micronic FILTER

Discover Quality...

Gas Turbine Filters

micronic FILTER

ORIGINAL micronic FILTER WARRANTY PRODUCT

COMPLETE AIR FILTRATION SOLUTIONS

HIGH-PERFORMANCE INDUSTRIAL AIR FILTRATION FOR INDUSTRIAL APPLICATIONS

Micronic Filtration Technologies has been at the fore-front of industrial air filtration for over 28 years, with particular expertise in the field of gas turbines and compressors. Our solutions re- liably remove particles from the intake air of tur- bomachines, prevent fouling and maximize both their performance and overall cost efficiency. By preventing corrosion of turbine blades and the build-up of dust deposits on compressor blades, they also improve reliability, eliminate unplanned downtime and reduce maintenance costs. In addition, our solutions are always optimized to meet specific local conditions, such as high humidity, ab-normal air pollution, extreme dust concentrations or saltwater spray.

Micronic Filtration Technologies offers you

- a complete design, development and instal-lation program for modifying or building air filtration systems and housings for industrial gas turbines and compressors
- static and cleanable systems covering filter classes G4 to E12, which meets the highest requirement of air filter program for any kind and any size of air in take cabins.

Integrated air filtration solutions, from A - Z.

We provide complete filtration Solutions, from design and build to a full range of filter consumables. Our experts will work with you from the earliest stages of your filtration project, right through to construction and commissioning. As well as new builds, we also undertake the retrofitting and modification of existing installations.

In that manner of application, we are caplable of upgrading one stage air intake filtration system to high efficiency three stage filter system with a very low cost construction and design budget.

For applications where filters are regularly exposed to water spray or fog, we offer a special coalescing. Our multistage concept uses a perfect combination of filter classes up to 0,3 micron level filtration, where required. This allows turbines and compressors to be operated for longer periods with no fouling, resulting in improved working life and increased economic gains.

A sustainable long-term partner

Micronic filtration Technology is part of the Micronic Group, a family-owned company that employs around 600 people in over 39 countries across the globe. Founded in 1988, Micronic has build its worldwide reputation on.

AIR INTAKE SYSTEMS FOR OPTIMUM TURBINE PERFORMANCE

HIGH-PERFORMANCE INDUSTRIAL AIR FILTRATION FOR DEMANDING APPLICATIONS

Particulates in the intake air significantly affect the operational efficiency of gas turbines and turbo compressors. Our customized air filtration solutions prevent blade damage caused by fouling or corrosion, ali of which adversely affect power output and profitability with the longest filter duration.

For applications where filters are regularly exposed to water spray or fog, we offer a special coalescing and with a “front of filter” drainage function. Our multistage concept uses a tailored combination of filter classes up to four stage micronic filtration, where required. This allows turbines and compressors to be operated for longer periods with virtually no fouling, resulting in improved working life and increased economic pay-back duration.

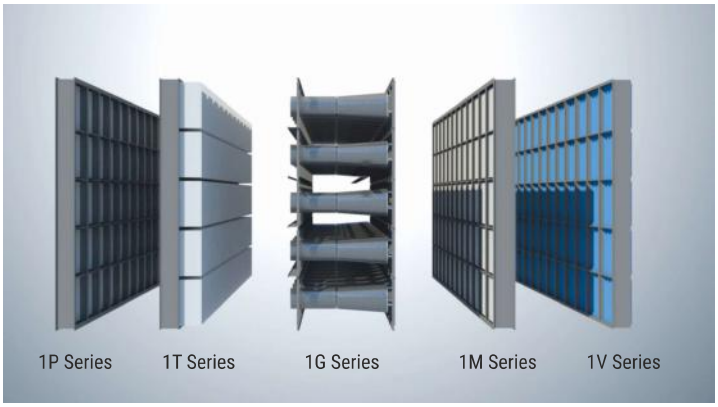
Your benefits when using Micronic Filter systems

- Highest filter efficiency up to four stage micronic purity level
- Optimized filters' long term duratwith low pressure drops and high mechanical stability
- Maximized system protection (turbine + com-pressor blades)
- High system availability with predictable filter operation from planned downtime to downtime
- Verifiable cost savings for the operator
- High operational reliability in all environ mental conditions

SECTOR-SPECIFIC EXPERTISE

SPECIAL DESIGNED SOLUTIONS TO MEET CUSTOMERS NEED PERFECTLY

Micronic has a good experience in a wide range of special needs of power plants. No matter what the extreme local conditions may be, including limited space or our engineers will work with you to offer the ideal solution.

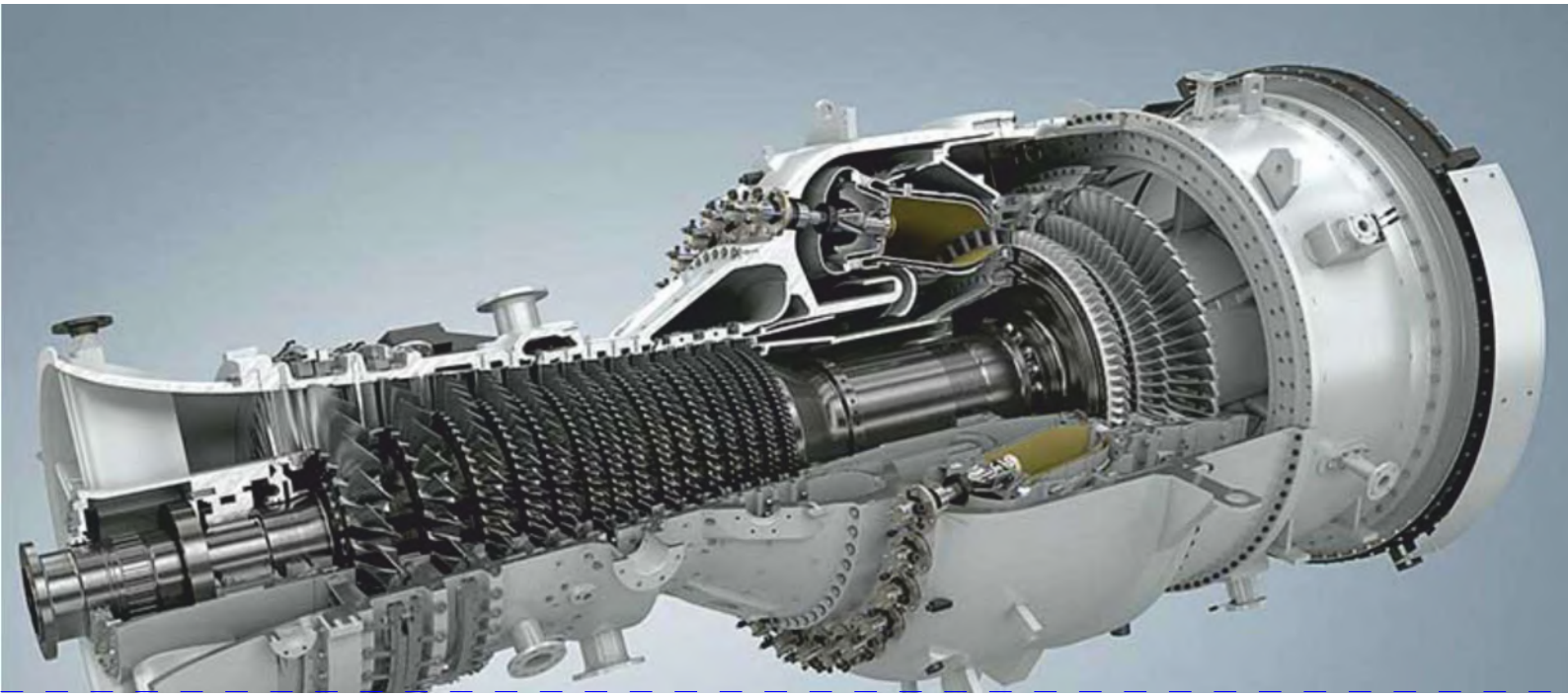


OIL AND GAS - OFFSHORE AND ONSHORE INSTALLATIONS

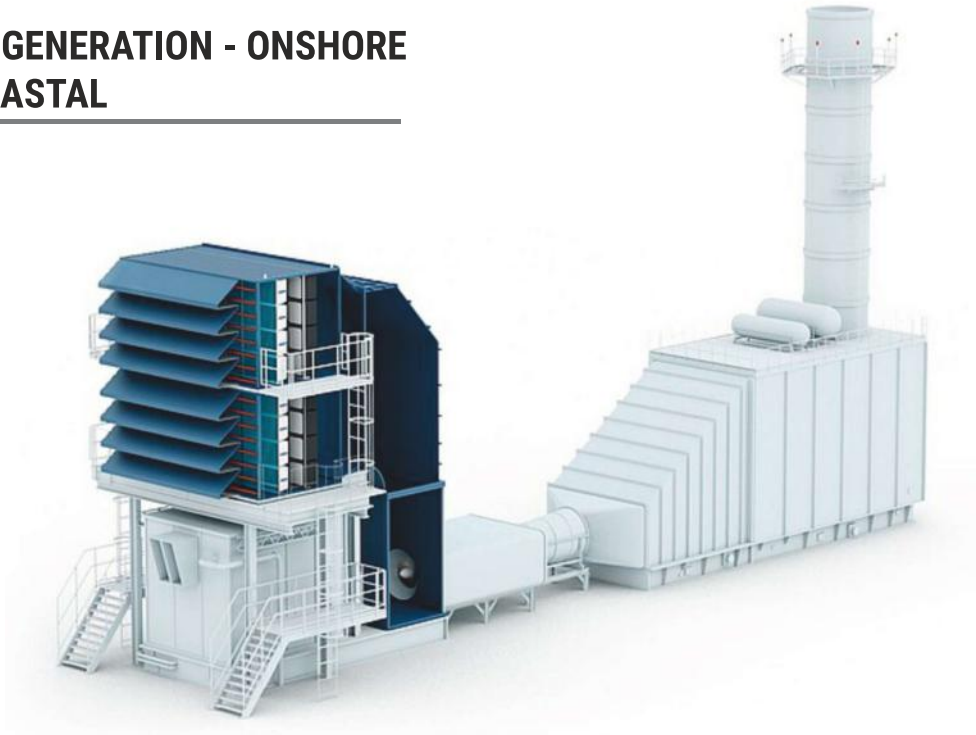
Oil and gas production often takes place in extremely harsh environments. Typical filtration challenges include heavy fog, salt spray, air pollution from other sources or very high dust concentrations. These conditions are frequently made worse by the by-products of drilling and industrial contaminants like hydrocarbons.

Micronic core strengths

- Solutions to meet any operational conditions, including desert, arctic and tropical
- Systems built around the optimum combination of filter types and classes
- Water / salt removal avoids corrosion in compressor and hot sections
- Long filter life and excellent total cost of ownership (TCO)
- On-site technical support and aftersales service



POWER GENERATION - ONSHORE AND COASTAL



Micronic core strengths

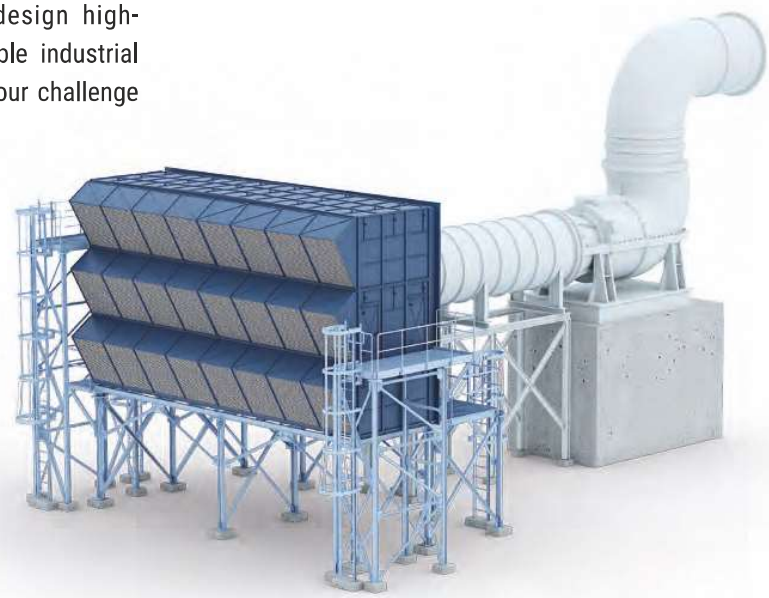
- Customized Solutions for any operational conditions
- Exceptional filter performance for high reliability and low TCO
- Filtration systems up to Micronic purity levels eliminate fouling of turbine blades
- High dust-holding properties maximize filter life time and reduce costs
- Full program of filters, spare parts and special accessories

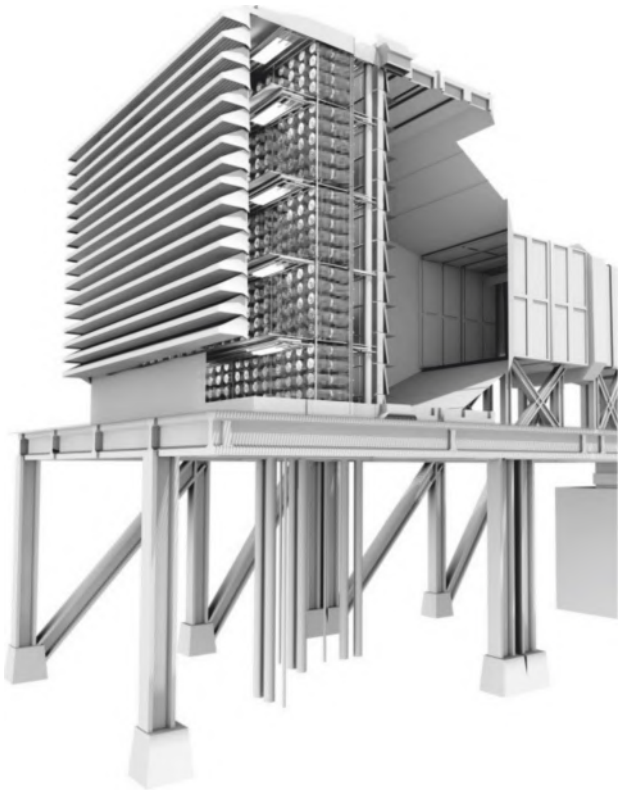
The power generation industry and the customers who depend on maximum duration of power supply require extremely high levels of reliability. Micronic system Solutions are ideally suited to these requirements. The exceptional quality and performance of our filters protects turbines from fouling, improves availability, extends maintenance schedules and makes a major contribution to avoiding unplanned downtime.

SECTOR-SPECIFIC EXPERTISE

INDIVIDUALLY DESIGNED SOLUTIONS FOR SPECIFIC INDIVIDUAL PROCESSES

Over 28 years of experience in air filtration has given us the technical and practical knowledge to design high-performance Solutions for every conceivable industrial application. Regardless of where of what your challenge might be.





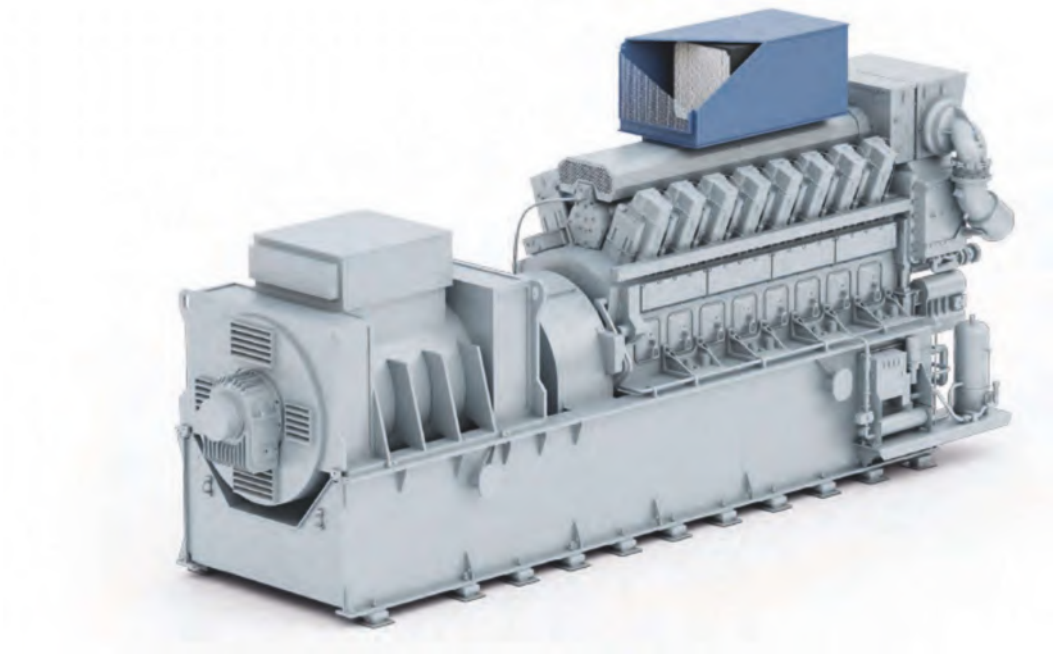
COMPRESSORS

Supporting a huge range of industrial functions, compressors rely heavily on filter quality to ensure their efficiency. This is especially true of air separation plants, which often need to be operational for periods as long as 12 or 24 months without ever shutting down. This means that the specified filtration solution has to be 100 % reliable, with a ready supply of spares and simple filter exchange processes.

Micronic core strengths

- Long-lasting filters with extremely high dust-holding capacities
- Filters with special features such as water droplet separation
- Fully customizable solutions
- Optimum protection of compressor blades during 24 / 7 operation
- Outstanding filtration efficiency for maximum availability and return on investment (ROI) Supporting

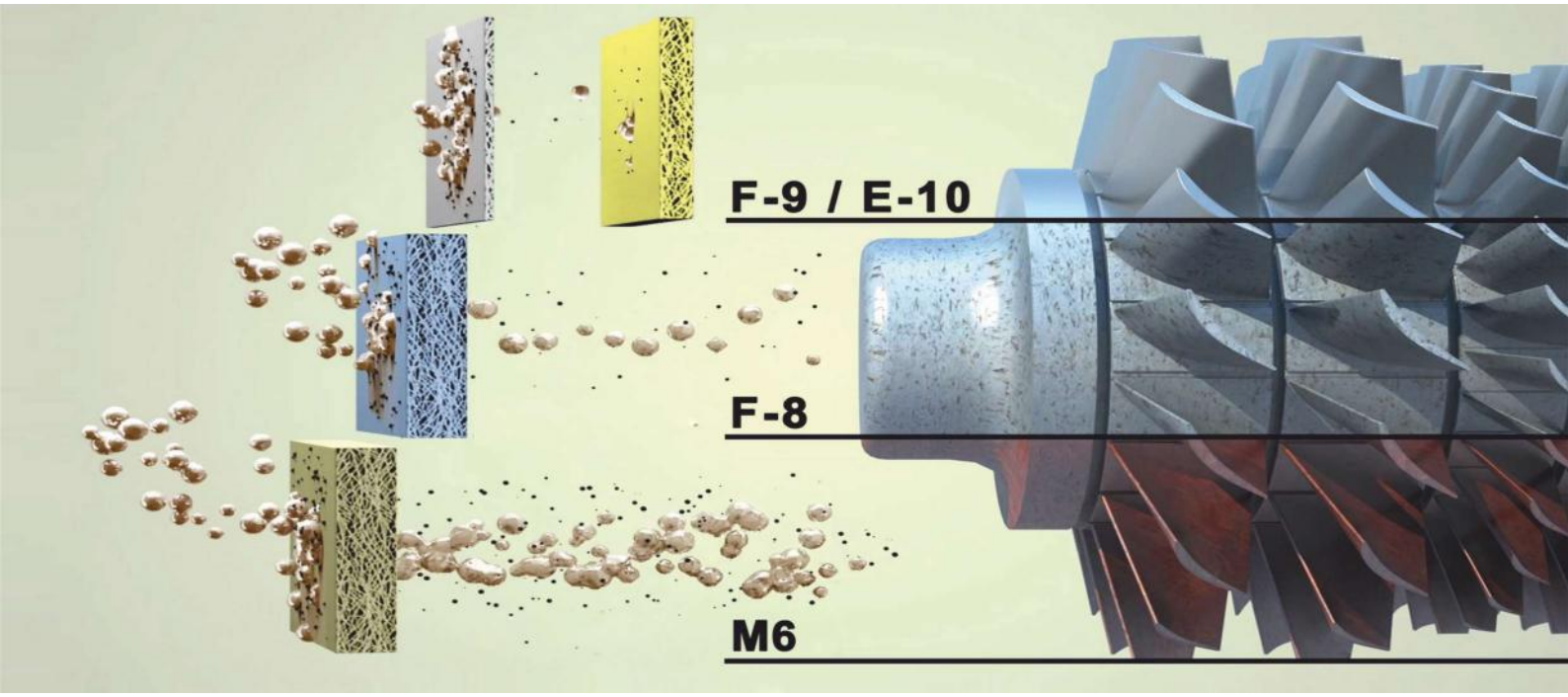
DIESEL AND GAS ENGINES



- Diesel and gas engines are used in industrial applications. The wide variety of engines use that air filtration solutions ideally need to be specifically designed for each application. With our comprehensive range of filters, accessories and mountign systems, Micronic can provide the ideal cost-effective solution for any diesel or gas engine.

Micronic core strengths

- Long-lasting filters with extremely high dust-holding capacities
- Flexible design solutions that match the precise needs of the engine
- Long-term supply agreements or partnerships from a global player with more than 28 years of history



ACCURATE PLANNING, CUSTOMIZED SOLUTIONS, LONG-TERM SUCCESS

Micronic Engineering

Micronic Engineering provides a comprehensive development and installation program for the retrofitting or new construction of air filter systems. Our individually specified service packages include onsite status analyses, consultancy, system design, quotations using 3D-CAD drawings, technical economic analysis, complete order handling, docu- mentation, training and aftersales service.

We have extensive global experience in air filtration engineering solutions for gas turbines and compressors. Our references include numerous examples of air filter systems for co-generation power stations, compressor stations, air separation plants and other industrial and commercial applications.

Micronic engineering teams are based worldwide and work closely with our customers to provide efficient solutions, regardless of the size and scale of the project. Every system is customized to meet the requirements of each specific application.

Our engineering portfolio at a glance

- Comprehensive status quo analysis
- 3D CAD models
- CFD analysis
- Structural calculation and FEM analysis
- Customized filtration solutions
- Small to large turn-key installations
- Final on-site inspections
- Close coordination with our customers
- Filter house production with qualified part ners.
- Continuous quality control

ENGINEERING SERVICES ATA GLANCE

Construction:

- New construction
- Replacements
- Retrofit of steel and concrete filter housings
- Upgraded filter Solutions

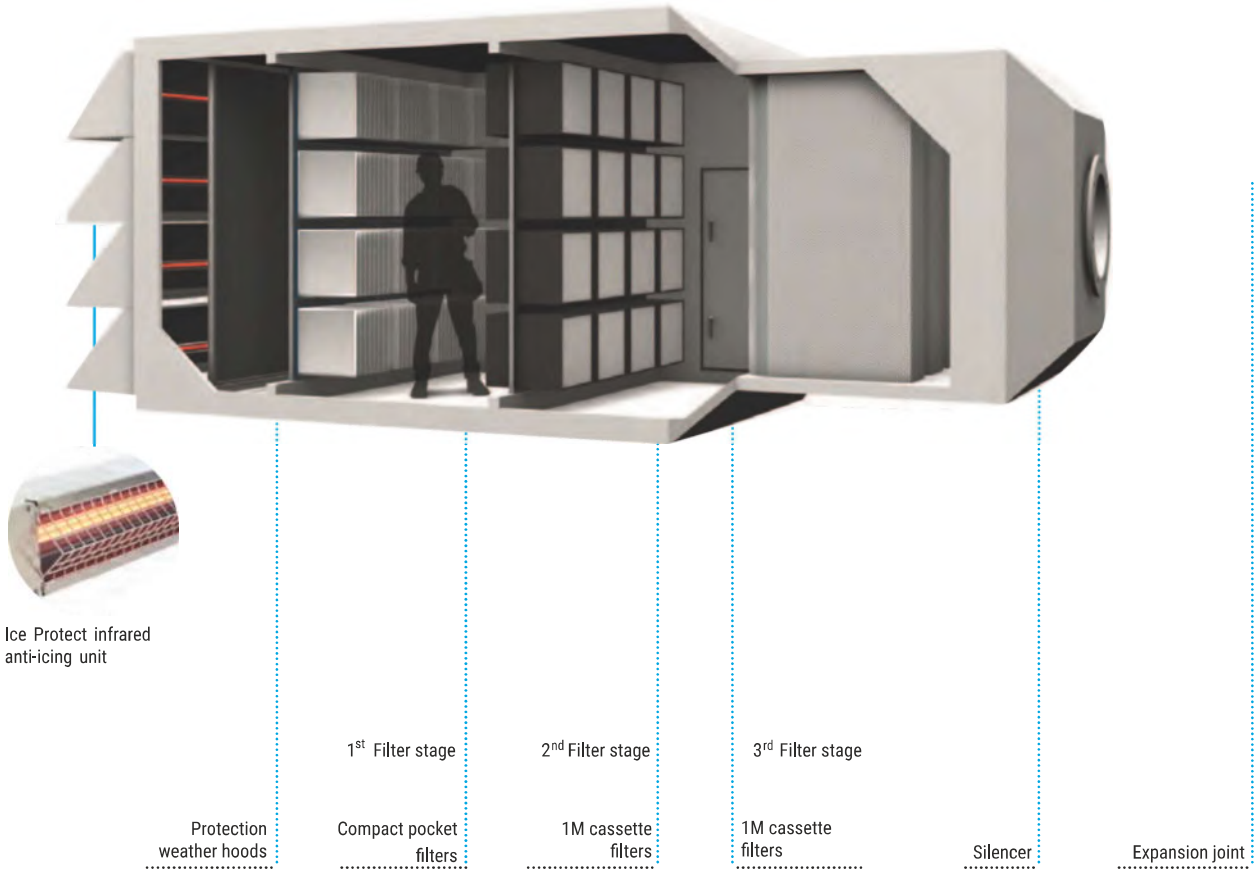
Components:

- Single- or multi-stage filter walls
- Weather hood constructions
- Weather louvres
- Measuring instruments
- Infrared anti-icing systems
- By-pass flaps
- Heat exchanger
- Air ventilation ducts
- Air cooling systems
- Droplet separators
- Fans
- Transition ducts and elbows
- Electrical equipment
- Shut-off louvres
- Silencers
- Support construction

Insulation

WALK-IN FILTER HOUSE

- A typical walk-in filter house showing a compact 3-stage configuration.
- Thanks to the 1M modular system, different filter classes and depths can be combined by simply clipping them together. This saves space and allows an additional filter stage to be added without any structural modifications



MULTI-STAGE FILTRATION CONCEPT

PERFORMANCE-OPTIMIZED TO MEET SPECIFIC OPERATIONAL CONDITIONS

Multi-stage filtration systems provide more effective filtration and increased protection for turbines and compressors. This has the effect of minimizing the risk of damage due to fouling. It also helps to eliminate unplanned downtime, reduce general maintenance costs and ensure that the turbine is running at optimum efficiency.

In a 2-stage system, the cassette filter in the final stage is protected by an upstream pocket filter. A 3-stage system adds a further downstream cassette filter stage. This can provide filtration levels up to Micronic standard. The choice of filters for each stage depends heavily on the environmen-tal conditions around the plant, as well as on any space limitations.

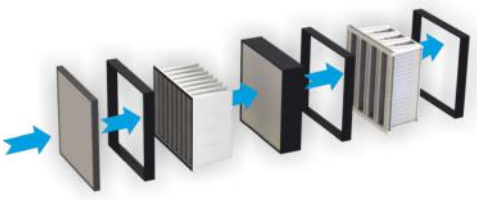
Getting the right solution for your needs

Micronic extensive experience of system solution design for hundreds of different applications worldwide is especially valuable in ensuring that your plant is correctly specified. From analysis and scoping to construction and commissioning, our engineers and filtration experts work closely with you to design the ideal solution for your specific needs.

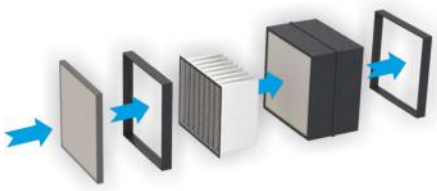
Your benefits at a glance

Our multi-stage air filtration concept offers tangible performance, efficiency and profitability:

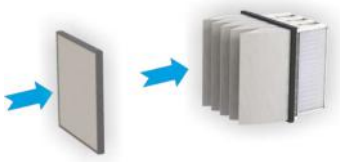
- Customized systems to meet your specific needs
- Expert advice and guidance on system design, construction, commissioning and maintenance
- Wide choice of filter products for a perfectly balanced solution
- Low pressure drop with outstanding particle collection efficiency
- Superior working life and longer mainte-nance intervals
- High quality filter products help to eliminate unplanned downtime
- Maximized performance leads to optimum Return on Investment



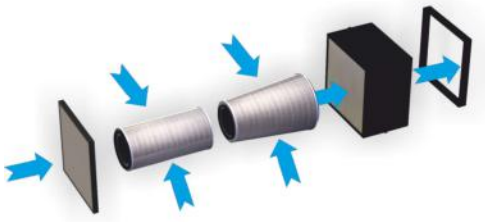
Ideal for highest-purity with Micronic filtration:
3-stage with 1TR (Rigid), 1M series and 1V filter combinations



Ideal for restricted spaces:
1M modular filter system featuring a 2-in-1 concept



Ideal for preventing water ingress:
1TR Reverse filter with 1V series filter



Optimized for cleanable filters and a safety filter stage:
1G Pulse-jet cartridges + 1M cassette filter

TYPICAL FILTER PRODUCTS USED IN FILTRATION SOLUTIONS FOR GAS TURBINES AND COMPRESSORS

Micronic Filtration Technologies offers a comprehensive range of cassette filters, pocket filters and cartridge filters for all turbomachinery and compressor air filtration systems, no matter where they are located or what the climatic or environmental conditions may be. In addition, we have the products required to support the growing trend for the use of Micronic filter systems, covering filter classes from G4 to H14.

FILTER CARTRIDGE OF 1G Series And Pulsable Variants of 1G Series

- Optimized selfcleaning characteristics for maximized useful lifetimes.
- Field-proven for critical on- site conditions like desert areas or tropical climates with high relative humidity.
- 1G 6001: tested acc. to EN specification. Static variants of 1G 6000/6001 series
- Optimal pressure drop characteristics resulting in maximized useful lifetimes for enhanced costefficiency of turbomachinery systems

1TR - BAG POCKET RIGID FIILTERS

- Water repellent with "front of filter" drainage effect in reverse fit configuration.
- Offer excellent coalescing properties.
- Ideally suited for applications where filters are exposed to constant water spray or fog.

1T - BAG POCKET FILTERS

- High-performing, economical and energy efficient.
- Cost-efficient 1T Bag pocket filters are resilient in continuous operation and achieve superlative performance based on high clean-air quality.

1M - PERFECT PLEATED BOX FILTERS

- Optimized handling, functional reliability and economy combined with uncompromising high filtration quality up to Micronic purity level.
- High security against dust penetration, outstanding bursting strength.
- Optional water barrier for less water-carry-through.
- 2- in-1 1M Modular Filter System for constricted space.

1W - V TYPE COMPACT FILTERS

- Excellent dust holding capacity thanks to 420 mm depth of the filter element which implies salient durability for a long service life.
- Powerful, efficient and resilient, even in damp or wet conditions
- Features at an optimal price performance ratio. Highly efficient with 21 m2 filter surface.

HIGH EFFICIENCY CARTRIDGES

DISCOVER THE DIFFERENCE IN PERFORMANCE AND VALUE

Applications: Gas Turbine inlet Filtration, Industrial Dust Collection micronic cylindrical and conical cartridge air filters are Nano coated technology depend on Nanofiber Based Technology.

Keep your equipment running efficiently and energy smart with highquality cartridge filters from micronic for Industrial Air. Available in our proprietary nanofiber medias-Micro M-19 Nanocoated technology for industrial filtration and Micro NanoFlat™ for gas turbine inlet filtration-our nanofiber cartridge filters lead the industry in perfarmance, efficiency and value.

Our nanofiber filters feature a special surface nanofiber layer made from cellulose and polyester so extremely fine they are measured in fractions of 0.3 micron level of particuls. This ultrathin layer traps dust and fume particulate on the filter's surface before it can embed deeper in the media leading to better selfcleaning efficiency with fewer pulses and significantly less pressure drop for compressed air.

- Proprietary Micro M-19 Nano Coated self-cleaning filter media delivers high performance, low maintenance and long life.
- Suitable for power generation, oil & gas, and industrial applications.
- Unique cartridge fixation sealing and locking system.
- A proprietary downflow airflow design to enhance the pulse-cleaning performance.
- Robust design makes the cartdride filter system of Micronic well-suited for all environments – including desert, marine, arctic, etc.

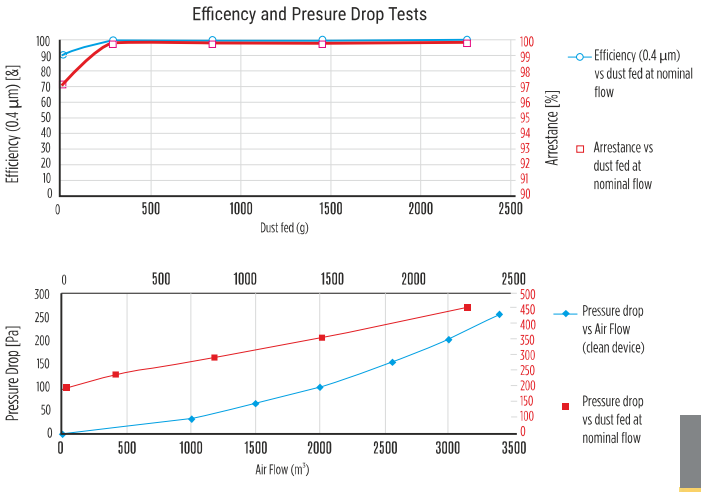
Our advanced nanofiber technology filters have been independently proven to achieve 20 %higher initial efficiency, cleaner air, lower pressure drop and greater energy savings than commodity filter media. This will reduce your cost for filter and cost for energy efficiency at your facilities.

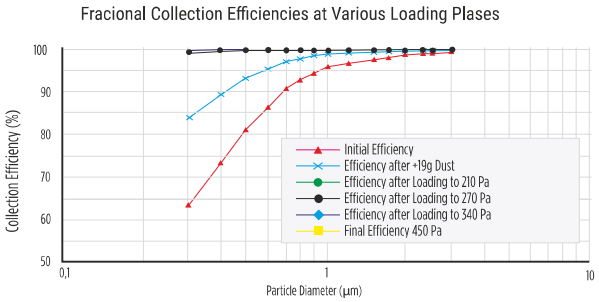
COMPARISON OF FILTER STANDARDS

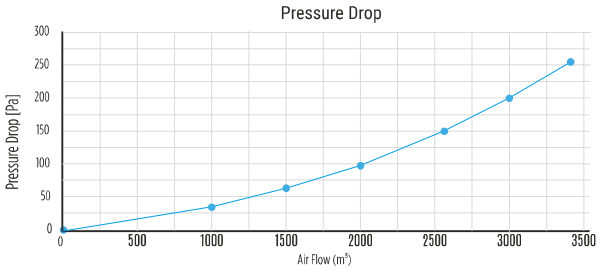
EN	EN779:2012			EN 1822	ASHRAE Standard 52.2-1999				ASHRAE 52.1	
Filter Class	Av. Arrestance of Syn. Dust	Average Eff at 0.4 µm	Min. Eff at 0.4 µm	Average Eff at MPPS	Minimum Eff Reporting Value	Composite Average Partide Size Efficiency % in Size Range, µm			Average Arrestance	Average Dust Spot Efficiency
	Test Final DP 250Pa	Test Final DP 450Pa				Range 1	Range 2	Range 3	NB. This Standard is obsoiate and here for reference only. Portonmances are not equivalent to ASHREA 52:2 or EN779.	
	%	%	%	%	MERV	0.30-1.0	1.0-3.0	3.0-10.0	%	%
G1	50≤Am≤65				1	n/a	n/a	E3<20	Aavg<65	<20
G2	65≤Am≤80				2	n/a	n/a	E3<20	Aavg<65	<20
					3	n/a	n/a	E3<20	Aavg<70	<20
					4	n/a	n/a	E3<20	Aavg<75	<20
G3	80≤Am≤90				5	n/a	n/a	E3<20	80	20
					6	n/a	n/a	E3≥35	85	20-25
G4	90≤Am				7	n/a	n/a	E3≥50	90	25-30
					8	n/a	n/a	E3≥70	92	30-35
M5		40≤Em≤60			9	n/a	n/a	E3≥85	95	40-45
					10	n/a	E2≥50	E3≥85	96	50-55
M6		60≤Em≤80			11	n/a	E2≥65	E3≥85	97	60-65
					12	n/a	E2≥80	E3≥90	98	70-75
F7		80≤Em≤90	35		13	n/a	E2≥90	E3≥90	98	80-85
F8		90≤Em≤95	55		14	E1≥75	E2≥90	E3≥90	99	90-95
F9		95≤Em	70		15	E1≥85	E2≥90	E3≥90	99	95
E10				<85	16	E1≥95	E2≥95	E3≥95	100	99
E11				<95	N/A	N/A	N/A	N/A	N/A	N/A
E12				<99.5						
H13				<99.95						
H14				<99.995						
U15				<99.9995						
U16				<99.99995						
U17				<99.999995						

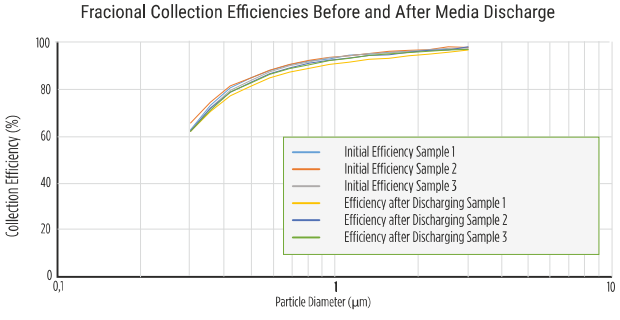
Note: The last MERV value is the highest MERV value that the filter data corresponds to, in fact, ali the requirements of MERV. MERV can not be used after 16th.

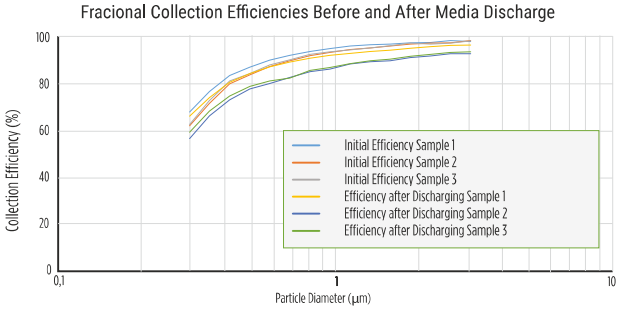
CYLINDRICAL AND CONICAL CARTRIDGES

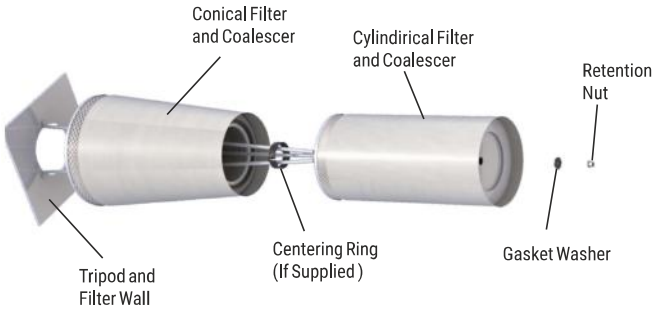












CONSTRUCTION MATERIALS

Filter Media	NANO Coated Blended-cellulose 80% polyester 20%
Structural Companents	Covers Galvanized Sheet Metal DX54 and 1 mm electro galvanized sheet metal
Potting	Two Companent Polyurethane
Gasket	EPDM rubber

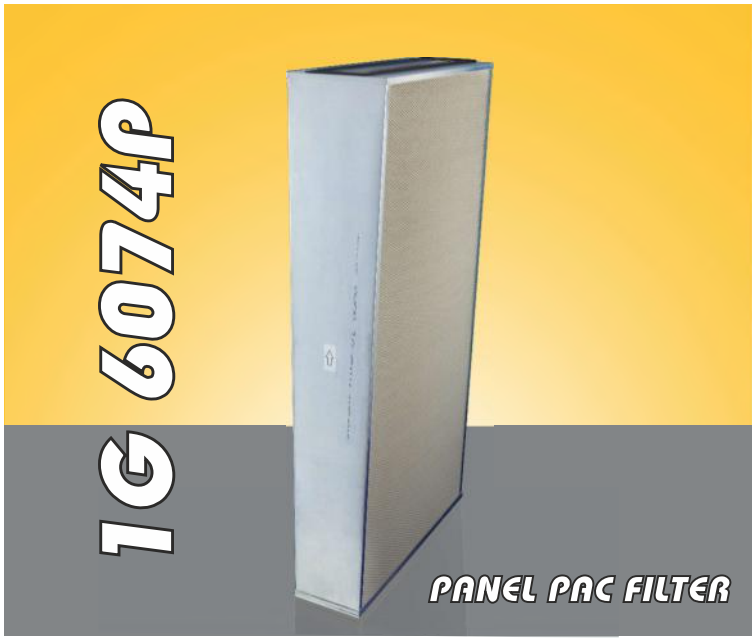
APPLICATION PERFORMANCE

Efficiency	According to Grade F9 (0,711 m^3/s) EN 779:2012 Min: 99.5%	
Wet Burst Pressure	>7500 Pa (30 in wg)	
	Initial Pressure Drop	*Final Pressure Drop*
1G 6000	160 Pa @ 2560 m^3/h	450 @ 2560 m^3/h
1G 6001	150 Pa @ 2560 m^3/h	450 Pa @ 2560 m^3/h
Recommended Maximum dP	1000 Pa (4 in wg)	
Temperature Range	-40 °C to +65°C (-40°F to +149°F)	

OPERATIONAL MODE

For arctic or desert envronments

Dimensons	*Inner Diameter*	*Out Diameter*	*Height*
1G 6000 (Cylindiracal)	213 mm	324 mm	660 mm
1G 6001 (Conical)	213-330 mm	324-445 mm	660 mm



PanelPak Media

The high efficiency media is available in a range of types and efficiencies specially treated to provide exceptional resistance to high humidity.

Each filter element is supplied with a moulded gasket fitted to the air leaving face, which guarantees a positive airtight seal every time the filter is changed.

	PanelPak Filter For Gas Türbine Air Intake Filter		
	High efficiency filter for air intake systems		
Key Data	PanelPak F8	PanelPak F9	PanelPak E12
FilterClassto EN779:2012	F8	F9	E12
Features & benefits	• Highercapacity • Longer life • Reinforced media for transport protection	• For machinery needing upto F9 efficiency • Higher capacity • Longer life • Reinforced media for transport protection	For EPA efficiency requirements please contact your local supplier for more information
Nominal air flow rate	2300 m^3/h 1350 CFM	2300 m^3/h 1350 CFM	-
Initial pressure dropat nominal air flow rate	282 Pa 1.13" WG	282 Pa 1.13" WG	-
Recommended final pressure	1000 Pa 4" WG	1000 Pa 4" WG	-
Bursting Strength	25"	25"	25"
Average arrestance	>85%	>99.99%	-
Average efficiency	90%	95.01%	-
Dimensions	Nominal:24"x9.75"x48" Exact: 610 x 300 x 1230mm	Nominal: 24" x9.75"x48" Exact: 610 x 300 x 1230mm	Nominal: 24"x9.75"x48" Exact: 610 x 300 x 1230mm

HIGH EFFICIENCY CARTRIDGES CROSS REFERENCES

micronic	Donaldson	Media	OD (mm)	ID (mm)	Length (mm)
1G 6000	P19-1280	Cellulose + Synthetic Micro M-19 Nano Coated and Micro NanoFlat	324	213	660
1G 6001	P19-1281	Cellulose + Synthetic Micro M-19 Nano Coated and Micro NanoFlat	324 / 445	213 / 330	660
1G 6005	MAHLE 852908	Cellulose + Synthetic	330 / 340	213	600
1G 6006	MAHLE 852908	Cellulose + Synthetic Micro M-19 Nano Coated and Micro NanoFlat	330 / 340	213	600
1G 6010	P19-1037	Cellulose + Synthetic	324	213	660
1G 6011	P19-1039	Cellulose + Synthetic	324 / 445	213 / 330	660
1G 6020	P19-1236	Duratek	324	213	660
1G 6021	P19-1238	Duratek	324 / 445	213 / 330	660
1G 6030	P19-1033	Synthetic	324	213	660
1G 6031	P19-1107	Synthetic	324 / 445	213 / 330	660
1G 6040	P19-1713	Duratek micro M 19 nano Coated and Micro NanoFlat	324	213	660
1G 6041	P19-1463	Duratek micro M 19 nano Coated and Micro NanoFlat	324 / 445	213 / 330	660
1G 6050	P19-1177	Synthetic micro M 19 nano Coated and Micro NanoFlat	324	213	660
1G 6051	P19-1178	Synthetic micro M 19 nano Coated and Micro NanoFlat	324 / 445	213 / 330	660
1G 6060	P19-1713	Duratek micro M 19 nano Coated and Micro NanoFlat	324	213	762
1G 6061	P19-1463	Duratek micro M 19 nano Coated and Micro NanoFlat	324	213	762
1G 6062	P19-0949	Synthetic micro M 19 nano Coated and Micro NanoFlat	324	213	559
1G 6063	P19-1031	Synthetic	324	213	559
1G 6064	P19-1310	Duratek micro M 19 nano Coated and Micro NanoFlat	324	213	559
1G 6065	P19-1234	Duratek	324	213	559
1G 6066	P19-0848	Duratek micro M 19 nano Coated and Micro NanoFlat	476 / 446	356	660
1G 6067	P19-1617	Duratek	324	213	737
1G 6068	P19-1767	Duratek micro M 19 nano Coated and Micro NanoFlat	324	213	914
1G 6069	P19-0848	Consist of Cellulose & Synthetic	476 / 446	356	660
1G 6070	P19-1790	Cellulose + Synthetic	324	213	762
1G 6071	P19-1492	Cellulose + Synthetic	324	213	762
1G 6072		Consist of Cellulose & Synthetic	324	213	559
1G 6073		Consist of Cellulose & Synthetic	330	231	600
1G 6074P		PanelPak	610 / 250 / 170	570 / 80	1235
1G 6075	387 700 031	Consist of Cellulose & Synthetic	351	240	905
1G 6076	387 700 031	Synthetic micro M 19 nano Coated and Micro NanoFlat	351	240	905
1G 6077	P19-1726	Cellulose + Synthetic	324	213	960
1G 6079	P19-1461	Cellulose + Synthetic	324 / 416	213 / 302	904
1G 6080	P19-1726	Cellulose + Synthetic	324	213	762
1G 6081	P19-1461	Cellulose + Synthetic	324	213	762

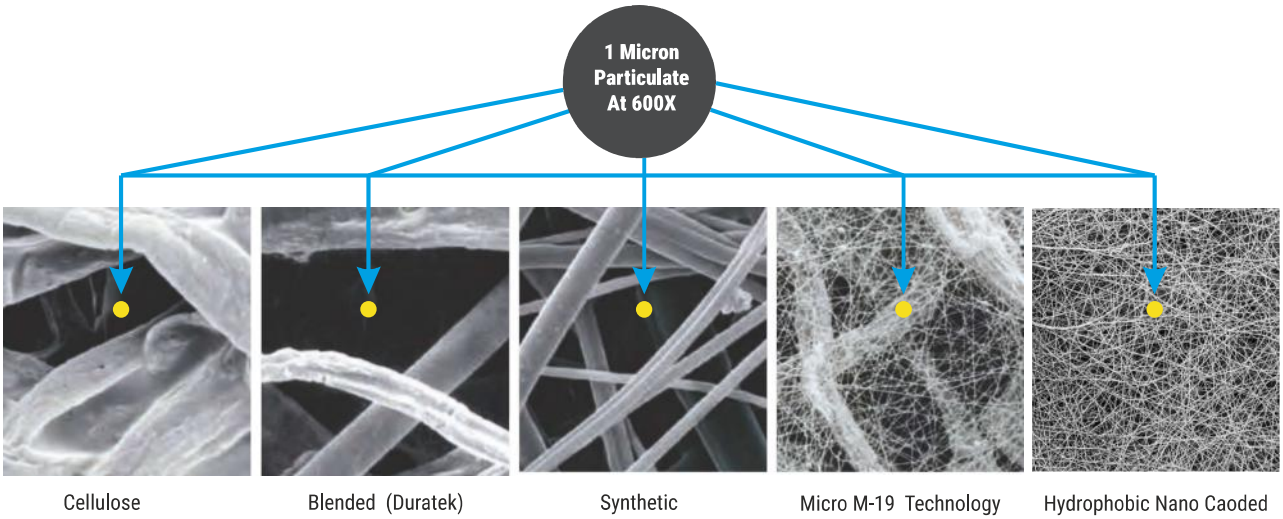
HIGH EFFICIENCY CARTRIDGES CROSS REFERENCES

micronic	Donaldson	Media	OD (mm)	ID (mm)	Length (mm)
1G 6090	P19-1781	Synthetic micro M 19 nano Coated and Micro NanoFlat	407	292	876
1G 6091	P19-1782	Synthetic micro M 19 nano Coated and Micro NanoFlat	407	292	559
1G 6100	P03-0253	Synthetic micro M 19 nano Coated and Micro NanoFlat	407	292	717
1G 6101	P03-0254	Synthetic micro M 19 nano Coated and Micro NanoFlat	407	292	717
1G 6110	P03-0067	Synthetic	476 / 446	356	660
1G 6111	P19-5778	Cellulose + Synthetic	486	356	660
1G 6130	P03-0072	Synthetic	407	292	876
1G 6131	P03-0071	Synthetic	407	292	559
1G 6140		Consist of Cellulose & Synthetic	407	292	876
1G 6141		Consist of Cellulose & Synthetic	407	292	559
1G 6200	P77-7172	Consist of Cellulose & Synthetic	571	446	711
1G 6201	P77-7171	Consist of Cellulose & Synthetic	446	324	711
1G 6210	P77-8231	Duratek micro M 19 nano Coated and Micro NanoFlat	571	446	711
1G 6211	P77-8230	Duratek micro M 19 nano Coated and Micro NanoFlat	446	324	711
1G 6300	P03-0183	Duratek micro M 19 nano Coated and Micro NanoFlat	407	292	717
1G 6301	P03-0184	Duratek micro M 19 nano Coated and Micro NanoFlat	407	292	717
1G 6310	P03-8661	Hydrophobic Nano Coated	324	213	660
1G 6311	P03-8662	Hydrophobic Nano Coated	324 / 445	213 / 330	660

PROPRIETARY TECHNOLOGY THAT PERFORMS

Proven and proprietary Micro M-19 technology delivers longer filter life, cleaner air and greater cost savings than other types of filter media. Made with an electrospinning process that produces a very fine, continous, resilient fiber od 0.2-0.3 micron in diameter, Micro M-19 forms a permanent nanofiber web with very fine interfiber spaces that trap dust

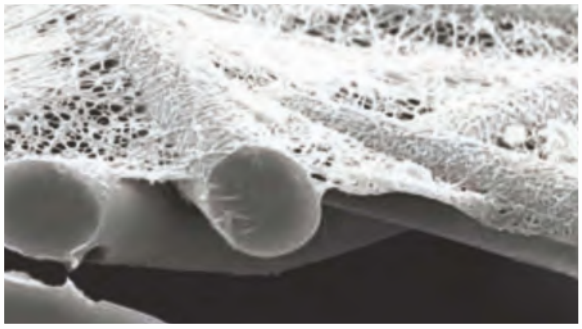
- Superior media, capturing submicron dust particles
- Longer filter life, better pulse cleaning, surface loading technology
- Lower pressure drop, optimal pulse cleaning, maximum turbine efficiency
- Filtration efficiencies to meet specific application needs



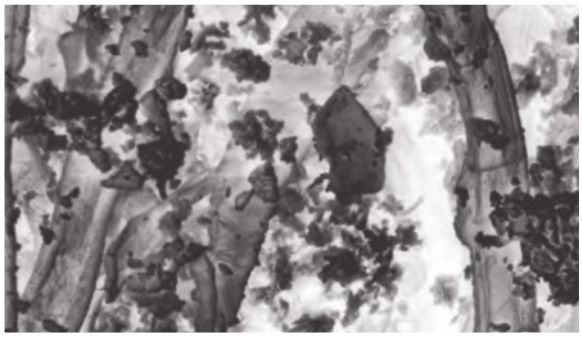
SUPERIOR TURBINE PROTECTION

For more than three decades, Micronic has advanced our Micro M-19 technology to provide a complete line of filters that last up to twice as long as commodity filters. Pressure drop rises quickly with commodity filters, resulting in shorter filter life, reduced power output and increased maintenance cost. Micro M-19 high efficiency filters provide superior gas turbine protection, lower operating pressure drop and longer filter life.

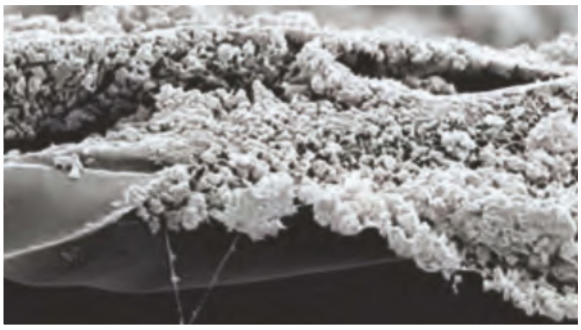
CLEAN COMMODITY FILTER



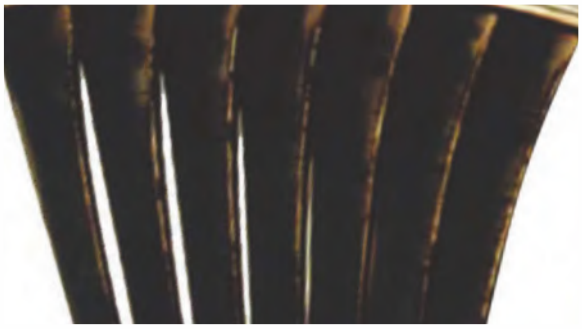
CLEAN MICRO M-19 FILTER



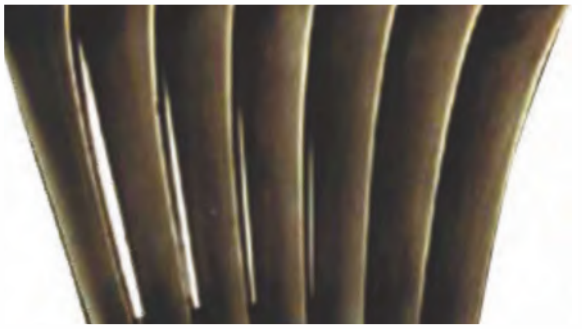
LOADED COMMODITY FILTER



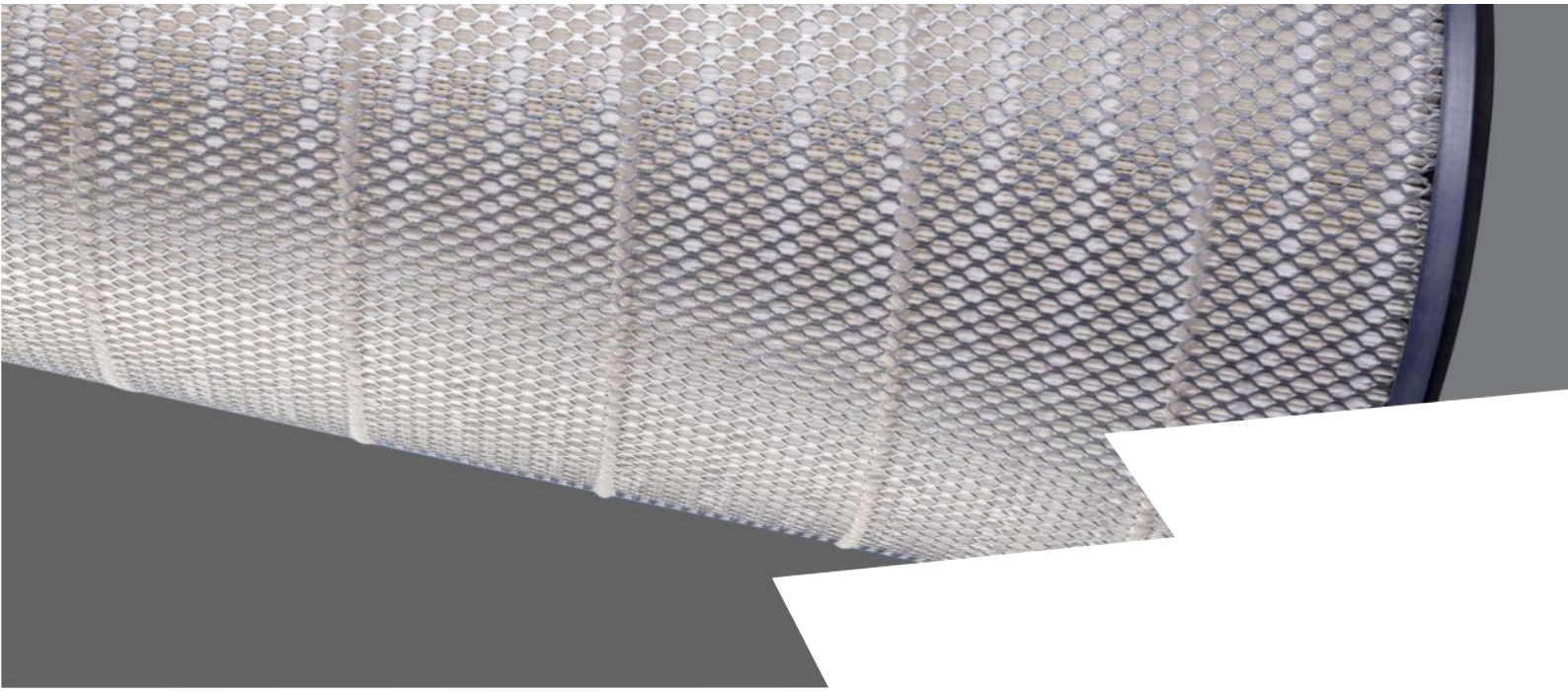
LOADED MICRO M-19 FILTER



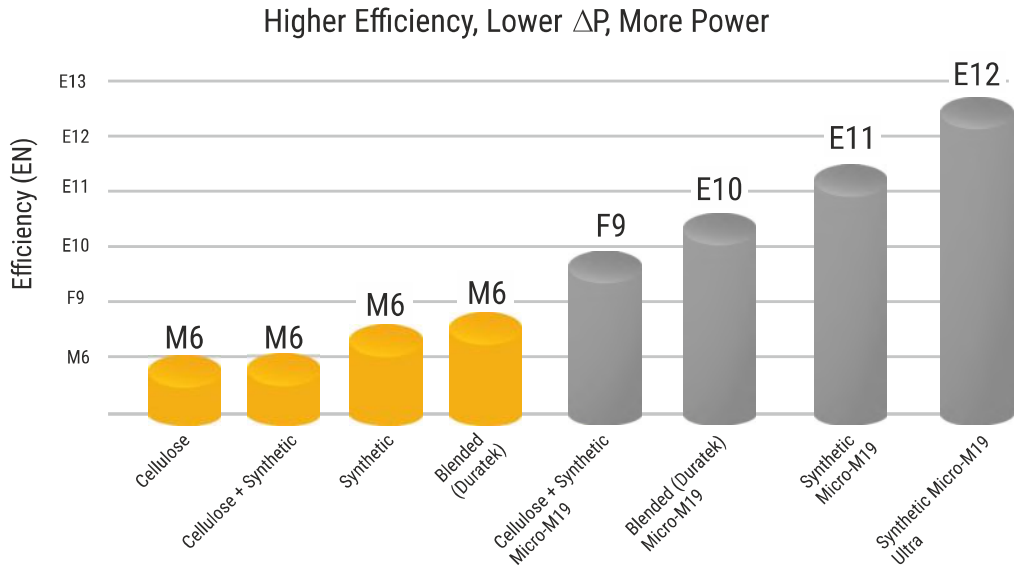
DIRTY TURBINE BLADE



CLEAN TURBINE BLADE



ENGINEERED FOR POWER



Cartridge Filter Media Type	EN	EN779:2012		
		Composite Average Partical Size Efficiency % in Size Range, m		
		0.30 - 1.0	1.0 - 3.0	3.0 - 10.0
Synthetic Micro M-19 Ultra	E12	≥99.5	≥99.9	≥99.9
Synthetlc Micro M-19	E11	≥97	≥97	≥97
Blended (Duratek) Micro M-19	E10	≥95	≥95	≥95
Cellulose + Synthetic Micro M-19	F9	≥85	≥95	≥95
Synthetic	M6	X	≥80	≥90
Blended (Duratek)	M6	X	≥80	≥90
Cellulose + Synthetic	M6	X	≥80	≥90
Cellulose	M6	X	≥65	≥90

Micro M-19 filters, optimizing filtration and turbine efficiency without sacrificing filter life or increasing pressure drop.

For applications that require even higher efficiency, there's a Micro M-19 filter to meet your needs.

micronic FILTER

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