	Dust holding capacity [g/m²]
A3/300 S 20/2000	8422288	2,000/20	20	300	M 5	0.25	20	46	97	330
ProfAir N 20/2000	53350549	2,000/20	23	545	M 5	0.25	30	45	96	250
PA/500-10 18/1600	7700072	1,600/18	25	500	M 5	0.25	25	50	98	300
PA/500-10 20/2000	7802106	2,000/20	25	500	M 5	0.25	25	50	98	300
PA/560 G-10 20/1600	53253198	1,600/20	25	580	M 5	0.25	30	55	99	300
PA/560 G-10 20/2000	7802206	2,000/20	25	580	M 5	0.25	30	55	99	300
PA/560 G-10 22/1600	8887232	1,600/22	25	580	M 5	0.25	30	55	99	300
PA/560 G-10 22/2000	8238130	2,000/22	25	580	M.5	0.25	30	55	99	300
PA-5 micron BK 20/2000	53296957	2,000/20	25	650	M6	0.25	55	70	99	300

21

# **Filter mats** Filter panels





Specifications	
Filter medium	Various Viledon® filter media available
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Polyurethane

### Application

The filter panels are used for intake air filtration in air-conditioning systems of all kinds, particularly for coarse dust arrestance or at the prefilter stage. Application areas include e.g.

- Heavy industry: cement plants, steel mills,
- Automotive: paint booths,
- Food industry,
- Petrochemical industry.

Filter panels are used to protect the climate and ventilation systems, control panels and heating systems.

### **Special features**

- Large range of high quality and efficient Viledon<sup>®</sup> filter media.
- Extremely rigid.
- Non-corroding and moisture-resistant up to 100% relative humidity.
- Easy installation, no extra clamping necessary.
- Self-sealing through overlapping.

### Delivery notes

Filter panels in a washable version are available upon request.

Article	Article number	Filter medium	Dimensions (W × L) [mm]	Filter class	Nominal volume flow [m³/h]	Pressure drop [Pa]
LH 111 MIT P15/150 \$ 610/610	53263665	P15/150 S	610×610	G2	2,600	25
LH 101 MIT PSB/290 S 610/610	53263659	PSB 290 S	610×610	G4	1,300	35
LH 101 MIT PSB/290 S 700/500	53263662	PSB 290 S	700×500	G4	1,250	35
LH 101 MIT PSB/290 S 625/500	53263658	PSB 290 S	625×500	G4	1,100	35
LH 101 MIT PSB/290 S 500/500	53263660	PSB 290 S	500×500	G4	720	35
LH 101 MIT PSB/290 S 500/400	53263661	PSB 290 S	500×400	G4	900	35
LH 103 MIT P15/500 S 610/610	53253599	P15/500 S	610×610	G4	1,300	35
LH 103 MIT P15/500 S 500/500	53000301	P15/500 S	500×500	G4	900	35
LH 103 MIT PA/560 G-10 500/500	53430605	PA/560 G-10	500×500	M 5	450	55

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# **Filter mats** Roll filters | Coarse dust

Specifications		
Filter medium	Polyester fibers	
Recommended final pressure drop	160 Ρα	
Initial pressure drop	50 Pa at 2.5 m/s	
Dust holding capacity	400 g/m <sup>2</sup>	
Gravimetric efficiency	80% (EN 779)	
Weight	250 g/m <sup>2</sup>	Marton
		-uon

Fire behavior

### Application

The R/260 filter mat is used for filtration in roll filter equipment.

### The medium and its features

The medium used is a high-performance nonwoven made of polyester fibers with thermal fiber bonding, i. e. without any bonding agents. The filter medium is progressively structured, featuring fiber layers with different fiber diameters, arranged one after the other in such a way that the density of the fiber layers increases towards the clean air side. This ensures an optimum in terms of defined filter performance and dust holding capacity. Result: longer operational lifetime of the filter. A scrim increases the mechanical strength. Viledon® filter media meet the stringent requirements of fire class F1 in conformity with DIN 53438, and are thus self-extinguishing.

### Delivery notes

Available on a cardboard core or a metal spool.

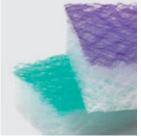
The roll goods R/260 (40 running meters) are manufactured in three different widths: 2,200 mm, 1,900 mm and 1,600 mm.

Article	Article number	Filter class	Thickness approx.
			[mm]
LH_R 260/810	53329934	G3	8
LH_R 260/838	53329914	G3	8
LH_R 260/1110	53329936	G3	8
LH_R 260/1143	53329915	G3	8
LH_R 260/1250	53361322	G3	8
LH_R 260/1410	53329938	G3	8
LH_R 260/1448	53329916	G3	8
LH_R 260/1710	53329940	G3	8
LH_R 260/1753	53329917	G3	8
LH_R 260/2010	53355829	G3	8
LH_R 260/2058	53329918	G3	8





# **Filter mats** Paint mist arrestors, glass-fiber



Specifications	
Filter medium	Glass-fibers
Thermal stability	up to at least 80 °C
Fire behavior	non-flammable acc. to DIN 4102
Nominal media velocity	0.7 - 1.75 m/s

### Application

High-quality filtration for paint-spray booth exhaust air. The PS 100 type, thanks to its higher arrestance efficiency is particularly well-suited for use in installations with heat recovery systems. The Paint Stop Hydro PSH 75 filter mat is ideally suited for arresting water-based paint.

During the intended use as a paint mist arrestor, the safety regulations for avoiding self-ignition must be complied with.

### Special features PS 50/PS 100

- Dimensionally elastic glass-fiber medium with a progressive structure, i.e. openly structured face side (green) and increasing fiber density towards the clean air side (white).
- High dimensional stability even when loaded thanks to low compressibility, which means the entire material depth is used for storing paint mist.
- Non-flammable in conformity with DIN 4102 and thermally stable up to 80 °C.

### Special features of the PSH 75 Paint Stop Hydro

- A shape-elastic high performance glass-fiber medium is used.
- Thanks to its fine, elastic material structure, the surface is prevented from being prematurely clogged.
- Enhanced material rigidity thanks to special finish.
- The paint mist arrestor PSH75 scores excellently in terms of increased paint storage capacity for hydro-paints, with concomitantly long useful lifetime.

### **Delivery notes**

PS 50 | FS 100 and PSH75 are available on request in all commonly encountered roll lengths and widths, and as rectangular blanks.

Article	Dimensions (W × L) [mm/m]	Thickness approx. [mm]	Weight per unit area approx. [g/m²]	Initial pressure drop [Pa]	Paint mist arrestance efficiency [%]	Paint holding capacity (at 80 Pa and 0.7 m/s) [g/m <sup>2</sup> ]
PS 50 20/1000	1,000/20	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 20/1524	1,524/20	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 20/2000	2,000/20	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 25/500	500/25	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 25/1000	1,000/25	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 25/1250	1,250/25	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 25/1524	1,524/25	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 25/2000	2,000/25	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 50/500	500/50	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 50/1000	1,000/50	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 50/1250	1,250/50	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 50/1524	1,524/50	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/500	500/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/610	610/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/660	660/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/760	760/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/860	860/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/910	910/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/1000	1,000/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/1250	1,250/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/1524	1,524/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 50 91/2000	2,000/91	50 - 65	220 - 240	7 - 40	93 - 97	3,500 - 4,700
PS 100 20/1000	1,000/20	100	350	14 - 60	98 - 99	3,900 - 5,050
PS 100 20/1524	1,524/20	100	350	14 - 60	98 - 99	3,900 - 5,050
PS 100 20/2000	2,000/20	100	350	14 - 60	98 - 99	3,900 - 5,050
PSH 75 20/1000	1,000/20	75	300	10 - 50	>98	>4,000

# Freudenberg **Filtration Technologies**

24

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# Filter cells MP45



Viledon<sup>®</sup> filter cells give reliable service in prefiltration jobs for intake, exhaust and recirculating air systems. They extend the operational lifetimes of the downstream fine filters.



# **Filter cells** MP 45 | Coarse dust



Specifications	
Specifications Thermal stability	up to 70 °C
Moisture resistance	100% rel. hum.

### Principal application category

Filter cells are used for prefiltration in ventilation and air-conditioning units, and in intake air systems and lines, so as to extend the operational lifetimes of the downstream fine filters.

Almost all commercially available filter cells and filter mats can be replaced in the removable frame by the filter cells MP45 (frame material cardboard) and MP45 K (frame material plastic).

The MP45 KTC filter cells can be used as prefilters for the Viledon<sup>®</sup> MaxiPleat filters, simply by clipping them on thus enabling another filter stage to be inserted without any structural modifications.

### Characteristics and pluses of the MP45 KTC

- Four coupling holes (L) are provided in the frame corners of the clean air side. This means the prefilter can be simply clipped onto an already-installed MaxiPleat basic filter fitted with black connecting pins. The connecting pins anchored in the basic filter can no longer be detached. The MP45 KTC prefilter, however, can easily be removed again and replaced. Even while the intake air system is still operating, the prefilter can be quickly and safely replaced.
- Velcro fastenings (KB) to the main filter increase the retention forces during operation. Additional metal brackets are available on request, which secure the filter in place when it is installed overhead.
- The entire filter element contains no metal, and is therefore non-corroding and fully incinerable.

### Delivery notes

Customized dimensions and regionally divergent versions are available on request.

Article	Article number	Dimensions (W×H×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average arrestance [%]	Face velocity [m/s]	Recommended final pressure drop [Pa]	Filter area [m²]	Frame
MP 45 0595x0595x96	53307806	595 × 595 × 96	G3	4,250	60	88	3.3	200	2.0	Cardboard
MP 45 K 0595x0595x96	53408851	595×595×96	G3	4,250	60	88	3.3	200	2.0	Plastic
MP 45 0595x0595x48	53349216	595×595×48	G3	4,250	95	88	3.3	200	1.1	Cardboard
MP 45 K 0595x0595x48	53401206	595×595×48	G3	4,250	95	88	3.3	200	1.1	Plastic
MP 45 0595x0595x96	53307806	595 × 595 × 96	G4	3,400	50	90	2.7	200	2.0	Cardboard
MP 45 K 0595x0595x96	53408851	595 × 595 × 96	G4	3,400	50	90	2.7	200	2.0	Plastic
MP 45 0595x0595x48	53349216	595 × 595 × 48	G4	3,400	75	90	2.7	200	1.1	Cardboard
MP 45 K 0595x0595x48	53401206	595 × 595 × 48	G4	3,400	75	90	2.7	200	1.1	Plastic
MP 45 KTC 0555x0555x092 LKB	53374950	555 × 555 × 92	G4	3,400	50	91	3.1	250	2.0	Nonwoven
MP 45 KTC 0555x0555x092 LD	53386678	555×555×92	G4	3,400	50	91	3.1	250	2.0	Nonwoven

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# Pocket filters

Compact, WinAir





Viledon<sup>®</sup> pocket filters are made from non-breaking synthetic-organic fibers and microfibers. The pockets are welded and foamed into the front frame in a leakproof configuration so as to provide maximized security against dust breakthrough. Their high cost-efficiency is rooted in low average pressure drops and optimized aerodynamics coupled with full utilization of the filtering area available.



# **Pocket filters** Compact | Coarse dust



Specifications	
Filter medium	Polyester fibers
Recommended final pressure drop	250 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Polyurethane
Fire class	F1 acc. to DIN 53438

### Special features of all Compact pocket filters with filter class G

- Progressively structured high-performance nonwovens made from non-breaking synthetic-organic fibers.
- High arrestance, low pressure drop, long operational lifetime, high cost-efficiency.
- Free of glass-fibers, non-corroding, moisture-resistant up to 100% rel. hum., self-extinguishing according to DIN 53438 (fire class F 1) and microbiologically inactive. They meet all the criteria laid down in VDI Guideline 6022 "Hygiene requirements for ventilation and air-conditioning systems and units".
- High functional dependability thanks to the leakproof welded configuration of the filter pockets, foam-sealed into a PUR front frame with aerodynamically optimized welded-in spacers and a dimensionally stable construction of the filter element as a whole.

### Application

- Compact pocket filters of filter classes G3 G4 are used in intake, exhaust and recirculating air filtration for air-conditioning systems of all kinds.
- As prefilters for fine and ultra-fine filters in industrial processes (metalworking, chemicals, pharmaceuticals, food and beverages, optics, electronics, etc.), in ventilation and air-conditioning systems, in paint shops / booths and in turbomachinery.
- For the filtration of process air with high dust loading or coarse particles.

### Special features of G35 series

- The robust filter series for heavy coarse dust loadings, even at high air flow rates. The filters achieve medium clean air quality coupled with particularly cost-efficient operating behavior and low energy costs.
- High functional dependability even when subjected to extreme humidity and moisture.
- By reason of their shorter pockets, the G 35 S provide a space-saving solution for systems in which the G 35 SL long-pocket filters cannot be used due to space constraints.

### Special features of F40/45 series

- Stable arrestance performance even with high coarse dust loadings and high air flow rate.
- F40 and F45 SEL achieve energy efficiency class A, thus ensuring reduced energy costs and downsized CO<sub>2</sub> emissions.
- High functional reliability, even under extremely moist and wet operating conditions.
- Thanks to their shorter pockets, F 45 S filters offer a space-saving solution for plants where the use of long-pocket filters would not be possible.

### **Delivery** notes

Customized dimensions are available on request.

Article	Article number	Dimensions (W×H×D) [mm]	Number of pockets	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Energy consump- tion [kWh/a]	Average arrestance [%]	Dust holding capacity (ASHRAE/450 Pa) [g]	Filter area [m²]	Weight [kg]	Packaging unit [units/ carton]
G 35 S 1/1*	7515413	592×592×330	5	G3	3,400	20		86	1,180	2.0	1.2	4
G 35 S 5/6	7521289	492×592×330	4	G3	2,700	20		86	950	1.6	1.0	2
G 35 S 1/2	7521389	289×592×330	3	G3	2,000	20		86	700	1.2	0.8	2
G 35 SL 1 / 1	7579317	592×592×650	5	G3	4,250	30		86	2,300	4.0	1.7	2
G 35 SL 5/6	7599437	492×592×650	4	G3	3,400	30		86	1,850	3.2	1.5	2
G 35 SL 1/2	7580138	289×592×650	3	G3	2,500	30		86	1,350	2.4	1.2	2
G 35 SL 1/4	7580238	289×289×650	4	G3	1,500	30		86	800	1.5	0.7	2
G 35 SE 1/1	8929206	592×592×510	8	G3	4,250	40		86	2,600	4.7	2.3	2
G 35 SEL 1/1	53307071	592×592×650	8	G3	4,250	45		86	3,200	6.2	2.7	2
F45S1/1*	7526134	592 × 592 × 330	5	G4	3,400	35	890	93	590	2.0	1.2	4
F45S5/6	7528456	492×592×330	4	G4	2,700	35		93	470	1.6	1.0	2
F45S1/2	7529267	289×592×330	3	G4	2,000	35		93	350	1.2	0.8	2
F 40 1 / 1	8256138	592 × 592 × 650	5	G4	4,250	30	400	93	1,425	4.0	1.7	2
F405/6	8500259	492×592×650	4	G4	3,400	30		93	1,150	3.2	1.5	2
F401/2	8498114	289×592×650	3	G4	2,500	30		93	850	2.4	1.2	2
F 40 1/4	8500359	289×289×650	4	G4	1,500	30		93	500	1.5	0.7	2
F 45 SEL 1/1	53457509	592×592×650	8	G4	4,250	50	410	93	1,980	6.2	2.7	2

\* also available as reverse-flow version

28

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# **Pocket filters** Compact | Fine dust

Specifications		
Filter medium	PES (F 50, T 60), Polyolefin (others)	
Recommended final pressure drop	450 Pa	
Bursting pressure	> 3,000 Pa	
Thermal stability	70 °C	
Moisture resistance	100 % rel. hum.	
Frame	Polyurethane	
Fire class	F 1 acc. to DIN 53438	

### Special features of all Compact pocket filters with filter classes M and F

High-performing, extremely cost-effective and energy efficient: Viledon® Compact pocket filters offer dependable operating characteristics plus freedom from maintenance over the entire operational lifetime. They constitute an optimum combination of stable arrestance performance for fine dusts, high dust holding capacity, low pressure drop and long operational lifetime.

- Single- or multi-layered progressively structured high-performance nonwovens made from non-breaking synthetic-organic fibers.
- High arrestance, low pressure drop, long operational lifetime, high cost-efficiency.
- Free of glass-fibers, non-corroding, moisture-resistant up to 100% relative humidity, self-extinguishing according to DIN 53438 (fire class F 1) and microbiologically inactive. They meet all criteria laid down in VDI Guideline 6022 "Hygiene requirements for ventilation and air-conditioning systems and units".
- High functional dependability thanks to filter pockets welded in a leakproof configuration foamed onto a PUR front frame, with welded-in aerodynamic spacers and a dimensionally stable construction of the entire filter element.

### F 50 und T 60

### Application

F 50 and T 60 are used for filtering intake, exhaust and recirculating air in air-conditioning systems with stringent requirements for sturdiness and costefficiency, e.g.

- in industrial processes (chemicals, pharmaceuticals, food and beverages, optics, electronics, etc.),
- in intake and exhaust air filtration for paint shops,
- in intake air filtration for gas turbines and turbocompressors onshore and offshore (especially T60),
- for intake and exhaust air filtration in sophisticated air-conditioning technology (hospitals, laboratories, libraries, museums, airports), plus production facilities and factory halls (especially F50).

### **Special features**

- T 60 and F 50 pocket filters are robust in continuous operation and achieve superlative performance even during temporary overload operation in terms of high clean air quality.
- Both pocket filter series achieve energy efficiency class A and thus ensure reduced energy costs and downsized CO<sub>2</sub> emissions.

In the intake air systems of gas turbines, T60 filters can be relied upon to retain aggressive, abrasive particles, to minimize blade fouling and erosion, thus enhancing the efficiency and availability of turbomachinery. They give excellent service even under extreme weather conditions, and in intake air systems on offshore installations, not least when subjected to increased volume flows.

### T90 PRE

### Application

T 90 PRE with proven jetSpin technology are used in intake air filtration for gas turbines and turbocompressors onshore and offshore.

### **Special features**

In intake air filtration for gas turbines, T90 filters can be relied upon to arrest aggressive, abrasive particles, to minimize blade fouling and erosion, and thus to upgrade the efficiency and availability of turbomachinery.

### T90, MF90 and MF95

### Application

T90, MF90 and MF95 filters are used for intake, exhaust and recirculating air filtration in air-conditioning systems with special requirements for arrestance performance, e.g.

- in sophisticated air-conditioning technology (hospitals, laboratories, libraries, museums, airports, etc.),
- in industrial processes (chemicals, pharmaceuticals, food and beverages, optics, electronics, etc.),
- as prefilters for EPA | HEPA | ULPA filters (MF 90 and MF 95),
- as downstream "police filters" in dust removal systems.

### **Special features**

- T90, MF90 and MF95 pocket filters featuring Nano jetSpin technology provide a sustainedly high level of mechanical filtering performance under all duty conditions. The advantage for the user: maximized operational reliability.
- The filters meet the toughest of requirements in terms of fine filtration and create very high clean air quality, thus making a crucial contribution to cost-efficient operation of sensitive lines and processes.
- T90 pocket filters achieve energy efficiency class A, thus ensuring reduced energy costs and downsized CO<sub>2</sub> emissions.



# **Pocket filters** Compact | Fine dust



Specifications	
Filter medium	PES (F 50, T 60), Polyolefin (others)
Recommended final pressure drop	450 Pa
Bursting pressure	>3,000 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Polyurethane
Fire class	F1 acc. to DIN 53438

Article	Article number	Dimensions (W × H × D) [mm]	Number of pockets	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Initial efficiency [%]	Minimum efficiency [%]	Average efficiency [%]	Average arrestance [%]	
F 50 S 1/1*	53456360	592×592×330	5	M 5	3,400	65			49	95	
F 50 1/1	7581349	592×592×650	5	M 5	4,250	50			51	97	
F 50 5/6	7581449	492×592×650	4	M 5	3,400	50			51	97	
F 50 1/2	7582150	289×592×650	3	M 5	2,500	50			51	97	
F 50 1/4	7582250	289×289×650	4	M 5	1,525	50			51	97	
F 50 SE 1 / 1	53457510	592×592×510	8	M 5	4,250	60			50	97	
F 50 SEL 1 /2 horiz	53473137	592×289×650	8	M 5	2,100	50			51	97	
T 60 1/1	8473449	592×592×650	8	M 6	4,250	65			63	99	
T 60 5/6	8474150	492×592×650	4	M 6	2,175	65			63	99	
T 60 1/2	8474250	289×592×650	3	M 6	1,600	65			63	99	
T 60 1/2 horiz	53471177	592×289×650	8	M 6	2,100	65			63	99	
T 60 1/4	8474350	289×289×650	4	M 6	975	65			63	99	
T 90 PRE 1/1	53449490	592×592×650	12	M6	4,250	80			85	>99	
T 90 PRE 1/2	53449491	289×592×650	4	M 6	1,450	80			85	>99	
T 90 1/1	53444184	592×592×650	12	F7	4,250	115	67	36	89	>99	
T 90 5/6	53444180	492×592×650	6	F7	2,200	115	67	36	89	>99	
T 90 1/2	53444179	289×592×650	4	F7	1,450	115	67	36	89	>99	
MF 90 1 / 1	53444178	592×592×650	8	F7	4,250	140	67	35	88	>99	
MF 90 5/6	53444175	492×592×650	6	F7	3,175	140	67	35	88	>99	
MF 90 1/2	53444172	289×592×650	4	F7	2,125	140	67	35	88	>99	
MF 90 1/4	53444170	289×289×650	4	F7	975	140	67	35	88	>99	
MF 95 1 / 1	53444168	592×592×650	12	F 8	4,250	190	84	55	95	>99	
MF 95 5/6	53444167	492×592×650	6	F8	2,200	190	84	55	95	>99	
MF 95 1/2	53444166	289×592×650	4	F8	1,450	190	84	55	95	>99	
MF 95 1/4	53444165	289×289×650	4	F8	675	190	84	55	95	>99	

# Freudenberg Filtration Technologies

30





# **Pocket filters** Compact | Fine dust

Specifications		
Filter medium	PES (F 50, T 60), Polyolefin (others)	6
Recommended final pressure drop	450 Pa	· · · · · · · · · · · · · · · · · · ·
Bursting pressure	>3,000 Pa	
Thermal stability	70 °C	
Moisture resistance	100 % rel. hum.	1 I I I I I I I I I I I I I I I I I I I
Frame	Polyurethane	
Fire class	F1 acc. to DIN 53438	

Delivery notes

Customized dimensions are available on request.

Dust holding capacity	Dust holding capacity	Filter area	Weight [kg]	Packaging unit [units/carton]	Article		ssification NT 4/21**	
(AC Fine/450 Pa) [g]	(AC Fine / 800 Pa) [g]	[m²]				Nominal volume flow [m³/h]	Energy class	Annual Energy consumption***
		2.0	1.6	4	F 50 S 1/1*	3,400	E	1,609
3,650		4.0	2.1	2	F 50 1 / 1	3,400	А	600
2,900		3.2	1.6	2	F 50 5/6	2,700	А	
2,150		2.4	1.2	2	F 50 1/2	2,000	А	
1,300		1.4	0.7	2	F 50 1/4	1,200	А	
		4.7	2.5	2	F 50 SE 1 / 1	3,400	А	560
		3.0	1.5	2	F 50 SEL 1 /2 horiz	3,150	А	
	5,000	6.2	3.1	2	T 60 1 / 1	3,400	А	620
	2,550	3.2	1.6	2	T 60 5/6	1,750	А	
	1,900	2.4	1.2	2	T 60 1/2	1,300	А	
		3.0	1.5	2	T 60 1 / 2 horiz	1,600	А	
	1,150	1.5	0.7	2	T 60 1/4	800	А	
		9.0	3.1	2	T 90 PRE 1 / 1	3,400	D	1,170
		3.1	1.6	6	T 90 PRE 1/2	1,200	D	
	3,000	9.0	3.1	2	T 90 1/1	3,400	В	1,060
	1,600	4.7	1.6	4	T 90 5/6	1,750	В	
	1,100	3.1	1.1	6	T 90 1/2	1,200	В	
	2,000	6.2	2.2	6	MF 90 1 / 1	3,400	С	1,500
	1,500	4.7	1.6	4	MF 90 5/6	2,550	С	
	1,000	3.1	1.1	6	MF 90 1/2	1,700	С	
	460	1.5	0.5	6/12	MF 90 1/4	800	С	
	2,200	9.0	3.1	2/5	MF 95 1 / 1	3,400	С	1,650
	1,150	4.7	1.7	4	MF 95 5/6	1,750	С	
	800	3.1	1.2	6	MF 95 1/2	1,200	С	
	350	1.5	0.5	6/12	MF 95 1/4	570	С	

\* also available as reverse-flow version

\*\* rated at 3,400  $\mbox{m}^3/\mbox{h}$  (further information at www.eurovent-certification.com)

\*\*\* The specified annual energy consumption is the result of laboratory tests using synthetic test dust and refers only to the proportion of total energy consumption attributable to flow resistance through the filter. The annual energy consumption of an HVAC system in operation can therefore differ significantly under actual operational conditions.

# **Pocket filters** WinAir | Coarse dust



Specifications								
Filter medium	Polyester fibers							
Recommended final pressure drop	250 Pa							
Thermal stability	70 °C							
Moisture resistance	100% rel. hum.							
Frame	Polyurethane							
Fire class	F1 acc. to DIN 53438							

### Application

The WinAir 35 and WinAir 45 coarse filters provide stable arrestance of coarse dusts, and are particularly suitable as prefilters.

### **Special features**

- Good filtration characteristics thanks to progressively structured filter media made of synthetic-organic fibers.
- Filter pockets foamed into the PU front frame, and welded in a leakproof configuration.
- Pocket forming through integrated welded seams.
- The pocket filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for ventilation and air-conditioning systems and units".
- Free of glass-fibers, non-corroding, moisture-resistant up to 100% relative humidity, self-extinguishing under DIN 53438 (fire class F1).
- Simple, secure installation, suitable for all commonly used mounting frames.

### Delivery notes

Customized dimensions are available on request.

Article	Article number	Dimensions (W × H × D) [mm]	Number of pockets	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Energy consump- tion [kWh/a]	Average arrestance [%]	Filter area [m²]	Weight [kg]	Packaging unit [units/carton]
WinAir 35 1/1 330 mm	53393071	592 × 592 × 330	5	G3	3,400	28		86	2.0	1.2	2
WinAir 35 5/6 330 mm	53393073	492×592×330	4	G3	2,700	28		86	1.6	0.9	2
WinAir 35 1/2 330 mm	53393072	289×592×330	3	G3	2,050	28		86	1.2	0.7	2
WinAir 35 1/4 330 mm	53393159	289×289×330	4	G3	1,200	28		86	0.7	0.5	2
WinAir 45 1/1 330 mm	53390774	592 × 592 × 330	5	G4	3,400	30	810	90	2.0	1.2	2
WinAir 45 5/6 330 mm	53390780	492 × 592 × 330	4	G4	2,700	30		90	1.6	0.9	2
WinAir 45 1/2 330 mm	53390777	289×592×330	3	G4	2,050	30		90	1.2	0.7	2
WinAir 45 1/4 330 mm	53393160	289×289×330	4	G4	1,200	30		90	0.7	0.5	2
WinAir 45 1/1 510 mm	53390775	592 × 592 × 510	5	G4	3,400	30	530	91	3.1	1.3	8
WinAir 45 5/6 510 mm	53390781	492×592×510	4	G4	2,700	30		91	2.5	1.1	10
WinAir 45 1/2 510 mm	53390778	289×592×510	3	G4	2,050	30		91	1.9	0.8	10
WinAir 45 1/4 510 mm	53393161	289×289×510	4	G4	1,200	30		91	1.1	0.6	2
WinAir 45 1/1 625 mm	53390776	592×592×625	5	G4	3,400	25	490	92	3.8	1.4	8
WinAir 45 5/6 625 mm	53390782	492 × 592 × 625	4	G4	2,700	25		92	3.0	1.2	4
WinAir 45 1/2 625 mm	53390779	289 × 592 × 625	3	G4	2,050	25		92	2.3	1.0	6
WinAir 45 1/4 650 mm	53393162	289×289×650	4	G4	1,250	25		92	1.4	0.6	2

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ubject to technical changes.





# **Pocket filters** WinAir | Fine dust

Specifications		44.1
Filter medium	Polyester (WinAir 50), Polyolefin (others)	
Recommended final pressure drop	450 Pa	
Thermal stability	70 °C	
Moisture resistance	100 % rel. hum.	
Frame	Polyurethane	
Fire class	F 1 acc. to DIN 53438	

### Application

The WinAir fine filters create good clean air quality based on good arrestance coupled with a low pressure drop. Used as prefilters, they protect the downstream filter stages.

### **Special features**

- Good filtration characteristics thanks to progressively structured filter media made of synthetic-organic fibers.
- Filter pockets foamed into the PU front frame, and welded in a leakproof configuration.
- Pocket forming through integrated welded seams.
- The pocket filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for ventilation and air-conditioning systems and units".
- Free of glass-fibers, non-corroding, moisture-resistant up to 100% relative humidity, self-extinguishing under DIN 53438 (fire class F 1).
- Simple, secure installation, suitable for all commonly used mounting frames.



33

# **Pocket filters** WinAir | Fine dust



Specifications	
Filter medium	Polyester (WinAir 50), Polyolefin (others)
Recommended final pressure drop	450 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Polyurethane
Fire class	F1 acc. to DIN 53438

Article	Article number	Dimensions (W × H × D) [mm]	Number of pockets	Filter class	Nominal volume flow [m³/ h]	Initial pressure drop [Pa]	Initial efficiency [%]	Minimum efficiency [%]	
WinAir 50 1 / 1 330 mm	53390783	592×592×330	5	M 5	2,500	40			
WinAir 50 5/6 330 mm	53390795	492×592×330	4	M 5	2,000	40			
WinAir 50 1/2 330 mm	53390787	289×592×330	3	M 5	1,500	40			
WinAir 50 1/4 330 mm	53393163	289×289×330	4	M 5	900	40			
WinAir 50 1 / 1 510 mm	53390784	592×592×510	5	M 5	3,400	50			
WinAir 50 5/6 510 mm	53390796	492×592×510	4	M 5	2,700	50			
WinAir 50 1/2 510 mm	53390788	289×592×510	3	M 5	2,000	50			
WinAir 50 1/4 510 mm	53393169	289×289×510	4	M 5	1,200	50			
WinAir 50 1 / 1 625 mm	53390785	592×592×625	5	M 5	3,400	45			
WinAir 50 5/6 625 mm	53390797	492×592×625	4	M 5	2,700	45			
WinAir 50 1/2 625 mm	53390794	289×592×625	3	M 5	2,000	45			
WinAir 50 1/4 650 mm	53393170	289×289×650	4	M 5	1,250	45			
WinAir 75 1/1 510 mm	53390798	592×592×510	8	M 6	3,400	100			
WinAir 75 5/6 510 mm	53390803	492×592×510	6	M 6	2,550	100			
WinAir 75 1/2 510 mm	53390801	289×592×510	4	M6	1,700	100			
WinAir 75 1/4 510 mm	53393171	289×289×510	4	M6	800	100			
WinAir 75 1/1 625 mm	53390799	592×592×625	8	M6	3,400	75			
WinAir 75 5/6 625 mm	53390804	492×592×625	6	M 6	2,550	75			
WinAir 75 1/2 625 mm	53390802	289×592×625	4	M 6	1,700	75			
WinAir 75 1/4 650 mm	53393172	289×289×650	4	M6	800	75			
WinAir 90 1/1 N 510 mm	53464906	592×592×510	8	F7	3,400	170	60	35	
WinAir 90 5/6 510 mm	53390810	492×592×510	6	F7	2,550	170	60	35	
WinAir 90 1/2 510 mm	53390808	289×592×510	4	F7	1,700	170	60	35	
WinAir 90 1/4 510 mm	53393173	289×289×510	4	F7	800	170	60	35	
WinAir 90 1 / 1 N 625 mm	53464907	592×592×625	8	F7	3,400	140	62	35	
WinAir 90 5/6 625 mm	53390811	492×592×625	6	F7	2,550	140	62	35	
WinAir 90 1/2 625 mm	53390809	289×592×625	4	F7	1,700	140	62	35	
WinAir 90 1/4 650 mm	53393174	289×289×650	4	F7	800	140	62	35	





# **Pocket filters** WinAir | Fine dust

Specifications	
Filter medium	Polyester (WinAir 50), Polyolefin (others)
Recommended final pressure drop	450 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Polyurethane
Fire class	F 1 acc. to DIN 53438

### Delivery notes

Customized dimensions are available on request. WinAir 50, WinAir 75 and WinAir 90 are also available in the sizes 1/2 and 5/6 for transverse installation.

Average efficiency	Average arrestance		Weight [kg]	Packaging unit [units/carton]	Article	Energy efficiency classification according to EUROVENT 4/21*			
[%]	[%]	[m²]				Nominal volume flow [m³/h]	Energy class	Annual Energy consumption**	
50	95	2.0	1.0	2	WinAir 50 1 / 1 330 mm	3,400	E	> 1,200	
50	95	1.6	1.0	2	WinAir 50 5/6 330 mm	2,700	E		
50	95	1.2	0.8	2	WinAir 50 1/2 330 mm	2,000	E		
50	95	0.7	0.6	2	WinAir 50 1/4 330 mm	1,200	Е		
50	96	3.1	1.3	6	WinAir 50 1/1 510 mm	3,400	D	960	
50	96	2.5	1.2	10	WinAir 50 5/6 510 mm	2,700	D		
50	96	1.9	0.9	10	WinAir 50 1/2 510 mm	2,000	D		
50	96	1.1	0.6	2	WinAir 50 1/4 510 mm	1,200	D		
50	97	3.8	1.5	6	WinAir 50 1/1 625 mm	3,400	С	700	
50	97	3.1	1.3	6	WinAir 50 5/6 625 mm	2,700	С		
50	97	2.3	1.0	10	WinAir 50 1/2 625 mm	2,000	С		
50	97	1.4	0.7	2	WinAir 50 1/4 650 mm	1,250	С		
72	>99	4.9	1.8	6	WinAir 75 1/1 510 mm	3,400	E	> 1,400	
72	>99	3.7	1.3	4	WinAir 75 5/6 510 mm	2,550	E		
72	>99	2.5	0.9	6	WinAir 75 1/2 510 mm	1,700	E		
72	>99	1.2	0.5	12	WinAir 75 1/4 510 mm	800	E		
77	>99	6.0	2.0	8	WinAir 75 1/1 625 mm	3,400	E	> 1,400	
77	>99	4.5	1.5	4	WinAir 75 5/6 625 mm	2,550	E		
77	>99	3.0	1.0	6	WinAir 75 1/2 625 mm	1,700	E		
77	>99	1.4	0.5	12	WinAir 75 1/4 650 mm	800	E		
81	>99	4.9	1.8	6	WinAir 90 1/1 N 510 mm	3,400	E	>2,200	
81	>99	3.7	1.3	4	WinAir 90 5/6 510 mm	2,550	E		
81	>99	2.5	0.9	6	WinAir 90 1/2 510 mm	1,700	E		
81	>99	1.2	0.5	12	WinAir 90 1/4 510 mm	800	E		
83	>99	6.0	2.0	8	WinAir 90 1 / 1 N 625 mm	3,400	E	>2,200	
83	>99	4.5	1.5	4	WinAir 90 5/6 625 mm	2,550	E		
83	>99	3.0	1.0	6	WinAir 90 1/2 625 mm	1,700	E		
83	>99	1.4	0.5	12	WinAir 90 1/4 650 mm	800	E		





**Cassette filters** MaxiPleat, NanoPleat, eMaxx, MVP, MVPGT





In the category of cassette filters, Freudenberg Filtration Technologies offers a broad choice of products. All models are characterized by high performance capabilities: Viledon<sup>®</sup> cassette filters excel in terms of optimum media velocity with low pressure drop even at high volume flows. Plus a large dust holding capacity and exceptionally high stability of the entire filter construction for operational dependability in actual use.

Freudenberg Filtration Technologies



37

### **Cassette filters** MaxiPleat | Fine dust



Filter medium         Micro-glass-fiber paper           Recommended final pressure drop         650 Pa           Bursting pressure         >6,000 Pa           Thermal stability         up to 70 °C           Moisture resistance         100% rel. hum.	Specifications
Bursting pressure     >6,000 Pa       Thermal stability     up to 70 °C       Moisture resistance     100% rel. hum.	Filter medium
Thermal stability     up to 70 °C       Moisture resistance     100% rel. hum.	Recommended final pressure drop
Moisture resistance 100 % rel. hum.	Bursting pressure
	Thermal stability
	Moisture resistance
Frame Without (D), 25 mm front frame, halogen-free plastic (N)	Frame
Seal Without (Z0), on request foamed-on PU seal (N1)	Seal
Protection grids On both sides, halogen-free plastic	Protection grids

### Application

Viledon® MaxiPleat cassette filters offer maximized operational dependability and cost-efficiency for intake, exhaust and recirculating air filtration in airconditioning systems with stringent requirements for clean air quality, particularly in the case of critical local conditions, high volume flows, restricted space available, and when process dependability does not tolerate compromises, e.g.

- in intake air filtration of turbomachinery,
- in industrial processes (chemicals, pharmaceuticals, food and beverages, optics, electronics, surface treatment technology, etc.),
- in sophisticated air-conditioning technology (laboratories, museums, airports, office buildings, etc.),
- as "police filters" in dust removal systems.

### **Special features**

- The optimum V-shaped pleat geometry of the filter medium, as created by the thermal embossing process, enables the entire filtering area to be utilized, with uniform dust loading, and a homogeneous media velocity with a low average pressure drop.
- The high dust holding capacity of the MaxiPleat filters, in conjunction with a low pressure drop and superlative constructional stability, ensures cost-efficient and dependable operation over a very long operational lifetime.
- MaxiPleat cassette filters achieve energy efficiency class A (MX95 and MX98) and B (MX85), thus ensuring reduced energy costs and downsized CO<sub>2</sub> emissions.
- Casting the dimensionally stable pleat package in the torsion-resistant plastic frame assures exceptional sturdiness plus high security against dust breakthrough. Gripping lugs facilitate installation and removal, and the protection grid on both sides minimizes the risk of damage to the filter medium.
- With the MaxiPleat modular filter system, MaxiPleat filters of different filter classes and construction depths can be positively combined simply by clipping them on, thus enabling another filter stage to be inserted without any structural modifications.
- MaxiPleat filters meet in full the requirements laid down in VDI 6022.

Article	Article number	Dimensions (W×L×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Initial efficiency [%]	Minimum efficiency [%]	
MX75-R-0592x0287x292x25-Z08N-A84	53360086	592×287×292	M6	2,000	135			
MX75-R-0592x0490x292x25-Z08N-A84	53360087	592 × 490 × 292	M6	3,500	135			
MX75-R-0592x0579x292x25-N18N-A84	53360088	592 × 579 × 292	M6	4,150	135			
MX75-R-0592x0592x292x25-Z08D-A84	53392076	592 × 592 × 292	M6	4,250	105			
MX75-M-0592x0592x292x25-Z08N-A84	53415630	592 × 592 × 292	M6	4,250	135			
MX85-R-0287X0287X292X25-Z08N-B84	53400130	287×287×292	F7	1,000	140	45	41	
MX85-R-0592x0287x292x25-Z08N-B84	53360039	592×287×292	F7	2,000	140	45	41	
MX85-R-0592x0490x292x25-Z08N-B84	53360040	592 × 490 × 292	F7	3,500	140	45	41	
MX85-R-0592X0579X292X25-N18N-B84	53360043	592 × 579 × 292	F7	4,150	140	45	41	
MX85-R-0592X0592X292X25-Z08D-B84	53375079	592 × 592 × 292	F7	4,250	110	46	42	
MX85-M-0592x0592x292x25-Z08N-B84	53415632	592 × 592 × 292	F7	4,250	140	45	41	
MX95-R-0592x0287x292x25-Z08N-C84	53360024	592×287×292	F 8	2,000	150	65	61	
MX95-R-0592x0490x292x25-Z08N-C84	53360025	592 × 490 × 292	F 8	3,500	150	65	61	
MX95-R-0592x0579x292x25-N18N-C84	53358070	592 × 579 × 292	F 8	4,150	150	65	61	
MX95-R-0592x0592x292x25-Z08D-C84	53370948	592 × 592 × 292	F 8	4,250	120	66	62	
MX95-M-0592x0592x292x25-Z08N-C84	53415637	592 × 592 × 292	F 8	4,250	150	65	61	
MX98-R-0592x0287x292x25-Z08N-D84	53360019	592×287×292	F 9	2,000	175	80	76	
MX98-R-0592x0490x292x25-Z08N-D84	53360020	592 × 490 × 292	F9	3,500	175	80	76	
MX98-R-0592x0579x292x25-N18N-D84	53360021	592 × 579 × 292	F 9	4,150	175	80	76	
MX98-R-0592x0592x292x25-Z08D-D84	53372259	592 × 592 × 292	F9	4,250	135	82	78	
MX98-M-0592x0592x292x25-Z08N-D84	53415639	592 × 592 × 292	F9	4,250	175	80	76	

### Freudenberg Filtration Technologies





## **Cassette filters** MaxiPleat | Fine dust

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	650 Pa
Bursting pressure	>6,000 Pa
Thermal stability	up to 70 °C
Moisture resistance	100% rel. hum.
Frame	Without (D), 25 mm front frame, halogen-free plastic (N)
Seal	Without (Z0), on request foamed-on PU seal (N 1)
Protection grids	On both sides, halogen-free plastic

### Delivery notes

MaxiPleat cassette filters are also available in 140 mm construction depth as well as with and without PU seal. N = with 25 mm front frame; U = with 20.5 mm front frame; D = without front frame.

An optional water barrier reduces the passage of intake water to the clean air side. Customized dimensions are available on request.

Average efficiency	Dust holding capacity	Filter area [m²]	Weight [kg]	Packaging unit [units/carton]	Article		y efficiency clo ding to EUROV	
[%]	(AC Fine/800 Pa) [g]					Nominal volume flow [m³/h]	Energy class	Annual Energy consumption**
75	960	7.5	4.0	2	MX75-R-0592x0287x292x25-Z08N-A84	1,500	E	
75	1,850	14.5	6.0	1	MX75-R-0592x0490x292x25-Z08N-A84	2,700	E	
75	2,240	17.5	7.0	1	MX75-R-0592x0579x292x25-N18N-A84	3,300	E	
75	2,600	21.0	7.0	1	MX75-R-0592x0592x292x25-Z08D-A84	3,400	E	
75	2,300	18.0	7.0	1	MX75-M-0592x0592x292x25-Z08N-A84	3,400	E	1,780
86	550	4.3	2.0	4	MX85-R-0287X0287X292X25-Z08N-B84	800	С	
86	790	7.5	4.0	2	MX85-R-0592x0287x292x25-Z08N-B84	1,500	С	
86	1,530	14.5	6.0	1	MX85-R-0592x0490x292x25-Z08N-B84	2,700	С	
86	1,850	17.5	7.0	1	MX85-R-0592X0579X292X25-N18N-B84	3,300	С	
86	2,200	21.0	7.0	1	MX85-R-0592X0592X292X25-Z08D-B84	3,400	С	
86	1,900	18.0	7.0	1	MX85-M-0592x0592x292x25-Z08N-B84	3,400	С	1,240
92	710	7.5	4.0	2	MX95-R-0592x0287x292x25-Z08N-C84	1,500	В	
92	1,370	14.5	6.0	1	MX95-R-0592x0490x292x25-Z08N-C84	2,700	В	
92	1,650	17.5	7.0	1	MX95-R-0592x0579x292x25-N18N-C84	3,300	В	
92	1,900	21.0	7.0	1	MX95-R-0592x0592x292x25-Z08D-C84	3,400	В	
92	1,700	18.0	7.0	1	MX95-M-0592x0592x292x25-Z08N-C84	3,400	В	1,300
96	630	7.5	4.0	2	MX98-R-0592x0287x292x25-Z08N-D84	1,500	В	
96	1,210	14.5	6.0	1	MX98-R-0592x0490x292x25-Z08N-D84	2,700	В	
96	1,460	17.5	7.0	1	MX98-R-0592x0579x292x25-N18N-D84	3,300	В	
96	1,700	21.0	7.0	1	MX98-R-0592x0592x292x25-Z08D-D84	3,400	В	
96	1,500	18.0	7.0	1	MX98-M-0592x0592x292x25-Z08N-D84	3,400	В	1,830



\*

### Cassette filters MaxiPleat | EPA



Micro-glass-fiber paper
600 Pa
>6,000 Pa
up to 70 °C
100 % rel. hum.
Without (D), 25 mm front frame, halogen-free plastic (N)
Without (Z0), on request foamed-on PU seal (N 1)
On both sides, halogen-free plastic

### Application

Viledon® MaxiPleat cassette filters offer maximized operational dependability and cost-efficiency for intake, exhaust and recirculating air filtration in airconditioning systems with stringent requirements for clean air quality, particularly in the case of critical local conditions, high volume flows, restricted space available, and when process dependability does not tolerate compromises, e.g.

- in intake air filtration of turbomachinery,
- in industrial processes (chemicals, pharmaceuticals, food and beverages, optics, electronics, surface treatment technology, etc.),
- in sophisticated air-conditioning technology (laboratories, museums, airports, office buildings, etc.),
- as "police filters" in dust removal systems.

#### **Special features**

- The optimum V-shaped pleat geometry of the filter medium, as created by the thermal embossing process, enables the entire filtering area to be utilized, with uniform dust loading over the filtering area and a homogeneous media velocity with a low average pressure drop.
- The high dust holding capacity of the MaxiPleat filters, in conjunction with a low pressure drop and superlative constructional stability, ensures cost-efficient and dependable operation over a very long operational lifetime.
- Casting the dimensionally stable pleat package in the torsion-resistant plastic frame assures exceptional sturdiness plus high security against dust breakthrough. Gripping lugs facilitate installation and removal, and the protection grids on both sides minimize the risk of damage to the filter medium.
- With the MaxiPleat modular filter system, MaxiPleat filters of different filter classes and construction depths can be positively combined simply by clipping them on, thus enabling another filter stage to be inserted without any structural modifications.
- MaxiPleat filters meet in full the requirements laid down in VDI 6022.

#### Delivery notes

MaxiPleat cassette filters are also available in 140 mm construction depth as well as with and without seal.

N = with 25 mm front frame; U = with 20.5 mm front frame; D = without front frame. An optional water barrier reduces the passage of intake water to the clean air side.

Customized	aimensions	are	available	on	request.	

Article	Article number	Dimensions (W×L×D) [mm]	Filter class acc. to EN 1822: 2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]	Dust holding capacity (AC Fine / 800 Pa) [g]	Face velocity [m/s]	Filter area [m²]	Packaging unit [units/ carton]
MXH10-M-0592x0592x292x25-Z08N-E84	53438221	592 × 592 × 292	E10		4,250	235	≥85	630	3.2	18.0	1
MX100-R-0592x0287x292x25-Z08N-F84	53360015	592×287×292	E11	ISO 15 E	1,500	195	≥95	300	2.3	7.5	2
MX100-R-0592X0490X292X25-Z08N-F84	53360016	592 × 490 × 292	E11	ISO 15 E	2,700	195	≥95	505	2.4	14.5	1
MX100-R-0592X0579X292X25-N18N-F84	53360017	592 × 579 × 292	E11	ISO 15 E	3,350	195	≥95	600	2.5	17.5	1
MX100-R-0592X0592X292X25-Z08D-F84	53372031	592 × 592 × 292	E11	ISO 15 E	3,400	190	≥95	690	2.5	21.0	1
MX100-M-0592X0592X292X25-Z08N-F84	53415622	592 × 592 × 292	E11	ISO 15 E	3,400	195	≥95	610	2.5	18.0	1
MX120-R-0592X0287X292X25-Z08N-G60	53359975	592×287×292	E11	ISO 15 E	1,500	320	≥99.9	235	2.3	11.0	2
MX120-R-0592X0490X292X25-Z08N-G60	53359976	592×490×292	E12	ISO 25 E	2,700	320	≥99.9	400	2.4	19.0	1
MX120-R-0592X0579X292X25-N18N-G60	53359977	592 × 579 × 292	E12	ISO 25 E	3,300	320	≥99.9	475	2.5	22.0	1
MX120-M-0592X0592X292X25-Z08N-G60	53415627	592 × 592 × 292	E12	ISO 25 E	3,400	320	≥99.9	485	2.5	23.0	1

### Freudenberg Filtration Technologies

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### Cassette filters MaxiPleat | Modular filter system | Fine dust

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	650 Pa
Bursting pressure	>6,000 Pa
Thermal stability	up to 70 °C
Moisture resistance	100% rel. hum.
Frame	Without (D), 25 mm front frame, halogen-free plastic (N)
Seal	Without (Z 0), on request glued-on/foamed-on PU seal (N 5)
Protection grids	On both sides, halogen-free plastic



### Application

The Viledon<sup>®</sup> MaxiPleat modular filter system is used for intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for the clean air quality, particularly when the space available is restricted, e.g.

- in intake air filtration for turbomachinery,
- in industrial processes,
- in sophisticated air-conditioning technology.

With the MaxiPleat modular filter system, MaxiPleat filters of different filter classes and construction depths can be positively combined simply by clipping them on, thus enabling another filter stage to be inserted without any structural modifications.

#### **Special features**

- The optimum V-shaped pleat geometry of the filter medium, as created by the thermal embossing process, enables the entire filtering area to be utilized, with uniform dust loading over the filtering area and a homogeneous media velocity with a low pressure drop.
- The high dust holding capacity of the MaxiPleat filters, in conjunction with a low pressure drop and superlative constructional stability, ensures cost-efficient and dependable operation over a very long operational lifetime.
- To install the MaxiPleat modular filter system, the MaxiPleat basic filter fitted with the black connecting pins is inserted in the existing support system. The prefilter with the white connecting caps can now be simply clipped onto the installed basic filter. The connecting pins anchored in the basic filter can no longer be detached. The clipped-on prefilter can be removed again and replaced.
- Casting the dimensionally stable pleat package in the torsion-resistant plastic frame assures exceptional sturdiness plus high security against dust breakthrough. Gripping lugs facilitate installation and removal, and the protection grids on both sides minimize the risk of damage to the filter medium.
- MaxiPleat filters meet in full the requirements laid down in VDI 6022.

#### **Delivery** notes

The MaxiPleat basic filters are supplied with connecting pins inserted (RB types). N = with 25 mm front frame; U = with 20.5 mm front frame; D = without front frame. The MaxiPleat modular prefilters (RC types) are available in 292 and 140 mm construction depths. The standard version does not include a front frame, but is delivered with a clean air side seal and connecting caps inserted.

A retaining bracket, which precludes the possibility of the prefilter becoming detached under any operating conditions, is included in the delivery package of the 292 mm types (for vertical installation). In the case of overhead installation, an additional bracket is required, which can be ordered separately. An optional water barrier reduces the passage of intake water to the clean air side. Customized dimensions are available on request.

Article	Article number	Dimensions (W×L×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average efficiency [%]	Dust holding capacity (AC Fine / 800 Pa) [g]	Filter area [m²]	Weight [kg]	Packaging unit [units/carton]
MX75-RC-0554x0554x140x10-N58D-A45	53372039	554×554×140	Μ6	3,400	135	79	> 1,500	12	4	1
MX75-RC-0554x0554x292x25-N58D-A84	53378239	554×554×292	Μ6	3,400	95	79	>2,300	18	7	1
MX85-RB-0592x0592x292x25-Z08N-B84	53403631	592×592×292	F7	3,400	100	87	> 1,900	18	7	1
MX85-RC-0554x0554x140x10-N58D-B45	53371192	554×554×140	F7	3,400	140	82	> 1,250	12	4	1
MX85-RC-0554x0554x292x25-N58D-B84	53375083	554×554×292	F7	3,400	100	87	> 1,900	18	7	1
MX95-RB-0592x0592x292x25-Z08N-C84	53371193	592×592×292	F 8	3,400	105	92	> 1,700	18	7	1
MX95-RC-0554x0554x140x10-N58D-C45	53372040	554×554×140	F 8	3,400	150	91	> 1,150	12	4	1
MX95-RC-0554x0554x292x25-N58D-C84	3379914	554×554×292	F 8	3,400	105	92	> 1,700	18	7	1
MX98-RB-0592x0592x292x25-Z08N-D84	53372041	592×592×292	F9	3,400	125	96	> 1,500	18	7	1
MX98-MB-0592x0592x292x25-Z08N-D84	53473592	592×592×292	F9	3,400	125	96	> 1,500	18	7	1
MX98-MB-0592x0592x292x25-N18N-D84	53473593	592×592×292	F9	3,400	125	96	> 1,500	18	7	1
MX98-RC-0554x0554x140x10-N58D-D45	53431249	554×554×140	F9	3,400	175	96	> 1,000	12	4	1
MX98-RC-0554X0554X292X25-N58D-D84	53372421	554×554×292	F9	3,400	125	96	> 1,500	18	7	1





### **Cassette filters** MaxiPleat | Modular filter system | EPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	650 Pa
Bursting pressure	> 6,000 Pa
Thermal stability	up to 70 °C
Moisture resistance	100 % rel. hum.
Frame	Without (D), 25 mm front frame, halogen-free plastic (N)
Seal	Without (Z0), on request glued-on/foamed-on PU seal (N5)
Protection grids	On both sides, halogen-free plastic

### Application

The Viledon<sup>®</sup> MaxiPleat modular filter system is used for intake, exhaust and recirculated air filtration in air-conditioning systems with stringent requirements for the clean air quality, particularly when the space available is restricted, e.g.

- in intake air filtration for turbomachinery,
- in industrial processes,
- in sophisticated air-conditioning technology.

With the MaxiPleat modular filter system, MaxiPleat filters of different filter classes and construction depths can be positively combined simply by clipping them on, thus enabling another filter stage to be inserted without any structural modifications.

#### **Special features**

- The optimum V-shaped pleat geometry of the filter medium, as created by the thermal embossing process, enables the entire filtering area to be utilized, with uniform dust loading over the filtering area and a homogeneous media velocity with a low pressure drop.
- The high dust holding capacity of the MaxiPleat filters, in conjunction with a low pressure drop and superlative constructional stability, ensures costefficient and dependable operation over a very long operational lifetime.
- To install the MaxiPleat modular filter system, the MaxiPleat basic filter fitted with the black connecting pins is inserted in the existing support system. The prefilter with the white connecting caps can now be simply clipped onto the installed basic filter. The connecting pins anchored in the basic filter can no longer be detached. The clipped-on prefilter can be removed again and replaced.
- Casting the dimensionally stable pleat package in the torsion-resistant plastic frame assures exceptional sturdiness plus high security against dust breakthrough. Gripping lugs facilitate installation and removal, and the protection grids on both sides minimize the risk of damage to the filter medium.
- MaxiPleat filters meet in full the requirements laid down in VDI 6022.

#### Delivery notes

The MaxiPleat basic filters are supplied with connecting pins inserted (RB types). N = with 25 mm front frame; U = with 20.5 mm front frame; D = without front frame. The MaxiPleat modular prefilters (RC types) are available in 292 and 140 mm construction depths. The standard version does not include a front frame, but is delivered with a clean air side seal and connecting caps inserted.

An additional retaining bracket, which precludes the possibility of the prefilter becoming detached under any operating conditions, is included in the delivery package of the 292 mm types (for vertical installation). In the case of overhead installation, an additional bracket is required, which can be ordered separately. An optional water barrier reduces the passage of intake water to the clean air side. Customized dimensions are available on request.

Article	Article number	Dimensions (W × L × D) [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Dust holding capacity (AC Fine/ 800 Pa) [g]	Filter area [m²]	Weight [kg]	Packaging unit [units/ carton]
MXH10-RB-0592x0592x292x25-Z08N-E84	53440228	592 × 592 × 292	E10		3,400	175	700	18	7.0	1
MXH10-MB-0592x0592x292x25-Z08N-E84	53470031	592 × 592 × 292	E10		3,400	175	700	18	7.0	1
MXH10-MB-0592x0592x292x25-N18N-E84	53473604	592 × 592 × 292	E10		3,400	175	700	18	7.0	1
MX100-RB-0592x0592x292x25-Z08N-F84	53381884	592 × 592 × 292	E11	ISO 15 E	3,400	195	610	18	7.0	1
MX100-MB-0592x0592x292x25-Z08N-F84	53473606	592 × 592 × 292	E11	ISO 15 E	3,400	195	610	18	7.0	1
MX100-MB-0592x0592x292x25-N18N-F84	53473607	592 × 592 × 292	E11	ISO 15 E	3,400	195	610	18	7.0	1
MX100-MB-0592x0592x292x25-N18N-F60	53473605	592 × 592 × 292	E11	ISO 15 E	3,400	210	750	23	8.3	1
MX120-RB-0592x0592x292x25-Z08N-G60	53372043	592 × 592 × 292	E12	ISO 25 E	3,400	320	485	23	8.3	1
MX120-MB-0592x0592x292x25-Z08N-G60	53473608	592 × 592 × 292	E12	ISO 25 E	3,400	320	485	23	8.3	1
MX120-MB-0592x0592x292x25-N18N-G60	53473609	592 × 592 × 292	E12	ISO 25 E	3,400	320	485	23	8.3	1

### Freudenberg Filtration Technologies

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### **Cassette filters** NanoPleat | Fine dust

Specifications	
Filter medium	HSN media technology
Recommended final pressure drop	450 Pa
Thermal stability	up to 70 °C
Moisture resistance	100 % rel. hum.
Frame	Plastic

### Application

Viledon<sup>®</sup> NanoPleat filters have been developed specifically for intake, exhaust and recirculated air filtration in HVAC systems posing stringent requirements for clean air quality and cost-efficiency. They ensure clean, efficiently conditioned air

- in office buildings, production halls, airports, libraries, museums, laboratories, hospitals, old people's homes and care facilities, etc.,
- in sensitive applications for the food and beverage industries, pharmaceuticals, chemicals, optics, electronics, and medical technology, etc.

### Special features and benefits

- Consistently high filtration efficiency under all operating conditions thanks to the unique HSN media.
- The low pressure drop and the high dust holding capacity provide ultraefficient, energy-saving operating characteristics, with a slow increase in the pressure drop and resultant additional lifetime reserves. This produces a significant reduction in operating costs.
- Simplified handling at installation, since the HSN medium will not be irreversibly damaged even if it comes into contact with slight pressure.

- The pleated HSN filter media, cast in a tough plastic frame in a leakproof configuration, are exceptionally sturdy and water-repellent. Even when exposed to high levels of dampness and moisture, the filter medium will not be saturated; in fact the water droplets will simply roll off the material's surface. The pressure drop remains almost unchanged even under these circumstances, thus providing maximized operational reliability.
- Viledon® NanoPleat filters are highly resistant to chemicals, microbiologically inert and meet all hygiene requirements for HVAC systems to EN 13779 and the German VDI Guideline 6022. Their microbial safety has been confirmed by the Institute for Air Hygiene in Berlin.
- The sturdy construction ensures optimum performance even under turbulent flow conditions or during load changes. This means that the risk of particle or fiber shedding is practically eliminated.
- The filter elements are free of metals and halogens, corrosion-proof and also fully incinerable and thus disposal-friendly. The frame and filter media are self-extinguishing to DIN 53438 (Fire class F 1).

Article	Article Dimension number (W×L×D) [mm]		Filter class		Initial pressure drop	Initial efficiency [%]	Minimum efficiency [%]	Average efficiency [%]	Weight [kg]	Energy efficiency classification according to EUROVENT 4/21*		
				[m³/h]	[Pa]					Nominal volume flow [m³/h]	Energy class	Annual Energy consump- tion**
MV 75 HSN 1/1 V08x24-Z00N-A33	53424217	592 × 592 × 292	M 6	3,400	85	43		≥70	5.8	3.400	E	1,640
MV 75 HSN 5/6 V08x24-Z00N-A33	53429115	490 × 592 × 292	M 6	2,700	85	40		≥70	4.8	2.700	Е	
MV 75 HSN 4/6 V08x24-Z00N-B33	53475720	405 × 592 × 292	Μ6	2,100	85	40		≥70	4.6	2.100	Е	
MV 75 HSN 1/2 V08x24-Z00N-A33	53429114	287×592×292	M 6	1,500	85	40		≥70	3.3	1.500	Е	
MV 85 HSN 1/1 V08x24-Z00N-B33	53424218	592 × 592 × 292	F7	3,400	100	60	57	≥85	5.8	3.400	С	1,500
MV 85 HSN 5/6 V08x24-Z00N-B33	53429117	490 × 592 × 292	F7	2,700	100	60	57	≥85	4.8	2.700	С	
MV 85 HSN 4/6 V08x24-Z00N-B33	53441273	405 × 592 × 292	F7	2,100	100	60	57	≥85	4.6	2.100	С	
MV 85 HSN 1/2 V08x24-Z00N-B33	53429116	287×592×292	F7	1,500	100	60	57	≥85	3.3	1.500	С	
MV 95 HSN 1/1 V08x24-Z00N-C33	53424229	592 × 592 × 292	F 8	3,400	110	70	67	≥90	5.8	3.400	С	1,700
MV 95 HSN 5/6 V08x24-Z00N-C33	53429124	490×592×292	F 8	2,700	110	70	67	≥90	4.8	2.700	С	
MV 95 HSN 4/6 V08x24-Z00N-C33	53441279	405 × 592 × 292	F 8	2,100	110	70	67	≥90	4.6	2.100	С	
MV 95 HSN 1/2 V08x24-Z00N-C33	53429118	287×592×292	F 8	1,500	110	70	67	≥90	3.3	1.500	С	
MV 98 HSN 1/1 V08x24-Z00N-D33	53424230	592 × 592 × 292	F9	3,400	120	75	72	>95	5.8	3.400	В	1,690
MV 98 HSN 1/2 V08x24-Z00N-D33	53429135	287×952×292	F9	2,700	120	75	72	>95	3.3	2.700	В	
MV 98 HSN 4/6 V08x24-Z00N-D33	53490992	405 × 592 × 292	F9	2,100	120	75	72	>95	4.6	2.100	В	
MV 98 HSN 5/6 V08x24-Z00N-D33	53429134	490×592×292	F9	1,500	120	75	72	>95	4.8	1.500	В	



43

rated at 3,400 m<sup>3</sup>/h (further information at www.eurovent-certification.com)
 The specified annual energy consumption is the result of laboratory tests using synthetic test dust and refers only to the proportion of total energy consumption attributable to flow resistance through the filter. The annual energy consumption of an HVAC system in operation can therefore differ significantly under actual operational conditions.

### **Cassette filters** eMaxx | Fine dust





Specifications	
Filter medium	Micro-glass-fiber paper
Thermal stability	up to 70 °C
Moisture resistance	100 % rel. hum.
Frame	Halogen-free plastic

### Application

Viledon® eMaxx filters are a new generation of powerful, efficient, economic and durable cassette filters offering operational reliability and cost efficiency for supply of air filtration systems which have stringent requirements for clean air quality. They are used in, e.g.

- intake air filtration for gas turbines and compressors,
- ventilation systems.

### Their characteristics and benefits

- High-strength micro-glass-fiber papers with hydrophobic coating are used as filter media.
- The entire filter element is non-corroding, and fully incinerable, since it contains no metal parts. Frame and protection grids consist of halogen-free plastic.
- eMaxx cassette filters have been optimized in terms of pleat geometry using the 3D pleating technology which ensures full utilization of the filtering area and uniform dust deposition. Combined with the filter elements depth of 420 mm particularly high dust holding capacity can be achieved resulting in long useful lifetimes.
- The leakproof casting of the dimensionally stable media pleat pack provides high burst strength, as well as excellent security against dust penetration during operation.
- Prefilters can be simply plugged-on by connecting pins and an additional retaining bracket.

### **Special features**

- The eMaxx cassette filter range offers a combination of excellent dust holding capacity, low pressure drop at an optimum price-performance ratio.
- eMaxx cassette filters are supplied as standard with an adhesively affixed gasket and a protection grid fitted to minimize risk of damage during handling and operation.

Article	Article number	Dimensions (W×L×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Dust holding capacity (AC Fine / 650 Pa) [g]	Filter area [m²]
EMAXX 98-P-1/1-W19N	53464841	593×593×420	F9	4,250	135	1,200	30
EMAXX 98-P-1/1-W19V	53466957	593×593×420	F9	4,250	135	1,200	30
EMAXX 98-P-1/1-Z09N	53479544	593×593×420	F9	4,250	135	1,200	30
EMAXX 98-P-1/2-W19N	53464840	288×593×420	F9	1,900	135	540	14

### Freudenberg Filtration Technologies

### Cassette filters eMaxx | EPA

Specifications		and the second s
Filter medium	Micro-glass-fiber paper	il n
Thermal stability	up to 70 °C	
Moisture resistance	100% rel. hum.	
Frame	Halogen-free plastic	

Special features

### Application

Viledon® eMaxx filters are a new generation of powerful, efficient, economic and durable cassette filters offering operational reliability and cost efficiency for supply of air filtration systems which have stringent requirements for clean air quality. They are used in, e.g.

- intake air filtration for gas turbines and compressors,
- ventilation systems.

### Their characteristics and benefits

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- Prefilters can be simply plugged-on by connecting pins and an additional retaining bracket.

- The eMaxx cassette filter range offers a combination of excellent dust holding capacity, low pressure drop at an optimum price-performance ratio.
- eMaxx cassette filters are supplied as standard with an adhesively affixed gasket and a protection grid fitted to minimize risk of damage during handling and operation.

A	Article	Article number	Dimensions (W×L×D) [mm]	acc. to	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]	Dust holding capacity (AC Fine / 650 Pa) [g]	Filter area [m²]
E	MAXX E10-P-1/1-W19N	53457960	593 × 593 × 420	E10		4,250	170	≥85	1,000	30
E	MAXX E10-P-1/1-Z09N	53457959	593×593×420	E10		4,250	170	≥85	1,000	30
E	MAXX E10-P-1/1-W19V	53466958	593×593×420	E10		4,250	170	≥85	1,000	30
E	MAXX E10-P-1/2-W19N	53482824	288×593×420	E10		1,900	170	≥85	420	14
E	MAXX E11-P-1/1-W19N	53464853	593×593×420	E11	ISO 15 E	4,250	235	≥95	900	30
E	MAXX E11-P-1/1-W19V	53466959	593×593×420	E11	ISO 15 E	4,250	235	≥95	900	30



## **Cassette filters** MVP | Fine dust



Specifications	
Recommended final pressure drop	450 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Top frame 25 mm, halogen-free plastic

### Application

Viledon $^{\oplus}$  MVP cassette filters are used for intake, exhaust and recirculating air filtration in air-conditioning systems, e.g.

- office buildings,
- factory / production halls,
- airports, libraries,
- museums,
- laboratories,
- hospitals,
- old people's and nursing homes, etc.

#### **Special features**

- MVP cassette filters excel in terms of a high dust holding capacity and low pressure drop values.
- Casting the dimensionally stable pleat package in the plastic frame assures a high degree of security against dust breakthrough over the entire operational lifetime.

Article	Article number	Dimensions (W×L×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Initial efficiency [%]	
MVP75-P-0593x0593x292/V08x25-Z00N	53412032	592×592×292	M 6	4,250	100		
MVP75-P-0491x0593x292/V08x25-Z00N	53412030	490×592×292	M6	3,500	100		
MVP75-P-0402x0593x292/V08x25-Z00N	53412623	402×592×292	M 6	2,800	100		
MVP75-P-0288x0593x292/V08x25-Z00N	53412029	287×592×292	M6	2,000	100		
MVP85-P-0593x0593x292/V08x25-Z00N	53412035	592×592×292	F7	4,250	115	56	
MVP85-P-0491x0593x292/V08x25-Z00N	53412034	490×592×292	F7	3,500	115	56	
MVP85-P-0402x0593x292/V08x25-Z00N	53412634	402×592×292	F7	2,800	115	56	
MVP85-P-0288x0593x292/V08x25-Z00N	53412033	287×592×292	F7	2,000	115	56	
MVP95-P-0593x0593x292/V08x25-Z00N	53412038	592×592×292	F 8	4,250	130	63	
MVP95-P-0491x0593x292/V08x25-Z00N	53412037	490×592×292	F 8	3,500	130	63	
MVP95-P-0402x0593x292/V08x25-Z00N	53412635	402×592×292	F 8	2,800	130	63	
MVP95-P-0288x0593x292/V08x25-Z00N	53412036	287×592×292	F 8	2,000	130	63	
MVP98-P-0593x0593x292/V08x25-Z00N	53412046	592×592×292	F9	4,250	140	82	
MVP98-P-0491x0593x292/V08x25-Z00N	53412045	490×592×292	F9	3,500	140	82	
MVP98-P-0402x0593x292/V08x25-Z00N	53412637	402×592×292	F9	2,800	140	82	
MVP98-P-0288x0593x292/V08x25-Z00N	53412044	287×592×292	F9	2,000	140	82	

### Freudenberg Filtration Technologies





### **Cassette filters** MVP | Fine dust

Specifications	
Recommended final pressure drop	450 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Top frame 25 mm, halogen-free plastic

### Delivery notes

MVP cassette filters are available on request in filter classes E 10 to E 12, and with a glued-on seal on the clean air side. nels.

Minimum efficiency [%]	Average efficiency [%]	Filter area [m²]	Article	Energy efficiency classification according to EUROVENT 4/21*				
				Nominal volume flow [m³/h]	Energy class	Annual Energy consumption**		
	≥70	18.0	MVP75-P-0593x0593x292/V08x25-Z00N	3.400	E	1,500		
	≥70	14.5	MVP75-P-0491x0593x292/V08x25-Z00N	2.700	E			
	≥70	11.8	MVP75-P-0402x0593x292/V08x25-Z00N	2.100	E			
	≥70	8.5	MVP75-P-0288x0593x292/V08x25-Z00N	1.500	E			
52	≥85	18.0	MVP85-P-0593x0593x292/V08x25-Z00N	3.400	В	1,100		
52	≥85	14.5	MVP85-P-0491x0593x292/V08x25-Z00N	2.700	В			
52	≥85	11.8	MVP85-P-0402x0593x292/V08x25-Z00N	2.100	В			
52	≥85	8.5	MVP85-P-0288x0593x292/V08x25-Z00N	1.500	В			
59	≥90	18.0	MVP95-P-0593x0593x292/V08x25-Z00N	3.400	А	1,200		
59	≥90	14.5	MVP95-P-0491x0593x292/V08x25-Z00N	2.700	А			
59	≥90	11.8	MVP95-P-0402x0593x292/V08x25-Z00N	2.100	А			
59	≥90	8.5	MVP95-P-0288x0593x292/V08x25-Z00N	1.500	А			
78	≥95	18.0	MVP98-P-0593x0593x292/V08x25-Z00N	3.400	В	1,470		
78	≥95	14.5	MVP98-P-0491x0593x292/V08x25-Z00N	2.700	В			
78	≥95	11.8	MVP98-P-0402x0593x292/V08x25-Z00N	2.100	В			
78	≥95	8.5	MVP98-P-0288x0593x292/V08x25-Z00N	1.500	В			



### **Cassette filters** MVPGT | Fine dust





Specifications	
Recommended final pressure drop	600 Pa
Bursting pressure	3,700 Ра
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Halogen-free plastic
Seal	Flat seal, glued
Protection grids	Halogen-free plastic, on the clean air side

### Application

Viledon® MVPGT cassette filters are used in intake air filtration for gas turbines and turbocompressors on the mainland. They are particularly well suited for locations with low dust concentrations, with volume flows of  $\leq 5,000 \text{ m}^3/\text{h}$  per filter unit and for systems with  $\leq 6,000$  operating hours/year.

### Advantages

- Low pressure drop values.
- Filtering area in accordance with industrial standard.
- High dust holding capacity.
- Casting the dimensionally stable pleat package into the plastic frame assures a high degree of security against dust breakthrough and a high pressure surge withstand capability over the entire operational lifetime.

Article	Article number	Dimensions (W×L×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Initial efficiency [%]	Minimum efficiency [%]	Average efficiency [%]	Filter area [m²]
MVPGT85-P-0593x0593x292/V08x25-W19N	53413477	592 × 592 × 292	F7	4,250	125	56	53	≥80	18
MVPGT85-P-0491x0593x292/V08x25-W19N		491 × 592 × 292	F7		125	56	53	≥80	14.5
MVPGT85-P-0288x0593x292/V08x25-W19N		288×592×292	F7		125	56	53	≥80	8.5
MVPGT95-P-0593x0593x292/V08x25-W19N	53413478	592×592×292	F 8	4,250	135	70	67	≥90	18
MVPGT95-P-0491x0593x292/V08x25-W19N		491 × 592 × 292	F 8		135	70	67	≥90	14.5
MVPGT95-P-0288x0593x292/V08x25-W19N		288×592×292	F 8		135	70	67	≥90	8.5
MVPGT98-P-0593x0593x292/V08x25-W19N	53413480	592 × 592 × 292	F9	4,250	165	82	79	≥95	18
MVPGT98-P-0491x0593x292/V08x25-W19N		491 × 592 × 292	F9		165	82	79	≥95	14.5
MVPGT98-P-0288x0593x292/V08x25-W19N		288×592×292	F9		165	82	79	≥95	8.5

### Freudenberg Filtration Technologies

Subject to technical changes.

## Cassette filters MVPGT | EPA

Specifications	
Recommended final pressure drop	600 Pa
Bursting pressure	3,700 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Halogen-free plastic
Seal	Flat seal, glued
Protection grids	Halogen-free plastic, on the clean air side

### Application

Viledon® MVPGT cassette filters are used in intake air filtration for gas turbines and turbocompressors on the mainland. They are particularly well suited for locations with low dust concentrations, with volume flows of  $\leq$  5,000 m<sup>3</sup>/h per filter unit and for systems with  $\leq$  6,000 operating hours/year.

### Advantages

- Low pressure drop values.
- Filtering area in accordance with industrial standard.
- High dust holding capacity.
- Casting the dimensionally stable pleat package into the plastic frame assures a high degree of security against dust breakthrough and a high pressure surge withstand capability over the entire operational lifetime.

	Article	Article number	Dimensions (W × L × D)	Filter class	Nominal volume flow	Initial pressure drop	Arrestance efficiency MPPS	Filter area [m²]	
2			[mm]		[m³/h]	[Pa]	[%]		10
valanc	MVPGTE10-P-0593x0593x292/V08x25-W19N	53464952	592 × 592 × 292	E10	4,250	240	≥85	18	49



Subject to technical changes.



Aluminum frame, plastic frame, MDF frame, steel sheet frame, high volume flow, cartridge, plastic plenum hood, accessories



Whether EPA, HEPA or ULPA filters: all Viledon<sup>®</sup> models guarantee effective protection for sensitive products and processes, by dependably arresting critical particles from intake and recirculating air flows in accordance with EN 1822. Even when subjected to high volume flows, they ensure optimum media velocity coupled with low pressure drop.

Freudenberg Filtration Technologies



## **EPA | HEPA | ULPA filters** Aluminum frame | Construction depths 68 + 88 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Application

Viledon® HEPA filters of filter classes H13 + H14 are used in intake and recirculating air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air and sterility, e.g.

- in sophisticated air-conditioning applications (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in sensitive and highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food / beverage, micro-electronics, etc.),
- in ceiling outlets and modules for flexible cleanroom systems.

### **Special features**

- High-efficiency micro-glass-fiber papers are used as filter media.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a

very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.

- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- Protection grids on both sides made of powdercoated expanded metal.

### Delivery notes

Customized dimensions and other filter classes are available on request.

Article	Article number	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-A-0305x0610x068x05-N13N	53417676	305×610×68	50	H13	ISO 35 H	580	250	≥99.95
SF13-A-0305x0762x068x05-N13N	53417677	305×762×68	50	H13	ISO 35 H	730	250	≥99.95
SF13-A-0457x0457x068x05-N13N	53417679	457×457×68	50	H13	ISO 35 H	660	250	≥99.95
SF13-A-0545x0545x068x05-N13N	53444903	545×545×68	50	H13	ISO 35 H	950	250	≥99.95
SF13-A-0610x0610x068x05-N13N	53417681	610×610×68	50	H13	ISO 35 H	1,200	250	≥99.95
SF13-A-0610x0762x068x05-N13N	53417683	610×762×68	50	H13	ISO 35 H	1,500	250	≥99.95
SF13-A-0610x1220x068x05-N13N	53417686	610×1,220×68	50	H13	ISO 35 H	2,400	250	≥99.95
SF13-A-1220x1220x068x05-N13N	53417688	1,220 × 1,220 × 68	50	H13	ISO 35 H	5,000	250	≥99.95
SF14-A-0305x0305x068x05-N13N	53411760	305 × 305 × 68	50	H14	ISO 45 H	135	120	≥99.995
SF14-A-0305x0305x088x07-N13N	53411849	305×305×88	70	H14	ISO 45 H	135	90	≥99.995
SF14-A-0305x0610x068x05-N13N	53411816	305×610×68	50	H14	ISO 45 H	280	120	≥99.995
SF14-A-0305x0610x088x07-N13N	53423973	305×610×88	70	H14	ISO 45 H	300	90	≥99.995
SF14-A-0610x0610x068x05-N13N	53411822	610×610×68	50	H14	ISO 45 H	600	120	≥99.995
SF14-A-0610x0610x088x07-N13N	53411851	610×610×88	70	H14	ISO 45 H	600	90	≥99.995
SF14-A-0610x0915x068x05-N13N	53411834	610×915×68	50	H14	ISO 45 H	900	120	≥99.995
SF14-A-0610x1220x068x05-N13N	53411835	610×1,220×68	50	H 14	ISO 45 H	1,200	120	≥99.995
SF14-A-0610x1220x088x07-N13N	53411853	610×1,220×88	70	H14	ISO 45 H	1,200	90	≥99.995
SF14-A-0610x1525x068x05-N13N	53411836	610×1,525×68	50	H14	ISO 45 H	1,500	120	≥99.995
SF14-A-0610x1525x088x07-N13N	53411854	610×1,525×88	70	H14	ISO 45 H	1,500	90	≥99.995
F14-A-0610x1830x068x05-N13N	53411837	610×1,830×68	50	H14	ISO 45 H	1,800	120	≥99.995
SF14-A-0610x1830x088x07-N13N	53411855	610×1,830×88	70	H14	ISO 45 H	1,800	90	≥99.995
SF14-A-0762x1220x068x05-N13N	53411842	762 × 1,220 × 68	50	H14	ISO 45 H	1,500	120	≥99.995
SF14-A-0762x1220x088x07-N13N	53411858	762 × 1,220 × 88	70	H14	ISO 45 H	1,500	90	≥99.995
F14-A-0762x1830x068x05-N13N	53411844	762 × 1,830 × 68	50	H14	ISO 45 H	2,250	120	≥99.995
SF14-A-0915x1220x068x05-N13N	53411846	915×1,220×68	50	H14	ISO 45 H	1,800	120	≥99.995
F14-A-0915x1220x088x07-N13N	53427337	915×1,220×88	70	H14	ISO 45 H	1,800	90	≥99.995
SF14-A-0915x1830x068x05-N13N	53411848	915×1,830×68	50	H14	ISO 45 H	2,700	120	≥99.995
SF14-A-0545x0545x068x05-N13N	53417689	545×545×68	50	H14	ISO 45 H	480	120	≥99.995

### Freudenberg Filtration Technologies

ubject to technical changes

## **EPA | HEPA | ULPA filters** Aluminum frame | Construction depth 78 mm | HEPA

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Application

Viledon<sup>®</sup> HEPA filters of filter classes H 13 + H 14 are used in intake and recirculating air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air and sterility, e.g.

- in sophisticated air-conditioning applications (operating theaters/intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food / beverage, micro-electronics, etc.),
- in ceiling outlets and modules for flexible cleanroom systems.

### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation, plus a quasi-laminar outflow.
- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-A-0305x0305x078x06-N13N	305 × 305 × 78	60	H13	ISO 35 H	290	210	≥99.95
SF13-A-0305x0457x078x06-N13N	305×457×78	60	H13	ISO 35 H	420	210	≥99.95
SF13-A-0305x0610x078x06-N13N	305×610×78	60	H13	ISO 35 H	600	210	≥99.95
SF13-A-0305x0762x078x06-N13N	305×762×78	60	H13	ISO 35 H	750	210	≥99.95
SF13-A-0305x0915x078x06-N13N	305×915×78	60	H13	ISO 35 H	900	210	≥99.95
SF13-A-0305x1120x078x06-N13N	305 × 1,120 × 78	60	H13	ISO 35 H	1,200	210	≥99.95
SF13-A-0457x0457x078x06-N13N	457×457×78	60	H13	ISO 35 H	680	210	≥99.95
SF13-A-0457x0610x078x06-N13N	457×610×78	60	H13	ISO 35 H	900	210	≥99.95
SF13-A-0545x0545x078x06-N13N	545×545×78	60	H13	ISO 35 H	1,000	210	≥99.95
SF13-A-0545x1155x078x06-N13N	545 × 1,155 × 78	60	H13	ISO 35 H	2,000	210	≥99.95
SF-13A-0575x0575x078x06xN13N	575 × 575 × 78	60	H13	ISO 35 H	1,070	210	≥99.95
SF13-A-0610x0610x078x06-N13N	610×610×78	60	H13	ISO 35 H	1,200	210	≥99.95
SF13-A-0610x0762x078x06-N13N	610×762×78	60	H13	ISO 35 H	1,500	210	≥99.95
SF13-A-0610x0915x078x06-N13N	610×915×78	60	H13	ISO 35 H	1,800	210	≥99.95
SF13-A-0610x1220x078x06-N13N	610×1,220×78	60	H13	ISO 35 H	2,400	210	≥99.95
SF13-A-0610x1525x078x06-N13N	610×1,525×78	60	H13	ISO 35 H	3,000	210	≥99.95
SF13-A-0610x1830x078x06-N13N	610×1,830×78	60	H13	ISO 35 H	3,600	210	≥99.95
SF13-A-0762x0762x078x06-N13N	762×762×78	60	H13	ISO 35 H	1,900	210	≥99.95
SF13-A-0762x0915x078x06-N13N	762×915×78	60	H13	ISO 35 H	2,250	210	≥99.95
SF13-A-0762x1220x078x06-N13N	762 × 1,220 × 78	60	H13	ISO 35 H	3,000	210	≥99.95
SF13-A-0762x1525x078x06-N13N	762 × 1,525 × 78	60	H13	ISO 35 H	3,750	210	≥99.95
SF13-A-0762x1830x078x06-N13N	762 × 1,830 × 78	60	H13	ISO 35 H	4,500	210	≥99.95
SF13-A-0915x0915x078x06-N13N	915×915×78	60	H13	ISO 35 H	2,700	210	≥99.95
SF13-A-0915x1220x078x06-N13N	915 × 1,220 × 78	60	H13	ISO 35 H	3,600	210	≥99.95
SF13-A-0915x1525x078x06-N13N	915 × 1,525 × 78	60	H13	ISO 35 H	4,500	210	≥99.95
SF13-A-0915x1830x078x06-N13N	915×1,830×78	60	H13	ISO 35 H	5,400	210	≥99.95



## **EPA | HEPA | ULPA filters** Aluminum frame | Construction depth 78 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Delivery notes

Customized dimensions and other filter classes are available on request.

Article	Dimensions (W × L × D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF14-A-0305x0305x078x06-N13N	305×305×78	60	H14	ISO 45 H	135	100	≥99.995
SF14-A-0305x0457x078x06-N13N	305 × 457 × 78	60	H14	ISO 45 H	200	100	≥99.995
SF14-A-0305x0610x078x06-N13N	305×610×78	60	H14	ISO 45 H	280	100	≥99.995
SF14-A-0305x0762x078x06-N13N	305×762×78	60	H14	ISO 45 H	360	100	≥99.995
SF14-A-0305x0915x078x06-N13N	305×915×78	60	H14	ISO 45 H	430	100	≥99.995
SF14-A-0305x1120x078x06-N13N	305 × 1,120 × 78	60	H14	ISO 45 H	600	100	≥99.995
SF14-A-0457x0457x078x06-N13N	457×457×78	60	H14	ISO 45 H	335	100	≥99.995
SF14-A-0457x0610x078x06-N13N	457×610×78	60	H14	ISO 45 H	450	100	≥99.995
SF14-A-0545x0545x078x06-N13N	545×545×78	60	H14	ISO 45 H	500	100	≥99.995
SF14-A-0545x1155x078x06-N13N	545 × 1,155 × 78	60	H14	ISO 45 H	1,000	100	≥99.995
SF14-A-0610x0610x078x06-N13N	610×610×78	60	H14	ISO 45 H	600	100	≥99.995
SF14-A-0610x0762x078x06-N13N	610×762×78	60	H14	ISO 45 H	750	100	≥99.995
SF14-A-0610x0915x078x06-N13N	610×915×78	60	H14	ISO 45 H	900	100	≥99.995
SF14-A-0610x1220x078x06-N13N	610×1,220×78	60	H14	ISO 45 H	1,200	100	≥99.995
SF14-A-0610x1525x078x06-N13N	610×1,525×78	60	H14	ISO 45 H	1,500	100	≥99.995
SF14-A-0610x1830x078x06-N13N	610×1,830×78	60	H14	ISO 45 H	1,800	100	≥99.995
SF14-A-0762x0762x078x06-N13N	762×762×78	60	H14	ISO 45 H	950	100	≥99.995
SF14-A-0762x0915x078x06-N13N	762×915×78	60	H14	ISO 45 H	1,125	100	≥99.995
SF14-A-0762x1220x078x06-N13N	762 × 1,220 × 78	60	H14	ISO 45 H	1,500	100	≥99.995
SF14-A-0762x1525x078x06-N13N	762 × 1,525 × 78	60	H14	ISO 45 H	1,875	100	≥99.995
SF14-A-0762x1830x078x06-N13N	762 × 1,830 × 78	60	H14	ISO 45 H	2,250	100	≥99.995
SF14-A-0915x0915x078x06-N13N	915×915×78	60	H14	ISO 45 H	1,350	100	≥99.995
SF14-A-0915x1220x078x06-N13N	915×1,220×78	60	H14	ISO 45 H	1,800	100	≥99.995
SF14-A-0915x1525x078x06-N13N	915 × 1,525 × 78	60	H14	ISO 45 H	2,250	100	≥99.995
SF14-A-0915x1830x078x06-N13N	915×1,830×78	60	H14	ISO 45 H	2,700	100	≥99.995

### Freudenberg Filtration Technologies

Subject to technical changes.

## Aluminum frame | Construction depth 150 mm | Pleat depth 50 mm | HEPA

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Application

Viledon® HEPA filters of filter classes H 13 + H 14 are used in intake and recirculating air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air and sterility, e.g.

- in sophisticated air-conditioning applications (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, micro-electronics, etc.),
- in ceiling outlets and modules for flexible cleanroom systems.

### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.

Article	Dimensions	Pleat depth	Filter class	Filter class	Nominal	Initial	Arrestance
Аптсте	(W×L×D) [mm]	[mm]	acc. to EN 1822:2009	acc. to ISO 29463	volume flow [m³/h]	pressure drop [Pa]	efficiency MPPS
SF13-A-0305x0305x150x05-N13N	305 × 305 × 150	50	H13	ISO 35 H	270	250	≥99.95
SF13-A-0305x0457x150x05-N13N	305×457×150	50	H13	ISO 35 H	420	250	≥99.95
SF13-A-0305x0610x150x05-N13N	305×610×150	50	H13	ISO 35 H	580	250	≥99.95
SF13-A-0305x0762x150x05-N13N	305×762×150	50	H13	ISO 35 H	730	250	≥99.95
SF13-A-0305x0915x150x05-N13N	305×915×150	50	H13	ISO 35 H	900	250	≥99.95
SF13-A-0457x0457x150x05-N13N	457 × 457 × 150	50	H13	ISO 35 H	660	250	≥99.95
SF13-A-0457x0610x150x05-N13N	457×610×150	50	H13	ISO 35 H	900	250	≥99.95
SF13-A-0610x0610x150x05-N13N	610×610×150	50	H13	ISO 35 H	1,200	250	≥99.95
SF13-A-0610x0762x150x05-N13N	610×762×150	50	H13	ISO 35 H	1,500	250	≥99.95
SF13-A-0610x0915x150x05-N13N	610×915×150	50	H13	ISO 35 H	1,800	250	≥99.95
SF13-A-0610x1220x150x05-N13N	610×1,220×150	50	H13	ISO 35 H	2,400	250	≥99.95
SF13-A-0610x1525x150x05-N13N	610×1,525×150	50	H13	ISO 35 H	3,000	250	≥99.95
SF13-A-0610x1830x150x05-N13N	610×1,830×150	50	H13	ISO 35 H	3,600	250	≥99.95
SF13-A-0762x0762x150x05-N13N	762×762×150	50	H13	ISO 35 H	1,900	250	≥99.95
SF13-A-0762x0915x150x05-N13N	762×915×150	50	H13	ISO 35 H	2,250	250	≥99.95
SF13-A-0762x1220x150x05-N13N	762 × 1,220 × 150	50	H13	ISO 35 H	3,000	250	≥99.95
SF13-A-0762x1525x150x05-N13N	762 × 1,525 × 150	50	H13	ISO 35 H	3,750	250	≥99.95
SF13-A-0762x1830x150x05-N13N	762 × 1,830 × 150	50	H13	ISO 35 H	4,500	250	≥99.95
SF13-A-0915x0915x150x05-N13N	915×915×150	50	H13	ISO 35 H	2,700	250	≥99.95
SF13-A-0915x1220x150x05-N13N	915 × 1,220 × 150	50	H13	ISO 35 H	3,600	250	≥99.95
SF13-A-0915x1525x150x05-N13N	915 × 1,525 × 150	50	H13	ISO 35 H	4,500	250	≥99.95
SF13-A-0915x1830x150x05-N13N	915×1,830×150	50	H13	ISO 35 H	5,400	250	≥99.95



Aluminum frame | Construction depth 150 mm | Pleat depth 50 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

Delivery notes

Customized dimensions and other filter classes are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF14-A-0305x0305x150x05-N13N	305 × 305 × 150	50	H14	ISO 45 H	135	120	≥99.995
SF14-A-0305x0457x150x05-N13N	305 × 457 × 150	50	H14	ISO 45 H	200	120	≥99.995
SF14-A-0305x0610x150x05-N13N	305×610×150	50	H14	ISO 45 H	280	120	≥99.995
SF14-A-0305x0762x150x05-N13N	305×762×150	50	H14	ISO 45 H	360	120	≥99.995
SF14-A-0305x0915x150x05-N13N	305×915×150	50	H14	ISO 45 H	430	120	≥99.995
SF14-A-0457x0457x150x05-N13N	457 × 457 × 150	50	H14	ISO 45 H	335	120	≥99.995
SF14-A-0457x0610x150x05-N13N	457×610×150	50	H14	ISO 45 H	450	120	≥99.995
SF14-A-0610x0610x150x05-N13N	610×610×150	50	H14	ISO 45 H	600	120	≥99.995
SF14-A-0610x0762x150x05-N13N	610×762×150	50	H14	ISO 45 H	750	120	≥99.995
SF14-A-0610x0915x150x05-N13N	610×915×150	50	H14	ISO 45 H	900	120	≥99.995
SF14-A-0610x1220x150x05-N13N	610×1,220×150	50	H14	ISO 45 H	1,200	120	≥99.995
SF14-A-0610x1525x150x05-N13N	610 × 1,525 × 150	50	H14	ISO 45 H	1,500	120	≥99.995
SF14-A-0610x1830x150x05-N13N	610×1,830×150	50	H14	ISO 45 H	1,800	120	≥99.995
SF14-A-0762x0762x150x05-N13N	762×762×150	50	H14	ISO 45 H	950	120	≥99.995
SF14-A-0762x0915x150x05-N13N	762×915×150	50	H14	ISO 45 H	1,125	120	≥99.995
SF14-A-0762x1220x150x05-N13N	762 × 1,220 × 150	50	H14	ISO 45 H	1,500	120	≥99.995
SF14-A-0762x1525x150x05-N13N	762 × 1,525 × 150	50	H14	ISO 45 H	1,875	120	≥99.995
SF14-A-0762x1830x150x05-N13N	762 × 1,830 × 150	50	H14	ISO 45 H	2,250	120	≥99.995
SF14-A-0915x0915x150x05-N13N	915×915×150	50	H14	ISO 45 H	350	120	≥99.995
SF14-A-0915x1220x150x05-N13N	915 × 1,220 × 150	50	H14	ISO 45 H	1,800	120	≥99.995
SF14-A-0915x1525x150x05-N13N	915 × 1,525 × 150	50	H14	ISO 45 H	2,250	120	≥99.995
SF14-A-0915x1830x150x05-N13N	915×1,830×150	50	H14	ISO 45 H	2,700	120	≥99.995

### Freudenberg Filtration Technologies

Subject to technical changes.

## Aluminum frame | Constrution depth 150 mm | Pleat depth 125 mm | EPA

Specifications		
Filter medium	Micro-glass-fiber paper	
Recommended final pressure drop	600 Pa	
Thermal stability	70 °C	
Moisture resistance	100% rel. hum.	
Frame	Extruded aluminum profile, anodized	
Seal	Semicircular PU profile, endlessly foamed	
Protection grids	On both sides, aluminum, powder-coated	

### Application

Special features

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon<sup>®</sup> HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.

Viledon® high volume flow EPA filters are used in intake, exhaust and recirculating air filtration in cleanrooms in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes.

### **Delivery** notes

Customized dimensions and other filter classes are available on request.

	Article	Dimensions	Pleat depth	Filter class	Filter class	Nominal	Initial	Arrestance
0		(W×L×D)	[mm]	acc. to	acc. to	volume flow	pressure drop	efficiency MPPS
5		[mm]		EN 1822:2009	ISO 29463	[m³/h]	[Pa]	[%]
	SF11-A-0305x0610x150x12-N13N-F58	305×610×150	125	E11	ISO 15 E	750	140	95
2	SF11-A-0457x0457x150x12-N13N-F58	457×457×150	125	E11	ISO 15 E	850	140	95
- Jano	SF11-A-0610x0610x150x12-N13N-F58	610×610×150	125	E11	ISO 15 E	1,500	140	95



Aluminum frame | Construction depth 150 mm | Pleat depth 125 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Application

Viledon<sup>®</sup> high volume flow HEPA filters are used in intake, exhaust and recirculating air filtration in cleanrooms in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes.

### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.

#### **Delivery** notes

Customized dimensions and other filter classes are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-A-0305x0610x150x12-N13N-J58	305×610×150	125	H 13	ISO 35 H	860	250	≥99.95
SF13-A-0457x0457x150x12-N13N-J58	457×457×150	125	H13	ISO 35 H	950	250	≥99.95
SF13-A-0610x0610x150x12-N13N-J58	610×610×150	125	H13	ISO 35 H	1,750	250	≥99.95
SF14-A-0305x0305x150x12-N13N-U36	305×305×150	125	H14	ISO 45 H	450	250	≥99.995
SF14-A-0305x0610x150x12-N13N-U36	305×610×150	125	H14	ISO 45 H	950	250	≥99.995
SF14-A-0457x0457x150x12-N13N-U36	457×457×150	125	H14	ISO 45 H	1,100	250	≥99.995
SF14-A-0610x0610x150x12-N13N-U36	610×610×150	125	H14	ISO 45 H	2,000	250	≥99.995

### Freudenberg Filtration Technologies

ubject to technical changes.

### **EPA | HEPA | ULPA filters** Aluminum frame | Construction depth 292 mm | EPA

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Application

Viledon<sup>®</sup> high volume flow EPA filters are used in intake, exhaust and recirculating air filtration in cleanrooms in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes.

### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a guasi-laminar outflow.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.

#### **Delivery** notes

Customized dimensions and other filter classes are available on request.

1	Article	Dimensions (W × L × D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
\$	SF11-A-0305x0610x292x20-N13N-F69	305×610×292	200	E11	ISO 15 E	1,100	140	≥95
	GF11-A-0457x0457x292x20-N13N-F69	457×457×292	200	E11	ISO 15 E	1,300	140	≥95
3	GF11-A-0457x0610x292x20-N13N-F69	457×610×292	200	E11	ISO 15 E	1,750	140	≥95
0.	GF11-A-0593x0593x292x20-N13N-F69	593 × 593 × 292	200	E11	ISO 15 E	2,250	140	≥95
	GF11-A-0610x0610x292x20-N13N-F69	610×610×292	200	E11	ISO 15 E	2,400	140	≥95
	SF11-A-0610x0762x292x20-N13N-F69	610×762×292	200	E11	ISO 15 E	3,000	140	≥95



## **EPA | HEPA | ULPA filters** Aluminum frame | Construction depth 292 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Extruded aluminum profile, anodized
Seal	Semicircular PU profile, endlessly foamed
Protection grids	On both sides, aluminum, powder-coated

### Application

Viledon<sup>®</sup> high volume flow HEPA filters are used in intake, exhaust and recirculating air filtration in cleanrooms in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes.

### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.

### Delivery notes

Customized dimensions and other filter classes are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-A-0305x0610x292x17-N13N-U42	305×610×292	175	H 13	ISO 35 H	1,250	250	≥99.95
SF13-A-0457x0457x292x17-N13N-U42	457×457×292	175	H 13	ISO 35 H	1,400	250	≥99.95
SF13-A-0457x0610x292x17-N13N-U42	457×610×292	175	H 13	ISO 35 H	1,950	250	≥99.95
SF13-A-0593x0593x292x17-N13N-U42	593 × 593 × 292	175	H 13	ISO 35 H	2,450	250	≥99.95
SF13-A-0610x0610x292x17-N13N-U42	610×610×292	175	H 13	ISO 35 H	2,600	250	≥99.95
SF13-A-0610x0762x292x17-N13N-U42	610×762×292	175	H 13	ISO 35 H	3,250	250	≥99.95
SF14-A-0305x0610x292x17-N13N-U42	305×610×292	175	H14	ISO 45 H	1,100	230	≥99.95
SF14-A-0457x0457x292x17-N13N-U42	457×457×292	175	H14	ISO 45 H	1,300	230	≥99.95
SF14-A-0457x0610x292x17-N13N-U42	457×610×292	175	H14	ISO 45 H	1,750	230	≥99.95
SF14-A-0593x0593x292x17-N13N-U42	593 × 593 × 292	175	H14	ISO 45 H	2,250	230	≥99.95
SF14-A-0610x0610x292x17-N13N-U42	610×610×292	175	H14	ISO 45 H	2,400	230	≥99.95
SF14-A-0610x0762x292x17-N13N-U42	610×762×292	175	H14	ISO 45 H	3,000	230	≥99.95

### Freudenberg Filtration Technologies

Subject to technical changes

### **EPA | HEPA | ULPA filters** Aluminum frame | Construction depth 80 mm | Silgel seal | HEPA

Specifications		
Filter medium	Micro-glass-fiber paper	
Recommended final pressure drop	600 Pa	
Thermal stability	70 °C	2000030000000
Moisture resistance	100% rel. hum.	30008900000
Frame	Extruded aluminum profile, anodized	
Seal	SilgelProtection grids: On both sides, aluminum, powder-coated; also available in a stainless steel version	deptobatestest
		22001201201202000

### Application

Viledon® HEPA filters of filter class H 14 are used in intake and recirculating air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air and sterility, e.g.

- in sophisticated air-conditioning applications (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food / beverage, micro-electronics, etc.),
- in ceiling outlets and modules for flexible cleanroom systems.

### Special features

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.
- Silgel seal for mounting systems with a sword profile.
- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.

#### **Delivery** notes

Customized dimensions and other filter classes are available on request.

Article	Dimensions (W × L × D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF14-A-0305x0305x080x05-F13N	305 × 305 × 80	50	H14	ISO 45 H	135	120	≥99.995
SF14-A-0305x0457x080x05-F13N	305×457×80	50	H14	ISO 45 H	200	120	≥99.995
SF14-A-0305x0610x080x05-F13N	305×610×80	50	H14	ISO 45 H	280	120	≥99.995
SF14-A-0305x0762x080x05-F13N	305×762×80	50	H14	ISO 45 H	360	120	≥99.995
SF14-A-0305x0915x080x05-F13N	305×915×80	50	H14	ISO 45 H	430	120	≥99.995
SF14-A-0457x0457x080x05-F13N	457×457×80	50	H14	ISO 45 H	335	120	≥99.995
SF14-A-0457x0610x080x05-F13N	457×610×80	50	H14	ISO 45 H	450	120	≥99.995
SF14-A-0610x0610x080x05-F13N	610×610×80	50	H14	ISO 45 H	600	120	≥99.995
SF14-A-0610x0762x080x05-F13N	610×762×80	50	H14	ISO 45 H	750	120	≥99.995
SF14-A-0610x0915x080x05-F13N	610×915×80	50	H14	ISO 45 H	900	120	≥99.995
SF14-A-0610x1220x080x05-F13N	610×1,220×80	50	H14	ISO 45 H	1,200	120	≥99.995
SF14-A-0610x1525x080x05-F13N	610×1,525×80	50	H14	ISO 45 H	1,500	120	≥99.995
SF14-A-0610x1830x080x05-F13N	610×1,830×80	50	H14	ISO 45 H	1,800	120	≥99.995
SF14-A-0762x0762x080x05-F13N	762×762×80	50	H14	ISO 45 H	950	120	≥99.995
SF14-A-0762x0915x080x05-F13N	762×915×80	50	H14	ISO 45 H	1,125	120	≥99.995
SF14-A-0762x1220x080x05-F13N	762 × 1,220 × 80	50	H14	ISO 45 H	1,500	120	≥99.995
SF14-A-0762x1525x080x05-F13N	762 × 1,525 × 80	50	H14	ISO 45 H	1,875	120	≥99.995
SF14-A-0762x1830x080x05-F13N	762 × 1,830 × 80	50	H14	ISO 45 H	2,250	120	≥99.995
SF14-A-0915x0915x080x05-F13N	915×915×80	50	H14	ISO 45 H	1,350	120	≥99.995
SF14-A-0915x1220x080x05-F13N	915×1,220×80	50	H14	ISO 45 H	1,800	120	≥99.995
SF14-A-0915x1525x080x05-F13N	915×1,525×80	50	H14	ISO 45 H	2,250	120	≥99.995
SF14-A-0915x1830x080x05-F13N	915×1,830×80	50	H14	ISO 45 H	2,700	120	≥99.995



## **EPA | HEPA | ULPA filters** Aluminum frame | Construction depth 80 mm | Silgel seal | ULPA

	Specifications						
	Filter medium	Micro-glass-fiber paper					
20100 kookookookookoom	Recommended final pressure drop	600 Pa					
	Thermal stability	70 °C					
Box Helensteinen aus	Moisture resistance	100% rel. hum.					
	Frame	Extruded aluminum profile, anodized					
destrotatestestestestestes	Seal	Silgel					
	Protection grids	On both sides, aluminum, powder-coated; also available in a stainless steel version					
00010101001000000000000000000000000000							

### Application

Viledon<sup>®</sup> ULPA filters of filter class U 15 are used in intake and recirculating air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning applications (operating theaters/intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food / beverage, micro-electronics, etc.),
- in ceiling outlets and modules for flexible cleanroom systems.

### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.

- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting thanks to high twist strength.
- The filter elements feature protection grids on both sides made of powdercoated expanded metal.
- Silgel seal for mounting systems with a sword profile.

### **Delivery** notes

Customized dimensions and other filter classes are available on request.

Article	Dimensions (W × L × D)	Pleat depth [mm]	Filter class acc. to	Filter class acc. to	Nominal volume flow	Initial pressure drop	Arrestance efficiency MPPS
	[mm]		EN 1822:2009	ISO 29463	[m³/h]	[Pa]	[%]
SF15-A-0305x0305x080x05-F13N	305 × 305 × 80	50	U15	ISO 55 U	135	140	≥99.9995
SF15-A-0305x0457x080x05-F13N	305×457×80	50	U15	ISO 55 U	200	140	≥99.9995
SF15-A-0305x0610x080x05-F13N	305×610×80	50	U 15	ISO 55 U	280	140	≥99.9995
SF15-A-0305x0762x080x05-F13N	305×762×80	50	U 15	ISO 55 U	360	140	≥99.9995
SF15-A-0305x0915x080x05-F13N	305×915×80	50	U 15	ISO 55 U	430	140	≥99.9995
SF15-A-0457x0457x080x05-F13N	457×457×80	50	U 15	ISO 55 U	335	140	≥99.9995
SF15-A-0457x0610x080x05-F13N	457×610×80	50	U 15	ISO 55 U	450	140	≥99.9995
SF15-A-0610x0610x080x05-F13N	610×610×80	50	U 15	ISO 55 U	600	140	≥99.9995
SF15-A-0610x0762x080x05-F13N	610×762×80	50	U 15	ISO 55 U	750	140	≥99.9995
SF15-A-0610x0915x080x05-F13N	610×915×80	50	U 15	ISO 55 U	900	140	≥99.9995
SF15-A-0610x1220x080x05-F13N	610 × 1,220 × 80	50	U 15	ISO 55 U	1,200	140	≥99.9995
SF15-A-0610x1525x080x05-F13N	610 × 1,525 × 80	50	U15	ISO 55 U	1,500	140	≥99.9995
SF15-A-0610x1830x080x05-F13N	610×1,830×80	50	U15	ISO 55 U	1,800	140	≥99.9995
SF15-A-0762x0762x080x05-F13N	762×762×80	50	U15	ISO 55 U	950	140	≥99.9995
SF15-A-0762x0915x080x05-F13N	762×915×80	50	U15	ISO 55 U	1,125	140	≥99.9995
SF15-A-0762x1220x080x05-F13N	762 × 1,220 × 80	50	U15	ISO 55 U	1,500	140	≥99.9995
SF15-A-0762x1525x080x05-F13N	762×1525×80	50	U15	ISO 55 U	1,875	140	≥99.9995
SF15-A-0762x1830x080x05-F13N	762 × 1,830 × 80	50	U15	ISO 55 U	2,250	140	≥99.9995
SF15-A-0915x0915x080x05-F13N	915×915×80	50	U15	ISO 55 U	1,350	140	≥99.9995
SF15-A-0915x1220x080x05-F13N	915 × 1,220 × 80	50	U15	ISO 55 U	1,800	140	≥99.9995
SF15-A-0915x1525x080x05-F13N	915×1,525×80	50	U15	ISO 55 U	2,250	140	≥99.9995
SF15-A-0915x1830x080x05-F13N	915×1,830×80	50	U15	ISO 55 U	2,700	140	≥99.9995

### Freudenberg Filtration Technologies

Subject to technical changes

Plastic frame | Construction depths 150 + 292 mm | EPA

Specifications	
Filter medium	Micro-glass-fiber paper, highly resistant to moisture and oils
Bursting pressure	> 3,000 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Halogen-free plastic; on request also with frame made from galvanized steel or stainless steel sheeting
Seal	Semicircular PU profile, endlessly foamed, on one side; on request with flat seal
Protection grids	Plastic, on both sides (N18N), with 200 mm pleat depth standard version without protection grid (N 10N)

### Application

Viledon® EPA filters of filter class E 1 1 are used for intake, exhaust and recirculating air filtration of ventilation systems with special requirements for clean

- air quality, e.g.sophisticated air-conditioning applications (hospitals, labs, cleanrooms,
- sopnisticated air-conditioning applications (nospitals, labs, cleanrooms, museums, etc.),
- sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverages, micro-electronics, etc.),
- downstream policing filters in dust removal applications.

### **Special features**

- The patented thermal embossing technique ensures the optimum V-shaped geometry and equidistance of the pleats and therefore maximum, homogeneous air passage at a very low pressure drop. This results in a remarkably economical and reliable operation.
- The frame consists of halogen-free plastic and is exceptionally distortionresistant, moisture-resistant and fully incinerable.
- Viledon<sup>®</sup> EPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting, thanks to exceptionally low weight.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.

#### **Delivery** notes

Customized dimensions are available on request.

Also available in 292 mm construction depth as MaxiPleat filters with and without a top frame.

Article	Article number	Dimensions (W × L × D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF11-K-0305x0305x150x10-N18N-F45	53392321	305×305×150	100	E11	ISO 15 E	440	160	≥95
SF11-K-0457x0457x150x10-N10N-F45	53359319	457×457×150	100	E11	ISO 15 E	1,100	160	≥95
SF11-K-0610x0610x150x10-N10N-F45	53360528	610×610×150	100	E11	ISO 15 E	2,000	160	≥95
SF11-K-0610x0610x150x10-N18N-F45	53386630	610×610×150	100	E11	ISO 15 E	2,000	160	≥95
SF11-K-0610x0305x292x20-N10N-F60	53352684	610×305×292	200	E11	ISO 15 E	1,400	160	≥95
SF11-K-0610x0610x292x20-N10N-F60	53352648	610×610×292	200	E11	ISO 15 E	3,000	160	≥95
SF11-K-0610x0762x292x20-N10N-F60	53357238	610×762×292	200	E11	ISO 15 E	4,000	160	≥95
SF11-K-0610x0305x292x28-N18N-F60	53351145	610×305×292	280	E11	ISO 15 E	1,600	160	≥95
SF11-K-0610x0610x292x28-N18N-F60	53351144	610×610×292	280	E11	ISO 15 E	3,400	160	≥95
SF11-K-0610x0762x292x28-N18N-F60	53357518	610×762×292	280	E11	ISO 15 E	4,300	160	≥95



## EPA | HEPA | ULPA filters Plastic frame | Construction depths 150 + 292 mm | HEPA

	Specifications	
	Filter medium	Micro-glass-fiber paper, highly resistant to moisture and oils
	Bursting pressure	>3,000 Pa
COLUMN TWO IS NOT	Thermal stability	70 °C
Contraction of the local division of the loc	Moisture resistance	100 % rel. hum.
CONTRACTOR OF TAXABLE	Frame	Halogen-free plastic; on request also with frame made of galvanized steel sheeting or stainless steel sheeting
COLUMN TWO IS NOT	Seal	Semicircular PU profile, endlessly foamed, on one-side; on request with flat seal
	Protection grids	Plastic on both sides (N18N), with 200 mm pleat depth standard version without protection grid (N10N)

### Application

Viledon® HEPA filters of filter classes H13 + H14 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning applications (operating theaters / intensive care units in hospitals, labs, cleanrooms etc.),
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverages, micro-electronics, etc.),
- in the treatment of dangerous substances (asbestos disposal, heavy metals, carcinogenic dusts, etc.),
- in the preliminary filtration of turbomachinery.

### **Special features**

The patented thermal embossing process ensures the optimum V-shaped geometry and equidistance of the pleats, and therefore maximum, homogeneous air passage at a very low pressure drop. This results in a remarkably economical and reliable operation.

Each filter element is leakproofed in accordance with EN 1822, and delivered together with the corresponding test certificate.

- The frame consists of halogen-free plastic and is extremely distortion-resistant, moisture-resistant and fully incinerable. The patented design provides a high degree of security against the growth of bacteria and fungi (permissible according to VDI 6022 in accordance with independent test certificates).
- Easy handling and mounting thanks to exceptionally low weight and a continuous, homogeneously foamed-on polyurethane gasket.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Meets the requirements laid down in EN 60335-2-69 for filters being used in dust-eliminating machines and equipment of dust class "H" (see table).

#### **Delivery notes**

Customized dimensions and other filter classes are available on request.

Article	Article number	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]	Dust class'
SF13-K-0305x0305x150x10-N18N-H45	53357911	305×305×150	100	H13	ISO 35 H	325	220	≥99.95	
SF13-K-0305x0305x292x20-N10N-H60	53380609	305×305×292	200	H 13	ISO 35 H	500	250	≥99.95	Н
SF13-K-0305x0305x292x28-N18N-G60	53358438	305×305×292	280	H 13	ISO 35 H	700	250	≥99.95	Н
SF13-K-0457x0457x150x10-N18N-H45	53361285	457×457×150	100	H 13	ISO 35 H	800	220	≥99.95	
SF13-K-0457x0457x292x20-N10N-H60	53352681	457×457×292	200	H13	ISO 35 H	1,300	250	≥99.95	Н
SF13-K-0457x0457x292x28-N18N-G60	53353934	457×457×292	280	H13	ISO 35 H	1,800	250	≥99.95	н
SF13-K-0575x0575x150x10-N18N-H45	53440647	575 × 575 × 150	100	H13	ISO 35 H	1,400	220	≥99.95	
SF13-K-0592x0592x292x28-N18N-G60	53378568	592 × 592 × 292	280	H13	ISO 35 H	3,000	250	≥99.95	Н
SF13-K-0610x0305x150x10-N18N-H45	53364637	610×305×150	100	H13	ISO 35 H	700	220	≥99.95	
SF13-K-0610x0305x292x20-N10N-H60	53352680	610×305×292	200	H13	ISO 35 H	1,100	250	≥99.95	Н
SF13-K-0610x0305x292x28-N18N-G60	53351143	610×305×292	280	H13	ISO 35 H	1,550	250	≥99.95	н
SF13-K-0610x0305x292x28-N18N-J60	53383118	610×305×292	280	H13	ISO 35 H	1,800	330	≥99.95	Н
SF13-K-0610x0457x292x20-N10N-H60	53367419	610×457×292	200	H13	ISO 35 H	1,800	250	≥99.95	Н
SF13-K-0610x0457x292x28-N18N-G60	53363063	610×457×292	280	H13	ISO 35 H	2,500	250	≥99.95	Н
SF13-K-0610x0610x150x10-N18N-H45	53392755	610×610×150	100	H13	ISO 35 H	1,500	220	≥99.95	
SF13-K-0610x0610x292x20-N10N-H60	53352647	610×610×292	200	H13	ISO 35 H	2,500	250	≥99.95	Н
SF13-K-0610x0610x292x28-N18N-G60	53351139	610×610×292	280	H13	ISO 35 H	3,400	250	≥99.95	Н
SF13-K-0610x0610x292x28-N18N-J60	53383117	610×610×292	280	H13	ISO 35 H	4,000	350	≥99.95	н
SF13-K-0610x0762x292x20-N10N-H60	53373991	610×762×292	200	H13	ISO 35 H	3,150	250	≥99.95	Н
SF13-K-0610x0762x292x28-N18N-G60	53373837	610×762×292	280	H13	ISO 35 H	4,300	250	≥99.95	Н
SF14-K-0305x0305x292x28-N18N-J60	53390438	305×305×292	280	H14	ISO 45 H	375	150	≥99.995	
SF14-K-0457x0457x292x28-N18N-J60	53381017	457×457×292	280	H14	ISO 45 H	900	150	≥99.995	
SF14-K-0610x0305x292x28-N18N-J60	53367662	610×305×292	280	H14	ISO 45 H	850	150	≥99.995	
SF14-K-0610x0457x292x28-N18N-J60	53358594	610×457×292	280	H14	ISO 45 H	1,250	150	≥99.995	
SF14-K-0610x0610x292x28-N18N-J60	53353557	610×610×292	280	H14	ISO 45 H	1,700	150	≥99.995	
SF14-K-0610x0762x292x28-N18N-J60	53361167	610×762×292	280	H14	ISO 45 H	2,150	150	≥99.995	

\* according to DIN EN 60 335-2-69 appendix AA

### Freudenberg **Filtration Technologies**

Subject to technical changes

### **EPA | HEPA | ULPA filters** MDF frame | Construction depth 78 mm | EPA

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Frame	MDF
Seal	Semicircular PU profile, endlessly foamed

### Application

Viledon<sup>®</sup> EPA filters of filter class E 11 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive industrial processes,
- as final filters in ceiling air outlets.

#### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a guasi-laminar outflow.
- The frame consists of MDF (medium-density fiber board) and is fully incinerable.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Endlessly and homogeneously foamed-on polyurethane seal; on request also available with a flat gasket.
- Protection grids on request.

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF11-M-0305x0305x078x05-N10N	305×305×78	50	E11	ISO 15 E	220	160	≥95
SF11-M-0305x0457x078x05-N10N	305×457×78	50	E11	ISO 15 E	350	160	≥95
SF11-M-0305x0610x078x05-N10N	305×610×78	50	E11	ISO 15 E	480	160	≥95
SF11-M-0305x0762x078x05-N10N	305×762×78	50	E11	ISO 15 E	600	160	≥95
SF11-M-0457x0457x078x05-N10N	457×457×78	50	E11	ISO 15 E	550	160	≥95
SF11-M-0457x0610x078x05-N10N	457×610×78	50	E11	ISO 15 E	750	160	≥95
SF11-M-0610x0610x078x05-N10N	610×610×78	50	E11	ISO 15 E	1,000	160	≥95
SF11-M-0610x0762x078x05-N10N	610×762×78	50	E11	ISO 15 E	1,300	160	≥95
SF11-M-0762x0762x078x05-N10N	762×762×78	50	E11	ISO 15 E	1,640	160	≥95

ubject to technical changes.

## **EPA | HEPA | ULPA filters** MDF frame | Construction depth 78 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	MDF
Seal	Semicircular PU profile, endlessly foamed

### Application

Viledon® HEPA filters of filter classes H13 + H14 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive industrial processes,
- as final filters in ceiling air outlets.

### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of MDF (medium-density fiber board) and is fully incinerable.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Endlessly and homogeneously foamed-on polyurethane seal; on request also available with a flat gasket.
- Protection grid on request.

### Delivery notes

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-M-0305x0305x078x05-N10N	305×305×78	50	H13	ISO 35 H	250	250	≥99.95
SF13-M-0305x0457x078x05-N10N	305×457×78	50	H13	ISO 35 H	400	250	≥99.95
SF13-M-0305x0610x078x05-N10N	305×610×78	50	Н13	ISO 35 H	550	250	≥99.95
SF13-M-0305x0762x078x05-N10N	305×762×78	50	H13	ISO 35 H	700	250	≥99.95
SF13-M-0457x0457x078x05-N10N	457×457×78	50	Н13	ISO 35 H	630	250	≥99.95
SF13-M-0457x0610x078x05-N10N	457×610×78	50	H13	ISO 35 H	850	250	≥99.95
SF13-M-0610x0610x078x05-N10N	610×610×78	50	H13	ISO 35 H	1,200	250	≥99.95
SF13-M-0610x0762x078x05-N10N	610×762×78	50	H13	ISO 35 H	1,500	250	≥99.95
SF13-M-0762x0762x078x05-N10N	762×762×78	50	H13	ISO 35 H	1,900	250	≥99.95
SF14-M-0305x0305x078x05-N10N	305 × 305 × 78	50	H14	ISO 45 H	120	125	≥99.995
SF14-M-0305x0457x078x05-N10N	305×457×78	50	H14	ISO 45 H	200	125	≥99.995
SF14-M-0305x0610x078x05-N10N	305×610×78	50	H14	ISO 45 H	280	125	≥99.995
SF14-M-0305x0762x078x05-N10N	305×762×78	50	H14	ISO 45 H	350	125	≥99.995
SF14-M-0457x0457x078x05-N10N	457×457×78	50	H14	ISO 45 H	335	125	≥99.995
SF14-M-0457x0610x078x05-N10N	457×610×78	50	H14	ISO 45 H	420	125	≥99.995
SF14-M-0610x0610x078x05-N10N	610×610×78	50	H14	ISO 45 H	600	125	≥99.995
SF14-M-0610x0762x078x05-N10N	610×762×78	50	H14	ISO 45 H	750	125	≥99.995
SF14-M-0762x0762x078x05-N10N	762×762×78	50	H14	ISO 45 H	900	125	≥99.995

### Freudenberg Filtration Technologies

Subject to technical changes.

### **EPA | HEPA | ULPA filters** MDF frame | Construction depth 150 mm | EPA

Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	MDF
Seal	Semicircular PU profile, endlessly foamed

### Application

Viledon<sup>®</sup> EPA filters of filter class E 11 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive industrial processes,
- as final filters in ceiling air outlets.

#### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a guasi-laminar outflow.
- The frame consists of MDF (medium-density fiber board) and is fully incinerable.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Endlessly and homogeneously foamed-on polyurethane seal; on request also available with a flat gasket.
- Protection grids on request.

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF11-M-0305x0305x150x12-N10N	305×305×150	125	E11	ISO 15 E	370	140	≥95
SF11-M-0305x0457x150x12-N10N	305×457×150	125	E11	ISO 15 E	560	140	≥95
SF11-M-0305x0610x150x12-N10N	305×610×150	125	E11	ISO 15 E	750	140	≥95
SF11-M-0305x0762x150x12-N10N	305×762×150	125	E11	ISO 15 E	950	140	≥95
SF11-M-0457x0457x150x12-N10N	457×457×150	125	E11	ISO 15 E	850	140	≥95
SF11-M-0457x0610x150x12-N10N	457×610×150	125	E11	ISO 15 E	1,200	140	≥95
SF11-M-0610x0610x150x12-N10N	610×610×150	125	E11	ISO 15 E	1,500	140	≥95
SF11-M-0610x0762x150x12-N10N	610×762×150	125	E11	ISO 15 E	2,100	140	≥95
SF11-M-0762x0762x150x12-N10N	762×762×150	125	E11	ISO 15 E	2,600	140	≥95



## **EPA | HEPA | ULPA filters** MDF frame | Construction depth 150 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	MDF
Seal	Semicircular PU profile, endlessly foamed

### Application

Viledon® HEPA filters of filter classes H13 + H14 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive and highly sensitive industrial processes,
- as final filters in ceiling air outlets.

#### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a guasi-laminar outflow.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of MDF (medium-density fiber panel) and is fully incinerable.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Endlessly and homogeneously foamed-on polyurethane seal; on request also available with a flat gasket.
- Protection grids on request.

#### Delivery notes

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-M-0305x0305x150x12-N10N	305×305×150	125	H13	ISO 35 H	400	250	≥99.95
SF13-M-0305x0457x150x12-N10N	305×457×150	125	H13	ISO 35 H	600	250	≥99.95
SF13-M-0305x0610x150x12-N10N	305×610×150	125	H13	ISO 35 H	820	250	≥99.95
SF13-M-0305x0762x150x12-N10N	305×762×150	125	H13	ISO 35 H	1,000	250	≥99.95
SF13-M-0457x0457x150x12-N10N	457×457×150	125	H13	ISO 35 H	950	250	≥99.95
SF13-M-0457x0610x150x12-N10N	457×610×150	125	H13	ISO 35 H	1,300	250	≥99.95
SF13-M-0610x0610x150x12-N10N	610×610×150	125	H13	ISO 35 H	1,700	250	≥99.95
SF13-M-0610x0762x150x12-N10N	610×762×150	125	H13	ISO 35 H	2,200	250	≥99.95
SF13-M-0762x0762x150x12-N10N	762×762×150	125	H13	ISO 35 H	2,850	250	≥99.95
SF14-M-0305x0305x150x12-N10N	305 × 305 × 150	125	H14	ISO 45 H	210	125	≥99.995
SF14-M-0305x0457x150x12-N10N	305×457×150	125	H14	ISO 45 H	320	125	≥99.995
SF14-M-0305x0610x150x12-N10N	305×610×150	125	H14	ISO 45 H	430	125	≥99.995
SF14-M-0305x0762x150x12-N10N	305×762×150	125	H14	ISO 45 H	560	125	≥99.995
SF14-M-0457x0457x150x12-N10N	457×457×150	125	H14	ISO 45 H	500	125	≥99.995
SF14-M-0457x0610x150x12-N10N	457×610×150	125	H14	ISO 45 H	700	125	≥99.995
SF14-M-0610x0610x150x12-N10N	610×610×150	125	H14	ISO 45 H	900	125	≥99.995
SF14-M-0610x0762x150x12-N10N	610×762×150	125	H14	ISO 45 H	1,200	125	≥99.995
SF14-M-0762x0762x150x12-N10N	762×762×150	125	H14	ISO 45 H	1,500	125	≥99.995

### Freudenberg Filtration Technologies

Subject to technical changes.

### **EPA | HEPA | ULPA filters** MDF frame | Construction depth 292 mm | EPA

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	MDF
Seal	Semicircular PU profile, endlessly foamed

### Application

Viledon<sup>®</sup> EPA filters of filter class E 11 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive and highly sensitive industrial processes.

#### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a guasi-laminar outflow.
- The frame consists of MDF (medium-density fiber board) and is fully incinerable.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Endlessly and homogeneously foamed-on polyurethane seal; on request also available with a flat gasket.
- Protection grids on request.

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF11-M-0288x0593x292x20-N10N	288×593×292	200	E11	ISO 15 E	950	140	≥95
SF11-M-0305x0305x292x20-N10N	305×305×292	200	E11	ISO 15 E	500	140	≥95
SF11-M-0305x0610x292x20-N10N	305×610×292	200	E11	ISO 15 E	1,050	140	≥95
SF11-M-0457x0457x292x20-N10N	457×457×292	200	E11	ISO 15 E	1,200	140	≥95
SF11-M-0457x0610x292x20-N10N	457×610×292	200	E11	ISO 15 E	1,650	140	≥95
SF11-M-0593x0593x292x20-N10N	593 × 593 × 292	200	E11	ISO 15 E	2,150	140	≥95
SF11-M-0610x0610x292x20-N10N	610×610×292	200	E11	ISO 15 E	2,250	140	≥95
SF11-M-0610x0762x292x20-N10N	610×762×292	200	E11	ISO 15 E	2,870	140	≥95



69

## **EPA | HEPA | ULPA filters** MDF frame | Construction depth 292 mm | HEPA



Specifications						
Filter medium	Micro-glass-fiber paper					
Recommended final pressure drop	600 Pa					
Thermal stability	70 °C					
Moisture resistance	100% rel. hum.					
Frame	MDF					
Seal	Semicircular PU profile, endlessly foamed					

### Application

Viledon® HEPA filters of filter classes H13 + H14 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive and highly sensitive industrial processes,
- as final filters in ceiling air outlets.

### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of MDF (medium-density fiber panel) and is fully incinerable.
- The entire filter element is non-corroding and easy to dispose of, as it is metal free.
- Endlessly and homogeneously foamed-on polyurethane seal; on request also available with a flat gasket.
- Protection grid on request.

#### **Delivery** notes

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-M-0288x0593x292x20-N10N	288×593×292	200	H13	ISO 35 H	900	250	≥99.95
SF13-M-0305x0305x292x20-N10N	305×305×292	200	Н13	ISO 35 H	470	250	≥99.95
SF13-M-0305x0610x292x20-N10N	305×610×292	200	H13	ISO 35 H	1,000	250	≥99.95
SF13-M-0457x0457x292x20-N10N	457×457×292	200	H13	ISO 35 H	1,100	250	≥99.95
SF13-M-0457x0610x292x20-N10N	457×610×292	200	H13	ISO 35 H	1,500	250	≥99.95
SF13-M-0593x0593x292x20-N10N	593 × 593 × 292	200	H13	ISO 35 H	1,900	250	≥99.95
SF13-M-0610x0610x292x20-N10N	610×610×292	200	H13	ISO 35 H	2,000	250	≥99.95
SF13-M-0610x0762x292x20-N10N	610×762×292	200	H13	ISO 35 H	2,750	250	≥99.95
SF14-M-0288x0593x292x20-N10N	288×593×292	200	H14	ISO 45 H	900	160	≥99.995
SF14-M-0305x0305x292x20-N10N	305 × 305 × 292	200	H14	ISO 45 H	270	160	≥99.995
SF14-M-0305x0610x292x20-N10N	305×610×292	200	H14	ISO 45 H	600	160	≥99.995
SF14-M-0457x0457x292x20-N10N	457×457×292	200	H14	ISO 45 H	680	160	≥99.995
SF14-M-0457x0610x292x20-N10N	457×610×292	200	H14	ISO 45 H	940	160	≥99.995
SF14-M-0593x0593x292x20-N10N	593 × 593 × 292	200	H14	ISO 45 H	1,200	160	≥99.995
SF14-M-0610x0610x292x20-N10N	610×610×292	200	H14	ISO 45 H	1,280	160	≥99.995
SF14-M-0610x0762x292x20-N10N	610×762×292	200	H14	ISO 45 H	1,620	160	≥99.995

### Freudenberg Filtration Technologies

ubject to technical changes.

## **EPA | HEPA | ULPA filters** Steel sheet frame | Construction depth 292 mm | EPA

Specifications		
Filter medium	Micro-glass-fiber paper	
Recommended final pressure drop	600 Pa	
Thermal stability	70 °C	
Moisture resistance	100 % rel. hum.	
Frame	Steel sheeting, galvanized	
Seal	Semicircular PU profile, endlessly foamed	

### Application

Viledon<sup>®</sup> EPA filters of filter class E 11 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with stringent and ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.),
- in sensitive and highly sensitive industrial processes.

### Characteristics and pluses

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation.
- Endlessly and homogeneously foamed-on polyurethane seal; on request available with flat seal.
- On request with protection grid.
- The frame consists of galvanized steel sheeting. The sturdy construction is moisture-resistant and provides a high degree of security against the growth of bacteria and fungi (thus permissible according to VDI 6022).

#### **Delivery** notes

Customized dimensions are available on request.

Article	Dimensions (W×L×D) [mm]	Pleat depth [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF11-B-0288x0593x292x20-N10N	288×593×292	200	E11	ISO 15 E	1,000	140	≥95
SF11-B-0305x0305x292x20-N10N	305×305×292	200	E11	ISO 15 E	550	140	≥95
SF11-B-0305x0610x292x20-N10N	305×610×292	200	E11	ISO 15 E	1,150	140	≥95
SF11-B-0457x0457x292x20-N10N	457×457×292	200	E11	ISO 15 E	1,300	140	≥95
SF11-B-0457x0610x292x20-N10N	457×610×292	200	E11	ISO 15 E	1,750	140	≥95
SF11-B-0593x0593x292x20-N10N	593×593×292	200	E11	ISO 15 E	2,270	140	≥95
SF11-B-0610x0610x292x20-N10N	610×610×292	200	E11	ISO 15 E	2,400	140	≥95
SF11-B-0610x0762x292x20-N10N	610×762×292	200	E11	ISO 15 E	3,000	140	≥95

Freudenberg

## **EPA | HEPA | ULPA filters** High volume flow | Construction depth 292 mm | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Frame	Steel sheeting, galvanized   also available with a stainless steel frame
Seal	Semicircular PU profile, endlessly foamed, on one side

### Application

Viledon<sup>®</sup> high volume flow HEPA filters are used in intake, exhaust and recirculating air filtration in cleanrooms in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters / intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.),
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, micro-electronics, etc.).

#### **Special features**

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed, plus the V-shaped configuration of the pleat package, ensure a particularly large filtering area for maximum air flow rate per filter element together with homogeneous media velocity, coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation with a very long lifetime.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame consists of galvanized steel or stainless steel sheeting and is extremely solid and moisture-resistant.
- Viledon<sup>®</sup> high volume flow HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units."
- A continuous and homogeneously foamed-on profile gasket made of polyurethane. Also available with a flat gasket on request.
- The elements feature recessed grips at the side and a gripping lug for easier handling and installation.

#### **Delivery** notes

Also available as ULPA filter. Customized dimensions and variants available on request.

Article	Article number	Dimensions (W×L×D) [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SF13-B-0288x0288x292/V06x25-N10N	53438538	288×288×292	Н13	ISO 35 H	850	250	≥99.95
SF13-B-0288x0593x292/V06x25-N10N	53412638	288 × 593 × 292	H13	ISO 35 H	1,800	250	≥99.95
SF13-B-0305x0305x292/V06x25-N10N	53411980	305 × 305 × 292	H13	ISO 35 H	1,000	250	≥99.95
SF13-B-0305x0610x292/V06x25-N10N	53412052	305×610×292	H13	ISO 35 H	2,000	250	≥99.95
SF13-B-0593x0593x292/V12x25-N10N	53412644	593 × 593 × 292	H13	ISO 35 H	3,600	250	≥99.95
SF13-B-0610x0610x292/V10x25-N10N	53412060	610×610×292	H13	ISO 35 H	3,400	250	≥99.95
SF13-B-0610x0610x292/V12x25-N10N	53412054	610×610×292	H 13	ISO 35 H	4,000	250	≥99.95
SF13-B-0610x0762x292/V14x25-N10N	53412056	610×762×292	H 13	ISO 35 H	4,700	250	≥99.95
SF14-B-0288x0288x292/V06x25-N10N		288×288×292	H14	ISO 45 H	850	320	≥99.995
SF14-B-0288x0593x292/V06x25-N10N	53417294	288×593×292	H14	ISO 45 H	1,800	320	≥99.995
SF14-B-0305x0305x292/V06x25-N10N	53415772	305 × 305 × 292	H14	ISO 45 H	1,000	320	≥99.995
SF14-B-0305x0610x292/V06x25-N10N	53418697	305×610×292	H14	ISO 45 H	2,000	320	≥99.995
SF14-B-0593x0593x292/V12x25-N10N	53429101	593 × 593 × 292	H14	ISO 45 H	3,600	320	≥99.995
SF14-B-0610x0610x292/V12x25-N10N	53412194	610×610×292	H14	ISO 45 H	4,000	320	≥99.995
SF14-B-0610x0610x292/V12x25-N13S-V27	53448417	610×610×292	H14	ISO 45 H	5,000	450	≥99.995

### Freudenberg Filtration Technologies

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### EPA | HEPA | ULPA filters Cartridge | EPA

Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.
Sheathing	Expanded metal
Seal	Semicircular PU profile, foamed

### Application

Viledon<sup>®</sup> EPA cartridge filters offer in a minimized space highly efficient arrestance in a compactly dimensioned unit. They are used for various applications in medical technology and the pharmaceutical industry.

### Features and benefits

- High-arrestance micro-fiber papers are used as filter media.
- Compactly dimensioned unit for highly efficient arrestance in a minimized space.
- The sheathing of powder-coated expanded metal protects the filter media from damage.
- Endlessly and homogeneously foamed-on polyurethane seal.
- Viledon<sup>®</sup> EPA cartridge filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".

### Delivery notes

Customized dimensions and variants available on request.

•	Article	Nominal diameter/ Nominal lengths [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
	SP11-A-0175x0175	175/175	E11	ISO 15 E	130	120	≥95
	SP11-A-0175x0226	175/226	E11	ISO 15 E	170	120	≥95



## **EPA | HEPA | ULPA filters** Cartridge | HEPA



Specifications	
Filter medium	Micro-glass-fiber paper
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100% rel. hum.
Sheathing	Expanded metal
Seal	Semicircular PU profile, foamed

#### Application

Viledon® HEPA cartridge filters offer in a minimized space highly efficient arrestance in a compactly dimensioned unit. They are used for various applications in medical technology and the pharmaceutical industry.

### Features and benefits

- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- High-arrestance micro-fiber papers are used as filter media.
- Compactly dimensioned unit for highly efficient arrestance in a minimized space.
- The sheathing of powder-coated expanded metal protects the filter media from damage.
- Endlessly and homogeneously foamed-on polyurethane seal.
- Viledon<sup>®</sup> HEPA cartridge filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".

#### **Delivery** notes

Customized dimensions and variants available on request.

Article	Nominal diameter/ Nominal lengths [mm]	acc. to	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Arrestance efficiency MPPS [%]
SP13-A-0175x0175x033x02-N11N-J25	175/175	H13	ISO 35 H	130	200	≥99.95
SP13-A-0175x0226x033x02-N11N-J25	175/226	H13	ISO 35 H	170	200	≥99.95

### EPA | HEPA | ULPA filters Plastic plenum hood | HEPA

Specifications	
Filter medium	Micro-glass-fiber paper
Initial pressure drop	at 0.45 m/s 140 Pa
Recommended final pressure drop	600 Pa
Thermal stability	70 °C
Moisture resistance	100 % rel. hum.

### Application

Viledon® HEPA filters / hood modules of filter class H 14 are used for intake and recirculating air filtration of cleanrooms and flexible cleanroom systems requiring the highest clean air quality and sterility, e.g.

- in hospitals / medical institutes, pharmacies, sterile rooms, laboratories, research centers, etc.,
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, micro-electronics, etc.).

### Special features

- The filter media used are high-arrestance micro-glass-fiber papers.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation, and a quasi-laminar outflow.
- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- The frame is made of extruded anodized aluminum, with an airtight, cast-in polystyrene plenum hood on the upstream side. An integrated perforated deflector plate equalizes the incoming air flow (minimum filter size 610 × 610 mm). The sturdy construction is moisture-resistant and offers high security against the growth of bacteria and moulds.
- Easy handling and mounting, as the units are distortion-resistant and exceptionally lightweight.
- The filter / hood modules feature a protection grid on the clean air side made from powder-coated expanded metal and a connection for measuring aerosol/pressure drop.

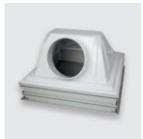
### **Delivery** notes

On request also with integrated control and stop valve plus clean air side flat gasket. Also available as ULPA filter of class U 15. Customized dimensions (then with metal hood) available on request.

Article	Article number	Dimensions (W × L × D) [mm]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Arrestance efficiency MPPS [%]
SF14-A-0305x0610x150x05-Z02H-250x50	53417702	305×610×150	H14	ISO 45 H	280	≥99.995
SF14-A-0610x0610x150x05-Z02H-250x50	53412922	610×610×150	H14	ISO 45 H	600	≥99.995
SF14-A-0610x1220x150x05-Z02H-250x50	53413831	610×1,220×150	H14	ISO 45 H	1,200	≥99.995
SF14-A-0595x1205x150x05-Z02H-250x50	53480454	595 × 1,205 × 150	H14	ISO 45 H	1,130	≥99.995
SF14-A-0600x0600x150x05-Z02H-250x50		600×600×150	H14	ISO 45 H	600	≥99.995
SF14-A-0600x1210x150x05-Z02H-250x50		600 × 1,210 × 150	H14	ISO 45 H	1,200	≥99.995
SF14-A-0300x0600x150x05-Z02H-250x50		300×600×150	H14	ISO 45 H	280	≥99.995



## **EPA | HEPA | ULPA filters** Accessories | Ceiling air outlets | With ceiling connection profile



Specifications	
Outlet housing	Extruded, anodized aluminum frame and deep-drawn plastic plenum made of polystyrene and cast in an airtight configuration, with round connection piece on the side; on request also available with a metal plenum and a connection at the top/side
Diffusor	As vortex flow outlet with adjustable air guide elements in powder-coated steel sheeting (RAL 9010), as a rectangular outlet with fixed-position guide fins in anodized aluminum or painted, as perforated-plate diffusor for low-turbulence displacement flow in anodized aluminum, painted, or stainless steel
Filter elements	Associated filter elements must be ordered separately. The ceiling air outlets are suitable for Viledon® HEPA filters with a 68, 78 or 88 mm deep aluminum frame and a foamed-on seal

### Application

Viledon® filter ceiling air outlets are used for intake and recirculating air filtration of cleanrooms and air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning technology (operating theaters / intensive care units in hospitals and medical institutes, labs, pharmacies, sterile rooms, research centers, etc.),
- In highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, micro-electronics, etc.).

### **Special features**

- The housings feature clamping devices for the filter elements and a port for measuring the raw gas concentration and the operational pressure drop.
- The construction is extremely solid and moisture-resistant.
- Viledon® ceiling air outlets meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units".
- Easy handling and mounting, thanks to low weight and high twist strength.
- Filter replacement, cleaning and maintenance can be simply performed from the clean air side.

#### Delivery notes

On request also available with integrated control and stop valve. Customized dimensions (then with metal plenum) and variants available on request Please order suitable filters as a separate item.

Article	Article number	Dimensions (W × L × D) [mm]	Dimensions of matching filters (W × L × D) [mm]	Diffusor	Diffusor material
SFDLA-CA-0380x0380x355-EV-0-200-0-T	53425088	380×380×355	305×305×68   78   88	Vortex flow outlet	Powder-coated steel (RAL 9010)
SFDLA-CA-0380x0685x380-LA-0-200-0-0	53424466	380×685×380	305×610×68   78   88	Rectangular outlet	Anodized aluminum
SFDLA-CA-0532x0532x390-LV-0-250-0-0	53427694	532×532×390	457×457×68   78   88	Rectangular outlet	Powder-coated steel (RAL 9010)
SFDLA-CA-0620x0620x410-EV-0-250-0-0	53427199	620×620×410	545×545×68   78   88	Vortex flow outlet	Powder-coated steel (RAL 9010)
SFDLA-CA-0685x0685x420FX-0-250-0-0	53424467	685×685×420	610×610×68   78   88	Perforated-plate diffusor	Stainless steel
SFDLA-CA-0685x0990x430-LV-Z-250-0-0	53427696	685×990×430	610×915×68 78 88	Rectangular outlet	Powder-coated steel (RAL 9010)
SFDLA-CA-0685x1295x450-FX-0-250-0-0	53424468	685 × 1,295 × 450	610×1,220×68   78   88	Perforated-plate diffusor	Stainless steel
SFDLA-CA-0837x0837x450-LV-Z-250-0-0	53427698	837×837×450	762×762×68   78   88	Rectangular outlet	Powder-coated steel (RAL 9010)

### Freudenberg Filtration Technologies

ubject to technical changes.

### **EPA | HEPA | ULPA filters** Accessories | Fan-filter unit

### Specifications

Description	Fan with AC motor (230 V, 50-60 Hz single-phase, 1.2 A/0.28 kW); Integrated electronic control system with main switch and heat protection; Noise level <75 dB (A) 1.5 m below the filter element; Outflow velocity max. 0.6 m/s, depending on the filter efficiency involved; Tool-free installation of a prefilter due to a clamping system	-

#### Housing

Filter element

The housing consists of an extruded, anodized aluminum frame and a deep-drawn plastic plenum cast in an airtight configuration, with an integrated fan, a connection for measuring the raw-gas concentration and operating pressure drop, plus an operating light. The removable diffusor is made of perforated aluminum sheeting.

Associated filter elements such as Viledon® HEPA | ULPA filters of filter classes H14 to U15 with aluminum frames can be ordered separately (see table for technical data). A prefilter panel is optionally available.

### Delivery notes

A pre-filter panel is optionally available. Please order suitable filters as a separate item.

Housing								
Article	Article number	Dimensions (W×L×D) [mm]	Outflow area (W × L) [mm²]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Weight [kg]
FFU-AK-0660x1270x380-AC	53479440	660×1,270×380	580×1,190			1,200		26
Pre-filter								
Article	Article number	Dimensions (W×L×D) [mm]	Outflow area (W × L) [mm²]	Filter class acc. to EN 779:2012	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Weight [kg]
FFU pre-filter panel	53479442	415×515×98		G4		1,200		22
Applicable filters								
Article	Article number	Dimensions (W×L×D) [mm]	Outflow area (W × L) [mm²]	Filter class acc. to EN 1822:2009	Filter class acc. to ISO 29463	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Weight [kg]
SF14-A-0610x1220x068x05-N13N	53411835	610×1,220×68		H14	ISO 45 H	1,200	120	
SF14-A-0610x1220x078x06-N13N	53415898	610×1,220×78		H14	ISO 45 H	1,200	100	
SF14-A-0610x1220x088x07-N13N	53411853	610×1,220×88		H14	ISO 45 H	1,200	90	
SF15-A-0610x1220x088x07-N13N	53431655	610×1.220×88		U 15	ISO 55 U	1.200	115	



## **EPA | HEPA | ULPA filters** Accessories | Safe-change system



	Specifications	
	Accessories	Safety bag and elastic O-ring (featured one set per housing as standard)
-	Bench	Aerosol connection for checking leakproofing and filter's seal fit, and for measuring the operating pressure drop (T); Manometer for checking the pressure drop (M); Pressure equalization valve (R)

### Housing

The entire housing consists of powder-coated steel in the color RAL 7035 (Type V) or stainless steel (Type X). The system provides for contamination-free filter replacement using a safety bag (bag in / bag out). The filter element is fixed in place using two eccentric rods made of stainless steel. The hinged and removable maintenance cover is fixed in position with manually operated clamping wheels, and sealed with a circumferential leakproof rubber seal.

#### Bench

For putting together a larger or multi stage filter system, up to six housings can be combined with each other in parallel. These are fitted as standard with a rectangular intake and exhaust air duct. The entire unit stands on stable feet.

### Filter element

Fine or EPA | HEPA | ULPA filters can be used with plastic, steel-sheeting or MDF frames in various dimensions.

### Delivery notes

Accessories (see above) can be integrated in the SF-benches on request. Please order the suitable filter as a separate item.

Housing									
Article	Article number	Dimensions (W × L × D) [mm]	Dimensions of matching filters (W × L × D) [mm]	Housing material	Number of filter stages	Integrated option			
SFSafe-V-363	53424126	755 × 495 × 570	610×305×292	Steel, powder coated RAL 7035					
SFSafe-V-663	53412788	755 × 800 × 570	610×610×292	Steel, powder coated RAL 7035					
SFSafe-V-673		755×950×570	610×762×292	Steel, powder coated RAL 7035					
SFSafe-X-663	53419671	755 × 800 × 570	610×610×292	Stainless steel (AISI 304)					
Article	Article number	Dimensions (W × L × D) [mm]	Dimensions of matching filters (W × L × D) [mm]	Housing material	Number of filter stages	Integrated option			
SFBench-1-V-663-C-N-S-M-R			610×610×292	Steel, powder coated RAL 7035	1	Pressure drop monometer, pressure equalization valve			
SFBench-2-V-663-C-N-S-M-R SFBench-1-X-363-C-N-S-M-R-T	53430511		610×610×292 610×305×292	Steel, powder coated RAL 7035 Stainless steel (AISI 304)	1	Pressure drop monometer, pressure equalization valve, 2 parallel filters Pressure drop monometer, pressure equalization valve, aerosol connection			
SFBench-1-X-6613-C-N-S-2M-R-T			610×610×150 292	Stainless steel (AISI 304)	2	Pressure drop monometer (2 x), pressure equalization valve, aerosol connection			
SFBench-2-X-6613-C-N-S-2M-R-T			610×610×150 292	Stainless steel (AISI 304)	2	Pressure drop monometer (2 x), pressure equalization valve, aerosol connection, 2 parallel filters			

### Freudenberg Filtration Technologies



### Gas phase filtration

CarboPleat / DuoPleat, ChemControl filters, activated-carbon cartridges, ChemControl modules, HM<sup>®</sup> modules, ChemControl pellets, ChemControl systems, ChemWatch



CarboPleat activated-carbon and DuoPleat combination filters improve indoor air quality und protect people as well as sensitive products, processes and equipment, by eliminating or reducing pollutant gases and unwanted odors.

Viledon<sup>®</sup> ChemControl pellets are used for the prevention of corrosion. They remove contaminant gases by means of adsorption, absorption and chemisorption.



### **Gas phase filters** CarboPleat / DuoPleat | Fine dust



Specifications	
Recommended duty temperature	<30 °C
Thermal stability	70 °C
Recommended duty humidity	<60 % rel. hum.

### Application

CarboPleat activated-carbon and DuoPleat combi filters improve the air quality in indoor environments and protect both people and sensitive products, processes and lines, by eliminating or reducing environmental pollutants and unwanted odors.

The activated-carbon media of both filters are fixed in place using a special bonding process, and provide a maximum of active surface area for efficient gas adsorption. DuoPleat combi filters simultaneously provide particle filtration of class M6, thanks to their additional 3-layered high-performance nonwoven on the face side. The large filtering area and the special structure of the filter media involved create not only a particularly high holding capacity and a long operational lifetime, but also very low pressure drop.

The filter capacities are measured according to DIN 71460-2 and refer to a gas breakthrough of 95% for toluene and n-butane, and 80% for  $SO_2$ . The concentration of the test gas is 80 ppm (toluene and n-butane) or 30 ppm ( $SO_2$ ).

Article	Article number	Dimensions (W×H×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average efficiency [%]	Recommend- ed final pressure drop [Pa]	toluene	Filter capacity SO <sub>2</sub> [g]	Filter capacity n-butane [g]
CP 1/1	53439756	592×592×292		3,400	60			1,550	120	250
CP 5/6	53439758	592×491×292		2,700	60			1,250	100	200
CP 1/2	53439770	592×288×292		1,500	60			700	55	110
DP851/1	53438699	592×592×292	M6	3,400	130	85	450	715	165	85
DP855/6	53438701	592×491×292	M 6	2,700	130	85	450	570	132	68
DP851/2	53438700	592×288×292	M6	1,500	130	85	450	310	72	37

### **Gas phase filters** ChemControl Filters



### Application

Viledon<sup>®</sup> ChemControl Filters of the CCF range provide an optimum solution for integrating chemisorptive filter media into conventional air handling systems. The chemisorptive components are mainly based on permanganate impregnated structures with basis weights of either 500 or 1,000 g per square meter. The permanganate is highly reactive against acidic gases such as hydrogen sulfide and sulfur oxides, formaldehyde, mercaptanes and other inorganic contaminant gases. The chemisorptive principle of operation avoids any desorption as it is known with activated carbons which are working on physical adsorption principals. These filters can easily be integrated in air handling units to supply relatively large amounts of make-up air into protected areas such as data centers and microelectronic production facilities. Depending on the concentrations of contaminant gases, the ChemControl Filters can be used in styles with different amounts of chemisorptively active permanganates.

nges.	Article	Dimensions (W×L×D) [mm]	Nominal volume flow [m³/h]	Filter area [m²]	Content of permanganate substrate [kg]	Initial pressure drop [Pa]	Weight [kg]	Thermal stability [°C]	Suitable for gases
al chai	CCF 1000-B-P	592 × 592 × 292	3,400	11	11	160	26	50	$\rm H_2S,SO_2,mercaptanes,formaldehyde$
schnice	CCF 500-B-P	592 × 592 × 292	3,400	11	5.8	160	21	50	$H_2S,SO_2,mercaptanes,formaldehyde$
ct to te	CCF 1000-P-P	592 × 592 × 292	3,400	8	8	130	20	50	$H_2S,SO_2,mercaptanes,formaldehyde$
Subjec	CCF 500-P-P	592 × 592 × 292	3,400	8	4.1	130	15	50	$H_2S,SO_2,mercaptanes,formaldehyde$



### Gas phase filters

Activated-carbon cartridges | Modules + individual elements



Specifications	
Adsorption medium	Activated-carbon, granulated
Operating temperature	<30 °C
Thermal stability	70 °C
Moisture resistance	<60% rel. hum.
Top plate	Steel, painted
Cartridge sheathing	Expanded metal
Seal	Flat seal

### Application

The filters are used in air-conditioning systems in public buildings, at airports, in offices and industrial facilities, in order to eliminate unwanted odors.

### **Special features**

- Stable construction.
- Compact single elements for easy handling and installation.
- Two different cartridge diameters (140 mm and 160 mm).
- Thickness of each activated carbon layer is 35 mm.

Module

Module						
Article	Optimized for	Dimensions (W×H×D) [mm]	Number of cartridges	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Activated-carbon volume [dm³]
C bank B-0305x0610x430/08x140 odor	Odors/organic solvents	305×610×430	8	1,700	200	32
C bank B-0507x0610x430/12x140 odor	Odors/organic solvents	507×610×430	12	2,500	200	48
C bank B-0610x0610x430/16x140 odor	Odors/organic solvents	610×610×430	16	3,400	200	64
C bank B-0305x0610x430/08x140 acid	Acidic gases	305×610×430	8	1,700	200	32
C bank B-0507x0610x430/12x140 acid	Acidic gases	507×610×430	12	2,500	200	48
C bank B-0610x0610x430/16x140 acid	Acidic gases	610×610×430	16	3,400	200	64
C bank B-0305x0610x430/08x140 iodine	Radioactive iodine	305×610×430	8	1,700	200	32
C bank B-0507x0610x430/12x140 iodine	Radioactive iodine	507×610×430	12	2,500	200	48
C bank B-0610x0610x430/16x140 iodine	Radioactive iodine	610×610×430	16	3,400	200	64
C bank B-0305x0610x430/05x160 odor	Odors/organic solvents	305×610×430	5	1,500	150	30
C bank B-0507x0610x430/07x160 odor	Odors/organic solvents	507×610×430	7	2,550	150	42
C bank B-0610x0610x430/09x160 odor	Odors/organic solvents	610×610×430	9	3,000	150	54
C bank B-0305x0610x430/05x160 acid	Acidic gases	305×610×430	5	1,500	150	30
C bank B-0507x0610x430/07x160 acid	Acidic gases	507×610×430	7	2,550	150	42
C bank B-0610x0610x430/09x160 acid	Acidic gases	610×610×430	9	3,000	150	54
C bank B-0305x0610x430/05x160 iodine	Radioactive iodine	305×610×430	5	1,500	150	30
C bank B-0507x0610x430/07x160 iodine	Radioactive iodine	507×610×430	7	2,550	150	42
C bank B-0610x0610x430/09x160 iodine	Radioactive iodine	610×610×430	9	3,000	150	54

Individual elements (cartridg	jes)	
Article	Optimized for	Nominal diameter/ Nominal height [mm]
C cart B-0140x0400x035 odor	Odors/organic solvents	140×400
C cart B-0140x0400x035 acid	Acidic gases	140×400
C cart B-0140x0400x035 iodine	Radioactive iodine	140×400
C cart B-0160x0400x035 odor	Odors/organic solvents	160×400
C cart B-0160x0400x035 acid	Acidic gases	160×400
C cart B-0160x0400x035 iodine	Radioactive iodine	160×400

#### ndividual elements (plates)

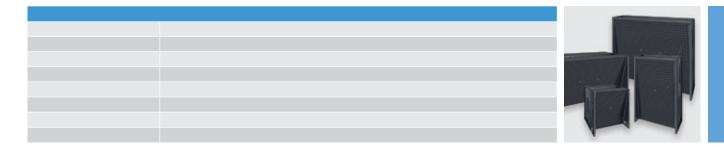
Article	Dimensions (W × H × D) [mm]	Number of cartridges
C plate B-0305x0610x40/08x140	305×610×40	8
C plate B-0507x0610x40/12x140	507×610×40	12
C plate B-0610x0610x40/16x140	610×610×40	16
C plate B-0305x0610x40/05x160	305×610×40	5
C plate B-0507x0610x40/07x160	507×610×40	7
C plate B-0610x0610x40/09x160	610×610×40	9

Freudenberg Filtration Technologies

84

Subject to technical changes.

### **Gas phase filters** Modules | ChemControl Modules



### Application

Viledon<sup>®</sup> ChemControl Modules are the rugged plastic housings that contain our chemical filtration pellets. They come in a range of four sizes to suit all applications and are designed for easy handling and replacement. They can be supplied pre-filled, direct from our production facilities, or refilled via their easy-access removable caps.

The design of your system will determine which size of module you require. Factors that need to be taken into consideration include available space, airflow volumes, type and concentration of contaminants and desired media life. **Proven performance and low whole-life costs.** As with all Viledon® products, our ChemControl Modules offer excellent airflow performance with low pressure drops. We have designed our modules to minimize maintenance time and reduce whole-life costs.

#### Delivery notes

Please consult your local Viledon® partner for further information.

nges.	Article	Dimensions (L×W×D) [mm]	Weigh <del>t</del> [kg]	Depth [mm]	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Packaging unit [units/carton]
al cha	CCM 1810	598×438×144	3.4	25.4	600	35	1
chnice	CCM 1210	598 × 295 × 299	2.9	76	600	180	1
ct to te	CCM 1805	299×438×144	2	25.4	300	35	2
Subjec	CCM 1205	299×295×299	1.8	76	300	180	2



### Gas phase filters Modules | HM<sup>®</sup> Modules

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The Viledon<sup>®</sup> HM<sup>®</sup> modules are an assembly of Versacomb<sup>™</sup> media housed in either a plastic or metallic frame for removing gas-phase contaminants from outdoor or recirculated air. The module is available in nominal depths of one, two, four and six inches as standard. Viledon<sup>®</sup> HM<sup>®</sup> modules are designed to fit in a side-access filter track or a Type 8 filter frame, and are available with or without a header.

### Applications

Refineries, petrochemical plants, electric centers, paper mills, wastewater treatment plants, museums, archives, hospitals, data centers, break rooms, laboratories, commercial and industrial offices.

### Features and benefits

- Provides protection from gas-phase contaminants.
- Can be installed in a standard filter track.
- Can be mounted horizontally or vertically.
- Frame options: Stainless steel, aluminum and plastic are available for most sizes.
- Can be used at face velocities up to 500 fpm.
- Can be used in ambient conditions up to 170 °F and 99 % RH non-condensing.
- By weight removal capacity of up to 40 % for  $H_2S$ , 4 % for  $Cl_2^*$ , 9 % for Toluene and 13 % for Xylene.
- Easy to install (no need for vacuum trucks).
- Economical and energy-efficient.

### **Delivery** notes

Customized dimensions available on request.

Dimensions** (W×L×D) [mm]	Weight [kg]
30.5×30.5×5.1	1.4
30.5×61.0×5.1	2.7
40.6×50.8×5.1	3.2
50.8 × 50.8 × 5.1	3.6
61.0×61.0×5.1	4.5
35.6×35.6×15.2	73

### Freudenberg Filtration Technologies

### Gas phase filters Pellets | CCP Pellets



### Application

Viledon<sup>®</sup> ChemControl Pellets are used in different areas for the prevention of corrosion caused by acidic gases. Special pellets are used for ammonia and chlorine.

- Paper and chemical pulp industryPetrochemistry
- Computer centerLabs
- MicroelectronicsFertilizer
- Pharmaceutical industry

Chemical industry

### CCP 104

Mining

Used for the prevention of corrosion caused by acidic gases. Remove contaminant gases by adsorption, absorption and chemisorption. Contain a minimum of 4 % potassium permanganate to eliminate contaminants via oxidation reaction to inactive solids.

### CCP 108

Used for the prevention of corrosion caused by acidic gases. Remove contaminant gases by adsorption, absorption and chemisorption. Contain a minimum of 8 % potassium permanganate to eliminate contaminants via oxidation reaction to inactive solids.

### CCP 210

Designed to remove or destroy airborne acidic gases by oxidation. Especially high reactivities and removal capabilities, even at high contaminant concentrations. Contain a mix of sodium and potassium permanganate at minimum 10% by weight.

#### CCP 310

Ideal for filtration of acidic gases in highly corrosive environments. Very effective in removing hydrogen sulfide, sulfur dioxide and chlorine. Porous structure based on activated alumina impregnated with activated carbon.

### CCP 510

Used especially for removal of gaseous halogens from airstreams. Capture chlorine, bromine and iodine by adsorption and absorption. Highly porous structure of activated alumina impregnated with active ingredients.

### CCP 610

Used for the filtration of airborne contaminant gases e.g. hydrocarbons, VOCs, chlorine and nitrogen dioxide. Consist of virgin activated carbon with very high inner surface area to achieve excellent adsorption capacities. Very low resistance to airflow and long service life.

### CCP 810

Blended pellets used for filtration of gaseous contaminants. 50:50 mix of CCP 108 and CCP 610 provides excellent adsorption, absorption and chemisorption.

### CCP 830

Blended pellets used for filtration of gaseous contaminants. 50:50 mix of CCP 210 and CCP 610 provides excellent adsorption, absorption and chemisorption.

### CCP 840

Blended pellets used for filtration of gaseous contaminants. 50:50 mix of CCP 310 and CCP 610 provides excellent adsorption, absorption and chemisorption.

### CCP 903

Specifically used for removal of gaseous ammonia from airstreams. They capture ammonia by means of adsorption and absorption inside their zeolite structure.

#### Please note:

All application information provided are subject to on-site conditions, specific application requirements and potential alternating effects by combining several ChemControl Pellets in multi-stage units. Please consult your local Viledon<sup>®</sup> partner for further information.

#### **Delivery** notes

Other ChemControl Pellets are available on request – especially custom formulations with impregnations for specific gaseous contaminants.

Article	Diameter [mm]	Face velocity [m/s]	Ambient temperature [C°]	Removal capacity for Cl <sub>2</sub> of own weight [%]	Removal capacity for H₂S of own weight [%]	Removal capacity for NH <sub>3</sub> of own weight [%]	Removal capacity for SO2 of own weight [%]	Moisture content (approx.) [%]	Crush strength (minimum) [kg]
CCP 104	3.80	0.3 - 2.5	-20+50		7		4	20	2
CCP 108	3.80	0.3 - 2.5	-20 +50		14		7	20	2
CCP 210	3.80	0.3 - 2.5	-20+50		25		12	20	2
CCP 310	3.80	0.3 - 2.5	-20 +50	10	15		10	20	2
CCP 510	3.80	0.3 - 2.8	-20 +50	15				15	2
CCP 610	4×8	0.3 - 2.5	-20 +50	10				3	2
CCP 810	3.80   4×8	0.3 - 2.9	-20 +50	4	7		3		2
CCP 830	3.80	0.3 - 2.1	-20 +50	3.75	15.53		7.5		2
CCP 840	3.80   4 × 8	0.3 - 2.1	-20 +50	10	12		6		2
CCP 903	3.80	0.3 - 2.7	-20 +50			10			3



### Gas phase filters

Systems | ChemControl Deep-Bed Pressurization Units



### Application

Many industrial processes generate contaminant gases that can cause corrosion. Even minor damage to electronic components can have serious consequences, e. g. fault signals, unplanned downtime, high repair costs. The Viledon® ChemControl Deep-Bed Pressurization Units (DBPU) are multi-stage filtration systems that reliably provide complete protection against corrosion. The Viledon® DBPUs are used for medium to high concentrations of gaseous contaminants. The system is placed outside the protected area and supplies purified air into it. Hence, the Viledon® DBPUs provide a positive pressure inside the protected area. They are particularly designed for paper mills, refineries, smelters, steel and chemical plants. In the Viledon® DBPU, Viledon® Compact pocket filters are used in the pre-filtration stage. Viledon® MaxiPleat cassette filters ensure secure fine filtration. The progressive media design, moisture resistance up to 100% relative humidity (no risk of filter collapse) and high dust holding capacities result in improved energy consumption over generic industry filters due to homogeneous air flow coupled with a low average pressure drop.

### Viledon® ChemControl Deep-Bed Pressurization Units (DBPU)

- Boxed anodized aluminum pentapost frame and high strength 30 mm double skin plastisol panels as standard offer reduced leakage rates of L3 in accordance with EN1886, compared to single skin products.
- High quality assembly ensures a smooth interior surface, thereby minimizing frictional losses and providing a positive air seal where panels are fitted to the frames.
- Units equipped with two deep bed stages; optionally available with third or fourth stage for higher gas concentrations.
- Panel construction offers increased acoustic properties over single skin versions with a case reduction index as follows:
- Frequency Hz:
   63 | 125 | 250 | 500 |
   1k |
   2k |
   4k |
   8k
- Casing reduction index: -11 | -14 | -14 | -24 | -25 | -25 | -25 | -23
- Integrated pressure gauges allow clear monitoring onsite.
- Internal and external weatherproof designs available.

### Delivery notes

Please consult your local Viledon® partner for further information

Article	Construction	Air intake	Air outlet	Air volume [m³/h]	Number of pre-filters	Number of fine filters	Overall unit height (excludes refill ports) [mm]	Overall unit width (excluding control panel)** [mm]	Overall unit length (excluding duct connections) [mm]	Overall weight (excluding filters and pellets)*** [kg]	Power con- sumption average [kW]	Control panel
DBPU 1000 Indoor	Plastisol inner/outer double skin panels, with aluminum extrusion frame*	Duct	Duct	1,000	1	1	1,076	700	3,700	400	1.35	IP 54
DBPU 3000 Indoor	Plastisol inner/outer double skin panels, with aluminum extrusion frame*	Duct	Duct	3,000	4	4	1,576	1,280	3,700	700	2.30	IP 54
DBPU 6000 Indoor	Plastisol inner/outer double skin panels, with aluminum extrusion frame*	Duct	Duct	6,000	9	9	2,176	1,900	3,700	900	4.70	IP 54
DBPU 1000 Outdoor	Plastisol inner/outer double skin panels, with aluminum extrusion frame*	Louvre	Duct	1,000	1	1	1,076	700	3,700	420	1.35	IP 66
DBPU 3000 Outdoor	Plastisol inner/outer double skin panels, with aluminum extrusion frame*	Louvre	Duct	3,000	4	4	1,576	1,280	3,700	740	2.30	IP 66
DBPU 6000 Outdoor	Plastisol inner/outer double skin panels, with aluminum extrusion frame*	Louvre	Duct	6,000	9	9	2,176	1,900	3,700	960	4.70	IP 66

### Freudenberg Filtration Technologies

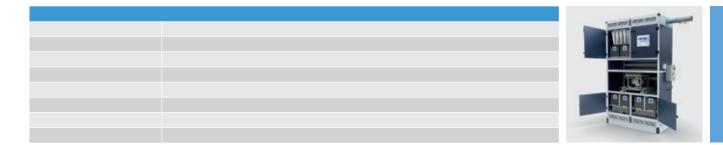
88

\* Stainless steel construction available. All units are supplied as standard in one section. Section breaks can be added as an option

\*\* Customized unit dimensions are available on request.

\*\*\* All units are optionally available with Viledon® CCM 1205 modules

### **Gas phase filters** Systems | ChemControl Recirculation Units



#### Application

Many industrial processes generate contaminant gases that can cause corrosion. Even minor damage to electronic components can have serious consequences, e.g. fault signals, unplanned downtime, high repair costs. The Viledon® ChemControl Recirculation Unit (CRU) and the Viledon® ChemControl Recirculation Pressurization Unit (CRPU) are multi-stage filtration systems that reliably provide complete protection against corrosion.

In both systems, Viledon<sup>®</sup> Compact pocket filters are used in the pre-filtration stage. Positioned before and after the fan, the Viledon<sup>®</sup> ChemControl Modules with pellets eliminate harmful gases. Viledon<sup>®</sup> MaxiPleat cassette filters ensure secure fine filtration. Integrated pressure gauges allow for reliable monitoring onsite.

#### Viledon® CRU: The 'recirculating air filtration' system

The Viledon<sup>®</sup> ChemControl Recirculation Unit (CRU) is a system fully based on recirculated air filtration. This makes it an ideal addition for rooms that are supplied with filtered air and maintained at positive pressure using a Viledon<sup>®</sup> ChemControl Deep-Bed Pressurization Unit (CDBPU).

### Viledon<sup>®</sup> CRPU: The 'outside air + recirculating air filtration' system for overpressure generation

Using an admixture of outside air, the Viledon® ChemControl Recirculation Pressurization Unit (CRPU) can maintain a slight positive pressure within the room to be protected. At moderate concentrations of corrosive gases, the Viledon® CRPU can be operated without the use of a Viledon® ChemControl Deep-Bed Pressurization Unit.

#### **Delivery** notes

Please consult your local Viledon® partner for further information.

#### Viledon® CRU\*

Article	Nominal volume flow [m³/h]	Dimensions (H × W × D) [mm]	Weight [kg]	Number of modules per stage	Number of pre-filters	Number of fine filters	Power consumption average [kW]
1800 DW	1,800	2,600×750×750	550	4	1	1	0.8
1800 DW stainless steel**	1,800	2,600×750×750	580	4	1	1	0.8
3600 DW	3,600	2,600 × 1,500 × 750	650	8	2	2	1.3
3600 DW stainless steel**	3,600	2,600 × 1,500 × 750	680	8	2	2	1.3

Viledon® CRPU

Article	Nominal volume flow [m³/h]	Dimensions (H × W × D) [mm]	Weight [kg]	Number of modules per stage	Number of pre-filters	Number of fine filters	Power consumption average [kW]
1800 DW	1,800	2,600×750×750	560	4	1	1	0.8
1800 DW stainless steel**	1,800	2,600×750×750	590	4	1	1	0.8
3600 DW	3,600	2,600 × 1,500 × 750	660	8	2	2	1.3
3600 DW stainless steel**	3,600	2,600 × 1,500 × 750	690	8	2	2	1.3

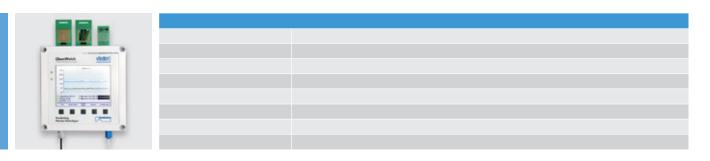


Standard casing: double wall casing ensuring low noise, manufactured using alumina corners and panels with plastisol coating.

Stainless steel casing also available as single wall (SW) model.

### Gas phase filters

ChemWatch | Online Monitoring System



### Application

The ChemWatch Online Monitoring System measures and monitors the corrosivity of air in rooms via copper and silver sensors. Corrosivity is usually caused by acid gases such as  $H_2S$ ,  $SO_2$ ,  $SO_3$ ,  $Cl_2$ ,  $Cl_2O$ , NOx, or NH<sub>3</sub>.

The online monitoring system is suitable for measuring corrosive gases in the range from low ppb to a maximum of 1 to 3 ppm. The sensors are consumed as they measure the corrosivity and thus need to be replaced from time to time. The corrosion rate is determined according to ANSI/ISA-71.04-2013.

### Measurements

- Corrosion rate (Copper and Silver).
- Temperature.
- Relative humidity.
- Differential pressure (positive pressure).

### Characteristics and pluses

- Big color display.
- Data transfer via LAN, WiFi or Bluetooth to PC, control station, or Smartphone.
- Large data storage capacity.
- Unsusceptible to vibrations.
- Precise corrosion rates independent from temperature fluctuations.
- All measured values logged directly from the beginning.
- Easy adjusting of individual measuring tasks on the instrument itself or via PC.
  CE mark.
- 7 standard languages: English, German, French, Spanish, Portuguese, Chinese, and Japanese (additional languages are available on request).
- The user can create notes which can be linked to the measured data.
- Metric and imperial units available.

#### Equipment

- Measuring instrument.
- 1 set of corrosion sensors copper and silver.
- Software for data visualization and analysis (e.g diagrams).
- SD-card for maximum data logging capacity and easy software updates.
- Detailed operating instruction in several languages.
- Power supply unit including adapter set for all common outlets.

Delivery notes

WiFi and Bluetooth modules can be inserted into the instrument as option.

Article	Article number
ChemWatch Instrument	53496605
ChemWatch Cu Sensor	53496606
ChemWatch Ag Sensor	53496607
ChemWatch WiFi Module	53496608
ChemWatch Bluetooth Module	53496609

90

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## Filter cartridges (turbomachinery)

Pulse-jet, depth-loading filters



Viledon® pulse-jet filter cartridges and depth-loading filter cartridges achieve optimum results in intake air filtration for turbomachinery. Pulse-jet filter cartridges are, for instance, the ideal solution for pulse-jet systems, where very high dust concentrations and/or fine, pourable dusts predominate.

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## Filter cartridges for turbomachinery

Pulse-jet | Fine dust



Specifications	
Filter medium	GTS: high-performance nonwoven with water-repellent coating made of synthetic microfibers; GTB: blended synthetic micro-fiber nonwoven with water repellent coating
Recommended final pressure drop	800 Pa
Thermal stability	80 °C
Moisture resistance	100% rel. hum.
Material for cover, base and support cages	Steel, galvanized
Seal	GTS: polyurethane, GTB: neoprene

### Application

Viledon<sup>®</sup> pulse-jet filter cartridges are used for intake air filtration at gas turbines and turbocompressors. The GTB series is suitable for dry locations. The GTS series is used at both onshore and offshore installations.

With their optimum cleaning characteristics, pulse-jet filter cartridges maximize the lifetimes of intake air systems for turbomachinery and reduce the operating costs significantly.

### Characteristics and pluses of the GTS filter cartridges

- Innovative high-performance nonwovens with a water-repellent finish and made of synthetic micro-fibers enable GTS filter cartridges to retain their excellent performance features under all climatic duty conditions.
- The filter medium achieves high arrestance performance, large dust holding capacity, a low average pressure drop and high cost-efficiency. The GTS series is particularly well suited for locations with high dust concentrations in the outside air.
- GTS filter cartridges have been optimized in terms of filtering area and pleat geometry. The active filtering area remains effective over the entire operational lifetime.
- In order to avoid corrosion, the inner and outer support cages, plus the cover and base, are made from galvanized steel or stainless steel. These components are cast in a leakproof configuration, so as to ensure maximized security against dust breakthrough during pulse-jet cleaning.
- Optimum seal with the mounting plate using a foamed-on polyurethane seal.

### Characteristics and pluses of the GTB filter cartridges

- High-strength blended synthetic micro-fiber nonwoven with water repellent coating that allows the cartridge to maintain excellent operational characteristics in most climatic conditions.
- The filter media, ensure high arrestance, high dust holding capacity (prior to self cleaning), low average pressure drop and high cost efficiency. This makes the GTB particularly suitable for predominantly dry locations with high dust concentrations in the ambient air.
- GTB 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.
- To minimize corrosion and handling damage, the inner and outer support cages and end base end caps are made of galvanized steel or stainless steel.
   All components are cast together to ensure leakproof operation as well as high security against dust penetration during pulse operation.
- The foamed-on neoprene gasket ensures optimum sealing against the mounting plate.

### **Delivery** notes

Customized variants of GTS cartridges and adapters (bayonet, etc.) plus cover, base and support cage in stainless steel version are available on request.

GTB cartridges can be obtained in a variety of other dimensions, stainless steel end caps and support cages and can be supplied with installation accessories (washers and nuts).

Article	Outer diameter [mm]	Construction height [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Initial efficiency [%]	Average efficiency [%]	Average arrestance [%]	Filter area [m²]
GTB 324 W66SO	324	660	M6	1,100	120	18	96.0	>99	18.1
GTB 324 W70S0	324	700	M6	1,100	120	18	96.0	>99	19.2
GTB 324-445 W66S0 Set	445/324	1,330	M6	2,500	135	18	96.0	>99	40.1
GTB 445 W66SO	445/324	660	M6	1,400	-	18	96.0	>99	22.0
GTS 324 W66S0	324	660	F 8	1,100	115	65	97.0	99.9	18.1
GTS 324 W70S0	324	700	F 8	1,100	115	65	97.0	99.9	19.2
GTS 324-445 W66S0 Set	445/324	1,330	F 8	2,500	130	65	97.0	99.9	40.1
GTS 445 K66S0	445	660	F 8	1,400	-	65	97.0	99.9	22.0

### Freudenberg Filtration Technologies

to technical changes

## Filter cartridges for turbomachinery

Depth-loading filters | Fine dust

Specifications		~~~
Filter medium	GTG: synthetic microglass-fiber nonwoven with water repellent coating	
Recommended final pressure drop	800 Pa	
Maximum permitted operating pressure	3,000 Pa	
Seal	Foamed-on polyurethane	-
		1 - 22

### Application

Viledon<sup>®</sup> depth-loading filter cartridges are used in intake air filtration for gas turbines and turbocompressors at both onshore and offshore installations.

### Characteristics and pluses of the GTG filter cartridges

- Innovative high strength synthetic micro-glass-fiber nonwoven with water repellent coating.
- Uniform pleat spacing for maximum dust holding capacity.
- The filter medium offers excellent initial efficiency, high dust holding capacity, low pressure drop and high cost efficiency. This makes the GTG cartridges of filter class F.
- 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.

GTG filter cartridges can be obtained in a variety of other dimensions, stainless steel end caps and support cages.

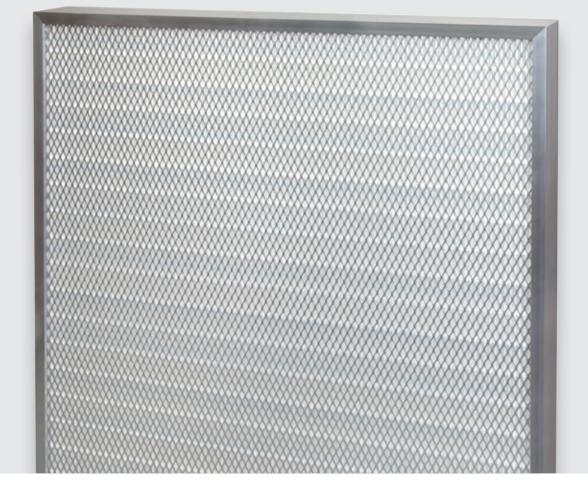
a changes.	Article	Article number	Construc- tion height [mm]	Outer diameter [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average efficiency [%]	Average arrestance [%]	Dust holding capacity (ASHRAE/450 Pa) [g]	Filter area [m²]
CUNIC	GTG 324-445 W 66S0-Set		1,330	445/324	F 9	2,500	135	98	>99.0	> 1,750	40.1
1010	GTG 445 K66S0	53458789	660	445/324	F9	1,400	70	98	>99.9	>800	22.0
alanc	GTG 324 W66S0	53454436	660	324	F 9	1,100	120	98	>99.9	>800	18.1





### High-temperature filters

HT filter mats, HT filter packs, HiProtec cassette filters, HT cassette filters



For air filtration at temperatures above 100 °C up to a maximum of 385 °C, the Viledon<sup>®</sup> high-temperature filters are the right choice. The silicone-free filter elements meet particularly stringent requirements for air purity, process dependability and cost-efficiency. The pleated filter media are made from special, thermally stable micro-glass-fiber papers.



## High temperature filters

HT filter mats | Fine dust



Specifications	
Filter medium	LH 243: Filter medium made from ultra-fine, homogeneously spun glass-fibers. Clean air side with special final layer made of glass-fiber nonwoven; LH 244: Filter medium made from ultra-fine homogeneously spun glass-fibers. Clean air side with special final layer made of synthetic nonwoven. LH 620: Filter medium made from ultra-fine, homogeneously spun glass-fibers. Clean air side with special final layer made of glass-fiber nonwoven.
Recommended final pressure drop	250 Pa
Thermal stability LH 244	150 °C; LH 243 und LH 620: 200 °C
Moisture resistance	100% rel. hum.
Fire class	F1 acc. to DIN 53438

### Application

- Filtration of recirculating air in drying booths or drying ovens in surface treatment systems.
- Filtration of air and gases at high temperatures.

### Delivery notes

LH 243 and LH 244: Rolls are available up to a maximum of 10 × 1.5 m. LH 620 rolls are available up to a maximum of 2 × 1.5 m. Customized dimensions are available as roll goods or blanks on request.

Article	Thickness approx. [mm]	Filter class	Nominal media velocity [m³/h×m²]	Initial pressure drop [Pa]	Average efficiency [%]	Average arrestance [%]	al changes.
LH 243	20	M 5	2,200	125	46	97	chnico
LH 244	20	M5	2,200	125	46	97	ct to te
LH 620	20	M 5	2,200	125	46	97	Subjec

## High temperature filters HT filter packs

Specifications		
Filter medium	LH 350/LH 1000: Glass-fiber nonwoven framed in expanded aluminum metal, type sticker on the clean air side, clean air side with additional glass-fiber nonwoven; LH 1000 OV: Glass-fiber nonwoven framed in expanded aluminum metal, type sticker on the clean air side; LH 370: Progressively structured PES staple-fiber nonwoven with a scrim on the clean air side in expanded aluminum metal.	
Recommended final pressure drop	250 Pa	a 100 40 40
Thermal stability	LH 350: 200 °C; LH 1000 und LH 1000 OV: 300 °C; LH 370: 120 °C	
Moisture resistance	100 % rel. hum.	and the second sec
Fire class	F 1 acc. to DIN 53438	SCORE &

### Application

HT filter packs are used for recirculated air filtration in drying booths and drying ovens for surface treatment systems, and for the filtration of air and gases at high temperatures.

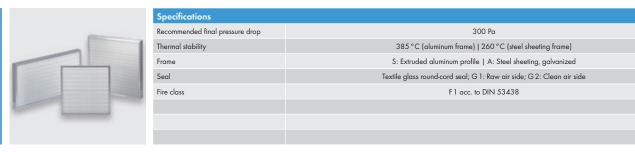
### Delivery notes

Standard dimensions: Approx. 480 × 480 × 14 mm, customized dimensions available on request. Delivery unit: 30 pcs./carton



### High temperature filters

HiProtec cassette filters | Construction depth up to 78 mm | Fine dust



#### Application

The principal application category for Viledon<sup>®</sup> HiProtec cassette filters HT 10.0 and HT 2.5 with construction depths of up to 78 mm is air filtration in paint driers for the automotive industry. The filters are mounted in the booth ceilings or the side channels of the dryer pipes, and meet particularly stringent requirements for air purity, process dependability and cost-efficiency.

Besides the applications in surface treatment technology, the filters also meet the toughest of quality stipulations for general drying technology. Type HT 2.5 A 480 × 480 mm (class M 6) frequently serves as an upgrade for expanded-metal filter packs and cells.

#### Special features

- The Viledon<sup>®</sup> HiProtec cassette filters HT 10.0 and HT 2.5 excel in terms of a high dust holding capacity and very good mechanical sturdiness even when subjected to inhomogeneous air flows.
- Thanks to low filter resistances, very long operational lifetimes can be achieved, coupled with exceptionally cost-efficient operating characteristics.

#### Delivery notes

Available in all dimensions commonly encountered on the market. Customized dimensions, filtering areas or frame materials available on request.

Article	Article number	Dimensions (H × W × D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average efficiency [%]	Average arrestance [%]	Filter area [m²]	Weight [kg]	Seal position
HT10-S-0915x0457x055-1	53457313	915×457×55	M6	1,800	30	85	99	6.5	4.5	Raw air side
HT10-S-0915x0457x055-2	53463986	915×457×55	M 6	1,800	30	85	99	6.5	4.5	Clean air side
HT10-S-0915x0457x078-1	53463978	915×457×78	M6	1,900	30	85	99	7.4	5.5	Raw air side
HT10-S-0805x0575x055-2	53458958	805 × 575 × 55	M6	2,000	30	85	99	7.2	6.5	Clean air side
HT10-S-0610x0610x078-2	53299750	610×610×78	M6	1,700	30	85	99	6.6	5.0	Clean air side
HT10-S-0610x0610x078-1	53463984	610×610×78	M6	1,700	30	85	99	6.6	5.0	Raw air side
HT10-S-0610x0610x055-1	53457319	610×610×55	M6	1,600	30	85	99	5.8	3.5	Raw air side
HT10-S-0610x0610x055-2	53457404	610×610×55	M6	1,600	30	85	99	5.8	3.5	Clean air side
HT10-S-0490x0490x040-2	53457321	490×490×40	M6	860	35	85	99	2.1	1.5	Raw air side
HT10-S-0480x0480x078-1	53456716	480×480×78	M6	1,050	30	85	99	4.1	3.0	Raw air side
HT10-A-0480x0480x022-2	53456197	480×480×22	M6	1,000	40	80	99	1.5	2.0	Clean air side
HT10-A-0480x0480x022-1	53469855	480×480×22	M6	1,000	40	80	99	1.5	2.0	Raw air side
HT2.5-S-0915x0457x078-1	53463978	915×457×78	F 8	1,900	85	95	>99	7.4	5.0	Raw air side
HT2.5-S-0915x0457x078-2	53463977	915×457×78	F8	1,900	85	95	>99	7.4	5.0	Clean air side
HT2.5-S-0915x0457x055-1	53457320	915×457×55	F8	1,800	95	95	>99	6.5	5.5	Raw air side
HT2.5-S-0915x0457x055-2	53456199	915×457×55	F8	1,800	95	95	>99	6.5	5.5	Clean air side
HT2.5-S-0610x0610x078-1	53463984	610×610×78	F 8	1,700	85	95	>99	6.6	5.0	Raw air side
HT2.5-S-0610x0610x078-2	53456196	610×610×78	F 8	1,700	85	95	>99	6.6	5.0	Clean air side
HT2.5-S-0610x0610x055-1	53457312	610×610×55	F 8	1,600	95	95	>99	5.8	3.5	Raw air side
HT2.5-S-0610x0610x055-2	53457621	610×610×55	F8	1,600	95	95	>99	5.8	3.5	Clean air side
HT2.5-S-0490x0490x040-2	53463309	490×490×40	F8	860	135	95	>99	2.1	1.5	Clean air side
HT2.5-S-0305x0610x055-1	53456195	305×610×78	F8	850	85	95	>99	3.3	2	Raw air side
HT2.5-S-0305x0305x055-1	53458016	305 × 305 × 55	F8	400	95	95	>99	1.45	2.5	Raw air side
HT2.5-S-0915x0610x078-1	53482697	915×610×78	F9	2,000	75	>95	>99	10	7.5	Raw air side

### Freudenberg Filtration Technologies

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### High temperature filters

## HT cassette filters | Construction depth 292 mm | Fine dust

Recommended final pressure drop     300 Pa       Thermal stability     at least 260 °C       Frame     25 mm top frame (type B) or box shape (type A)       Frame material     Steel sheeting, galvanized   Aluminum extruded section       Seal     Textile glass round-cord seal       Fire class     F1 acc. to DIN 53438	Specifications		
Frame     25 mm top frame (type B) or box shape (type A)       Frame material     Steel sheeting, galvanized   Aluminum extruded section       Seal     Textile glass round-cord seal	Recommended final pressure drop	300 Pa	
Frame material     Steel sheeting, galvanized   Aluminum extruded section       Seal     Textile glass round-cord seal	Thermal stability	at least 260 °C	Contraction of the local states
Seal Textile glass round-cord seal	Frame	25 mm top frame (type B) or box shape (type A)	
	Frame material	Steel sheeting, galvanized   Aluminum extruded section	
Fire class F1 acc. to DIN 53438	Seal	Textile glass round-cord seal	
	Fire class	F1 acc. to DIN 53438	Links marking

### Application

The principal application category for the Viledon® HT60 and HT90 hightemperature cassette filters with an construction depth of 292 mm is air filtration in recirculating air equipment of paint drying processes in the automotive industry. The filters meet particularly stringent requirements for air purity, process dependability and cost-efficiency.

Besides the applications in surface treatment technology, the filters also meet the toughest of quality stipulations for general drying technology.

### **Special features**

- The Viledon® HT 60 and HT 90 high-temperature cassette filters excel in terms of a particularly high dust holding capacity and very good mechanical strength, even when subjected to inhomogeneous air flows.
- Thanks to low filter resistances, very long operational lifetimes can be achieved, coupled with exceptionally cost-efficient operating characteristics.

#### **Special variants**

For confined space situations, the filters are available with a top frame (type B) featuring a reduced through-hole width of 547 mm (designation: -547).

For unfavorable flow conditions in the system, the filters can be supplied in a stronger version (designation: -reinforced).

For temperatures up to 350 °C, the filters are also available with a frame made of aluminized steel sheeting (designation: -D).

For systems with only a confined space at their disposal, the filter elements are also available in a construction depth of 150 mm.

### **Delivery** notes

Customized dimensions, different frame materials, higher thermal stability or a specially reinforced version available on request.

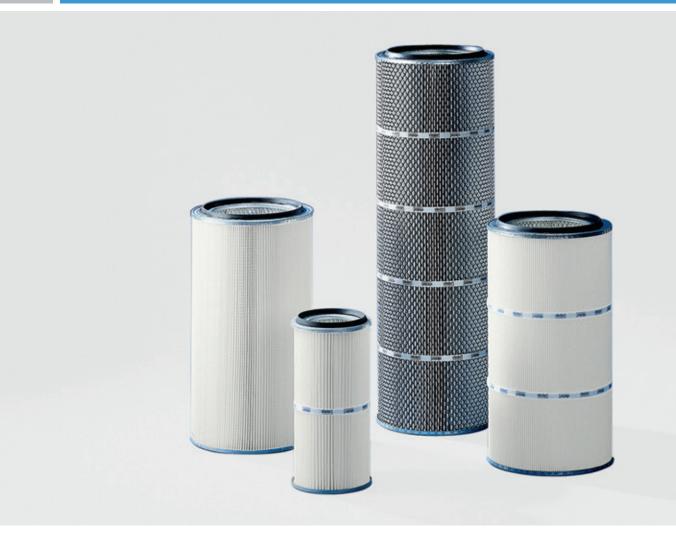
Article	Article number	Dimensions (L×W×D) [mm]	Filter class	Nominal volume flow [m³/h]	Initial pressure drop [Pa]	Average efficiency [%]	Average arrestance [%]	Filter area [m²]	Weight [kg]	Seal position
HT60-A-0610x0610x292-G-2-M-3-Q-2-F	53366788	610×610×292	M6	3,400	90	71	99	12.0	10.0	Clean air side
HT60-A-0610x0610x292-G-1-M-3-Q-2-F	53414743	610×610×292	M6	3,400	90	71	99	12.0	10.0	Raw air side
HT60-A-0305x0610x292-G-2-M-3-Q-2-F	53367242	305×610×292	M6	1,700	100	71	99	6.0	6.0	Clean air side
HT60-A-0305x0610x292-G-2-M-3-Q-2F-reinfo	53426898	305×610×292	M6	1,700	100	71	99	6.0	6.0	Clean air side
HT60-B-0592x0592x292-G-2-M-3-Q-2-F	53366698	592 × 592 × 292	M6	3,400	130	71	99	9.0	7.0	Clean air side
HT60-B-0592x0592x292-G-1-M-3-Q-2-F	53366787	592 × 592 × 292	M6	3,400	130	71	99	9.0	7.0	Raw air side
HT60-B-0592x0592x292-G-2-M-3-Q-2F-547 mm	53394225	592 × 592 × 292	M6	3,400	130	71	99	9.0	7.0	Clean air side
HT60-B-0592x0592x292-G-2-M-3-Q-2F-547-Re	53414564	592 × 592 × 292	M6	3,400	130	71	99	9.0	7.0	Clean air side
HT60-B-0490x0592x292-G-2-M-3-Q-2-F	53429703	490 × 592 × 292	M 6	2,800	130	71	99	9.0	7.0	Clean air side
HT60-B-0287x0592x292-G-2-M-3-Q-2-F	53366705	287 × 592 × 292	M6	1,700	140	71	99	4.5	4.5	Clean air side
HT60-B-0287x0592x292-G-1-M-3-Q-2-F	53366706	287×592×292	M 6	1,700	140	71	99	4.5	4.5	Raw air side
HT60-B-0287x0592x292-G-2-M-3-Q-2F-547 mm	53394224	287×592×292	M6	1,700	140	71	99	4.5	4.5	Clean air side
HT90-A-0610x0610x292-G-2-M-3-Q-2-F	53340443	610×610×292	F 8	3,400	120	93	>99	12.0	10.0	Clean air side
HT90-A-0610x0610x292-G-1-M-3-Q-2-F	53433314	610×610×292	F 8	3,400	120	93	>99	12.0	10.0	Raw air side
HT90-A-0305x0610x292-G-2-M-3-Q-2-F	53371208	305×610×292	F 8	1,700	130	93	>99	6.0	6.0	Clean air side
HT90-B-0592x0592x292-G-2-M-3-Q-2-F	53366717	592×592×292	F 8	3,400	150	93	>99	9.0	7.0	Clean air side
HT90-B-0592x0592x292-G-1-M-3-Q-2-F	53409792	592×592×292	F 8	3,400	150	93	>99	9.0	7.0	Raw air side
HT90-B-0287x0592x292-G-2-M-3-Q-2-F	53366727	287×592×292	F 8	1,700	160	93	>99	4.5	4.5	Raw air side
HT90-B-0287x0592x292-G-1-M-3-Q-2-F	53382668	287×592×292	F 8	1,700	160	93	>99	4.5	4.5	Raw air side





### Filters for dust removal

Filter cartridges, filter bags, filter plates, filter media

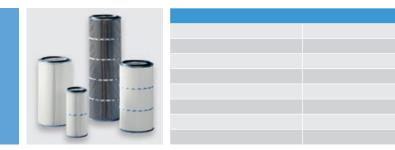


We develop customized dust removal concepts for enhancing occupational safety and protecting both the environment and technical systems, as well as for product recovery. We customize Viledon® filter media for dust removal, filter cartridges and filter plates in terms of model, construction height, nominal diameters and pleat geometry to suit the particular requirements involved.



### Filters for dust removal

Filter cartridges



### DIN standard cartridges

Cylindrical filter cartridges for horizontal and vertical installation with integrated interior support cage in various heights. Simple installation using a tie-rod or a closure cover. Available in nominal diameters of 200, 327 mm and 351 mm, and in the standard lengths of 300, 400, 600, 660, 1,000 and 1,200 mm.

### Twist & Fix filter cartridges

- Cylindrical filter cartridges with four nominal diameters 145, 156, 218 and 324 mm, with standard lengths of 300, 600, 1,000, 1,200 and 1,500 mm and with 3- or 4-hook flanges. Perfect fit of the filter cartridge and protection of the filter medium thanks to centering collar.
- Spacer ribs (patented) on both sides at the flange ensure correct installation and an optimum seal to the system's raw-gas compartment.
- A foamed-on seal on both sides for installation on the raw or clean-gas side as desired.

### Snap & Fix filter cartridges

- The cartridge series snaps into place "properly", for a perfect axial seal achieved without any further aids like metal sleeves or spring washers.
- Suitable for upgrading old bag filter systems or for new installations.
- Installation: on the clean-gas side without any elaborate screwing work: simply
  press into place and the patented snap-on hooks will engage.
- Dismantling: just takes a matter of seconds with the aid of a snap-ring lifter.

### Pluses

- Low pressure drop values.
- Minimized compressed-air-consumption for the cleaning routine.
- Pleat geometry optimally matched to the application concerned.
- All cartridges are fitted with surface media, and can be cleaned using a pulse-jet procedure or rotary nozzles.
- Long operational lifetimes.
- Low replacement costs.
- Low disposal outlay thanks to long operational lifetimes.
- Antistatic variants have DEKRA certification.

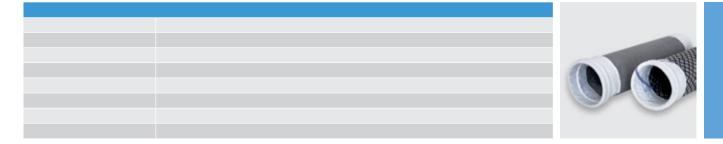
Article	Article number	Version	Filter medium	Nominal diameter/ Nominal lengths [mm]	Filter area [m²]	Pleat depth [mm]	Dust class*
LP 351 D-71-A 17-76	53457670	DIN open/open	sinTexx Plus as	351/710	17	44	м
LP 327 S-12-A 15-06	53343700	DIN standard cartridge	FE 2506-sinus, PES (antistatic)	327/1,205	15.6	48	м
LP 200 S-40-A 20-07	53322727	DIN standard cartridge	FE 2507-sinus, PES	200/405	2.0	32	м
LP 327 S-66-A 14-07-L	53421628	DIN standard cartridge	FE 2507-sinus, PES	327/660	13.9	46	м
LP 327 S-12-A 25-07	53324309	DIN standard cartridge	FE 2507-sinus, PES	327/1,205	25.3	46	м
LP 327 S-30-B 50-09	53492086	DIN standard cartridge	FE 2509, PP	327/305	5.0	46	м
LP 327 D-66-A 11-09	53492081	DIN standard cartridge	FE 2509, PP	327/660	11.0	46	м
LP 327 S-66-A 11-09	53492094	DIN standard cartridge	FE 2509, PP	327/660	11.0	46	м
LP 327 S-76-A 12-09	53492095	DIN standard cartridge	FE 2509, PP	327/765	12.6	46	м
LP 327 S-10-A 13-09	53492070	DIN standard cartridge	FE 2509, PP	327/1,005	13.0	46	м
LP 327 S-60-A 10-76	53458532	DIN standard cartridge	sinTexx Plus as	327/605	10	46	м
LP 152 B-15-A 54-07	53321826	Snap & Fix cartridge	FE 2507-sinus, PES	152/1,512	5.4	25	м
LP 155 B-15-A 54-07	53327406	Snap & Fix cartridge	FE 2507-sinus, PES	155/1,512	5.4	25	м
LP 145 G-10-A 27-06	53375277	Twist & Fix cartridge	FE 2506-sinus, PES (antistatic)	145/1,012	2.7	25	м
LP 156 G-10-A 36-06	53372251	Twist & Fix cartridge	FE 2506-sinus, PES (antistatic)	156/1,012	3.6	25	м
LP 218 G-15-A 75-09	53295115	Twist & Fix cartridge	FE 2509, PP drainage nonwoven	218/1,512	7.5	32	м
LP 324 G-60-B 77-21	53306324	Twist & Fix cartridge	FE 2521, PES + PTFE membrane	324/612	7.7	48	м
LP 324 G-12-A 25-77	53457204	Twist & Fix cartridge	sinTexx Plus	324/1,212	25.3	48	м
LP 145 G-15-A 54-77	53458531	Twist & Fix cartridge	sinTexx Plus	145/1,512	5.4	25	м

\* according to DIN EN 60 335-2-69 appendix AA

104

Freudenberg Filtration Technologies Subject to technical changes

### **Filters for dust removal** Filter bags



Viledon<sup>®</sup> filter bags are available in a large number of different sizes, lengths and models, and in different top and bottom section variants. On request, Viledon<sup>®</sup> filter bags are available made from almost all the filter media commonly encountered on the market.

Viledon<sup>®</sup> filter bags can be precoated to suit your own particular needs, e.g. with FHM 1500 for sticky dusts or with lime for oily dusts.

### Viledon® NEXX Bags

- Viledon<sup>®</sup> NEXX filter bags are the next generation of surface filters, with outstanding advantages compared to conventional filters featuring needlefelt.
- Whether in the pigment, cement or metal industries, in fact wherever large quantities of dust are encountered, Viledon<sup>®</sup> NEXX filter bags are what you need.
- Original Viledon<sup>®</sup> NEXX: This high-quality patented filter medium possesses unique properties for surface filtration.
- Worry-free cleaning: Dusts can be quickly and easily cleaned off the microfiber layer of the Viledon<sup>®</sup> NEXX filter bags.
- Reduced energy costs: Thanks to optimized filter performance, less compressed air is used during the cleaning process, and the fan's power consumption downsized.
- Low emissions: With Viledon<sup>®</sup> NEXX, clean-gas values of < 1 mg/m<sup>3</sup> can be lastingly achieved.
- In comparison to needlefelts, Viledon® NEXX requires around 50% less resources to produce. Coupled with the same (or an even higher) filtration performance! This means you're making a proactive contribution to protecting the natural environment and ensuring sustainable resource-economy.
- Application: e.g. fine dusts, pigment, cement and metal industries.

### Viledon<sup>®</sup> Fiber Bags Viledon<sup>®</sup> Fiber Bags w

- Viledon<sup>®</sup> Fiber Bags with unique characteristics are particularly suitable for use in the wood and paper industry.
- In particular for extraction of fibrous dust, high arrestance with a low pressure drop can be achieved.
- Significantly longer useful lifetimes than conventional needlefelts.
- Very high resistance to abrasion.
- Viledon<sup>®</sup> FE 2919 + FE 2920 are made from recycled polyester. So the plastic can be brought back into industrial circulation and is not dumped on a landfill. This is a proactive contribution towards resource-economy.
- Applications: fibrous dusts, wood and paper industries.

### Viledon<sup>®</sup> MAXX Bags

- For maximized filtration performance.
- MAXX Bags are finished with a PTFE membrane on the face side.
- Ultra-fine dusts in the nm range are efficiently arrested, and clean-gas concentrations of < 1 mg / m<sup>3</sup> achieved.
- Very good regenerability using a pulse-jet routine.
- Application: ultra-fine dusts.

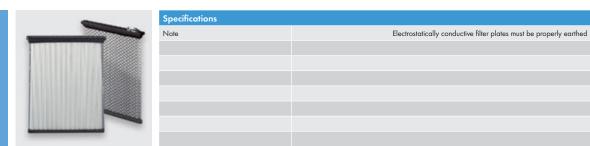
The innovative Viledon $^{\oplus}$  filter media are also available as roll material: Antistatic (gray-black raster print) or in the standard version (gray).

	Article	Filter medium	Weight per unit area approx. [g/m²]	Maximum tensile force along/across [N/5 cm]	Thermal stability [°C]		
	NEXX Bags	NEXX	240	700/800	150		
900.	NEXX Bags as	NEXX as	240	700/800	150		
	Fiber Bags	FE 2920	250	750/750	150		
	Fiber Bags as	FE 2919	260	750/750	150		
2	MAXX Bags	FE 2921	280	750/750	150		
	MAXX Bags as	FE 2923	280	750/750	150		



## Filters for dust removal

Filter plates



### **Product characteristics**

- High-performance filter plates for every application, to ensure compliance with the statutory residual-dust emission values.
- Long lifetime coupled with low maintenance and operating costs.
- Space-saving thanks to compact construction with pleated, synthetic filter media.
- Can be regenerated using all customary cleaning processes and by washing.

### Delivery notes

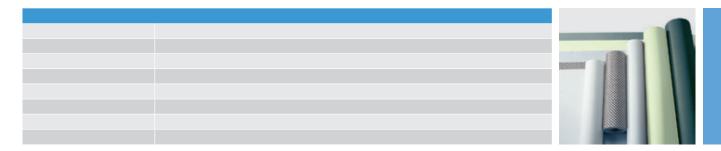
Customized product variants and dimensions available on request. Please ask our customer service for technical data.

Article	Dimensions (W × H × D) [mm]	Pleat depth [mm]	Filter medium	Filter area [m²]	Number of pleats
FP 0110 C6014N	490×600×33	15	FE 2831 polyester	1.4	40
FP 0110 C6014L	490×600×33	15	FE 2832 polyester antistatic	1.4	40
FP 0110 C6014C	490×600×33	15	FE 2833 polyester + PTFE membrane	1.4	40
FP 0110 C6014D	490×600×33	15	FE 2834 polyester + PTFE membrane antistatic	1.4	40
FP 0110 C1024N	490 × 1,000 × 33	15	FE 2831 polyester	2.4	40
FP 0110 C1024L	490 × 1,000 × 33	15	FE 2832 polyester antistatic	2.4	40
FP 0110 C1024C	490 × 1,000 × 33	15	FE 2833 polyester + PTFE membrane	2.4	40
FP 0110 C1024D	490 × 1,000 × 33	15	FE 2834 polyester + PTFE membrane antistatic	2.4	40
FP 0110 C1230N	490 × 1,200 × 33	15	FE 2831 polyester	3.0	40
FP 0110 C1230L	490 × 1,200 × 33	15	FE 2832 polyester antistatic	3.0	40
FP 0110 C1230C	490 × 1,200 × 33	15	FE 2833 polyester + PTFE membrane	3.0	40
FP 0110 C1230D	490 × 1,200 × 33	15	FE 2834 polyester + PTFE membrane antistatic	3.0	40
FP 0800 C6021N	490×600×33	15	FE 2831 polyester	2.1	60
FP 0800 C6021L	490×600×33	15	FE 2832 polyester antistatic	2.1	60
FP 0800 C6021C	490×600×33	15	FE 2833 polyester + PTFE membrane	2.1	60
FP 0800 C6021D	490×600×33	15	FE 2834 polyester + PTFE membrane antistatic	2.1	60
FP 0800 C1034N	490 × 1,000 × 33	15	FE 2831 polyester	3.4	60
FP 0800 C1034L	490 × 1,000 × 33	15	FE 2832 polyester antistatic	3.4	60
FP 0800 C1034C	490 × 1,000 × 33	15	FE 2833 polyester + PTFE membrane	3.4	60
FP 0800 C1034D	490 × 1,000 × 33	15	FE 2834 polyester + PTFE membrane antistatic	3.4	60
FP 0800 C1241N	490 × 1,200 × 33	15	FE 2831 polyester	4.1	60
FP 0800 C1241L	490 × 1,200 × 33	15	FE 2832 polyester antistatic	4.1	60
FP 0800 C1241C	490 × 1,200 × 33	15	FE 2833 polyester + PTFE membrane	4.1	60
FP 0800 C1241D	490 × 1,200 × 33	15	FE 2834 polyester + PTFE membrane antistatic	4.1	60
FP 1800 C1050C	554 × 1,045 × 52	24	FE 2833 polyester + PTFE membrane	5.0	52

### Freudenberg Filtration Technologies

### Filters for dust removal

Filter media for dust removal elements



#### FE 2506-sinus and FE 2507-sinus

- The pleatable polyester filter media with sinusoidal cross-section and microfibers achieve up to 35% energy cost savings when operating a cartridge system.
- You benefit from an extended operational lifetime and reduced maintenance costs.
- The patented pleat stabilization is thermally stable up to 90 °C and remains mechanically stable even under alternating loads in the filtration and cleaning phases.
- Increase your filters' air flow rate, since the cartridges finished with FE 2507-sinus offer a higher effective filtering area.

### Antistatic filter media

- Finished with a patented raster imprint on both sides, applied by carbon suspension.
- High operational dependability without restricting the filters' performance.
- Retain their antistatic effect even with abrasive dusts or after being washed in conformity with the washing instructions.
- = DEKRA test reports with electric surface and resistances to ground  $< 10^8 \ \Omega$  are on file.

Full-area thermal bonding of the media involved creates very smooth nonwoven surfaces. This means removal of the dust cake during cleaning is significantly better than with spunbonded nonwovens featuring punctiform or linear bonding.

#### **Delivery** notes

Customized dimensions are available on request, not available as roll goods.

### sinTexx Plus 📿 🦯

- sinTexx Plus is a corrugated polyester medium with a nanofiber lining, developed specifically for removing dust from smoke produced in welding, cutting and coating processes.
- Collection efficiency for fine dust and smoke improved across the board and assured right from the start. Thanks to the higher collection efficiency threshold limit values for the workplace can be reliably complied with.
- Highly efficient thanks to lower flow resistance. This significantly reduces the consumption levels for power and compressed-air and extends useful lifetime of the filter elements concerned. Finally this improves the energy balance for the system's operator.
- Dispensation of the initial precoating of cartridges otherwise customary. This
  implies easier handling, less maintenance and the costs can be reduced.
- Combination of excellent properties of the corrugated Viledon filter medium with improved filtration behavior.

Efficacious filtration of ultra-fine and difficult-to-handle dust and smoke outperforming customary media.

### NEXX

This patented microfiber material has been developed specifically for the stringent requirements in dust removal systems, and possesses unique properties for surface filtration.

- Dusts can be quickly and easily washed off the microfiber layer of the Viledon<sup>®</sup> NEXX filter medium.
- With Viledon<sup>®</sup> NEXX clean-gas values of < 1 mg/m<sup>3</sup> can be lastingly achieved.
- Resource-saving manufacturing allows active contribution to environmental protection.

Article	Product series	Filter medium	Thick-	Weight	Dust class*	Air- permeability	Elongation at	Maximum tensile force
	series		ness ap- prox. [mm]	per unit area approx. [g/m²]	ciass	at 200 Pa [m³/(m²×h)]	tensile force along/across [%]	along/ across [N/5 cm]
FE 2506	FE Medien	PES, thermally bonded, antistatic halftone print	0.45	250	м	300	25/40	300/600
FE 2507	FE Medien	PES, thermally bonded	0.45	240	М	300	25/40	300/600
FE 2508	FE Medien	100% polyolefin, thermally bonded, antistatic halftone print	0.3	130	М	500	25/25	350/600
FE 2509	FE Medien	100% polyolefin, thermally bonded	0.3	120	М	500	25/25	350/200
FE 2519	FE Medien	PES, thermally bonded, antistatic halftone print	1.0	260		3,400	35/35	750/750
FE 2520	FE Medien	PES, thermally bonded	1.0	250		3,400	35/35	750/750
FE 2521	FE Medien	PES, thermally bonded, + PTFE membrane	1.0	270	М	320	35/35	750/750
FE 2523	FE Medien	PES, thermally bonded, antistatic halftone print, + PTFE membrane	1.0	280	М	320	35/35	750/750
FE 2576 sinTexx Plus as	sinTexx Plus	PES, thermally bonded with nanofiber lining; antistatic finish	0.55	240	м	600	25/40	500/700
FE 2577 sinTexx Plus	sinTexx Plus	PES, thermally bonded with nanofiber lining	0.55	240	М	600	25/40	500/700
FE 2931 NEXX as	NEXX	PES/PA, microfilaments; antistatic finish	1.0	245	м	480	35/35	700/800
FE 2932 NEXX	NEXX	PES/PA, microfilaments	1.0	240	М	600	35/35	700/800
FE 2933 NEXX as wr	NEXX	PES/PA, microfilaments; antistatic finish; water- and oil-repellent finish	1.0	250	м	420	35/35	700/800
FE 2934 NEXX wr	NEXX	PES/PA, microfilaments; water- and oil-repellent finish	1.0	245	м	420	35/35	700/800

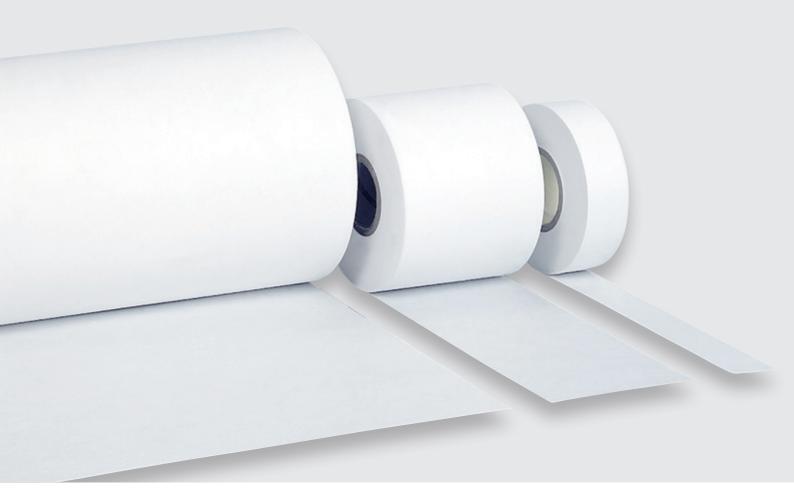
\* according to DIN EN 60 335-2-69 appendix AA

to technical changes



# Liquid filtration

### nutritexx, cooltexx, pluratexx, novatexx



Viledon<sup>®</sup> sets the standard for industrial liquid filtration in terms of quality, reliability and versatility: with nutritexx for food and beverage filtration, with cooltexx for coolant and lubricant filtration, with pluratexx for oil, urea and fuel filtration and with novatexx as support media for membranes.



Freudenberg Filtration Technologies

### Liquid filtration nutritexx | Food-grade nonwovens



#### Application

Whether for food and beverage or drinking water filtration: In stringently hygienic areas such as food and beverage or drinking water filtration producers require special filter media which fulfill the various requirements and highest standards - Viledon<sup>®</sup> nutritexx filter media ensure the perfect combination of hygiene, efficiency and diversity.

#### **Product advantages**

- Good processability for making bags (sewing, welding, die-cutting).
- Long operational lifetime.
- Low pressure drop.
- High wet strength.

#### Delivery notes

Customized roll dimensions available on request.

Article	Weight per unit area approx. [g/m²]	Air permeability at 100 Pa [I/(s×m²)]	Maximum tensile force along/across [N/5 cm]	Thickness approx. [mm]
nutritexx 2640	100	150	130/220	0.24
nutritexx 2641	100	900	120/75	0.64
nutritexx 2690N	75	1,600	90/60	0.6
nutritexx 2693N	65	1,800	80/60	0.5
nutritexx 2681	30	3,500	20/14	0.25
nutritexx 2614	65	980	85/45	0.22
nutritexx 1007 KN	70	38	55/25	0.25
nutritexx 2007	100	90	95/65	0.74
nutritexx 5021	50	90	40/25	0.35
nutritexx 6550	50	1,200	135/60	0.24
nutritexx 6470	70	1,600	100/65	0.25

### Freudenberg Filtration Technologies

Subject to technical changes.

### Liquid filtration

nutritexx | Drinking water filter mats

Specifications		
Fiber	Polyester	
Principal application	Drinking water filtration	
		nutritexx

#### Application

nutritexx 2020 and 2040 are the newly developed filter mats that are made from 100% food-grade fibers. They are therefore particularly well suited for filtering ion exchangers and drinking water. Physiologically safe raw materials in conjunction with state-of-the-art production technology guarantee a filter medium that consistently meets the food and beverage industries' stringent requirements in terms of hygiene, efficiency and extractable constituents.

#### Food-grade testing to:

- 2002/72/EC und 2011/10/EC
- FDA 21 CFR 177.1630
- KTW (Plastic, Drinking Water) Guideline of the UBA (German Federal Environmental Agency)
- DVGW (German Association of the Gas and Water Industry) Worksheet W 270

chnical changes.	Article	Dimensions (W × L) [mm/ m]	· ·	Air permeability at 100 Pa [l/(s×m²)]	Thickness approx. [mm]	
ct to te	nutritexx 2020	1,600 × 20	300	2,700	17	111
Subje	nutritexx 2040	2,000×12	400	2,300	38	111



### Liquid filtration cooltexx | Polyester spunbonded nonwovens

**cool**texx

Polyester endless filaments
Thermal
Pressure   vacuum
Rotating   milling   drilling   grinding

#### Application

Viledon<sup>®</sup> cooltexx polyester spunbond media have a high mechanical and chemical resistance, are budget products, and on demand we also deliver food grade versions. Due to their excellent tensile strength, they can also be used on vacuum and pressure belt lines, where the filter material is under high mechanical stress.

#### **Product advantages**

- Long lifetime.
- Maximized process dependability.
- Good filter cake detachment.
- Optimum process matching.

#### **Product characteristics**

- Maximized mechanical strength.
- Filtration based on sieving effect.
- Smooth surface.
- High separation efficacy.

#### Delivery notes

Customized lengths available on request.

Article	Fiber structure	Weight per unit area approx. [g/m²]	Belt filter principle	Machining process	Air permeability at 100 Pa [l/(s×m²)]	Maximum tensile force along/across [N/5 cm]	Thickness approx. [mm]
cooltexx 6430	Fine fibers	30	Gravity   pressure	Turning   drilling   milling	3,300	40/20	0.14
cooltexx 6450	Fine fibers	50	Pressure   vacuum	Turning   drilling   milling (smoothing)	2,500	70/50	0.22
cooltexx 6470	Fine fibers	70	Pressure   vacuum	Grinding (ultra-precision machining)	1,600	110/60	0.32
cooltexx 6534	Fine fibers - punctiform-bonded	34	Gravity   pressure	Turning   drilling   milling	2,000	80/30	0.16
cooltexx 6550	Fine fibers - punctiform-bonded	50	Pressure   vacuum	Turning   drilling   milling (smoothing)	1,200	130/60	0.24
cooltexx 6570	Fine fibers - punctiform-bonded	70	Pressure   vacuum	Grinding (ultra-precision machining)	600	170/80	0.30
cooltexx 7230	Coarse fibers	30	Gravity   pressure	Turning   drilling   milling (roughing)	5,000	60/60	0.14
cooltexx 7250	Coarse fibers	50	Pressure   vacuum	Turning   drilling   milling (smoothing)	4,000	110/100	0.23
cooltexx 7270	Coarse fibers	70	Pressure   vacuum	Turning   drilling   milling (smoothing)	2,700	175/170	0.29
cooltexx H7210	Coarse fibers	100	Pressure   vacuum	Grinding   honing   lapping (fine-smoothing)	1,800	230/220	0.38

### Freudenberg Filtration Technologies

ubject to technical changes.

### Liquid filtration

cooltexx | Polypropylene spunbonded nonwovens

Specifications		
Material	Polypropylene endless filaments	
Bonding	Thermal	
Band filter principle	Pressure   vacuum	
Machining process	Rotating   milling   drilling   grinding	cooltexx

#### Application

Viledon<sup>®</sup> cooltexx polypropylene spunbond media have a high mechanical and chemical resistance, are budget products, and on demand we also deliver food grade versions. Thanks to their excellent tensile strength, they can also be used on vacuum and pressure belt lines, where the filter material is under high mechanical stress. Due to the hydrophobic nature of polypropylene, the pressure drop in water filtration is increased. Additionally, polypropylene needs to be protected from UV light.

#### **Product advantages**

- Adsorption of foreign oil from the emulsion.
- High chemical stability.
- Good filter cake detachment.

#### **Product characteristics**

- Oleophilic and hydrophobic fibers.
- Pure polypropylene.
- Smooth surface.

#### **Delivery** notes

Customized lengths available on request.

	Article	Weight per unit area approx. [g/m²]		Air permeability at 100 Pa [l / (s × m²)]	Maximum tensile force along/across [N/5 cm]	Thickness approx. [mm]
	cooltexx 3440	40	Turning   drilling   milling (smoothing)	1,400	100/60	0.38
nges.	cooltexx 3440	40	Turning   drilling   milling (smoothing)	1,400	100/60	0.38
al cha	cooltexx 3450	50	Turning   drilling   milling (smoothing)	1,200	90/60	0.40
chnice	cooltexx 3450	50	Turning   drilling   milling (smoothing)	1,200	90/60	0.40
ct to te	cooltexx 3470	70	Grinding (ultra-precision machining)	700	180/100	0.50
Subjec	cooltexx 3470	70	Grinding (ultra-precision machining)	700	180/100	0.50



### Liquid filtration cooltexx | Cellulose-polyester media

	Specifications				
	Material	Cellulose + Polyester			
	Bonding	Chemical			
and the second sec	Band filter principle	Gravitation   pressure   vacuum			
cooltexx	Machining process	Grinding   honing   lapping (fine-smoothing)			

#### Application

#### **Product advantages**

- Hydrophilic fine-fiber medium with good water wettability.
  - Long operational lifetime thanks to depth-loading filtration.
  - Low pressure drop thanks to good wettability.
  - High separation efficacy, even with fine particles.

with pure gravity systems. The hydrophilic properties of the cellulose ensure good wettability for water, so that despite the fine fibers used and the good particle arrestance only a low pressure drop ensues. Since cellulose can be bonded only chemically, not thermally, the mechanical strengths will usually be lower than with polyester spunbonded nonwovens, so that their use is restricted to systems with low tensile stresses.

Viledon® cooltexx filter media with a cellulose content are used predominantly in

aqueous solutions, where a low pressure drop is a primary consideration, e.g.

#### **Delivery** notes

Customized lengths available on request.

Article	Weight per unit area approx. [g/m²]	Air permeability at 100 Pa [I/(s×m²)]	Thickness approx. [mm]
cooltexx 2652	17	3,000	0.19
cooltexx 2653	23	1,900	0.19
cooltexx 2654	32	1,500	0.28
cooltexx 2662	25	4,000	0.28
cooltexx 2663	50	1,800	0.37
cooltexx 2666	60	1,600	0.45
cooltexx 2689	130	1,000	1.0
cooltexx 2693	70	2,000	0.53

### Freudenberg **Filtration Technologies**

ubject to technical changes.

### **Liquid filtration** cooltexx | Depth filter

Specifications		
Production process	Wet laid process	
Material	Polyester (partly with cellulose content)	
Bonding	needled + chemical	in the second
Band filter principle	Gravitation   pressure   vacuum	cooltexx
Machining process	Grinding   honing   lapping (fine-smoothing)	

#### **Product advantages**

- Particularly long operational lifetime thanks to deep bed filtration.
- Low pressure drop.
- High separation efficiency, even for fine particles.

#### **Product characteristics**

- High dust holding volume.
- Depth-loading filter high nonwovens thickness.
- High amount of fine fibers.

#### Delivery notes

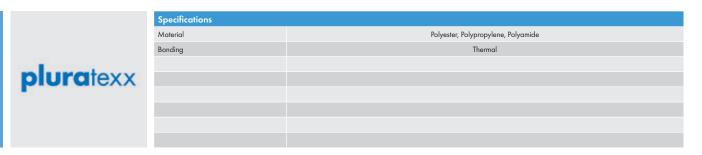
Customized lengths available on request.

>	Article	Weight per unit area approx. [g/m²]			Elongation at maximum tensile force along/across [%]	Thickness approx. [mm]	
	cooltexx 9210N	100	900	120/100	12/15	0.7	
	cooltexx 2689	130	1,000	160/90	13/16	1.0	



### Liquid filtration

pluratexx | Oil, urea and fuel filtration



#### Application

Whether for oil, urea or fuel filtration, Freudenberg Filtration Technologies high-quality filter media allow reliable removal of dirt particles, ensuring motor function and oil quality, and guarantee economic vehicle operation. Viledon® pluratexx filter media fulfill the various requirements of the hydraulic and automotive industry and assure the perfect combination of hygiene, efficiency and diversity.

#### **Product advantages**

- High arrestance efficiency thanks to fine fibers.
- Long operational lifetime (high dust holding capacity).
- High mechanical strength and resistance to chemicals.
- No fiber release, no glass-fibers.

#### **Delivery** notes

Customized roll dimensions available on request.

Article	Weight per unit area approx. [g/m²]	Air-permeability at 200 Pa [l/(s×m²)]	Pore size: Largest pore/MFP [µm]	Particle size at 90% arrestance efficiency [µm]	Particle size at 99% arrestance efficiency [µm]	Dust holding capacity [g/m²]	Thickness approx. [mm]
pluratexx 2033	165	650	72/32	24	30	180	0.95
pluratexx 2037	155	400	55/22	15	22	150	0.9
pluratexx 5100	190	200	40/20	10	15	100	1.1
pluratexx 5120	120	500	50/20	20	30	80	0.54
pluratexx 5121	120	800	80/30	23	35	85	0.7
pluratexx 2313	130	80	45/15	4	10	70	0.5
pluratexx 2317 S	170	40	32/14	4	6	150	0.7
pluratexx 5021	50	200	25/11	7	12	75	0.35
pluratexx 2001 KN	62	100	18/11	5	9	65	0.24
pluratexx 1007 KN	65	65	16/7	5	11	65	0.3

### Freudenberg Filtration Technologies

Subject to technical changes.

### **Liquid filtration** novatexx | Drainage nonwoven for filter cartridges

Specifications		
Maximum width	2,000 mm	
Standard lengths	500 m, 1,000 m	

In the production of filter cartridges, Viledon® novatexx spunbonded nonwovens serve as "spacers" between the pleats on the face side and as a drainage layer on the clean side. The performance profiles of the media concerned can be very specifically designed to requirements. The nonwovens involved can be easily pleated together with the membrane without damaging the latter.

In the products of the 20xx series, the use of special bi-component fibers creates particularly high rigidity, which is indispensable for the pleating operation and significantly enhances the stability of the filter cartridge.

The raw materials used meet the requirements laid down for safety in food, beverage, medical and pharmaceutical applications.

#### Delivery notes

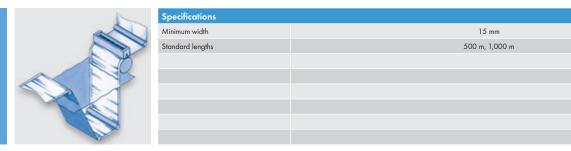
Customized dimensions are available on request. Please protect products from exposure to direct sunlight.

	Article	Filter medium	Weight per unit area approx. [g/m²]	Air permeability at 100 Pa [l/(s×m²)]	Maximum tensile force along/across [N/5 cm]	Elongation at maximum tensile force along/across [%]	Thickness approx. [mm]
	novatexx 2010	PP biko	50	1,300	155/90	60/70	0.24
	novatexx 2019	PP biko	70	1,200	170/90	60/70	0.44
	novatexx 2035	PP biko	30	1,800	85/50	50/50	0.15
	novatexx 2036	PP biko	30	3,900	60/35	60/60	0.23
	novatexx 2043	PP biko	50	1,800	140/70	60/70	0.32
	novatexx 6317	PP	17	2,100 [50 Pa]	25/25	50/50	0.21
	novatexx 6320	PP	20	1,900 [50 Pa]	35/30	40/40	0.24
-	novatexx 6340	PP	40	1,300	85/85	70/70	0.40



### Liquid filtration

novatexx | Carrier materials for flat membranes



Viledon® novatexx products for flat membranes stand for superior results in membrane production. The carrier materials are made of synthetic polymers, and are crucial to the mechanical and filtering properties of the filtration membranes. The specially created surface porosity enables the membrane solution to penetrate into the nonwoven, so as to achieve good adhesion results.

There is an option for additionally customizing the products by modifying the surface to suit the particular membrane production process involved.

All polymers used are suitable for contact with food and beverages.

#### **Delivery** notes

Customized lengths, widths and surface modification available on request. Please protect products from exposure to direct sunlight.

Article	Filter medium	Weight per unit area approx. [g/m²]	Air-permeability at 200 Pa [I/(s×m²)]	Maximum tensile force along/across [N/5 cm]	Elongation at maximum tensile force along/across [%]	Thickness approx. [mm]
novatexx 2413	PET	100	300	125/240	10/25	0.19
novatexx 2429	PET/PBT	90	190	240/200	25/30	0.15
novatexx 2430	PP/PE	100	150	200/300	65/65	0.22
novatexx 2431	PP/PE	60	500	110/170	60/85	0.14
novatexx 2432	PP/PE	32	700	60/80	50/70	0.11
novatexx 2442	PET	25	1,800	30/17	10/10	0.06
novatexx 2463	PP/PE	50	2,500	100/85	30/30	0.35
novatexx 2465	PP/PE	30	4,000	65/60	25/30	0.31
novatexx 2470	PP/PE	60	200	200/150	28/28	0.12
novatexx 2471	PP/PE	85	150	270/170	25/30	0.18
novatexx 2473	PP/PE	27	2,100	80/55	20/25	0.11
novatexx 2481	PET/PBT	100	120	270/180	25/30	0.15
novatexx 2483	PET/PBT	70	100	170/110	25/30	0.10
novatexx 2484	PET/PBT	85	60	300/200	25/30	0.12

### Freudenberg Filtration Technologies

Subject to technical changes.

## Liquid filtration

novatexx | Carrier materials for tubular membranes

Specifications Minimum width		
Minimum width	15 mm	$\sim$
Roll length	500 m	
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Viledon® novatexx products for tubular membranes are very well established in the membrane industry. The products are predominantly made of polyester fibers, and offer a high degree of stability. Combined with specially created surface porosity, novatexx products stand for superlative results in terms of membrane production. There is an option for additionally customizing the products to suit the particular membrane production process involved, by surface modification or by providing an adhesive-compound finish.

All polymers used are suitable for contact with food and beverages.

### Delivery notes

Customized lengths, adhesive-compound coating and surface modification available on request. Please protect products from exposure to direct sunlight.

	Article	Filter medium	Weight per unit area approx. [g/m²]	Air-permeability at 200 Pa [l / (s × m²)]	Maximum tensile force along/across [N/5 cm]	Elongation at maximum tensile force along/across [%]	Thickness approx. [mm]
	novatexx 2413	PET	100	300	125/240	10/25	0.19
	novatexx 2416	PET	205	6	500/550	25/30	0.25
200	novatexx 2429	PET/PBT	90	190	240/200	23/28	0.15
	novatexx 2436	PET	235	4	550/600	20/35	0.27
	novatexx 2472	PP/PE	200	90	650/380	25/28	0.42
	novatexx 2481	PET/PBT	100	120	270/180	25/30	0.15
	novatexx 2482	PET/PBT	220	6	800/380	28/28	0.25



### Mounting frames, seals, dust removal accessories



Freudenberg Filtration Technologies offer high-quality accessories matched to the entire range of filters. These include mounting frames for air filters, clip-on seals for mounting frames, pressure drop measuring instruments, and an extensive range of accessories for dust removal filters.



Freudenberg Filtration Technologies

### Accessories Mounting frames

	Specifications	
-	Note	ARV = Mounting frame galvanized; ARE = Mounting frame stainless steel
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#### **Design features**

- High inherent rigidity thanks to special jointing process and large construction depth.
- Centering guides assure optimum positioning of the filter elements.
- Consistent leakproofing thanks to four friction-locked clamping springs, which are fixed in position in "locking noses".
- The shape of the springs enables the filters to be easily installed and removed, since the free cross-sectional area of the mounting frame is available in full.
- The boreholes for the screws have been selected so as to ensure that mounting frames of different sizes can be combined without any problems.
- An ultra-flexible, silicone-free rubber clip-on seal with a hollow compartment is supplied with the frame. The clip-on seal is weatherproof and thermally stable within a range of approx. -40 °C to +100 °C, with good resistance to alcohols, lyes and weak acids, and very long-lived.
- Depending on the size of the filter wall, and the stresses acting on it, we
  recommend providing additional reinforcements as a substructure. M 6 × 8
  screws should be used for affixing the frames; if reinforcements are provided,
  then correspondingly longer screws must be selected.

#### Application category

Designing new air-conditioning systems and modifying existing ones with variable dimensions.

#### Use

Supporting Viledon<sup>®</sup> filters with a top frame, e.g. Compact pocket filters or MaxiPleat cassette filters. Panel filters featuring the standard depth of 48 mm can also be installed.

#### Execution

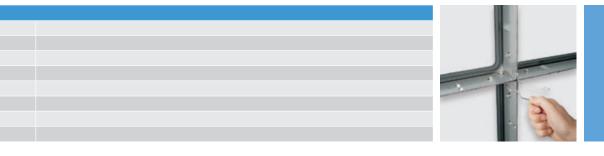
Non-corroding stainless steel (material 1.4301) or galvanized steel sheeting (U-St 1203), burr-free, inherently rigid, in four sizes. Operationally dependable clamping spring system with four clamping springs and mechanical locking, including rubber clip-on seal enclosed loose. The mitered corners are rendered airtight with a permanently elastic sealing compound.

Article	Article number	Dimensions (W × H × D) [mm]	Suitable for filters in the dimensions [mm, approx.]
ARV-LD NF 1 / 1 A-Mounting frame galvanized with seal	53373316	610×610×75	1/1 592×592
ARE-LD NF 1 / 1 A-Mounting frame stainless steel with seal	53373325	610×610×75	1/1 592×592
ARV-LD NF 5/6 A-Mounting frame galvanized with seal	53435027	508×610×75	5/6 490×592
ARE-LD NF 5/6 A-Mounting frame stainless steel with seal	53435039	508×610×75	5/6 490×592
ARV-LD NF 1/2 A-Mounting frame galvanized with seal	53377509	305×610×75	1/2 287×592
ARE-LD NF 1/2 A-Mounting frame stainless steel with seal	53377510	305×610×75	1/2 287×592
ARV-LD NF 1/4 A-Mounting frame galvanized with seal	53435028	305×305×75	1/4287×287
ARE-LD NE 1 / 4 A-Mounting frame stainless steel with seal	53435040	305×305×75	1/4287×287

### Freudenberg Filtration Technologies

to technical changes

### Accessories Seals



#### Clip-on seal

- U-shaped seal profile made of closed-pore EPDM soft rubber with embedded wire clamping band and formed sealing lips plus a hollow compartment made of EPDM cellular rubber; color: black.
- The seal can be installed without needing any tools simply by pressing it in place by hand.
- The clip-on seal is held in position by the clamping effect of the rubber lips; no adhesives or other attachment aids are required.
- The Viledon<sup>®</sup> clip-on seal is weatherproof and thermally stable in the range from -40 °C to +100 °C, possesses good resistance to alcohols, lyes and weak acids, and is durable. It is not resistant to concentrated acids, chlorinated hydrocarbons, aromatic hydrocarbons, oil and fuel.
- Good paint-compatibility, silicone-free.

Other seals available on request.



Accessories for dust removal filters | Support cages + pulse-jet reflectors + displacer units



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#### Support cages

In order to avoid deformations of Viledon<sup>®</sup> filter cartridges in the case of high pressure drop, they are fitted with reusable support cages.

#### Pulse-jet reflectors

To optimize the pulse-jet cleaning function, when support cages of the type series 145, 156, 218 and 324 are being used, pulse-jet reflectors can additionally be affixed.

#### Displacer unit

Use of the displacer unit leads to a significant increase in cleaning intensity, which means real savings in terms of operating and capital investment costs. The tank pressure must be restricted to a maximum of 3 bar, or if the maximum tank pressure is retained, the valves must be reduced by one size.

Delivery notes

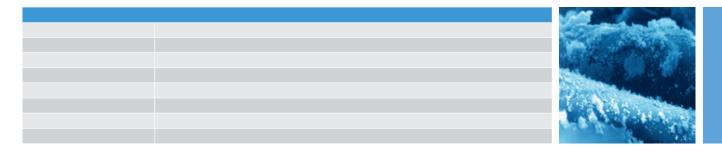
Customized dimensions are available on request.

Article	Article number	Construction height [mm]	Diameter [mm]	Outer diameter [mm]	Inner diameter [mm]	Material thickness [mm]
Pulse-jet-reflector 145/P946010	53280727	50		79	62	1.0
Pulse-jet-reflector 156/P946013	53296351	50		90	71	1.0
Pulse-jet-reflector 218/P946011	53280134	60		139	92	1.0
Pulse-jet-reflector 324/P946012	53280728	70		210	156	1.0
Support cage 145/0600	53366927	585	84			2.9
Support cage 145/1000	53366928	985	84			2.9
Support cage 145/1200	53366935	1,185	84			2.9
Support cage 145/1500	53366936	1,485	84			2.9
Support cage 156/0600	53366945	585	95			2.9
Support cage 156/1000	53366947	985	95			2.9
Support cage 156/1200	53366946	1,185	95			2.9
Support cage 156/1500	53366949	1,485	95			2.9
Support cage 218/0500	53366951	485	143			2.9
Support cage 218/0600	53366952	585	143			2.9
Support cage 218/1000	53366953	985	143			2.9
Support cage 218/1200	53366954	1,185	143			2.9
Support cage 218/1500	53366955	1,485	143			2.9
Support cage 324/0600	53366956	585	215			2.9
Support cage 324/0660	53366957	645	215			2.9
Support cage 324/1000	53366958	985	215			2.9
Support cage 324/1200	53366959	1,185	215			2.9
Support cage 324/1500	53366960	1,485	215			2.9
Displacer unit 327/0600	53283768	585				
Displacer unit 327/1000	53283767	985				
Displacer unit 327/1200	53281463	1,185				
Displacer unit 327/1500	53283766	1,485				

### Freudenberg Filtration Technologies

ubject to technical changes.

### Accessories for dust removal filters | Filtering Aid FHM 1500



#### Application

In what application categories does precoating with FHM 1500 offer advantages?

- Plasma / flame and laser-cutting of metals.
- Welding.
- Cleanable "police filter" stages.
- Sticky dusts.
- Coating processes like spray-galvanizing, spray-aluminizing.
- Applications with low raw-gas concentrations.

Why precoating?

- To improve the cleaning characteristics.
- For lower stable pressure drops.

How is precoating performed with FHM 1500?

- With Filtering Aid 1500 as a one-off routine on new filter cartridges (approx. 10 g/m<sup>2</sup>).
- Precoating duration: Minimum 15 min. compression with process dust to 2,000 – 2,500 Pa.

**Important:** Precoating and compression without cleaning. In accordance with the relevant DIN safety data sheet, wearing a respirator mask of protection level FFP1 is recommended when handling the FHM 1500.

al changes.	Article	Article number	Weight [kg]
Ū.	Filtering Aid 1500	53474679	0.1
ct to te	Filtering Aid 1500	53474681	0.5
	Filtering Aid 1500	53301586	1



125

Accessories for dust removal filters | Rotary nozzle systems



Specifications	
Suitable filter cartridges	$\varnothing$ = 327 mm, H = 602 mm und 1,202 mm, particularly with small pleat spacings

#### Application

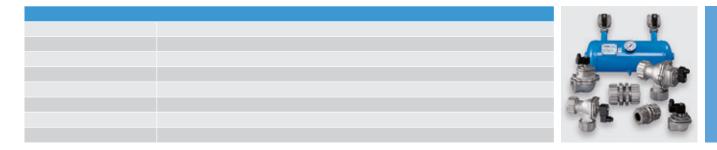
The ROG 600 F-PL and ROG 1200 F-PL rotary nozzle systems ensure effective cleaning of filter cartridges with  $\emptyset$  = 327 mm, H = 602 mm und 1,202 mm, particularly with small pleat spacings.

#### **Special features**

- Lasting operational dependability.
- The nozzle vane is mounted on life-time-lubricated ball-bearings encapsulated on both sides.
- Air distributor pipes and lower supporting rib plus stop plate made from high-quality, glass-fiber-reinforced plastic.
- High accuracy of fit of all joints to assure optimum concentricity.
- Quasi-offline cleaning featuring clean-gas-side stop plate operated by compressed air.
- Additional devices for securing the cartridge not required.

	Article	Article number	Operating pressure [bar]	Solenoid valve + air feeding line [,,]	Pulse time [s]	Air-consumption per pulse [standard liters]
126	Rotary nozzle 1200/F-PL/P946713	8928695	2.5 - 3.5	3/4	0.8 - 1.0	160
120	Rotary nozzle 600/F-PL/P946712	8925662	3.0 - 4.0	1	1.0 - 1.5	250

### Accessories Accessories for dust removal filters | Tanks + valves



#### **Pneumatic components**

Correct dimensioning of the cleaning unit is essential for effective, cost-efficient operation of dust removal systems. It is vital to select the right individual components and in the right dimensions too, in order to ensure trouble-free, cost-efficient filtration.

Corrosion-proofed solenoid valves, optimized for maximum air flow rate with the shortest possible pulses, in conjunction with optimally dimensioned compressed-air tanks, ensure gentle and nonetheless effective cleaning of the filter's surface.

Integral valves or corner valves with screw or quick-release locks are matched to the geometry used in the filter cartridges involved.

Ready-for use customized cleaning units, consisting of compressed-air tank, valves and blowing pipes, can be supplied.

Ready-to-connect BUS systems, e.g. for large filter systems, reduce the amount of work involved in installation and connection.

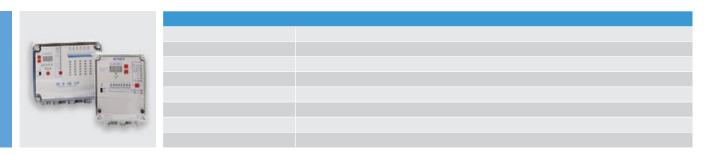
Filter wall connections in various versions and sizes are available for simple installation of the cleaning unit.

#### **Delivery** notes

Compressed-air tanks, valves and blowing pipes are individually matched to each filter system, and have to be inquired for separately in each individual case.



Accessories for dust removal filters | Cleaning control



#### Cleaning control systems

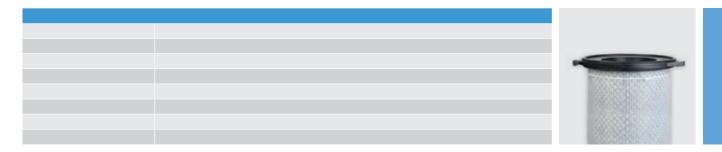
- Cleaning control systems governed by pressure drop and time for highest requirements.
- Ultra-simple operator control of adjustments, and optimum visualization of the ongoing values.
- A huge range of different sizes for matching your own filter system.
- Ideal for utilizing the full potential of your filter inserts.
- Display and switching device with electrical and pressure connections for one or two switching points used to monitor the pressure differential. Alarm function, plus switch-on / switch-off functions.

**Delivery** notes

Customized product variants available on request.

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### Accessories for dust removal filters | Cartridge protection sleeve



The CPSs are made from a fully synthetic PES filter medium, that excels particularly in terms of very high air-permeability measuring approx. 3,880 l/m<sup>2</sup>·s and a mean pore size of approx. 50 µm. Fine particles can penetrate the filter medium, while coarse ones are arrested.

#### Use

For protecting a filter cartridge against irreversible dust deposits of coarse particles or fibrous dusts in the pleat package.

#### Application category

Arresting fibrous dusts, for example.

#### Assembly

The CPSs are secured in accordance with the illustration above with a cable tie underneath the flange of the filter cartridge, and cut off approx. 5 – 10 cm above the base of the filter cartridge.

#### Delivery notes

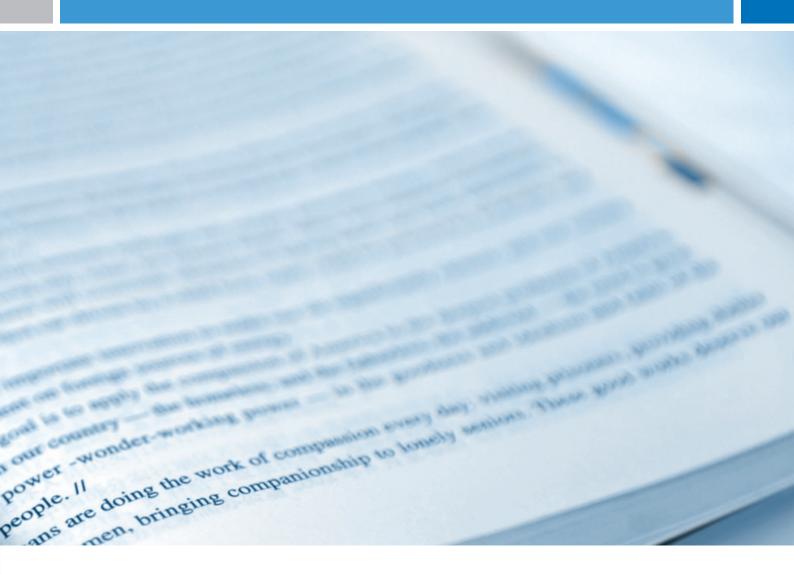
Cartridge protection sleeves are individually matched to each filter system, and have to be inquired for separately in each particular case. Cartridge protection sleeves are available for the following cartridge diameters: 145 mm, 218 mm and

Cartridge protection sleeves are available for the following cartridge diameters: 145 mm, 218 mm and 327 mm.





Order | order inquiry form Information | legal notes





131

Freudenberg Filtration Technologies

### Order | order inquiry form

(Please enter all particulars legibly and in block letters.)

# viledon®

Customer number:	Tour direct route to us		
Company name:	To find your customer service		
If you do not know your customer number, please state complete contact data Your contact data:	contact details for your region, please visit our website		
Company name:	www.freudenberg-filter.com		
Street/No.:			
Post code/Town:	and go to "Contact".		
Contact person:			
Telephone:			
Email:			

<ul> <li>Order</li> <li>Inquiry</li> </ul>			
Article number	Article designation	Quantity (pcs./m²/rolls)	Application   Remark

Place, date

Signature

132

Freudenberg Filtration Technologies

### Information | legal notes

Dear Viledon<sup>®</sup> Customers,

we not only provide effective and efficient filters and reliable services, we are also strive to constantly improve our product documentation for you. Therefore, we appreciate your comments on how we could further upgrade our product catalogue to serve you in the best possible way. Please send an email to marketing@freudenberg-filter.com. We look forward to hearing from you.

Your "Viledon® product catalogue" editors

# Industrial air filtration knowledge:

sound, clear and concise

What is the composition of air? How do particulate air filters work? How are gases adsorbed from the air? These and other questions are answered in Freudenberg Filtration Technologies' new book on industrial air filtration. The 70-page book explains the relevant norms and standards, as well as the construction of air filters and their key application areas. It provides both industry experts and newcomers a clear and concise insight into the field of industrial air filtration.

The English-language edition of "Industrial Air Filtration" is exclusively available for customers (as long as stocks last) of Freudenberg Filtration Technologies. The German-language version "Industrielle Luftfiltration" can be bought in bookstores and online shops.

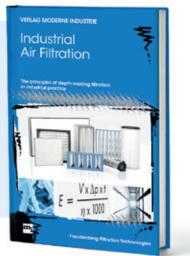
Speak to your regular Viledon® contact to see how you can get your own personal copy of this brand new book.











#### Notes on technical specifications

#### **Filter classes**

Groups G to F according to EN 779:2012 Groups E to U according to EN 1822:2009

#### Energy efficiency classes | **Energy consumption** According to EUROVENT 4/21 measured at 3,400 m<sup>3</sup>/h

#### Important notes

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The figures given are mean values subject to tolerances due to 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 changes, errors and misprints. Product pictures may vary from actual product.

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Did you know, for example, that besides a top-quality choice of filters you also have a complete development and installation program available for creating new and retrofitted filter housings? Or just take a look inside our download section: we have put together detailed information for you on a variety of topics.





Quick information search thanks to user-friendly navigation.

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EPA, HEPA and ULPA

Filter Cartridg

Filters for Dust Re



Freudenberg Filtration Technologies

Freudenberg Filtration Technologies develops and produces high-performance, energy efficient filtration solutions, designed to make industrial processes more efficient, save resources and protect people and our environment, and thus to improve the quality of life. Our Viledon® and micronAir® brands enjoy an enviable reputation worldwide. Viledon® ensures optimum results in industrial air and liquid filtration systems, while micronAir® fine-dust filters are used as intake air filters for the engine and the passenger compartment in the automotive industry, as well as for improving indoor air quality in buildings. For nearly 2,000 associates at 35 facilities all over the world, customer satisfaction is the overriding goal.

Freudenberg Filtration Technologies is part of the Freudenberg Group. Besides filtration solutions, Freudenberg develops and manufactures seals, vibration control components, nonwovens, surface treatment products, release agents, speciality lubricants, medical technology, mechatronic and household products. Creativity, quality, diversity and innovative strength are the group's cornerstones. Reliability and responsible conduct rank among the basic values of the company which was founded over 160 years ago. Freudenberg is committed to partnerships with customers, and believes in a long-term orientation, financial solidity and the excellence of more than 39,000 associates in 56 countries around the globe.

### www.freudenberg-filter.com

www.freudenberg.com

### Viledon<sup>®</sup> Distribution Partner

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