



## **Composite working**

Safeguarding health and production in composite industries



## Improved health conditions and a clean environment

All surplus material from cutting, grinding, and polishing is extracted immediately with our on-toll extraction solutions. Dust and particles are collected and safely stored for convenient disposal and the air is filtered before being released into your premises or the atmosphere.

## Rationalized work and improved ergonomics

Pressurized air, electricity and vacuum supplies are readily available. Swing arms offer optimal convenience when installed over wide working areas using on-tool extraction. No more tripping over tangled hoses and cables on the workshop floor.

#### **Improved safety**

Safety comes first. To safeguard personnel, and plant, we divide your system into safety zones and secure the installation with backlash valves, blast plates, etc.

#### Less wear on equipment

Damage to machinery and malfunctions are caused by mechanical wear, dirt, and dust. With our solutions no supply systems are left on the floor to be damaged and our vacuum cleaning systems keep your production lines and premises clean and tidy.

### Assured product quality and finish

A clean production environment is essential for the quality and finish of the product. The smallest particle of dust can have devastating consequences. Smooth, dust-free surfaces are decisive for achieving maximum adhesion when joining components made of composites. This is an area where no compromises can be tolerated when producing aircraft parts, for example, or propellers for wind turbines.

That is why the world's leading car and boat manufacturers buy equipment from Nederman to ensure the best results.

## **Working in Composite:**

# Improve work conditions, optimize uptime and safeguard production

Products made of composite materials are increasing strongly in number and include everything from simple features to advanced components. When these materials are cut, milled, machined or polished, they release dust, particles and fibres.



The particles are often small enough to enter human lungs or, especially when the material is fibreglass, penetrate the skin and cause an eczema-like reaction. Lubricants and fluids used in the production of composite materials also generate organic substances and gases that are dangerous when inhaled.

### Eliminate the risks right at the source

The most effective way of minimizing risks is to extract them immediately at source when the material is being processed and the substances causing the risks arise. In most companies, these systems are critical for the entire production process. Operational stops entail health risks but also affect product quality.

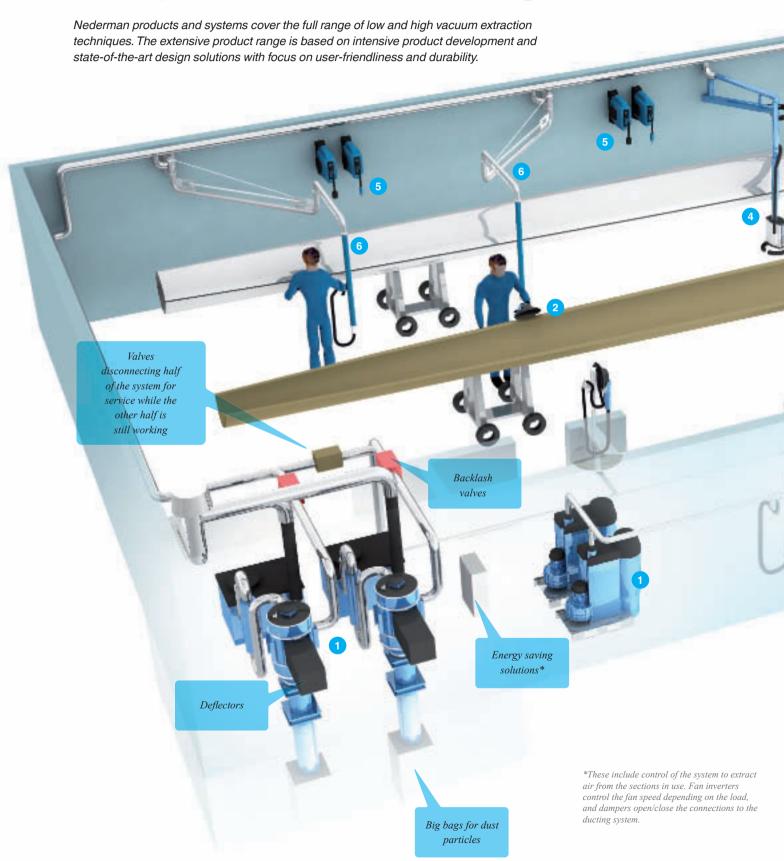
#### Improved uptime is pure profit

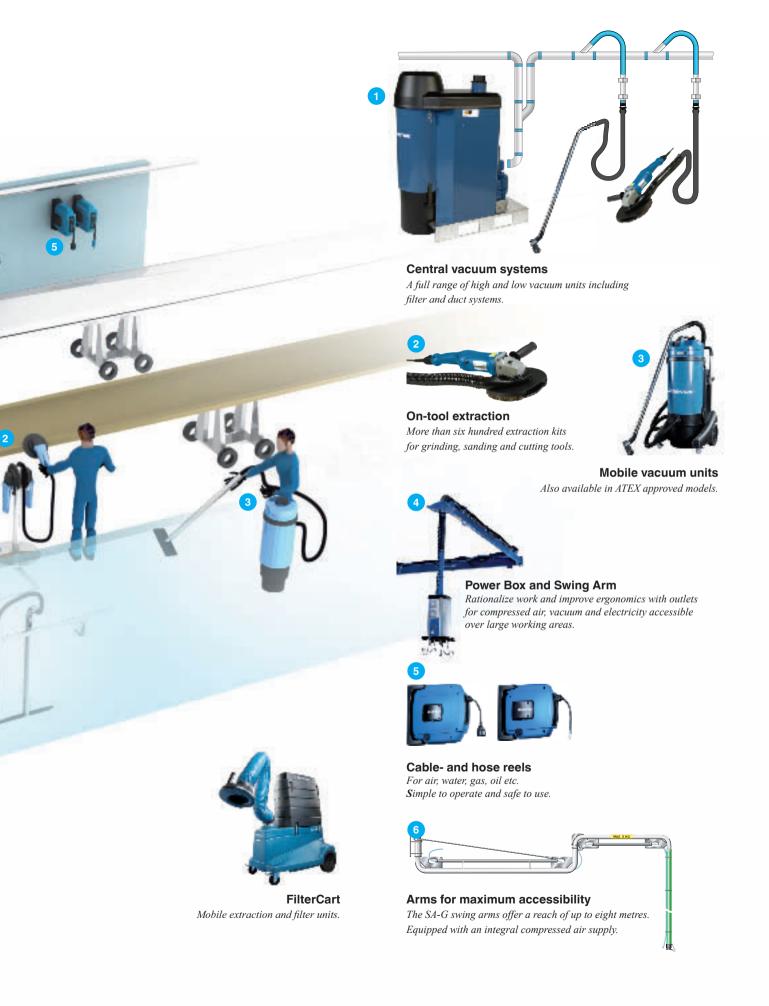
Production downtime can prove highly expensive. Components used in aircraft or wind turbines, for example, must have zero faults or the consequences will be disastrous.

#### A competent partner

Nederman is a leading supplier of products and systems for "extraction at source" for the composite sector. We have experience of projects carried out all over the world. Customers choose Nederman because we have the know-how, competence and resources to offer solutions that safeguard production and the end-quality of products.

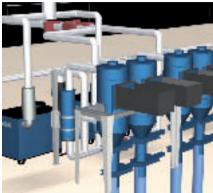
# Single workplaces or complete manufacturing lines





# Safe and sound installations are built on know-how and competence







Accurate dimensioning is at the heart of an optimized plant.

Each machine and each point must have the necessary capacity for each operation.

During planning it's essential to know what type of machine is being used and if it is possible to plan in sections to increase safety and flexibility.

#### Handling of materials with explosive risks

Nederman has a wide experience of providing solutions for handling potential explosive materials. This is obtained, for example, by dividing a system into safety zones, and by enclosing the equipment in areas remote from explosive environments. A system can also be secured with backlash valves, blast plates, etc. Containers and bags with extracted dust particles must be handled and stored safely, which may require secure areas and alarm equipment. All of these matters require knowledge and experience.

Our specialists and sales representatives know what is necessary for creating an efficient and profitable facility. They are backed by competent teams and central resources assisting in all phases of a project, from planning and design to installation and commissioning.

Nederman helps you all the way with a focus on safety and cost-efficiency.

### Nederman offers complete solutions



- ${\color{red} \bullet Proprietary\ products\ based\ on\ effective\ technology}$
- Comprehensive product range
- Extensive experience of creating optimum working environment
- Worldwide representation

## Composite users all over the world trust in Nederman









#### BRAZIL

Tecsis John Deere

#### CHINA/RPC

Sinoma (Baoding, Beijing)

#### CZECH REPUBLIC

Aar Plast Litovel HOBAS CZ UHERSKÉ HRADIŠT

#### DENMARK

Vestas/Siemens Windpower LM glasfiber EM Fiberglas X-Yachts MX Både Dupont Plast Siplast GT Glasfiber Mabré Bachs Composites Camp Let

#### FINLAND

Bella-Veneet Oy

#### FRANCE

Beneteau Jeanneau

#### GERMANY

Airbus
Beiersdorf
BKT-Bücker
Eurocopter
HAASE-Tank
Kunststofftechnik
LM Glasfiber
Powerblades
Salzgitter AG
Toyota F1
Vestas
Voith

#### INDIA

LM Glasfiber (Bangalore) LM Glasfiber Suzlon Energy Ltd SE Composites Ltd Vestas RRB, India

#### **POLAND**

Delphi Yachts GALEON Gdansk Wawrzaszek Bielsko-Biala

#### **PORTUGAL**

MBO, Matosinhos Alto, Leça do Balio Roca, SA Grestel

#### RUSSIA

HIUS, Tver

#### SWEDEN

AB Svenska Wavin/RonaPlast Hallberg-Rassy Najad Yachts Applied Composites Koenigsegg

#### SPAIN Eads Casa

Aernnova Gamesa Eolica LM Glasfiber Remosa Roblepol Tecnove Fiberglass Tubocyl Aries Complex Aresa Irizar Turmarine Zodiac Multiforma Protesa Coasa SK 10 Vestas

Acciona Windpower

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Green Marine BAE Filton **BAE** Broughton Williams F1 racing team Sealine boats Princess yachts Mclaren Cars Jaguar cars Aston Martin Landrover Rolls Royce Bentley K Engineering Shorts Brothers Aircelle formley Hurel Hispano Swift Caravans Autotrail Advanced Composites United Aerospace Lamplas Klargester Keystone Anderson Greenwood

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3P USA Suzlon LM Glasfiber Vestas Hunter Marine Gamesa

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