



Oil Mist Filter

To serve our customers with a unique strength and reliability since Dantherm Filtration covers the entire business area from know-how and products to solutions and services



Dantherm Filtration Co., Ltd. is the leading supplier in air pollution control system for the industrial sector in Thailand.

The company originates back to 1991 when the company was setup as a branch office mainly with the purpose to serve the growing demands in the local wood industry.

Since then the company have evolved with support from group companies to service many other industries in the Thai and South East Asia market.

With a broad product program, know how from the Dantherm Filtration group we can help our customers to provide clean air for man machine in most industries, but especially we focus on serving manufacturing industries who processes Metal, Wood, Agriculture products, Plastic, Chemical, Rubber, Glass fiber Cement, Aluminum and cobber.

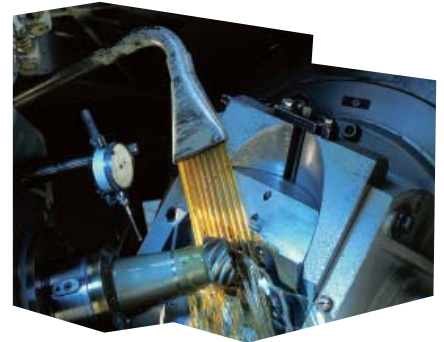
Main Industry segments served is Manufactures of automotive & metal parts, Furniture and panel boards, plastic components, building materials , paint and lacquer, Rubber tires, chemical additives, Food, animal feed, chemicals and additives.

Dantherm Filtration Co., Ltd. has more than 80 employees in the Bangkok office, Chonburi office, Vietnam office and Nonthaburi factory. Moreover, we coordinate with our partners from to make to provide cost effective turnkey solutions in air pollution control systems.

Furthermore Dantherm Filtration group constantly work on development of the products to meet the strongest demands in environmental and safety standards to provide the best for our customers in terms of Know-How, Product, Solution and service.

Serving the Metalworking Industry

Dantherm Filtration Co., Ltd. have supplied the our Know - How, Products, solution and service to the Automotive and metal manufactures during many years. The solution covers designing, supply, installation and commissioning of dust extraction and Air pollution control systems for example welding, grinding, shot-blast and surface treatment systems. Dantherm Filtration solution is based on in-depth knowledge of the industry and the specific requirements of individual companies. Welding fumes, oil mists and abrasive grinding dusts are a constant threat to the working environment and to product quality and we are constantly investing resources in the development of new products and solutions to increase efficiency and apply energy - saving features.



Our solution ensures maximum up-time, which is crucial to for a smooth operation, and our systems today have already operated Millions of hours in tough conditions, which is your guarantee of durability, flexibility , efficiency and long life time.

Dantherm Filtration staff is available at all time around the world to help you with optimization, expansion and service of Air pollution control system with back up from our own manufacturing facilities.

With Dantherm Filtration as a partner you get:

- Correctly designed system which complies with current legislations.
- Optimal design for low operation cost.
- Long life time and reduced maintenance cost
- Access to know how from experience with 35,000 Installations made world wide.
- Service and spare part back up to ensure trouble free operation.
- Support from our local offices and partners close to you.



System design for extraction, filtration and handling of oil mist and fumes :

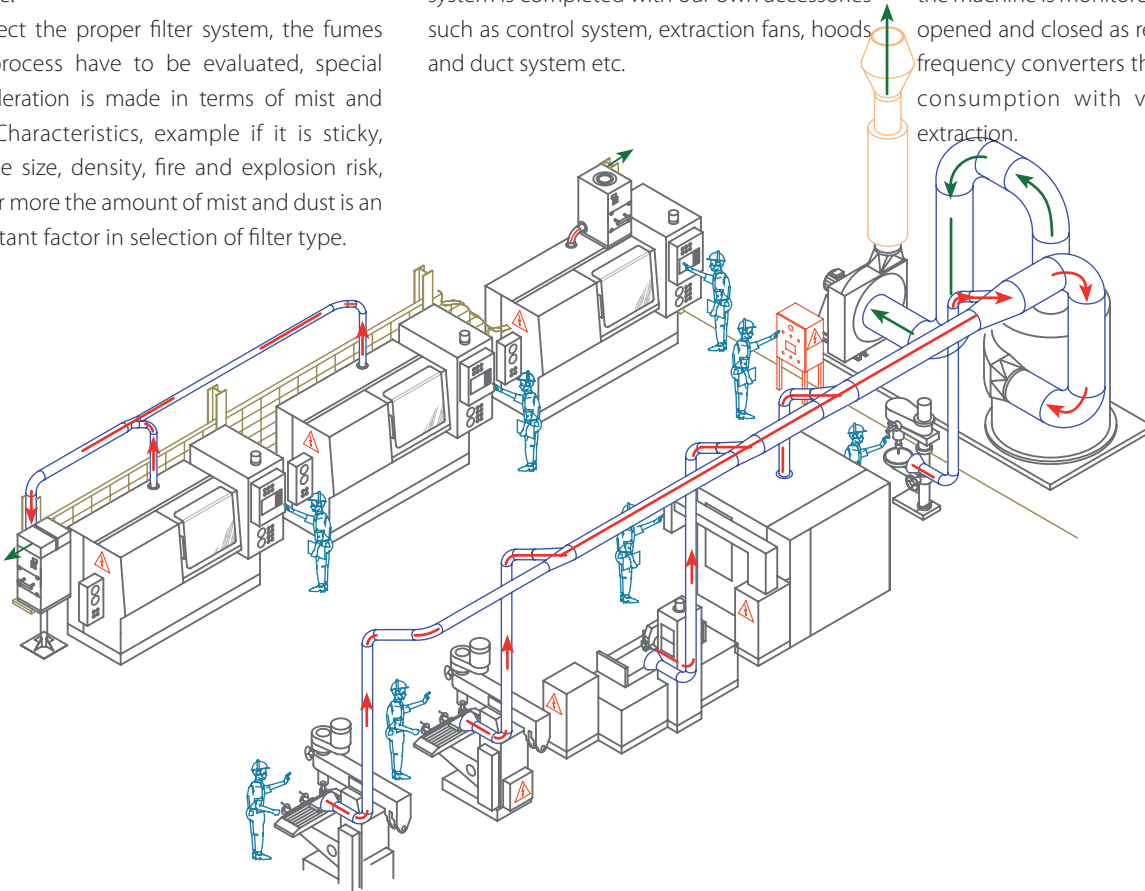
Designing a effective working area and creating proper ventilation at each working place for Machine tool ensures a good environment for the workers and removes oil mist fumes, but the extracted air has to be filtrated by a effective filter media before the air is released to the outside.

To select the proper filter system, the fumes and process have to be evaluated, special consideration is made in terms of mist and dust Characteristics, example if it is sticky, particle size, density, fire and explosion risk, further more the amount of mist and dust is an important factor in selection of filter type.

Dantherm filtration select from our own extensive product range the correct oil filter material, type of filter elements, type of filter housing, cleaning system, dust and liquid discharge method and safety features such as explosion relief and fire protection, and the system is completed with our own accessories such as control system, extraction fans, hoods and duct system etc.

Energy consumption:

In many industrial processes a number of work places are used for Machine tools but not all of them are working simultaneously. To prevent unnecessary energy consumption Dantherm Filtration offers a sensor built into the CEE power take-off, hereby the current taken by the machine is monitored and the dampers are opened and closed as required. Together with frequency converters this ensures low energy consumption with variety in needs for extraction.



Customer Reference

Air Pollution Control Solution

Dantherm Filtration focuses on individual solutions for customer needs.

We leverage the experience and expertise of air cleaning systems for

wide range of applications.



DAIMLER CHRYSLER



ISUZU



PEUGEOT



SIAM KUBOTA

Industry Reference:

- | | | | | |
|-----------------|-------------|-----------------|-----------|------------|
| Aluminium | Agriculture | Metal & Casting | Machinery | Shot blast |
| Casting | Cement | Packaging | Painting | Steel |
| Chemicals | Electronics | Paper | Plastic | Tobacco |
| Food processing | Foundry | Pharmaceutical | Rubber | Wood |
- ... and many more**



CENTRAL Mistral Filter

The innovation: The Mistral filter

Modern machining centres have to cope with ever increasing demands in terms of product quality and through put times. The cutting fluids used at the machines have been continuously improved and developed for this purpose. This results in corresponding changes in the workplace safety regulations and accordingly in the demands made of systems for the extraction of aerosol mists and vapours.

Dantherm Filtration, the renowned company for filter systems and process engineering, has developed a new filter to take account of all demands in close cooperation with various associations and study groups: the Mistral aerosol filter for air volumes of up to 30,000 m³/h.

Depending on the dirty gas dust levels, this system can be used to achieve residual particle contents of less than 1 mg/m³. Tests by **the Institut für Luftund Kältetechnik ILK Dresden** resulted in an efficiency level of 99% for particles measuring 2.3 µm in size, thus verifying Mistral's high filtration capability.

Modern filtration solutions for modern machining centres

The Mistral aerosol filter has been specially developed for the extraction of oil, emulsion and aerosol mist. The main application for this system is primarily in the metalworking industry, wherever machine and tools are being operated which use cutting fluids. The filter system has been designed for use as a central extraction system in the sub- and medium pressure range.

Industries

- Automotive industry
- Machinery
- Tempering shops
- Sheet metal working
- Rolling mills

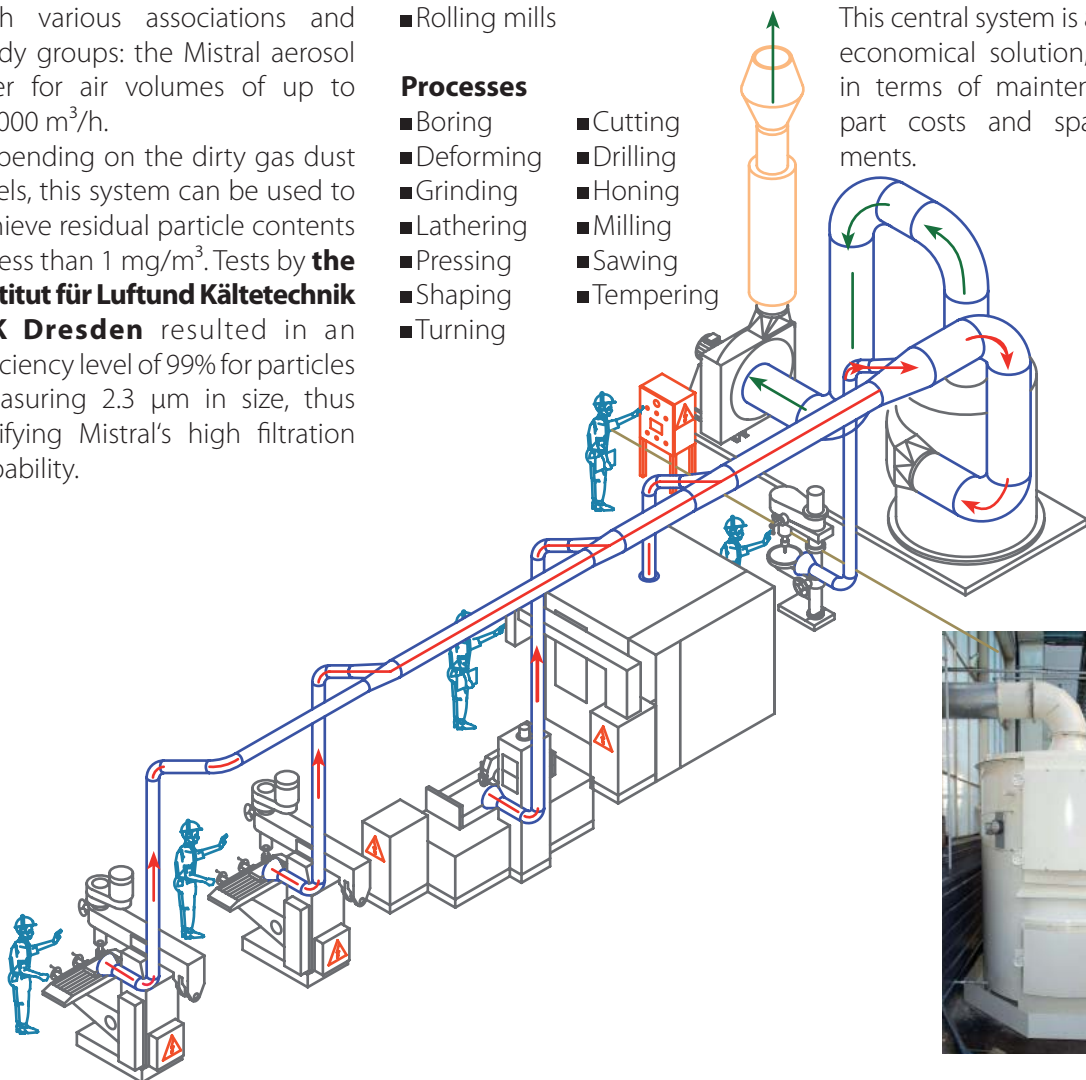
Processes

- Boring
- Drilling
- Deforming
- Honing
- Grinding
- Milling
- Lathering
- Sawing
- Pressing
- Tempering
- Shaping
- Turning

Functions and advantages

- Compact design
- 3-stage filtration (cyclone effect and 2 filtration stages)
- High pre-separation of coarse particles
- Long life - times
- No disposable elements
- Low operating costs
- Simple maintenance
- Filtration capacity tested by certified testing institute
- High filtration rate

The Mistral filter has been designed for use as central or group extraction system, i.e. several different machines are connected up to a filter system, either individually or in groups. This central system is an extremely economical solution, particularly in terms of maintenance, spare part costs and space requirements.



Mistral technology

3 STAGE FILTRATION PROCESS

Step 1 Cyclone pre-separation

Cyclonic effect Dirty gas intake tangential

Step 2 Agglomeration

Air flow in the filter cartridge from the outside in

Step 3 Filtration

Air flow through the filter cartridge from the inside out Clean gas outlet

Mistral technical specifications

Type	Air flow volume m³/h	Filter (mm.)		Flange Air intake (mm.)	Diameter Air discharge (mm.)	Weight (kg.)
		Diamete	Height			
NOMF4	10,000	1,600	2,150	300 X 600	550	540
NOMF6	15,000	1,800	2,240	375 X 700	650	670
NOMF8	20,000	1,900	2,330	450 X 775	700	800
NOMF10	25,000	2,150	2,380	525 X 1000	800	930
NOMF12	30,000	2,290	2,520	525 X 1000	850	1,060

Pressure loss in the filter depends on the air volume and the condition of the filter elements. Normally the pressure loss is approx. 1500 Pa for maximum filter flow volumes. The dirty gas is cleaned in the Mistral filter

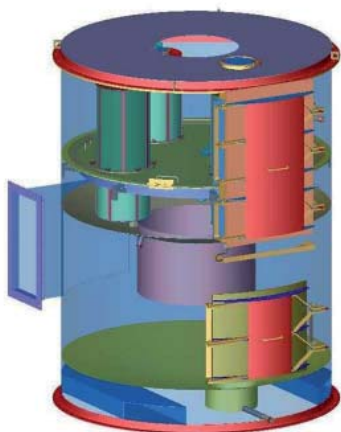
system as follows: cyclone pre-separation by tangential air intake, agglomeration in the first filter stage (on the filter cartridge) and filtration in the second filter stage (in the filter cartridge).

Operating conditions:

Maximum operating temperature: 60°C

Minimum operating temperature: 0°C

Hydrocarbon resistance: good to excellent



Accessories / options:

- Spray nozzle system available
- Two filter versions

- with integrated fan on the housing roof
- Free - standing fan

- Hepa filter as filter stage 4 for special features etc.

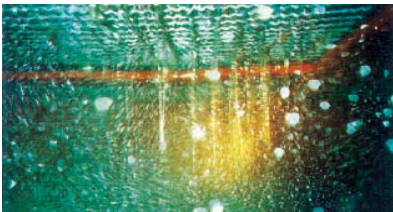


DE - CENTRAL Emulsion Mist Separator

The compact oil and emulsion vapor separation unit

During wet metal cutting processes the cooling lubricants used are atomized into extremely fine aerosols. The air-strange substances are a mix of the oils and emulsions used and the materials being processed. The particle size of the majority of the droplets lies between 0.5 and 3.0µm.

- Reliable and efficient separation of liquid droplets and particles from the gas stream
- Clean production areas and humanized work places
- Reduced maintenance rates
- Less entrainment, recirculation of cooling lubricants
- Assured emission rates
- High-level availability
- Improved production and product quality



Advantages:

Cost-efficiency

Cost-favorable cutting-edge technology thanks to fully automatic laser-assisted production plus low running costs thanks to renewable knitted fabrics

Performance

Powerful performance with permanently stable suction capacity of 600 m³/h and 800 m³/h respectively Lowvibration, low-noise operation and pressure-proof up to 50m bar.

Maintenance

Higher performance means considerably longer intervals between filter swaps and thus less filter load. No tools needed to exchange filters.

Dimensions & Setup

Low unit height - just 55 cm, base 40 x 45 cm, numerous setups and connections possible.

The separation principle:

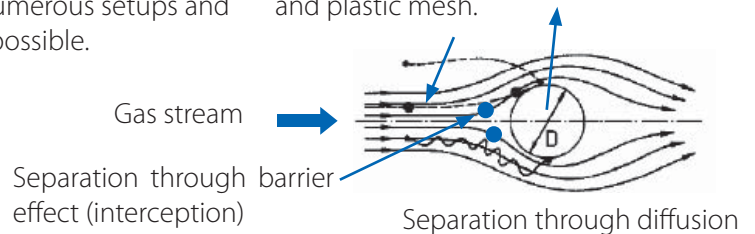
In order to separate oils and emulsions in waste air from machine tools there must be a phase separation between the gas and the liquid phase. In order to achieve a high degree of separation, filters made of specially developed meshes are used.

Active principle and separation mechanism

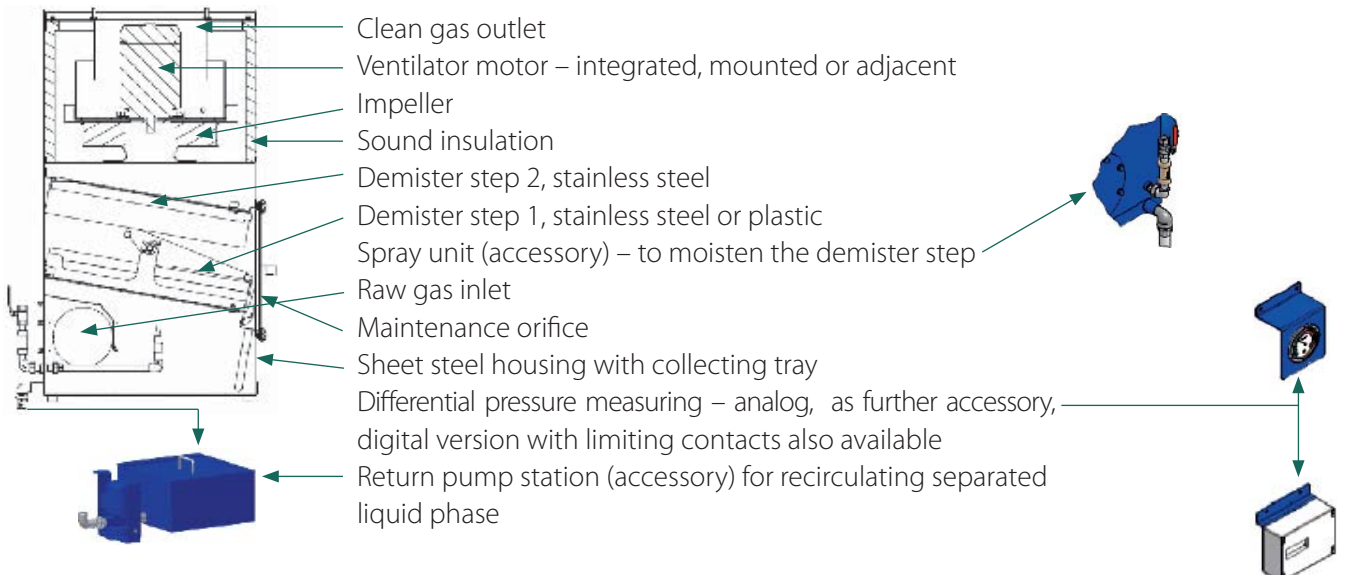
- Separation through inertia - droplets coalesce
- Separation through barrier effect - larger droplet diameter
- Separation through diffusion - Brownian molecular motion

Mode of operation:

Deflection and mass inertia separation (impaction) through demister phases made of metal and plastic mesh.



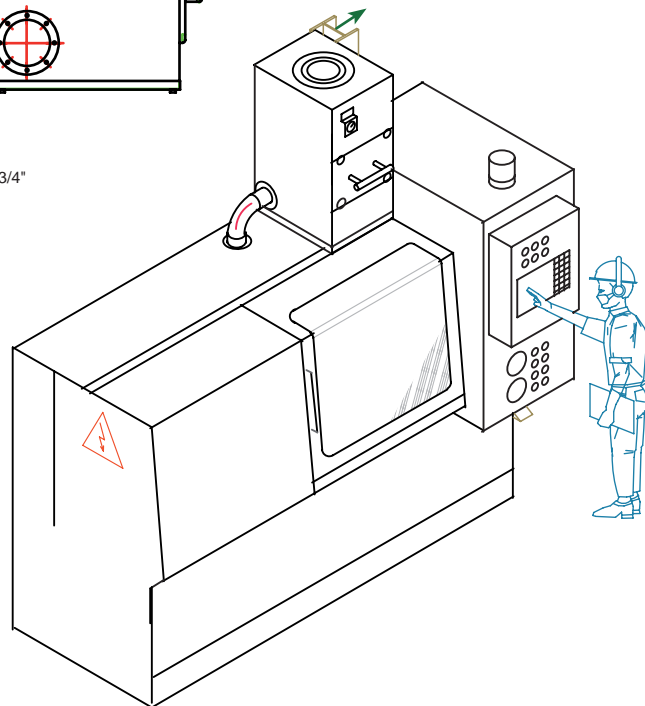
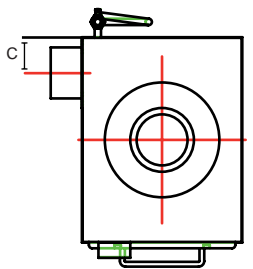
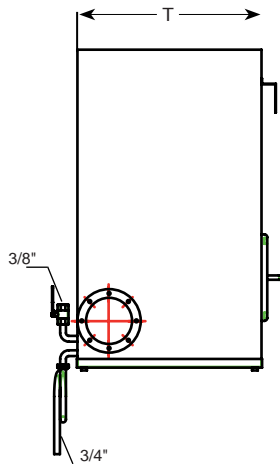
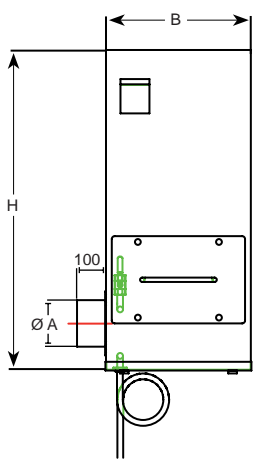
Design and dimensions:



Technical Data

Separator Type (A)* on top unit	Air flow volume (m ³ /h)	Filter area (m ²)	Power input (kW)	Voltage (V)	Dimensions (mm.) B x T x H			Connection Ø inlet (mm.)	Connection Ø outlet (mm.)	Oil drain (inch)	spraying valve (inch)	sound pressure level db(A)	Weight (kg.)
					B	T	H						
Charly 600	650	0.12	0.75	230/460	400	510	650	125	125	1"	3/4"	70	60
1 - 0,12 (A)*	650	0.12	0.75	230/460	500	540	1100	125	125	3/4"	3/4"	70	110
1 - 0,18 (A)*	1000	0.18	1.45	230/460	500	640	1100	160	160	3/4"	3/4"	70	130
1 - 0,28 (A)*	1500	0.28	1.75	230/460	600	640	1150	180	180	3/4"	3/4"	70	150
1 - 0,37 (A)*	2000	0.37	2.2	230/460	700	640	1200	200	200	3/4"	3/4"	70	170
1 - 0,5	2500	0.5	4	460/660	750	860	1500	224	224	3/4"	1"	67	500
1 - 0,75	4000	0.75	5.5	460/660	780	990	2000	280		3/4"	1"	75	650
1 - 1,0	6000	1	7.5	460/660						3/4"	1"	75	
2 - 1,5	8000	1.5	11	460/660	1410	1090	2520			3/4"	1"	75	950
2 - 2,0	10000	2	15	460/660									
4 - 3,0	15300	3	18.5	460/660	1405	1694	2600			3/4"	1"	75	1250

Remark: Protective system: IP55, Frequency 50/60 [Hz], Pressure / filter resistance 1000-1400 Pa



option



option

World wide sales companies



The world leader in air pollution control

Dantherm Filtration focuses on individual solutions for individual customer needs. We benefit from the experience and expertise of more than 35,000 air cleaning systems. And we deliver unbeatable reliability, low energy consumption and

compliance with all mandatory requirements for a wide range of applications in many different industries all over the world.

Dantherm Filtration is part of the Dantherm Group, a leader in industrial air

management, offering industrial cooling, heating dehumidification, ventilation, air filtration and mobile air management. The group has 3,000 employees and operates globally with production and sales companies in Europe, the US and Asia.



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