



**Nederman**

# Safe and reliable solutions

for handling combustible dust and gases



# Explosive atmospheres - a potential risk

## Nederman fulfilling the ATEX demands:

- Proven explosion test of filters
- ATEX compliance is ensured by means of explosion relief doors, panels, flameless venting and suppression
- The risk of an explosion spreading shall be prevented by installing safety equipment such as rotary valves, explosion isolation flap valves etc.
- ATEX designed fans for handling potentially explosive dust

Explosive or potentially explosive atmospheres occur in a wide variety of workplaces where process dust comprises fine aluminum dust, organic powders or other similar substances. They can also be found where flammable gases or fumes derived from chemicals or petroleum products are present.

The consequences of explosions can be extensive. Besides causing direct injuries to employees, filter systems can be ruptured and contaminated air for personnel and environment emitted with subsequent health risks.

All workplaces in the European Union must comply with the regulations set under the ATEX directives. Employers are required to evaluate and classify their working environments to determine the risks. Additionally, all process and production equipment must meet the regulations concerning technical and legal standards. In many other countries the practice of ATEX is also adopted.



### Directive 2014/34/EU, also known as the ATEX Equipment Directive

**ATEX stands for ATmosphere EXplosive.**

The ATEX directives cover machinery, components and controls that work in explosive atmospheres.



### Directive 1999/92/EC, also known as the ATEX Workplace Directive

**This ATEX directive states that:**

- The employer must determine how often, and where a potentially explosive atmosphere will be present.
- These areas must be zoned according to the relevant specifications.
- The employer must ensure only equipment of the correct category is used in a certain zone type.

## Avoid explosions by creating a safer environment

### Keep the workplace clean

The first and most important step is to minimize the occurrence of potentially explosive dust or powder by capturing the dust directly at the source and keeping the workplace clean and tidy. Nederman offers a wide range of industrial cleaning solutions from simple, light suction appliances to heavy duty, high capacity equipment. Nederman also supplies high vacuum cleaning equipment facilitating the important good housekeeping.

### Use correct equipment

Sparks and static discharges can easily start an explosion. By using machines and production equipment without ignition sources and equipped with adequate earthing, risks can be reduced. The Nederman ATEX-designed extraction arms, fans and filters ensure safe and efficient removal of hazardous fumes, vapors and dust.

### Minimize the effect of an explosion

Risks and explosion effects can be minimized by installing the extraction equipment in a safe and correct way. Nederman has wide experience of providing suitable solutions. These include extraction equipment complete with safety devices that prevent the consequences of explosions and widespread damage.



In the US the standard NFPA 652 Combustible Dusts Fundamentals standard is used. This standard presents safety measures to prevent and mitigate fires and dust explosions in facilities that handle combustible particulate solids, which includes combustible dusts, fibres, flocks, flakes, chips and chunks.

# EX products and safety components

Nederman offers safe and reliable solutions for handling combustible dust and gases. Based on the customer's risk evaluation, we recommend suitable equipment for each application. The products are designed to comply with the ATEX directives.

Safety components, fans and other components for use with combustible dusts and gases.



Explosion isolation flap valve CARZ



Rotary valve NRSZ for emptying of combustible dust from the dust collector



Fans type COMBIFAB-FZ



ATEX designed combustible dust extraction arm NEX DX



Hose reels for use in ATEX zones



Industrial vacuum cleaners for removal of flammable liquids and combustible dust



Nederman Dust Collectors - suitable for most combustible dust applications. From small dust amounts to heavy material contaminations.



LCP dust collector  
Applications - fine dust, shot blasting, pharmaceuticals.



NFZ3000 dust collector  
Applications - wood, furniture production, bulk materials.



FMKZ and FMCZ dust collectors  
Application - metal grinding, fine dust, bagging operations.



E-PAK DX dust collector



FlexPAK DX dust collector

Applications: sanding, grinding, metal chips, organic dust and more.



FlexFilter Ex units

We filter, clean and recycle for eco-efficiency in industrial environments

# Complete solutions that protect your environment



## Comprehensive product range

Nederman is a world-leading environmental technology company with solutions that take their origin in “capture-at-source”, i.e. extraction of contaminants right at the point of creation. We filter, clean and recycle to create eco-efficient production in demanding industrial surroundings. Our offer includes individual products, engineering design, installation, commissioning and service. By continually adding new skills and solutions and expanding our geographic presence, we help our customers to develop their businesses both economically and ecologically.



## Extensive experience

For more than 70 years, Nederman has developed products and solutions to reduce the strain on the environment and protect people from harmful particles, fibers, dust, gas, smoke and oil mist. We have extensive experience of how to create a safe working environment, also when handling combustible substances. Our accumulated knowhow is easily accessible when you plan a new facility or need to modernize existing operations.

## What is combustible dust?

Combustible dust is any fine material that has the ability to catch fire and explode when mixed with air.

Many materials can become combustible dust under specific conditions. Examples include:

- Agricultural products such as flour, sugar, grain, soya beans, rice etc.
- Metals such as aluminum, magnesium, titanium etc.
- Coal and other carbon dusts
- Pharmaceuticals, pesticides, rubber
- Wood, textiles, plastics



## Worldwide presence

Nederman has a strong global presence in both sales and production. We have our own sales companies in 30 countries and distributors in more than 30 countries. Production is performed in 12 countries on five continents. In many countries, we also have a well-established service organization. By offering advanced service with high availability, Nederman helps customers to secure continuous, optimized production.

The image features a large background photograph of a calm lake reflecting a clear blue sky and a dense forest of evergreen trees. On the left side, there is a vertical white bar with a blue sky and clouds pattern. The Nederman logo is positioned at the top left of this bar.

**Nederman**

Nederman is a world-leading environmental technology company. We filter, clean and recycle to create eco-efficient production in demanding industrial surroundings.

For more than 70 years, Nederman has developed, manufactured, and installed products and solutions to reduce the strain on the environment and improve working conditions in numerous industries.

Our products and systems have been ground-breaking in industries such as machining, metal fabrication, mining, automotive, composite manufacturing, food, pharmaceuticals, wood-working, and many others.