Nederman

MCP SmartFilter

Future-Proof Fume and Dust Collection Solutions

Complete Industrial Air Filtration Solution

The MCP SmartFilter cartridge dust collector is the latest industrial air filtration solution for providing clean air.

Smarter industrial filtration

The Nederman MCP SmartFilter is a general duty, cartridge fume and dust collector that combines innovative filtration and connected service technology delivering clean air optimised and protecting workers and facilities from the harmful effects of air pollution.

The MCP is a complete, configurable solution featuring a proprietary filter design and advanced filter cleaning algorithm which extends filter life, reduces energy consumption and lowers emissions. A wide range of filter medias, options and accessories allow it to be adapted to a wide range of industrial processes. It is also IIoT ready making it ready for a connected future.

Designed for your application

Thee MCP is configurable to meet the filtration needs of dust and fumes common in metalworking, fabrication, bulk powders, food and other general industrial processes.

Applications

- ☑ Welding Smoke / Fumes
- ☑ Plasma / Laser Cutting
- ☑ Thermal Spray
- ☑ Metal Grinding
- ☑ Powder Bulk Materials
- ☑ Abrasive Blasting
- ☑ Grain / Agriculture
- ☑ General Dust

The Nederman advantage

As one of the world's largest providers of industrial air pollution control equipment, Nederman is your total solution provider for fume and dust applications. Whether the application is small or large, simple or complex, manual or automated, Nederman assess each customers' unique needs and provides solutions that effectively and efficiently protect your workers and factory.

- Proven solutions. Improved filter cleaning versus horizontal-style filters resulting in more dust in the bin and extended filter life.
- Configurable. Modular design with multiple filter media, accessories and more means we provides solutions that meet unique customer requirements.
- Productivity. Technology and services that allow companies to focus on their core business and work at hand and leave the maintenance and monitoring to us.
- Future proof. Clean air solutions for modern factory demands and prepared for a connected future.
- Compliance. Air quality and combustible dust regulations are becoming increasingly stringent. Nederman's experience and expertise helps you achieve and maintain compliance.
- Sustainability. Efficient technology that reduces energy consumption, extends filter life and decreases waste helps companies achieve their sustainability goals.

Experts in combustible dust applications

Fire or explosions resulting from combustible dust pose a significant risk to the safety of your employees and facility. Therefore, it is important to select a partner that is experienced in handling these applications and capable of achieving compliance with the latest regulations.

Nederman is a global leader in combustible dust solutions and the MCP SmartFilter complies with the latest ATEX and NFPA standards. Additionally, our comprehensive turn-key approach in the system design, installation and service offerings set us apart to keep you operating in a safe and efficient manner.

Did you know?

According to Dust Safety Science data, there are on average 250 reported combustible dust incidents every year.

Take Control of Your Industrial Air Filtration

Take control of your industrial air filtration with the world's most advanced dust collection technology for easy access to the most critical operating data.

Designed to perform

The MCP SmartFilter is equipped with features that provide reliable and effective fume or dust extraction.

Rear Vertical Inlet(s)

Reduces collector footprint versus horizontal inlet arrangements.

Squircle Filter Design

Unique shape maximizes filter area. Twist-n-lock end caps speeds up filter replacement.

Optimized Airflow

2-stage pre-separation with drop out for heavy dust from the airstream and perforated plate even air distribution to filters.

Clean Air Outlet

Top mounted integral fans or ducted connection to ground mount fan. With optional silencers.

IntelliPulse

Optimised filter cleaning algorithm that saves energy, reduces noise level and emissions.

Durable Construction

Heavy gauge steel construction with galvanized coating.

Steep Slope Hopper

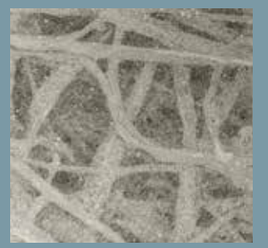
Helps prevent dust bridging.

Mobile Dust Bin

Convenient removal and handling of collected material.

Insight Control Panels

The MCP SmartFilter offers the world's most advanced dust collection control panel that includes a vibrant, easy to use HMI Touchscreen with animated, graphical representation of system operation. The UI includes (15) languages and is designed in accordance with global industrial alarm standards ISA 18.2 and IEC 62682. The control panels pair seamlessly with variable frequency drives (VFDs) to offer maximum energy savings and reduced operation costs.



Advanced filter technology

The MCP SmartFilter's proprietary design permits higher air-to-cloth ratios and more effective pulse cleaning minimises footprint, reduces emissions and improves energy efficiency. Highly efficient filter media options including fire retardant Nanofiber, ePTFE, conductive and more are all available to match the application requirements.

Product specifications

MCP Model	No. of Modules	No. of Filters	Nanofiber Filter Area		Maximum Airflow		Estimated Shipping Weight***		Approximate Dimensions*					
									Height**		Width		Depth	
			m^2	ft^2	m^3/hr	ft^3/min	kg	lbs	cm	in	cm	in	cm	in
MCP-2-8SL	2	8	67	723	4,500	2,649	363	800	281	110.5	65	25.6	114	45.0
MCP-2-8S	2	8	106	1,137	7,000	4,120	454	1,000	334	131.5	65	25.6	114	45.0
MCP-4-16SL	4	16	134	1,447	9,000	5,297	590	1,300	281	110.5	130	51.3	114	45.0
MCP-4-16S	4	16	211	2,273	14,000	8,240	680	1,500	334	131.5	130	51.3	114	45.0
MCP-6-24SL	6	24	202	2,170	13,500	7,946	907	2,000	281	110.5	195	76.9	114	45.0
MCP-6-24S	6	24	317	3,410	21,000	12,360	907	2,000	334	131.5	195	76.9	114	45.0
MCP-8-32SL	8	32	269	2,893	18,000	10,594	1,134	2,500	281	110.5	260	102.5	114	45.0
MCP-8-32S	8	32	422	4,546	28,000	16,480	1,451	3,200	334	131.5	260	102.5	114	45.0

* Stated height is with a 26 gal (100 l) discharge bin. ** Height does not include the fan. *** Weight includes typical fan but will vary based upon order configuration.

Filter media and construction

- Nanofiber fire retardant
- Spunbond polyester
- Conductive media (ATEX)
- ePTFE membranes
- Wide pleat spacing

Dust discharge

- 50 l quick release dust bin
- 100 l quick release dust bin
- With wheels quick release drum
- Rotary air locks
- Discharge dump valves

Inlet and outlet accessories

- Extraction arms and hoods
- Safety after filters (HEPA)
- Broken bag detectors
- Emissions monitors
- Inlet duct elbow (vertical duct)
- Fan outlet transitions
- Discharge silencers
- Quick Fit (QF) duct

Combustibe dust accessories

- CARZ-N passive isolation valve
- Rupture panel
- Flameless explosion vents
- Firetrace dry chemical fire supression

Shaping the Future of Clean Air

Insight IIoT Platorm

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.

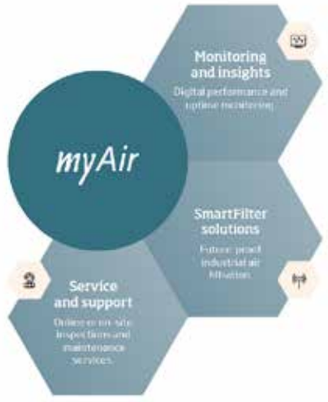
Insight empowers users to operate and maintain their filtration system more effectively - improving plant productivity, worker safety, regulatory compliance and energy consumption.

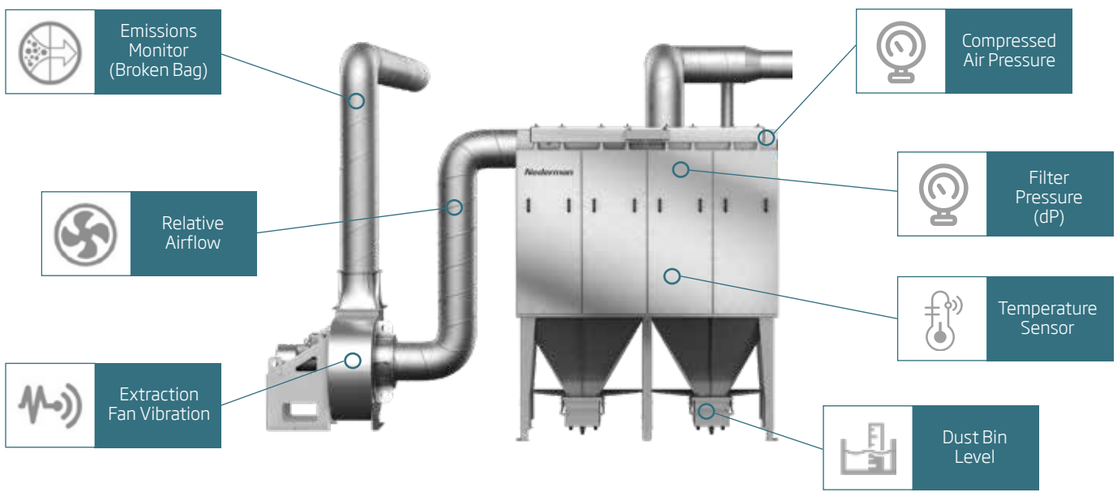
Nederman *myAir*™

Maintaining fume and dust extraction systems are essential to keep workers safe, reduce fire risks and improved sustainability. In order to help metal fabricators better manage these systems, Nederman has developed the myAir service platform for the MCP.

This scalable offering includes the MCP SmartFilter solution, traditional on-site inspection and maintenance services, as well as a connected, digital monitoring service called Nederman Insight. With this comprehensive platform customers can proactively address filter-related issues and improve their overall operational efficiency.

The MCP is available with a suite of sensors based on your unique system configuration and operations needs to verify proper performance but also alert you when service is required.





Additional sensors for combustible dust accessories, rotary valves and after filter dP also available.

Benefits of Active Monitoring and Proper Service

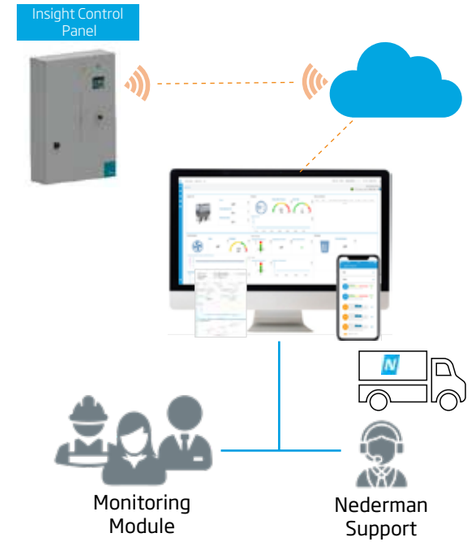
Safety. Fume and dust presents risks to workers and facilities from exposure, noise, and combustible dust hazards.

Productivity. Downtime is expensive, so extending maintenance intervals or reducing downtime of dust collection systems helps keep workers safe and productive.

Maintenance. Most facilities lack expertise in operating dust collection equipment and optimizing performance.

Emissions. Poorly maintained filtration systems increase emissions and pressure drop, reducing component life.

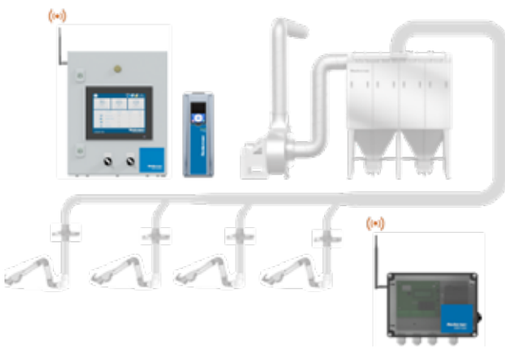
Energy Efficiency. Optimally designed and operated filtration systems can reduce energy consumption and costs, improving sustainability.



Nederman SAVE - Intelligent Airflow Control

Nederman SAVE is an innovative technology that optimizes MCP SmartFilter system performance and reduce energy consumption by up to 70%. SAVE determines the precise amount of airflow and pressure required for effective dust extraction and safe material transport by monitoring the process. The fan operation is adjusted to achieve the actual airflow and pressure required resulting in significant energy savings and reducing the risk of fire or explosion. The data collected can be visualized through Nederman Insight as a convenient way to monitor and track machine utilization.

Including Nederman SAVE upon the initial system design allows it to be “right-sized” for the actual airflow demand potentially saving on the initial investment, reducing the installation footprint and lowering operational costs associated. SAVE can also be retrofit onto existing systems to optimize performance or create additional capacity allowing for operational expansion.



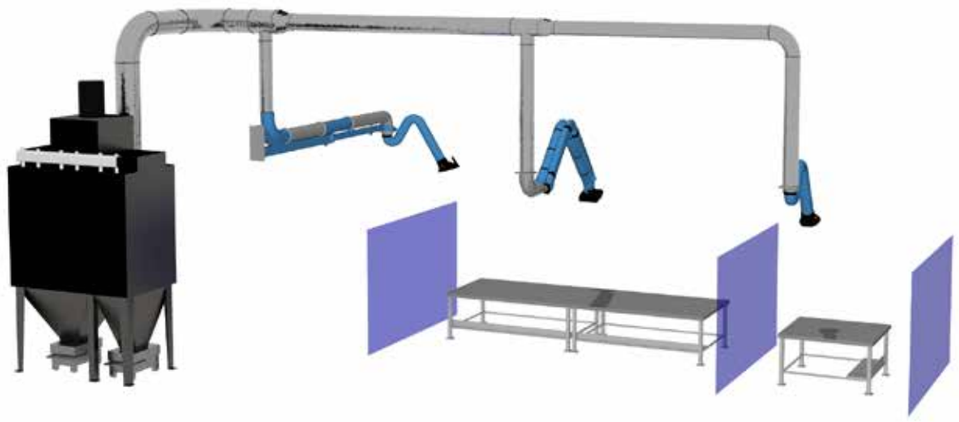
Complete, Turn-Key Solutions

Unique factory needs require more than a one-size-fits all solution. The MCP is designed to handle a variety of dust and fume in metalworking and other industrial processes, including the safe handling of combustible dusts.

Clean Air Solutions

Nederman manufacturers and provides more than just filters and the MCP SmartFilter flexible design and configurability allow to adapt it to a wide range of needs and applications. Whether simple or complex, combining the MCP with the complete range of Nederman accessories allows us to build complete clean air solutions for customer's unique needs.

Nederman manufactures everything necessary to effectively capture, convey, collect and maintain the system to achieve the target performance and ensure the system is compliant with all local regulations. We can also provide project management services to support the design, installation and commissioning of the complete system so you have a single source.



Typical MCP SmartFilter fume or dust collection solution featuring multiple extraction points, variety of extraction arms, QF duct, integral mounted fan.

Combustible dust experts

Extraction Arms

Complete line of extraction arms for source capture of fume, dust and combustible dust applications.

Exhaust Fans

Nederman's comprehensive family of CombiFab Fans cover applications and performance requirements for wide range of dust collection applications.

QF Industrial Duct

Complete range of Quick-Fit (QF) duct and fittings for building complete extraction systems. QF duct offers installation savings, improved maintenance, and future flexibility.

Combustible Dust Accessories

Complete line of combustible dust mitigation devices that protect the factory from fires hazards originating in the filter. Complies with latest ATEX and NFPA standards. applications.

Particulate Emission Monitors

High precision emission monitors offer filter leak detection, regulatory and combustible dust compliance.

Safety after filters

HEPA or 95% after filters for additional layer of protection when recirculating air into the factory.

Experience and Competence You Can Trust

Nederman is global leader in clean air solutions for a wide range of fume and dust applications. With numerous MCP installations globally, you can be confident that Nederman has the products and capabilities to handle your clean air needs.

"For us, it was very valuable to work with one partner who has been able to provide a solution that covered all technical aspects we needed"

VTI Bruges Campus

MCP-12-48S
Welding School

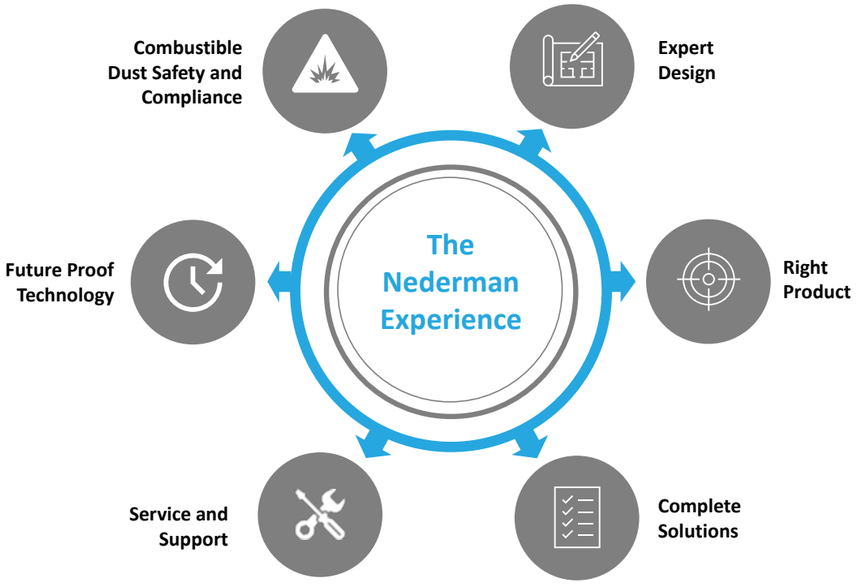
MCP-8-325
Bulk Powder

MCP-2-85
Transportation Dust

MCP-6-245
Laser Cutting

MCP-4-16SL
Production Welding

MCP-4-16SL
Metal Cutting



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 collators. 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.

Nederman

The Clean Air Company

Nederman is an environmental technology company and a global leader in industrial air filtration dedicated to extracting, transporting and cleaning air to make industrial production more efficient, safe and sustainable. Based on industry leading products, solutions and services in combination with innovative IoT technology, we monitor and optimise performance and validate emissions compliance to protect people, planet and production.

nederman.com