

Nederman

LBR SmartFilter

Future-proof reverse air baghouse dust collector



Complete Industrial Air Filtration Solutions

Nederman is The Clean Air Company and the LBR SmartFilter is a complete dust collection solution for industrial applications including woodworking.



Smarter industrial filtration

LBR SmartFilter is a reverse air style baghouse suitable for industrial dust collection applications including the wood industry (furniture, cabinetry, windows, doors, flooring, particle board, MDF, building materials, marine, sawmills), agriculture (seed transportation and cleaning), waste / recycling, paper, plastic and other lightweight bulk materials.

LBR SmartFilter systems are IIoT ready, energy efficient solutions designed for continuous duty operation in both overpressure (positive) or vacuum (negative) airflow arrangements. The system is a modular design that can handle air volumes over 300.000 m³/hr (176.000 ft³/min) and configurable to meet all ATEX and NFPA combustible dust regulations.



The Nederman advantage

As the world's largest provider of industrial air pollution control equipment, Nederman is your total solution provider for controlling woodworking dust. Whether the application is small or large, simple or complex, manual or automated, Nederman assesses each customer's unique needs and develops solutions that effectively and efficiently protect your workers and factory.

- **Proven solution.** With over 35.000 LBR installations, we have the expertise and experience to solve your dust collection challenges.
- **Configurable.** A modular system available in a variety of configurations to meet unique needs.
- **Future proof.** Field expandability and IIoT ready controls that can be updated prepares the factory for today and the future.
- **Low operational cost.** 5+ years typical filter life, low pressure losses and efficient filter cleaning reduce operating expenses compared to pulse jet or shaker alternatives.
- **Regulatory compliance.** Air quality and combustible dust regulations are becoming increasingly stringent. Nederman's expertise helps our customers design and maintain compliance.
- **Sustainability.** Energy efficient operation, extended filter life and effective recovery of waste material to be reused or recycled.

Combustible dust experts

Nederman is the global leader for ATEX and NFPA compliant dust collection solutions. Our comprehensive approach throughout the design, installation and maintenance processes sets us apart.

Nederman not only manufactures compliant products, but our sales and technical support teams go through rigorous, annual training and follow a strict process to ensure combustible dust standards are being followed.

Because Nederman manufactures the complete system you can be confident you have a complete, safe and compliant solution.

Additionally, Nederman offers both on-site and Insight digital monitoring services to ensure the solution is being operated and maintained in a safe and efficient manner.

Did you know?

According to Dust Safety Science, the woodworking industry accounts for approximately 28% of all global, combustible dust incidents.



Dust Collection for Your Specific Needs

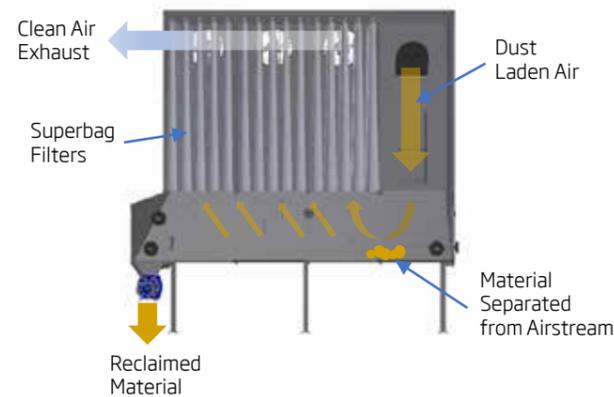
The LBR is reverse air baghouse suitable for heavy duty, industrial dust collection applications. The modular, configurable design provides a high performing solution that meets a factory's unique needs.



Cleaning the air

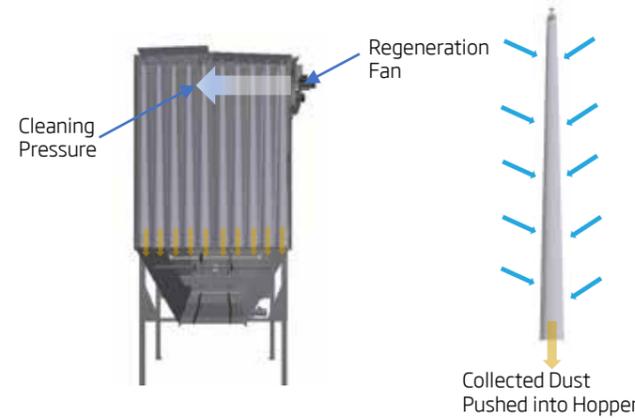
Filtering the material

Air enters through an inlet module or the hopper where heavy dust particles drop out of airstream and remaining fine particles are filtered by the SUPERBAG filters allowing clean air to pass through.



Cleaning the filters

As dust accumulates on the filter bags, a regeneration fan located on each filter module blows air in the reverse direction dislodging the collected dust into the hopper where it is evacuated from the dust collector.



Handling collected material

The LBR SmartFilter is available with four dust handling options that can be selected based upon the amount and type of material being collected and the total extracted air volume required.



Chain Conveyor (LBR-C)

For high airflow and large material volume, a double chain conveyor moves material to a single discharge point and onto a material handling system.



Screw Conveyor (LBR-S)

For small to medium size airflow and high material volume, screw discharges material to container or material transport system.



Rotary Valve (LBR-R)

Rotary airlock at bottom of hopper discharges material from collector. Designed for small to medium size airflow with high material volume.



Bin Container (LBR-B)

Drums located directly beneath the filter. Designed for low airflow and limited material volume.

SUPERBAG filters - the heart of the system

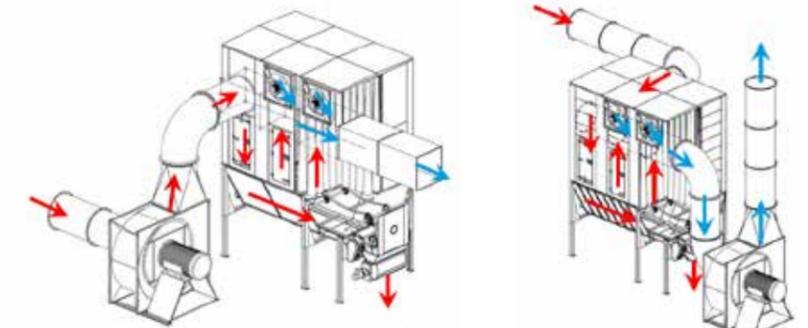


The Nederman SUPERBAG patented technology delivers high efficiency, low energy consumption, combustible dust safety and extended life.

- Emissions levels less than 0,1 mg/m³
- Low pressure drop requires less energy
- Durable construction with seamless, woven construction
- Reduced risk of fire and explosion with anti-static woven carbon fibers

Flexible fan and airflow orientation

The LBR can be configured with fan(s) on the dirty air side pushing air through the filter (overpressure / positive) or on the clean air side of the filter (vacuum / negative) pulling air through. Fan placement has a significant effect on energy consumption, safety and compliance and Nederman's experts can help design fan arrangements that optimize your operation.



Overpressure (Positive)

Vacuum (Negative)

General Specifications

LBR Model	Hopper Discharge Style	Maximum Filter Modules	Airflow Capacity	Dust Loading	Maximum Airflow Range m ³ /h (ft ³ /min)	Maximum Airstream		Maximum Positive Pressure		Maximum Negative Pressure	
						°C	°F	Pa	in. w.g.	Pa	in. w.g.
LBR-B	Dust Bins	4	Low	Light	33.000 (19,423)						
LBR-S	Screw Conveyor	6	Medium	Heavy	50.000 (29,428)	75	167	800	3,2	5000	20
LBR-R	Rotary Airlock	4	Medium	Medium	50.000 (29,428)						
LBR-C	Chain Conveyor	90	High	Heavy	300.000 (176,573)						

- Modular, galvanized steel construction; field expandable
- Standard systems certified for St 1 and St2 dust with a Kst value up to 300 bar m/s
- Supply voltages are available in 200-230 V / 3 Ph / 50-60 Hz, 400-480 V / 3 Ph / 50-60 Hz, 575 V / 3 PH / 50-60 Hz
- LBR conforms to all applicable EU Machine directives and is CE marked
- Insight Control panels conform to UL508 in applicable market

Complete, Turn-Key Solutions

Insight control panels

The LBR SmartFilter offers the world's most advanced dust collection system control panel featuring a vibrant, easy to use touchscreen Human Machine Interface (HMI). Sensors monitor key performance metrics, such as filter pressure drop, duct pressure, emission monitors and then visually displays the system status. An IoT gateway is included within the standard panel that enables cloud-connectivity and remote monitoring on customizable dashboards.

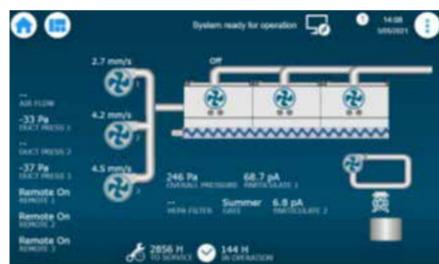
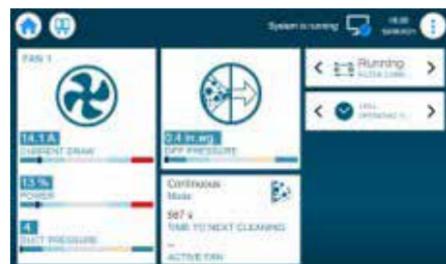
The control panel can control all dust collector functions and the accessories that make the complete system including multiple extraction fans, combustible dust accessories, material handling motors, rotary airlocks and more.

Nederman also offers a full range of integrated variable frequency drives (VFDs) that maximize energy savings and reduce operating costs.



Designed with users and safety in mind

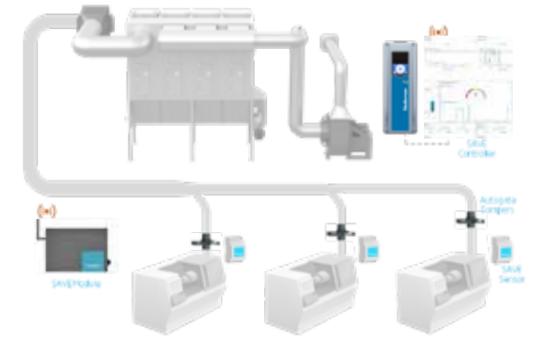
The regular, daily interface with a dust collector is the control panel. The Insight Control HMI was designed with users in mind by including animated, graphical representations of the system operation and key operational information, including operating hours and maintenance times. The display is available in (15) languages and designed in accordance with global industrial alarm standards ISA 18.2 and IEC 62682.



Nederman SAVE- Intelligent Airflow Control

Nederman SAVE is an innovative technology that optimizes LBR system performance and reduces energy consumption up to 70% energy. Through monitoring machine and process information, SAVE determines the precise amount of airflow and pressure required for effective dust extraction and safe material transport. Fan operation is then adjusted based on the actual operational demand resulting in significant energy savings and reducing the risk of fire and explosion. The data collected can be visualised through Nederman Insight as a convenient way to monitor and track machine utilisation.

Including Nederman SAVE within the initial LBR System design allows it to be "right-sized for the actual airflow demand saving on the initial investment, reducing the installation footprint and lowering operational costs associated. SAVE can be retrofit onto existing systems to optimise performance or create additional capacity allowing for operational expansion.



Exhaust Fans

Nederman's comprehensive family of CombiFab Fans covers a wide range of applications and performance requirements to optimise the performance of your filter system. Available in multiple sizes, direct drive or belt-driven configurations and three types of fan wheels to meet unique operational needs.



Combustible Dust Accessories

Complete line of combustible dust mitigation devices that protect the factory from combustible dust explosions originating in the dust collector. Complies with latest ATEX and NFPA standards.



Particulate Emission Monitors

Monitoring emissions from the filter offers benefits for filter leak detection, regulatory compliance and combustible dust compliance. Nederman offers a family of Auburn FilterSense high-precision monitors from that help ensure your filter is operating just as expected.



Nordfab QF Industrial Duct

Complete range of Quick-Fit (QF) durable duct and fittings for building a complete extraction system. Compared to traditional dusting systems, the QF style duct offers installation savings, adapting to existing systems, improved cleaning, and future flexibility.



Dust and material handling systems

Reclaiming or recycling the collected material is an important portion of many dust collection systems as the material can be valuable as production material, fuel, resale or to recycle and have more sustainable operations. The LBR SmartFilter system and standard automation controls are designed to support external dust handling systems to reclaim or manage this material.



Conveying Blower to Silo



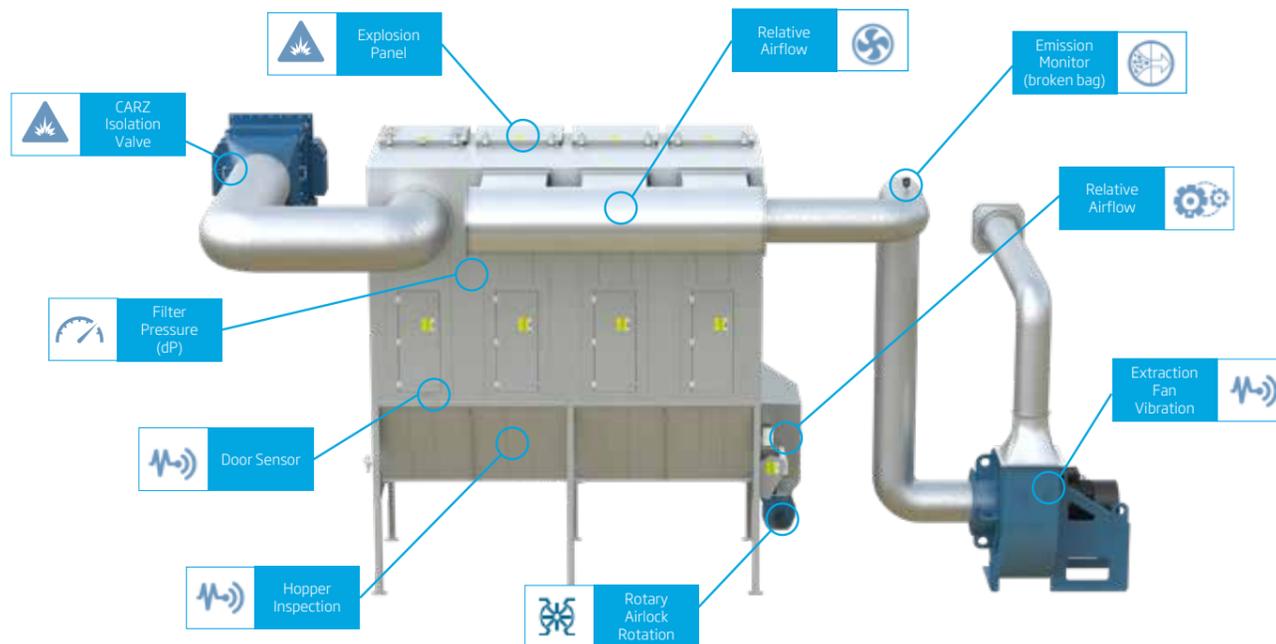
Material Handling Conveyor

Shaping the Future of Clean Air

Nederman *myAir*™

Factories may not typically spend time thinking about the service or maintenance of dust collectors, but these are systems that directly impact important operational areas including personal and asset safety, energy consumption, worker productivity and sustainability.

To assist our customers in better managing these systems, Nederman created the myAir platform which is a scalable offering including industry filter solutions, traditional on-site inspection and maintenance services and a connected, digital monitoring service called Nederman Insight.



Sensors monitor component operation that are critical to safety and performance and then connect to the Insight Control panel where data is securely uploaded to the Insight IIoT System (optional).

Insight IIoT Platform

Insight is a cloud-based IIoT platform designed specifically for filtration systems that provides real time monitoring, visualization and tracking of system performance, including customized dashboards, alarms and reports. Live data is accessible via the web and mobile devices and stored in the cloud for trending and performance analytics.

Insight empowers users to operate and maintain their filtration system more effectively - improving plant productivity, worker safety, regulatory compliance and energy consumption.



Benefits of Active Monitoring and Proper Service

Worker/Facility Safety. Wood dust presents a risk to the worker and the facility resulting from dust exposure, noise and combustible dust hazards.

Increased Productivity. Machine downtime for high production wood facilities is extremely expensive. This risk is magnified for central dust collection systems that may protect multiple machines.

Efficient Maintenance. Most facilities are not well trained in operating dust collection equipment, making the proper adjustments or optimizing performance.

Reduced Emissions. Emissions increase on filtration systems that are poorly maintained, run at too high of pressure drop component life.

Energy Management. Filtration systems move large amounts of air long distances which consumes energy. Ensuring that the filtration system is designed and operated optimally reduces energy usage saving money and improving sustainability.

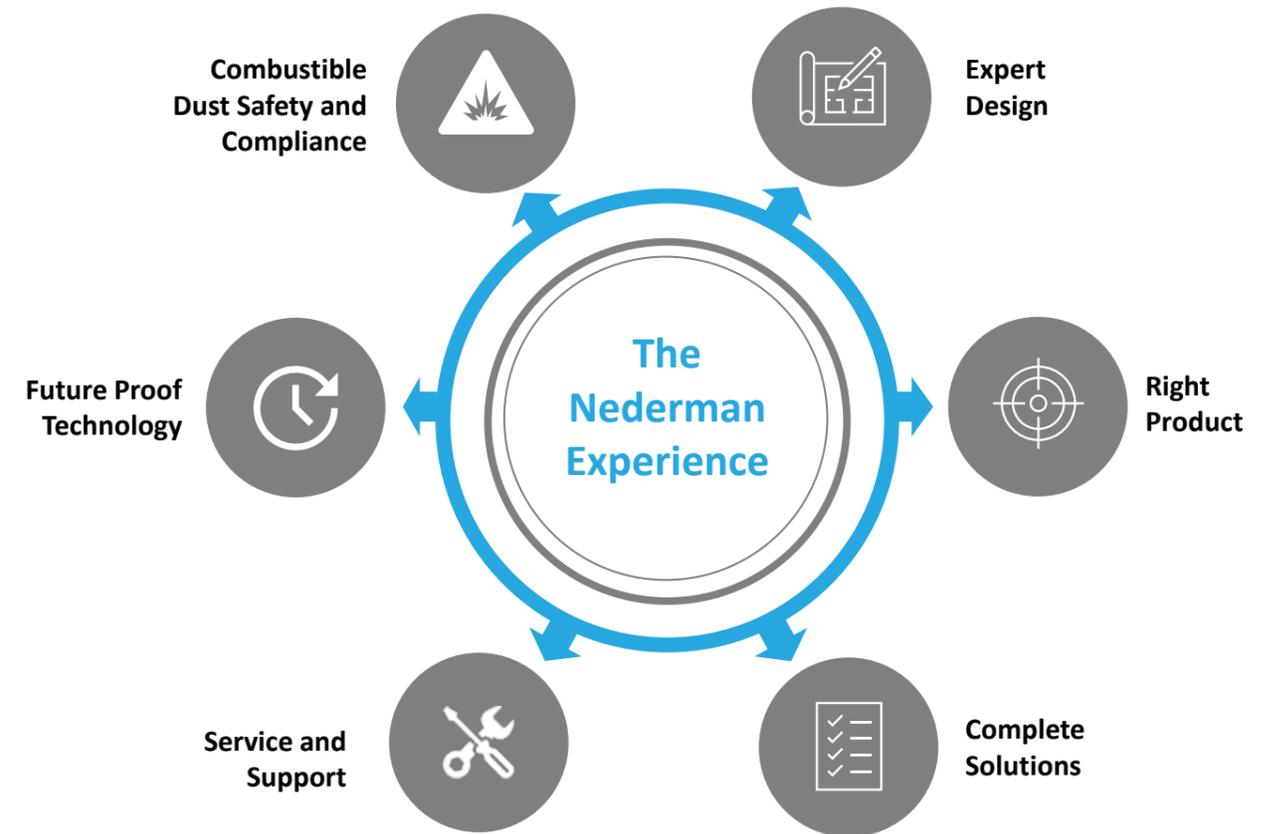
Experience and Competence You Can Trust

With over 35.000 LBR installations globally, Nederman is a global leader in dust collection solutions



"When selecting Nederman as a partner the goal was to acquire a dust collection system which is known to be very reliable while finding the best ratio between price and performance, capable to be easily expanded in the future and (operated) separately for different production departments."

ALVIC Group



The global leader in complete dust collection solutions

For over 75 years, Nederman has developed products and solutions to reduce the strain on the environment and protect people from the harmful effects of indoor air pollution including dust, smoke, oil mist and gases. We have extensive experience in creating safe working environments, handling combustible dusts, managing turn-key projects and servicing dust collectors. Our innovative, smart solutions including Insight have further strengthened our ability to deliver clean air to our customers throughout the world.



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 Nederman logo is displayed in a white, slanted rectangular box. The word "Nederman" is written in a bold, blue, sans-serif font. The background of the top half of the page is a composite image: the left side shows a bright sun with rays shining through a blue sky with white clouds, while the right side shows a close-up of a smiling man wearing an orange safety helmet and a grey work vest with the "Nederman" logo on it, set against a blurred industrial background.

Nederman

The Clean Air Company

Our promise - contributing to a sustainable future

Clean air is a cornerstone of sustainable production. Our customers want to boost profitability by making their operations as efficient as possible. They want to meet high environmental standards and keep employees safe from fumes and dust. Nederman can help them on all counts. That's how we create value.

The Clean Air Company - Vision 2025

Nederman celebrated its 75th anniversary in 2019. From the very beginning, the business idea was clean air. Today, the environment and sustainability are more relevant than ever and the demands are increasing to contribute actively to more efficient production and reduced emissions in industry. The next generation of solutions for clean industrial airflows is under development. Nederman is at the forefront of this development.

nederman.com