PRODUCT BROCHURE

DELBAG® Air Filtration
Air Filters for Power Plants

Protection for gas turbines, compressors and motors

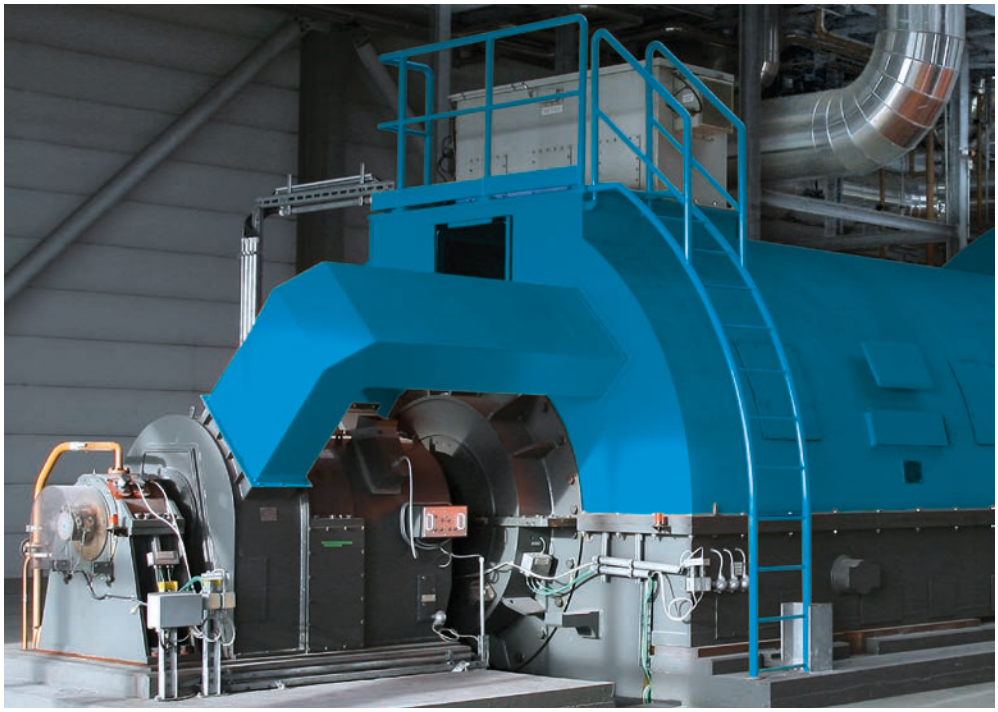
DELBAG®
HENGST FILTRATION

MORE THAN 100 YEARS OF EXPERIENCE IN FILTER PRODUCTION

DELBAG® Air Filtration is one of the leading technological forward-thinkers in the context of air filtration. The head office of the DELBAG® GmbH is situated in Herne, Germany. The current DELBAG® filter assortment covers more than 2.000 different standard and special filters for commerce and industry. Thanks to our international presence, our products and engineering services are successfully used in more than 50 countries around the world. Due to the variety of possible variations, you find a tailored solution for each project. We draw on the vast range of process engineering possibilities of air filtration.

IN BUSINESS SINCE 1909

Your Partner for Air Filtration



DELBAG® Air Filtration is one of the European market leaders for the entire spectrum of air filtration. More than 100 years of experience, in various industries and applications – with references in more than 50 countries and all climate zones of the earth.

Like no other company, DELBAG® Air Filtration is a synonym for competent consultancy and reliable commissioning in all questions of air purification. DELBAG® Air Filtration, unlike most other suppliers, covers the entire process of air filtration. We understand the interrelationships and manage them down to the smallest detail. We know the requirements of the different industries, from microbiology to heavy industry.

We have the know-how for optimal air quality. We have supported the development of numerous companies with demand-driven filter technologies for supply and extract air filtration systems since 1909. The Technology Center of the DELBAG® GmbH regularly generates new impulses and innovations. For example, the filter media with lotus effect (LoTex) and the flame resistant treatment FireTex can be emphasized. Intelligent solutions with visionary character – and very real added value for people and companies. With DELBAG® Air Filtration you decide on an air filtration that regarding quality, economy and amortisation of the investment costs leaves no wish unfulfilled.

Countless variants – individual solutions

Pre-filter and coalescer

Filter mat LoTex
Series 1000

Filter cell
AeroPlus series 3000

Bag filter
Series 4000

Bag filter ‚reverse'
Series 4000

Special solutions
and combinations

Fine dust filter

Bag filter
Series 4000

Bag filter
Series R

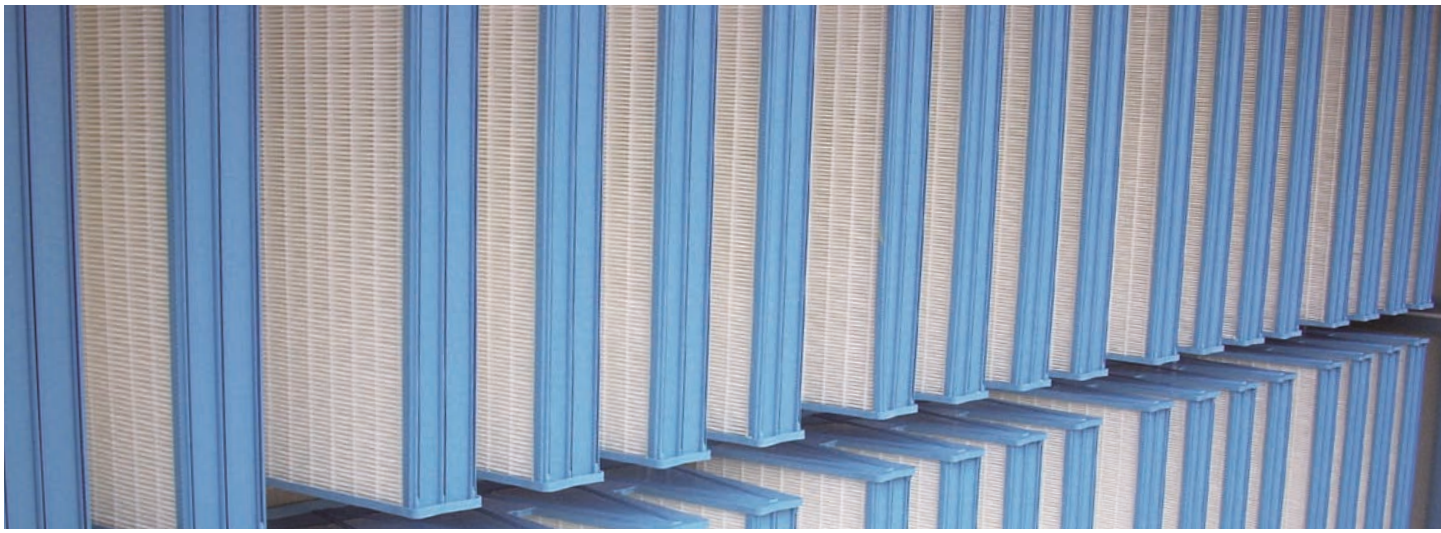
Compact filter MultiPlus
Series 8000

HEPA/ULPA filter

Compact filter MultiPlus
HEPA series 8000

Compact filter MultiPlus
GT series 8000

Reliability – certainly!



With increasing capacity and efficiency of turbo-machines and motors, the operation of air intake filtration systems and the characteristics of the used air filters have gained increased attention of the operators.

The safe function at different climatic influences with temperatures between -30 and +40°C, with frost and snow as well as high air humidity, mist and heavy rain falls are of great importance for the design of an air filter system and the used air filters. Additionally, local emissions such as oil mist and high dust concentrations or air pollution caused by pollen and surrounding agriculture are very demanding on the effective protection of compressors or gas turbines. DELBAG® Air Filtration is the right solution for all local conditions.

- Retrofit and optimization of existing plants. With DELBAG® you can extend your filtration system by one additional filter stage without having to carry out further structural changes.
- Filter elements with grip and handle protection made of aluminium.
- Robust products for the most difficult operating conditions.
- DELBAG® Air Filtration optimizes the water separation of your filter house.
- Optimized humidity and droplet separation to protect the entire system
- Spot-on interaction of the filtration concepts

What you can expect from us:

- Expertise
- Individual support
- Innovative solutions
- On-site consultation/ analysis
- Reliability

Energy efficiency – with service life!

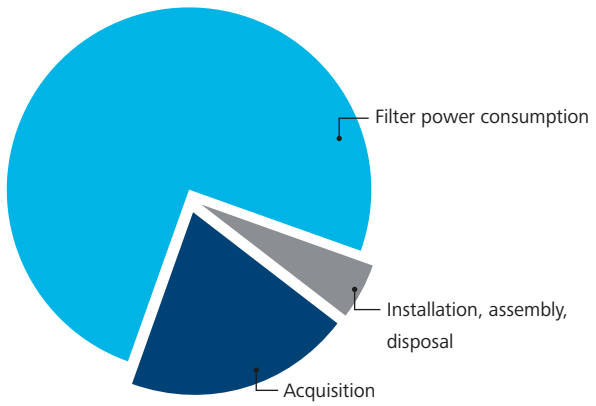
How quickly the strategy pays off for the user and how beneficial it is for the environment can be seen on the consumption values of the air intake filter system: energy costs generally comprise approx. 75 % of your total life-cycle costs. Therefore, the savings potential is enormous, and the choice of the right filter plays a decisive role in this.

The knowledge of the operating costs caused by filters such as pressure drop and shut-down period are of fundamental importance for the operator and the optimization of air intake filtration facilities. Thus, the operating costs of an air filter caused by pressure drop over the service life exceed the purchase price by far.

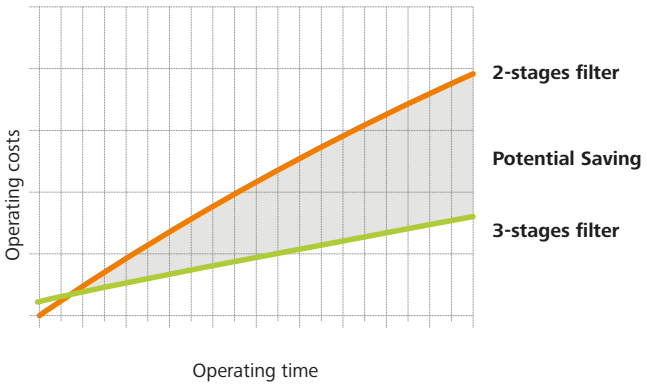
Moreover, the deposit of finest particles on the turbine blades (fouling effect) can be reduced through individually tailored intake air filtration. This has the effect that the temporal decrease of capacity and efficiency factors are minimised. For this purpose, filters with optimal filtering capacities are used in order to efficiently separate even the finest particles.

The operating costs of air intake filtration systems can be reduced through the optimized usage of air filters and the variation of different filters and several filter stages. As a result, the performance and the total efficiency of a turbo-machine is significantly improved. The alignment of pressure drop and filter performance are of great importance in order to optimize the system operation. Our experts will gladly analyse the operation of your system and create an optimization concept.

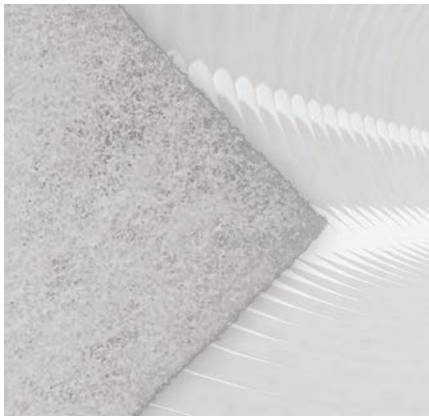
Distribution of the Life Cycle Costs



Life Cycle Costs over 10 years

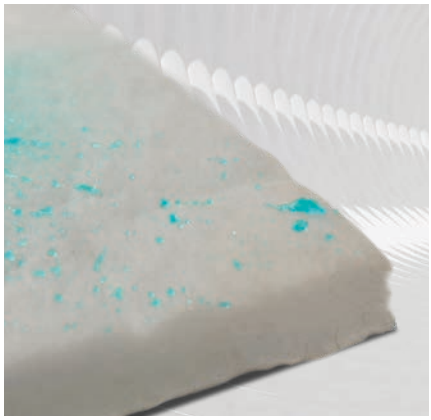


Overview of our air intake filters



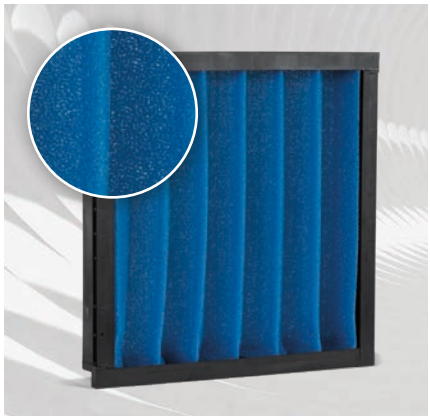
FILTER MAT

Series 1000	
Application	Coarse dust pre-filter, Coalescer
Filter Classes	G3, G4
Material	Polyester, glass
Model design	Pad (cut or rolled goods)
Thickness	10 – 125 mm
Special Features	Progressive fiber construction



FILTER MAT

Series LoTex	
Application	effective coalescer through nanotechnology
Filter Classes	G4, M5
Material	Polyester with LoTex coating
Model design	Pad (cut or rolled goods)
Thickness	15 and 20 mm
Special Features	Hydro- and oleophobic



FILTER CELL

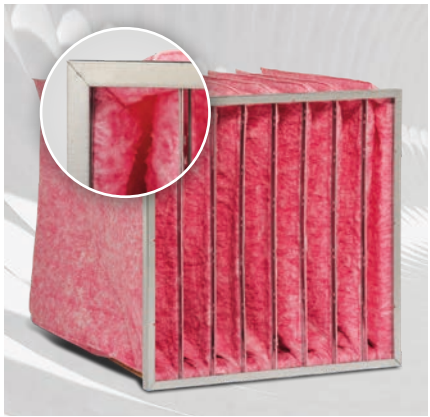
Coalescer	
Application	Pre-filter / coalescer
Filter Classes	–
Material	Polyurethane
Model design	Panel filter
Installation depth	96 mm
Special Features	Effective droplet separator, regenerative

FILTER CELL

AeroPlus series 3000	
Application	Pre-filter / coalescer
Filter Classes	G4
Material	synthetic fiber, pleated
Model design	Panel filter
overall depth	96 und 116 mm
Special Features	Moisture resistent

BAG FILTER

Series 4000	
Application	Pre and fine filtration
Filter Classes	G4 – F9
Material	synthetic fiber
Model design	Bag filter
overall depth	195 – 650 mm
Special Features	Double cone-shaped bag form

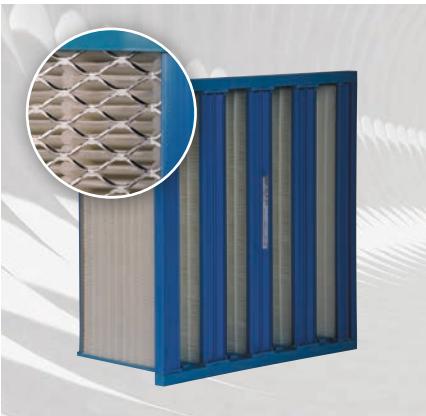


BAG FILTER

Series G	
Application	Pre and fine filtration
Filter Classes	M5 – F9
Material	micro glass-fiber fleece
Model design	Bag filter
overall depth	380 – 650 mm
Special Features	High dust holding capacity, low pressure drop

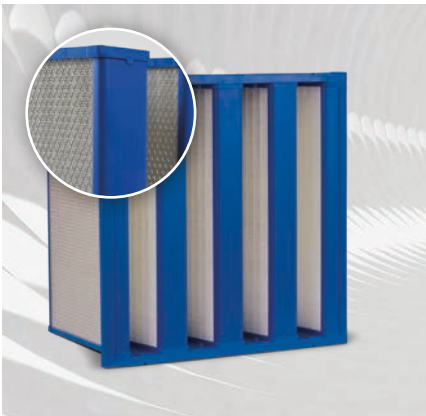
INHERENTLY RIGID BAG FILTER

Series R	
Application	Pre and fine filtration
Filter Classes	M5 – F7
Material	synthetic fiber welded bags
Model design	Bag filter
Installation depth	620 mm
Special Features	Highest dust-holding capacities, self-stiffening bags, hydrophobic



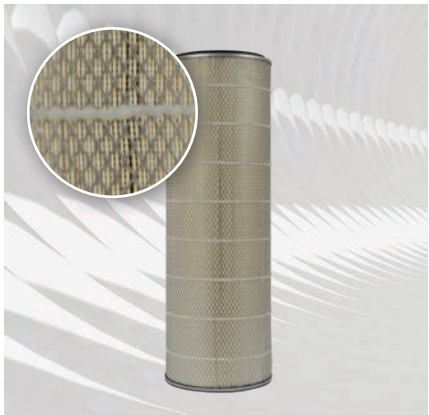
COMPACT FILTER GT

MultiPlus series 8400	
Application	Fine and finest dust filtration
Filter Classes	F7 – H13
Material	Micro glass fiber paper
Model design	Compact filter
Installation depth	298 mm
Special Features	Completely bonded fold pack, robust model design, aluminium grip and handle guard



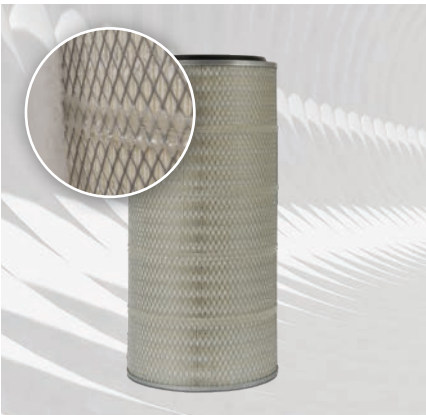
COMPACT FILTER GT ‚EXTENDED'

MultiPlus series 8500	
Application	Fine and finest dust filtration
Filter Classes	F7 – E11
Material	Micro glass fiber paper
Model design	Compact filter
Installation depth	400 mm
Special Features	Large filter surface, low pressure drops, aluminium grip and handle guard



PULSE-FILTER CARTRIDGE

MultiPuls	
Application	Fine filtration, for high dust load
Filter Classes	M6 – F9
Material	Cellulose and synthetic fiber
Model design	cartridge, cylindric, cone-shaped
Special Features	Rigid design, regenerable



DEPTH FILTER CARTRIDGES

MultiPuls T	
Application	Fine and finest dust filtration
Filter Classes	F8 – E11
Material	Synthetic/micro-glass fibers
Model design	cartridge, cylindric, cone-shaped
Special Features	Long service intervals, good degree of arrestance

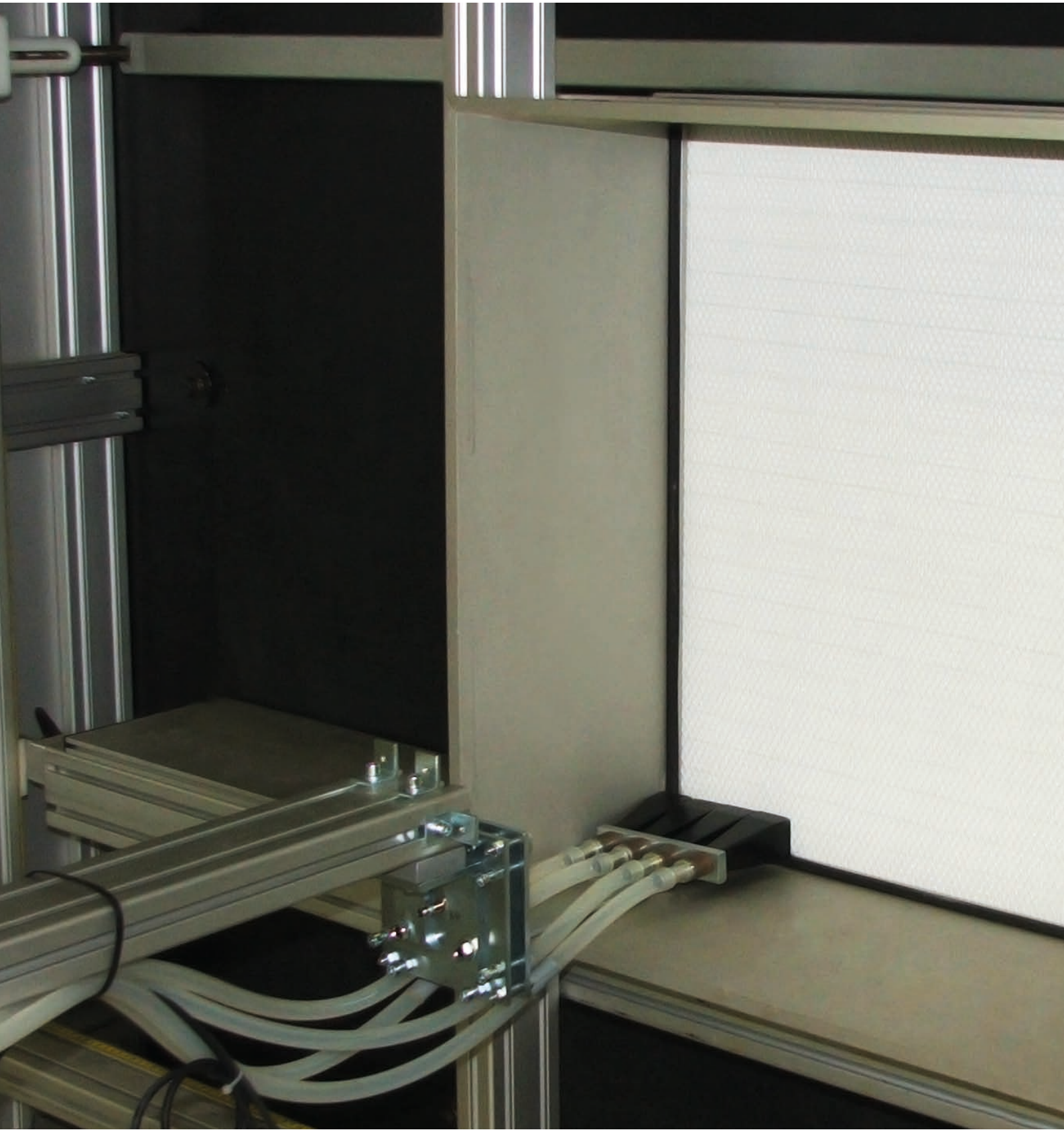
INDIVIDUAL DESIGNS AND SOLUTIONS FOR YOUR PLANT

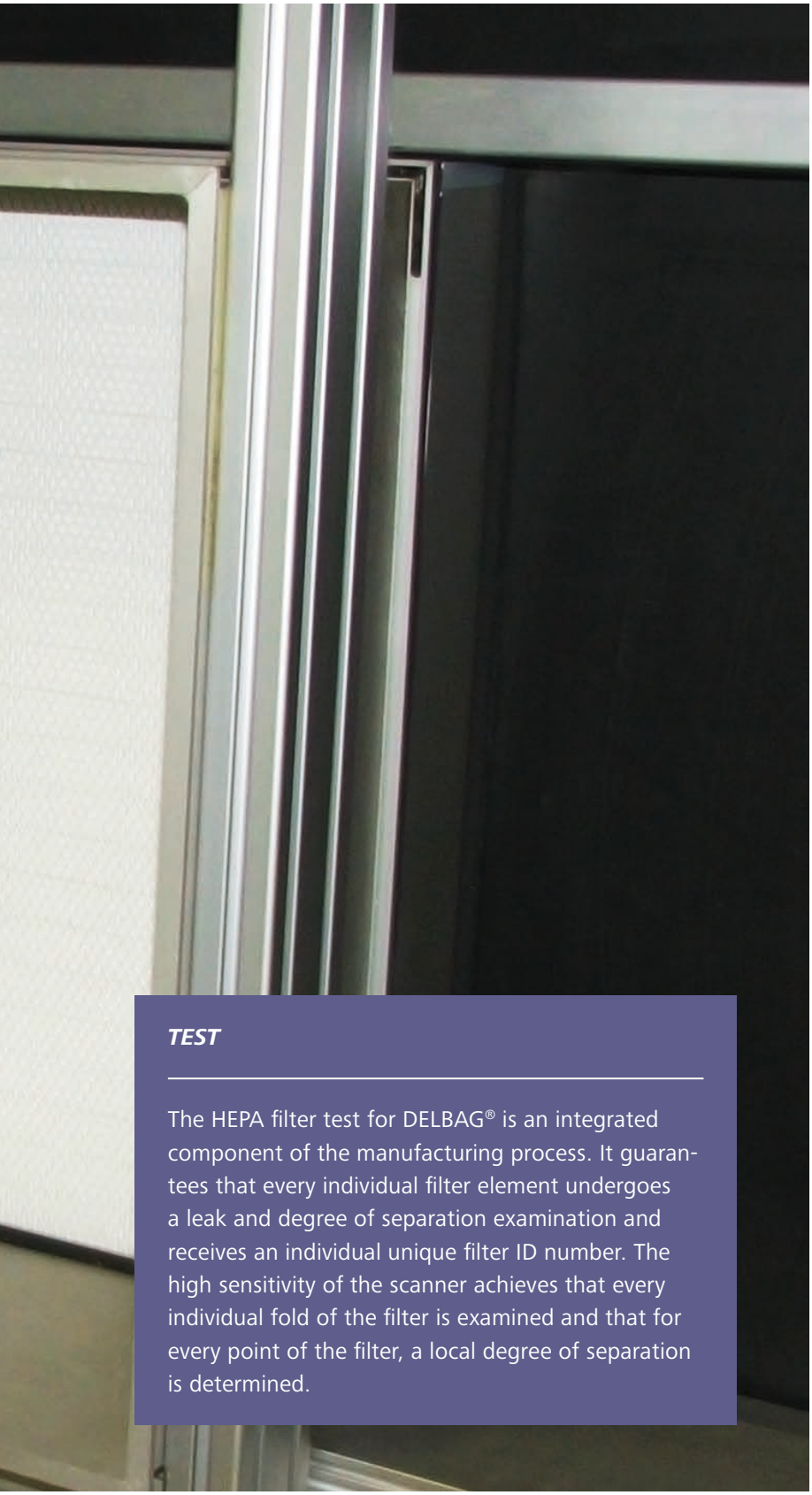
Talk to our experts if you have special requirements for your filter systems. We will gladly provide you with the necessary consulting and support and develop tailored solutions with you for your facility.

Please call or write us:

Telephone +49 2325.468 701
airintake@delbag.com

Durable under extreme conditions

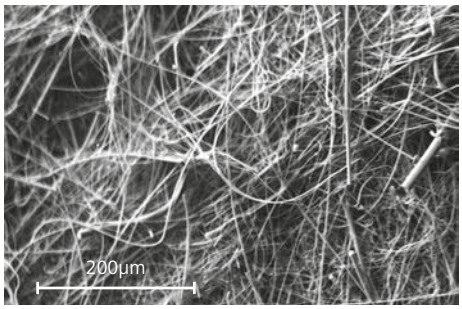




TEST

The HEPA filter test for DELBAG® is an integrated component of the manufacturing process. It guarantees that every individual filter element undergoes a leak and degree of separation examination and receives an individual unique filter ID number. The high sensitivity of the scanner achieves that every individual fold of the filter is examined and that for every point of the filter, a local degree of separation is determined.

For the DELBAG® filter, special, paper-like fleeces made of finest micro fiberglass used as filter media, which, depending on filter class, shows different degrees of separation or penetration. The filter fleece is processed to form a stable package of folds; number and height of folds are designed for maximize product life and to match the optimal rated operating points and long service intervals.



Section of micro-glass fiber of a HEPA filter under the scanning electron microscope

TESTED AND CERTIFIED

Maximum safety thanks to certification

The protection of your turbo machinery is guaranteed from the very beginning. DELBAG® Air Filtration is one of the very few suppliers who voluntarily satisfy the strict regulation frame work of the Eurovent certification program and meet the highest quality demands.

The Eurovent seal gives operators of air filtration plants the certainty that the published characteristics of our air filters have been examined and confirmed by independent test laboratories according to ISO 17025.

- DELBAG® AirFiltration with Eurovent label for energy efficiency classification
- Certified product quality EU standard EN779:2012
- Test readings according to norm and fit for ISO 16890
- Additional quality control by Eurovent tests in independent accredited test labs.

LoTex – patented hydro- and oleophobic treatments made by DELBAG® Air Filtration.

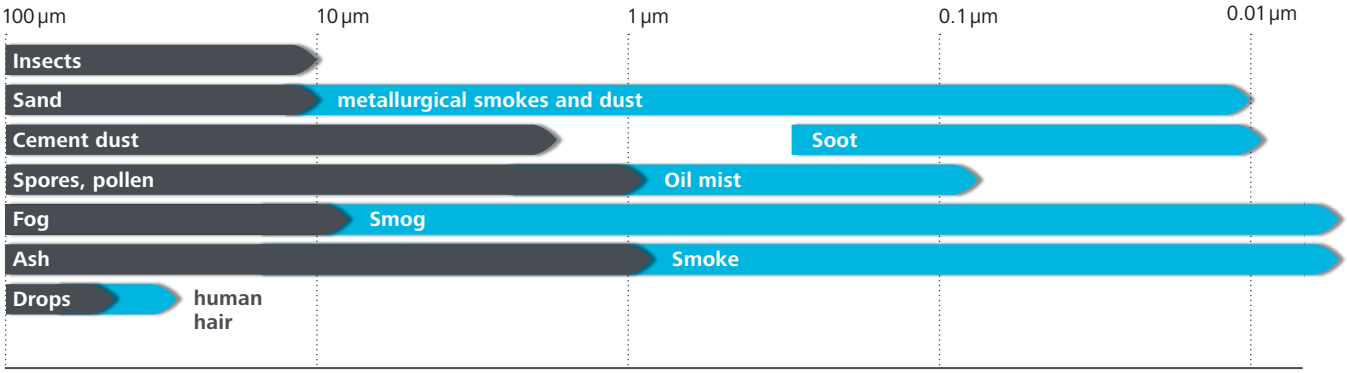
FireTex – patented flame resistant treatments made by DELBAG® Air Filtration

independent certification by Eurovent

SOLUTIONS FOR ALL AMBIENT CONDITIONS

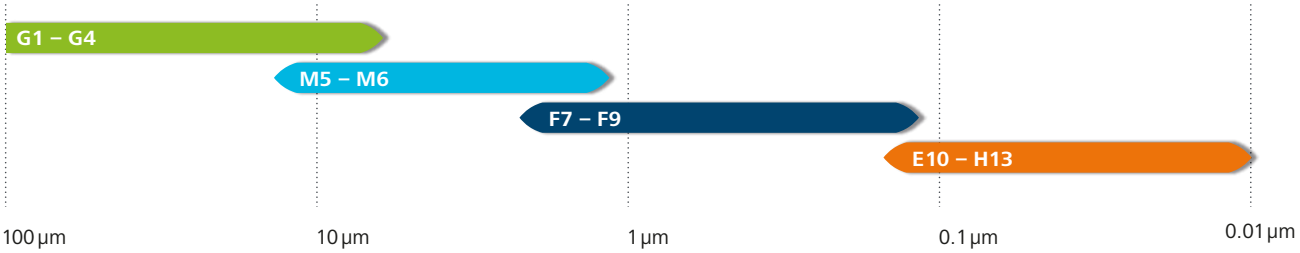
One dust is not like another.

Types of dust



Filter

Filter Classes



Effects of dust particles on turbo-maschines and motors

Tiny dust particles of a half micrometer size can already lead to severe consequences for the operation as well as the efficiency factor. The difference is made between erosion, corrosion and fouling. Thanks to an optimally designed filtration concept, the risks mentioned below can be reduced to a minimum.

Erosion

Erosion is defined as material removal on the blades through dust particles >5 µm. These particles have an abrasive effect which influence the aerodynamics of the blades.

Fouling

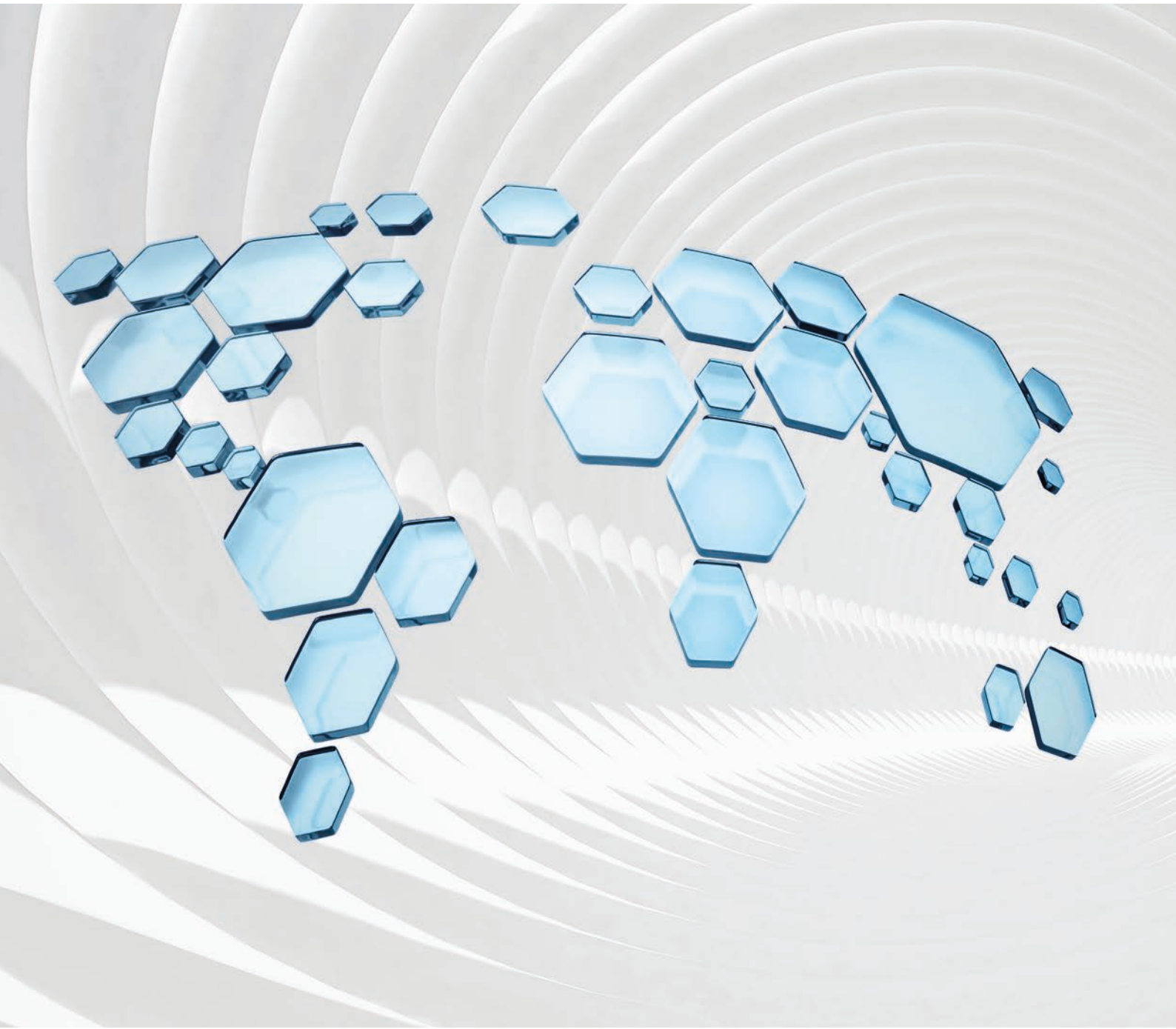
Fouling is the deposition of particles <5 µm on the blades which has a negative effect on the aerodynamics.

Corrosion

Corrosions inside the machine are caused by air contaminations – especially through salts in combination with high relative humidity. These aggressive compounds lead to damages on e.g. blade material.

DELBAG® Air Filtration is a dynamic globally active company within air treatment - filter technology - air quality.

Our local consultant and service teams gladly take their time to develop ideas and solutions together with our clients – creatively and professionally.



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