



## FM Filters

# The Force in Air

Dantherm Filtration is a leading supplier of Air Pollution Control solutions for a wide range of industries all over the world.

Dantherm Filtration focuses on individual solutions for individual customer needs. Dantherm Filtration combines the experience and expertise of four internationally recognised suppliers – Airmaster, BMD Garant, Cattinair, and Nordfab – to provide its customers with high efficiency, unbeatable reliability, low energy consumption, and full compliance with all mandatory requirements.

Dantherm Filtration takes care of everything from design and engineering, through feasibility studies, installation and commissioning, to lifetime service and maintenance.

Dantherm Filtration has the expertise, experience, organisation, and commitment to deliver an efficient clean air solution completed to specification, on budget, and on time. This makes us a force to be reckoned with. It makes us The Force in Air.



# Many years experience of effective dust control

*Removal of dust from production processes is necessary in order to improve the working conditions for people and machines. The FM filter series were developed from a thoroughly tested filter range that has stood the test of a variety of conditions in many industries.*

## **Compact with high performance**

The FM Filter series have been developed in order to give maximum filtration efficiency with very low space requirements.

The filters can be installed close to the dust source. This means lower energy consumption, less ducting and lower installation costs. Naturally the filters can also be located outdoors.

## **High efficiency - low energy consumption**

The FM Filters incorporate a highly efficient cleaning system that reduces pressure loss and consequently energy consumption. Furthermore, the possibility of working with less ducting leads to even greater energy savings.

As standard the filters are equipped with an integral high efficiency fan and optional noise enclosure to ensure a very low noise level. Alternatively there is the option of a separately mounted fan.

## **Suitable for a wide range of industries**

The modular constructed FM Filter series are made of galvanised steel which eliminates corrosion problems. With a versatile range of units and accessories, the FM Filters are the ideal choice for most production environments.

## **Extraction and filtering to improve the internal and external environment**

Regulations concerning the working and external environment are observed through a very effective filtration of dust from different production processes:

- Better working environment with increased motivation and productivity
- Better product quality and less wear and tear on machinery
- Very low emission levels for the benefit of the environment
- Low fan noise levels for the benefit of the surroundings



# The versatile FMK25 filter with individual possibilities

The FMK25 Filters are versatile and can be fitted with 2, 4, 6, or 8 filter cassettes.

- Filter capacities up to 10,000 m<sup>3</sup>/h
- Wide range of filter materials
- Wide range of accessories, for example: fans, support structures, platforms, dampers, waste bins, noise enclosures, filter protection against abrasive dust, and inspection doors with quick closing mechanism.
- 3 main types:
  - Cased filter with open flanged base for connection to your plant
  - Filter with hopper and flange
  - Filter with hopper and waste bin
- Suitable for indoor and outdoor location

The filter cassettes' patented design ensures effective cleaning with low energy consumption of compressed air, a function that is enhanced by the electronically controlled cleaning process.

## Tried and tested filter built on experience

The FMK25 Filter is constructed and tested according to very high quality demands:

- Very reliable filter based on more than 20 years of documented experience with a filter technique that has been developed continuously during this time
- Possibility of special filter cassettes for various dust types and concentrations





## The FMC200 filter, Excellent efficiency and economy

The FMC200 Cartridge Filter is capable of handling air flows from 1,200-21,000 m<sup>3</sup>/h with many different dust types.

### **Well considered design**

The FMC200 Filter has been designed with vertically mounted filter cartridges, thus avoiding the build up of dust on the upper part of the cartridge filter. This problem is regularly encountered where the filter cartridges are placed horizontally. Vertical mounting also aids the cleaning process.

The Dantherm Filtration FMC200 Filters are fitted with easily accessible and removable cartridges (patented).

The FMC200 Filter incorporates the best features of horizontally and vertically mounted cartridges.

By using the FMC200 Filter, maximum filter capacity for minimum space can be achieved.

The compact, modular design allows the filter to be placed close to the dust source, which in turn reduces energy consumption required for transporting the dust laden air to the filter.

### **UniClean™ - the intelligent cleaning system**

The FMC200 Filter has been developed with a patented new and unique cleaning system. The special design of UniClean™ cartridges ensures uniform effective cleaning over the entire length of the cartridges. This is linked to a pressure sensitive 'clean-on-demand' system that reduces compressed air consumption and maximizes cartridge life.

### **Patent No.**

EP 1 161 293 B1  
US 6, 554, 138 B1  
IN/PCT/2001/0092I  
CAN 2, 364, 037  
KOR 10-2001-7011181

# FMZ Filter

## FMZ Filters for explosive dust

Both the FMK25 and FMC200 Filters are made in special versions suitable for explosive dusts.

The FMKZ25 and FMCZ200 respectively are compact cassette and cartridge filters equipped with explosion relief panels. The filter is ideal for solving dust problems within a wide range of industries where there is dust with a potential explosion hazard (St1, St2 or St3 dust). The filters are designed for outdoor location and a top mounted fan. No further explosion relief channels are necessary in case of indoor installation due to the unique construction of the EVN 480 explosion valve. This minimizes the mounting costs and means optimum flexibility when placing the filter.

The FMZ filter are like the standard FM filters available with either cassettes or cartridges. The FMZ filters are cleaned automatically by a high-efficiency low energy consumption compressed air system activated by an integral electronic controller. The filters are easy to maintain with quick access for inspection and replacement of the filter elements. The possibility of front service of the cleaning valves, the controller, the compressed air tank, and the filter cassettes further facilitates the maintenance.

## EVN 480 explosion valve – for indoor installation



## Standard explosion relief panel – for outdoor installation





# The ATEX Directive

Dantherm Filtration A/S can supply ATEX compliant components such as filter units and fans; ATEX certified protective systems such as rotary valves, explosion relief doors, and back-pressure flaps are also available according to ATEX directive 94/9/EC.



Full scale explosion test of NF2000

## ATEX Directive 99/92/EC

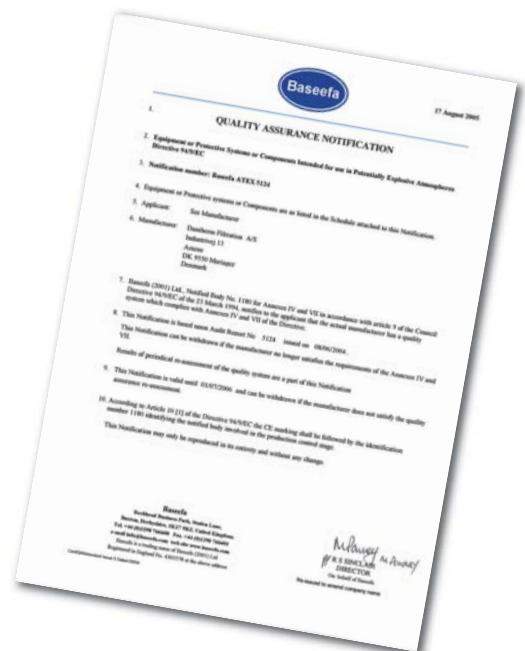
From 1st July 2003 any new equipment installed for use with potentially explosive dusts or in a zoned area must be ATEX certified.

From 1st July 2006 any existing equipment handling potentially explosive dusts or in a zoned area must be Risk Assessed.



## Requirements of the equipment:

- The explosion strength of the filter has to be proved
- The pressure in the filter is controlled by explosion relief doors or panels. These components must be ATEX approved
- The risk of an explosion spreading has to be prevented by installing safety equipment such as rotary valves, back-pressure flaps, etc.
- Fans, etc. have to be certified when handling potentially explosive dust



The protective systems at Dantherm Filtration A/S are manufactured in accordance with the ATEX design and manufacturing standards.

## 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 30,000 air cleaning systems. And we deliver unbeatable reliability, low energy consumption, and compliance with all mandatory require-

ments 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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