



Nederman

SmartFilter Family

Future-proof Fume and Dust Collection Solutions
with IoT connectivity

Take control of your industrial air filtration

The SmartFilter range is the latest industrial air filtration solutions designed by Nederman. Collecting dust and fumes common in metal working and industrial processes including safe handling of combustible dusts.



Efficiency, performance and savings

The Nederman SmartFilter solutions brings together industry leading filtration technology in a smarter way that leads to improved air quality, reduced operating costs, improved processes and worker safety. But more importantly, it enables you to focus more time on your business by relying on Nederman to support your factory's clean air needs.

Future-proof technology and services

Each SmartFilter is equipped with technology for today but is also ready for tomorrow. Sensors and controls monitor critical components in order to keep the system running reliably and effectively. Combined with myAir subscriptions for remote monitoring, service and support, you are prepared to take control of your industrial air filtration.

How is it future-proof? Nederman's strengths as a leading environmental technology company guarantees continuous development of improved solutions, updates and serviceability. Ensuring clean air even in challenging industrial environments – always with sustainability at heart.

Engineered to your needs

Do you have specific demands such as limited floor space or low height? With a flexible design including modular construction, multiple filter medias and configurations, and a wide range of options and accessories, your SmartFilter unit will be delivered with solutions for your plant's unique needs.

Filter technology - Insight ready

The SmartFilters offer an industry leading filtration technology including optimized filter design, nanofiber filter media, advanced filter cleaning controls and Insight IIoT* services. This means cleaner air, reduced operating costs and less downtime.

*IIoT Industrial Internet of Things

Digital platform - Insight ready

The Nederman Insight platform is a solution specifically designed for filtration systems. It comprises of a cloud solution, the Nederman Insight Analytics, and an on premises device, the Nederman Insight Control.

Nederman SmartFilter solutions are IoT ready – that is they have the connectivity module prepared and ready to connect to Insight Analytics. Combine the filter solution with Nederman myAir subscription and that provides real time monitoring, visualisation and tracking of system performance including customised dashboards and alarms at given thresholds.

It delivers data for the complete filtration process and illustrates, in a user intuitive manner, key filtration parameters, empowering users to operate and maintain the filtration system more effectively. Improving plant productivity, worker safety, regulatory compliance and energy consumption.

Combustible dust experts

Worldwide standards and regulations exist on how to handle combustible dusts. Proper dust extraction at the source is just one of the needs to be compliant with these rules and keep their workers and facility safe. As a world leader in providing combustible dust compliant system, Nederman can assist facilities in meeting the compliance needs of their subject to the ATEX standard and health and safety regulations.

Complete solution

Nederman assesses each customer's unique needs and develop solutions that effectively and efficiently protect workers and factories. We support our customers through the system design, installation, operation and service, ensuring that you get the maximum value out of our products.

The SmartFilter family



Applications

- ✓ Welding Smoke / Fumes
- ✓ Plasma / Laser Cutting
- ✓ Thermal Spray
- ✓ Metal Grinding
- ✓ Powder and Bulk Materials
- ✓ Powder Painting and Pigment
- ✓ Sand Blasting
- ✓ Shot Blasting
- ✓ Grain / Agriculture
- ✓ Nuisance Dust Applications



Facts	MCP* SmartFilter
Filter type	Cartridge
Filter cleaning method	Pulse jet
Application	Fume, dust
Installation	Indoor, outdoor
Suitable for combustible dust	Optional for ST1 & ST2 dust
Housing material	2mm galvanised sheet metal
Working pressure	-6 000 Pa
Maximum nominal airflow range	28 000 m³/h
Air stream temperature range	-20 to 70 °C
Compressed air requirements	6 bar
Dust bin volume	50 litre and 100 litre

*MCP Medium capacity range dust collector with Cartridge filter using Pulse jet cleaning. Also available as envelope (bag) filter MEP SmartFilter

Facts	LCP* SmartFilter
Filter type	Cartridge
Filter cleaning method	Pulse jet
Application	Fume, dust
Installation	Indoor, outdoor
Suitable for combustible dust	Optional for ST1 & ST2 dust
Housing material	3mm galvanised sheet metal
Working pressure	-6 000 Pa
Maximum nominal airflow range	100 000 m³/h
Air stream temperature range	-20 to 60 °C
Compressed air requirements	6 bar
Dust bin volume	50 litre and 100 litre

**LCP Large capacity range dust collector with cartridge filter using Pulse jet cleaning. Also available as envelope (bag) filter LBP Smart-Filter

The right solution for your unique needs

The modular design allows for stand-alone as well as multi-filter solutions for extended requirements. The SmartFilters are optimised for long filter lifetime providing low cost of ownership and efficiently protecting workers and factory.



Smart cartridge filters

The filtration system has a new and innovative cartridge design (patent-pending). The squircle shape, an intermediate between a square and a circle, utilises the square space within the dust collector in the most optimal way and generates more cartridge airflow per m^2 - decreasing the size and footprint of the system.

Vertically positioned cartridges prevent dust building up on the filter material. Front cartridge access allows installation below obstacles, such as low ceilings or ducting with easy maintenance and change of filter cartridges. Tool-free replacement featuring quarter turn locking mechanism to properly seal filter.

Sensors

Sensors monitor the performance of critical components including pressure, airflow, dust bin level, emissions and filter cleaning system performance. Different sensor packages are available based upon application and product configuration.

Optimised UniClean®, pulse pipe and pulse cleaning system

The advanced cleaning system, with a large diameter of UniClean® and improved compressed air delivery system, gives a strong cleaning pulse which means less compressed air used and results in reduced energy consumption. It further ensures a long cartridge lifetime, often twice that of comparable solutions.

This is how it works:

In conventional cartridges the dust cake builds from the top, where cleaning is least effective, giving rise to clogging in this area. This reduces the area for effective filtration. UniClean® design overcomes this completely by encouraging the dust cake to build from the middle of the cartridge downward towards the bottom.



Auburn IntelliPULSE™

On demand cleaning mode that automatically adjusts the time between pulses. The technology is included in Insight Control. The IntelliPULSE™ cleaning mode automatically varies and optimises off-time between pulses to maintain a constant differential pressure drop across the filter cartridges while using the least amount of compressed air. When less compressed air is being used, the energy cost decreases.

System fans

Fans available as integral top mount or ducted ground mount. As the solution retains constant airflow there will be a lower fan energy cost.

Filter media - nanofiber technology

Nanofiber technology is a thin layer of synthetic fibers that are deposited on the filter surface that captures particles on the surface before they can penetrate and clog the filter which significantly improves performance.

Immersion valve technology

Pulse valves are immersed within the compressed air header and deliver more filter cleaning energy than traditional 90° valves.

Pneumatic valve control

New range of pilot valve boxes at the compressed air tank; change from electrical valve control to pneumatic valve control. No electric wiring, simple pneumatic hose connection.

Robust galvanised finish

Reinforced sheet metal panels with durable finish that resists corrosion. Modified 2mm galvanised steel panel construction for indoor and outdoor use, provides a strong light weight solution for easy installation and cost efficient shipping.

Rear dirty air inlet

Dirty air enters on the rear of the unit. Multiple connection points on multi-module systems. A pre-separator is included as standard to remove large dust particles and ensure longer filter lifetime.

Quick release dust bins

Manageable dust bins with castors available in various sizes to match your operation.

Insight control panel

An intelligent controller with a touchscreen that controls local operation whilst collecting and securely transmitting sensor data to the cloud via a gateway - the latter if a subscription is in place (Perform or Perform Plus).



Future-proof technology & support

From guesstimates to filtration facts. With Nederman SmartFilter solutions and digital insights it's easy to maximise your business. Avoid expensive downtime through preventative measures, in time.



Take control



The SmartFilter panel controls all functions related to the dust collection system including filter cleaning and fan operation by using the Insight Control touchscreen. Nederman offers a full range of integrated variable frequency drives (VFDs) that maximises energy savings and reduces operating costs. With Nederman myAir monitoring modules subscription, sensor data is uploaded to the cloud via a gateway connection and is then accessible through customised dashboards where alarms can be set-up for maintenance and data can be analysed to optimise system performance.

Nederman Insight Analytics is a cloud based IIoT platform designed specifically for filtration systems that provides real time monitoring, visualisation and tracking of system performance including customised dashboards and alarms. The real time data is accessible via the web or mobile devices and then 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.

Control panel: 3 in 1 solution

Touchscreen

- New and intuitive user interface
- Illustrates key filtration parameters in real time

Gateway

- Connectivity with 3G/4G, Ethernet and Wifi available
- Insight Ready. Just add Insight Analytics subscription

Controller

- Unique filter specific control system.
- Allows a Nederman standard for filter control systems.

Improve safety and energy efficiency

Uptime assurance

Take actions before the system stops or reduces its performance. Historical filter data and trends help to improve performance and minimise the risk of unplanned downtime.

Improved system lifetime

Early fault corrections help to improve product lifetime.

Performance tracking

Get valuable data on how your filter is operating.

Remote monitoring

Supervise the filter from a remote place inside or outside the factory. Conveniently access the filtration system from anywhere at any time to make informed, smart decisions.

Reduced unplanned maintenance

Maintenance is less expensive when planned.

Improved safety for people and premises

Early alerts of fire or possible explosion minimise injuries and property damage.

Energy efficiency

A system with all components operating properly consumes less energy.

The clean air subscription services

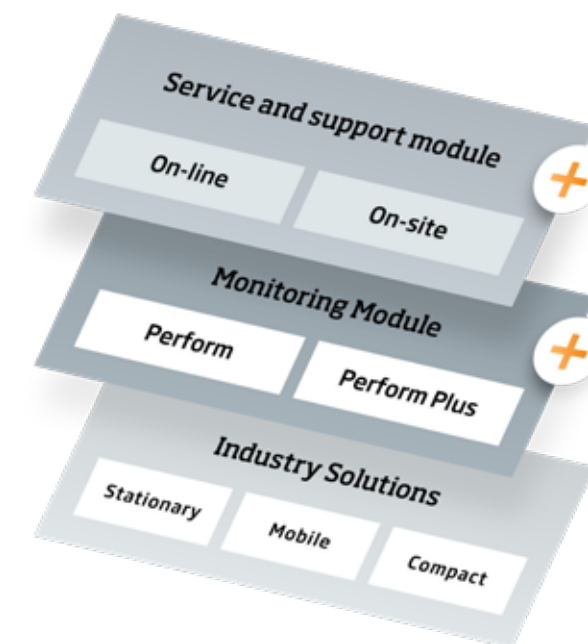
Creating and maintaining a clean and safe working environment is essential to any successful operation. Nederman's high-performing products are equipped for the future. Nederman SmartFilter solutions paired with Nederman myAir maximises your ability to protect your employees, your facility and the environment.

The monitoring module consists of two subscription plans; Perform and Perform Plus. Nederman Insight Analytics enables remote monitoring and proactive troubleshooting through trends and algorithms from sensor data. It is a corporate license limited to one filtration system allowing anyone within your organisation to access the service, should that be requested.

Nederman has extensive service and support capabilities based on more than 75 years of industry experience. The service and support module have two options: on-site support and/or on-line support. These can be purchased separately or in combination for the best possible service and support.

The on-site option is service activities at the customer's premises performed by Nederman's service technicians. The online option is support provided by Nederman service and support staff who help solve customer problems through a help desk. It also includes proactive monitoring of the filtration system to ensure system uptime.

The service team alerts customers if action is needed based on the filtration data from Nederman Insight Analytics, for example, if the bin must be emptied or the filter media must be changed.



Read more about the monitoring subscriptions and service & support modules on nedermanmyair.com



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.