FMC Cartridge Filter
The FMC200 (1,850-15,000 CFM)

The FMC200 Cartridge Filter is ideal for removal of fine dusts and fumes that can be irritating and harmful. It has a compact design and side removal of filter media for easy maintenance. The compact design can accommodate two sizes of filter elements (standard and long) to fit into spaces where height and or footprint constraints exist.

Immersion Valve Technology (IVT)

Increases peak pressure and flow with lower air consumption compared to traditional valves.

The UniClean Cartridge

The UniClean cartridge was designed with the purpose of increasing the effective cleaning pressure within the cartridge and equalizing its effect over the complete length of the cartridge.

The UniClean device is a simple but very effective component integrated into the construction of the cartridge element.

Benefits:

- Higher internal cleaning pressure reduces cleaning requirement and thus compressed air consumption, increasing cartridge life.
- Uniform cleaning of complete cartridge increases effective filter area and reduces differential pressure, saving fan power and energy costs.
- Lower compressed air pressure requirement; increased cartridge life.

Patented UniClean Cartridges and Immersion Valve Technology Minimize Filter Replacement

New Nano-Fiber (CA178) with MERV 15 Rating!

Optimized Perimeter Velocity and wide pleat cartridge handle tough dust applications.
The FMC200 (1,850-15,000 CFM)

**Technical Parameters:**

- Standard cartridge in polyester
  CA100:5g/m3 max. of fine or coarse dusts
- Construction: Galvanized (Powder Coat Optional)
- Maximum working temp 167°F
- Max Dust Load: Polyester Spun Bond – 5 g/m2, Cellulose – 1 g/m2
- Standard Door Type: Bolted (Hinged Optional)
- Controller: NFHD Delta-P
- Inlet: Cross Flow with Solid Deflector Plate
- Air inlet part fitted with a deflector plate
- Compressed Air Cleaning System: 1” Dia. NPT, (Max. 6 bar)
- Explosion Vent Kits: ST1, ST2, and ST3 (contact us for ST3)
- Max. negative pressure: 16” wg
- Max. normal over pressure: 6” wg
- Optional Inlet and Outlet Adapters: 6”, 10”, 12”, 16”, 20”, 22” Diameters
- Inlet and Outlet Adapter Connection Type: Raw, QF, and Flanged

**Typical Applications:**

- Shot Blasting
- Sand Blasting
- Meal Grinding
- Welding Smoke / Fumes
- Plasma / Laser Cutting
- Thermal Spray
- Nuisance Dust Ventilation
- Paper Scrap Systems
- Recycling Operations
- Grain / Agriculture
- Powder and Bulk Materials
- Pharmaceutical
- Chemical Processing
- Powder Painting and Pigment

NF-HD controller: Delta-P functionality minimizes operational costs. LED Screen: displays pressure drop and alarm messages. Programmable for four different stop down cleaning modes and time message for maintenance interval.

Efficient Cross Flow Design and Vertical Cartridges reduce pressure drop.

Robust Galvanized Finish.

Camlock side access removal provides easy service and maintenance.
## Unit Specifications

**FMC 200-2**
- Unit shown with 14 gallon bin

**FMC 200-4**
- Unit shown with 28 gallon bin

**FMC 200-6**
- Unit shown with airlock & damper discharge

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>NO. OF CATRIDGES AND TYPE</th>
<th>FILTER MEDIA</th>
<th>MAX AIR VOLUME (cfm)</th>
<th>‘A1’ With small bin (14gal.)</th>
<th>‘A2’ With large bin (28gal.)</th>
<th>‘A3’ With large drum (55gal.) or air-lock</th>
<th>‘B’</th>
<th>‘C’</th>
<th>STANDARD FAN ARRGRT.</th>
<th>WEIGHT FILTER &amp; FAN (lbs)</th>
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<tbody>
<tr>
<td>FMC200-2L</td>
<td>8 POLYESTER</td>
<td>344</td>
<td>1850</td>
<td>96.375°</td>
<td>110.5°</td>
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<td>FMC200-2A</td>
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<td>FMC200-4A</td>
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<td>6200</td>
<td>117.75°</td>
<td>131.5°</td>
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<td>73&quot;</td>
<td>43&quot;</td>
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<td>FMC200-6L</td>
<td>24 POLYESTER</td>
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<tr>
<td>FMC200-6A</td>
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</table>
## Unit Specifications

### Unit shown with 55 gallon drum

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<td>2 x FM 828 2 x 15 HP</td>
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<td></td>
<td>32 CELLULOSE</td>
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<td>2 x FM 831 2 x 20 HP</td>
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<td>40 POLYESTER</td>
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<td>96.375&quot;</td>
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<td>40 CELLULOSE</td>
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<td>3,875</td>
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<td>117.75&quot;</td>
<td>131.5&quot;</td>
<td>157&quot;</td>
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<td>2 x FM 828 2 x 15 HP</td>
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<tr>
<td>FMC200-10A</td>
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<td>15,350</td>
<td>96.375&quot;</td>
<td>110.5&quot;</td>
<td>135.5&quot;</td>
<td>51.5&quot;</td>
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<td>2 x FM 831 2 x 10 HP</td>
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<tr>
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<td>40 CELLULOSE</td>
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<td>6,243</td>
<td></td>
<td>117.75&quot;</td>
<td>131.5&quot;</td>
<td>157&quot;</td>
<td>73&quot;</td>
<td>43&quot;</td>
<td>2 x FM 831 2 x 20 HP</td>
</tr>
</tbody>
</table>
FMC Fan Curves

FM Fan Performance Curves 3HP - 7.5HP

Air Volume - CFM

Static Pressure in. WG

FM 616-3 HP
FM 620-5 HP
FM 625-7.5 HP

FM Fan Performance Curves 10HP - 20HP

Air Volume - CFM

Static Pressure in. WG

FM 825-10 HP
FM 828-15 HP
FM 831-20 HP
FMC Options

14 gallon quick release bin

28 gallon quick release bin with wheels

NRS3 rotary air-lock

NFSU3 counter balanced dump valve

Fan outlet transition

Fan outlet elbow

Silencer

Explosion panel

Fan outlet damper

55 gallon drum assembly

CARZ Explosion Isolation Flap

Backpack

Hoerbiger Flameless Vent

Smartflow System

Firetrace
UniClean Cartridge Benefits

The UniClean cartridge was the result of an exhaustive design project with the purpose of increasing the effective cleaning pressure within the cartridge and equalizing its effect over the complete length of the cartridge. The UniClean device is a simple but very effective component integrated into the construction of the cartridge element.

Benefits achieved by this patented invention.

- Higher internal cleaning pressure reduces cleaning requirement and thus compressed air consumption, increasing cartridge life.
- Uniform cleaning of complete cartridge increases effective filter area and reduces differential pressure, saving fan power and energy costs.
- Lower compressed air pressure requirement; increased cartridge life.
The Nederman Advantage

All Dantherm Filtration cartridge collectors utilize the patented UniClean design to offer customers one of the longest life and most efficient cartridges on the market today.

This brochure provides datasheets for the wide array of media offerings to meet the most demanding dust applications along with technical discussions about the important features of each of the cartridge offerings.

These cartridges are offered in our:
FM (modular style side entry collector),
MJ (welded outdoor top entry collector), and
SILOSAFE (silo vent top entry bin collector).
Please refer to the respective product brochure to see how the UNICLEAN cartridge is utilized.

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Cartridges

<table>
<thead>
<tr>
<th>Cartridge</th>
<th>Description</th>
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<tbody>
<tr>
<td>CA100</td>
<td>Spun bonded polyester</td>
</tr>
<tr>
<td>CA105</td>
<td>Spun bonded polyester with moisture treatment</td>
</tr>
<tr>
<td>CA140</td>
<td>Spun bonded polyester with anti-static treatment</td>
</tr>
<tr>
<td>CA190</td>
<td>Spun bonded polyester with PTFE coating</td>
</tr>
<tr>
<td>CA198</td>
<td>PTFE membrane media</td>
</tr>
<tr>
<td>CA175</td>
<td>80/20 Cellulose with flame retardant</td>
</tr>
<tr>
<td>CA178</td>
<td>80/20 Cellulose with melt blown NANO fiber and flame retardant</td>
</tr>
</tbody>
</table>

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The UniClean Cartridge

The UniClean cartridge was the result of an exhaustive design project with the purpose of increasing the effective cleaning pressure within the cartridge and equalizing its effect over the complete length of the cartridge. The UniClean device is a simple but very effective component integrated into the construction of the cartridge element.

UniClean Benefits:

- Higher internal cleaning pressure reduces cleaning requirement and thus compressed air consumption, increasing cartridge life.
- Uniform cleaning of complete cartridge increases effective filter area and reduces differential pressure, saving fan power and energy costs.
- Lower compressed air pressure requirement; increased cartridge life.
CA-100 Filter Cartridge

Heavy-Duty Polyester Spunbonded nonwoven filter media at 260 g/m²

Common Applications
- Chemical Processes
- Pharmaceutical
- Pigment
- Powder Coating
- Plastics and Catalysts
- Food Processes
- Mineral Processes
- Metal Processes

CA-100 is a high-strength, 100% synthetic spunbonded media with excellent durability, particulate release and moisture resistance. Continuous operating temp 275°F

Basis Weight 160 lbs/300 ft²

CA-100 Media Performance

Frazier Permeability - CFM

Strength - Mullen Burst (Dry) PSI

Ashrae 52.2 “MERV”

Permeability of 23 is moderate. The higher the permeability, the greater the airflow and throughput. Higher airflow leads to decreased energy costs.

Dry Mullen of 388 PSI is extremely high for dust filtration applications. The higher the mullen burst, the stronger the media. Strength in media leads to longer filter life.

Test results on a common cartridge configuration. Initial efficiency is moderate for below 3 microns, but should be only one of many factors to be considered when choosing the optimum media for your application.

www.epa.gov/etv
CA-175 Filter Cartridge

Blended cellulose/synthetic fiber paper, non-phenolic resin system with fire retardant material applied

Common Applications
- Laser Cutting
- Metal Spray
- Metal Grinding
- Polishing
- Textiles
- Tobacco
- Wood Working
- Welding

CA175 is an excellent grade of paper which is suitable for most applications. It is moisture resistant and has fire retardant properties compliant with NFPA701 and TAPPI T-461. Continuous operating temperature 200°F

Basis Weight 87 lbs/300 ft²

Common Applications

Frazier Permeability - CFM

Permeability of 14 is moderate. The higher the permeability, the greater the airflow and throughput. Higher airflow leads to decreased energy costs.

Strength - Mullen Burst (Dry) PSI

Dry Mullen of 60 PSI is moderate/high for dust filtration applications. The higher the mullen burst, the stronger the media. Strength in media leads to longer filter life.

Ashrae 52.2 “MERV”

Test results on a pleated/panel configuration. Initial efficiency is moderate for below 3 microns, but should be only one of many factors to be considered when choosing the optimum media for your application.
CA-140 Filter Cartridge

Static dissipating heavy-duty polyester spunbonded nonwoven filter media at 260 g/m²

Common Applications
- Chemical Processes
- Pharmaceutical
- Pigment
- Plastics and Catalysts
- Mineral Processes
- Finish Mill

CA-140 is a high-strength, 100% synthetic spunbonded media with excellent durability, particulate release and moisture resistance. Contains an aluminized anti-static surface. Continuous operating temperature is 275°F. Meets NFPA 77 regulations.

Basis Weight 160 lbs/300 ft²

Dry Mullen of 388 PSI is extremely high for dust filtration applications. The higher the mullen burst, the stronger the media. Strength in media leads to longer filter life.

Frazier Permeability - CFM
Permeability of 23 is moderate. The higher the permeability, the greater the airflow and throughput. Higher airflow leads to decreased energy costs.

Strength - Mullen Burst (Dry) PSI
Dry Mullen of 388 PSI is extremely high for dust filtration applications. The higher the mullen burst, the stronger the media. Strength in media leads to longer filter life.

Ashrae 52.2 “MERV”
Test results on a common cartridge configuration. Initial efficiency is moderate for below 3 microns, but should be only one of many factors to be considered when choosing the optimum media for your application.
CA-178 Filter Cartridge

Blended paper with melt-blown nano-fiber and micro-fiber efficiency layer with fire retardant material applied

**Common Applications**
- Gas Turbine Inlet Filter
- Mineral Processes
- Dry Chemical Processes
- Fiberglass
- Paper Dust
- Weld Smoke Fume
- Powder Coating
- Shot Blast

CA-178 is a high efficiency, fire-retardant paper grade. Certified to meet NFPA701 and TAPPI T-461 Fire Retardant Requirements

**CA-178 Media Performance**

**Frazier Permeability - CFM**

Permeability of 20 is excellent for paper media. The higher the permeability, the greater the airflow and throughput. Higher airflow leads to decreased energy costs.

**Strength - Mullen Burst (Dry) PSI**

Dry Mullen of 50 PSI is moderate for dust filtration applications. The higher the mullen burst, the stronger the media. Strength in media leads to longer filter life.

**Ashrae 52.2 “MERV”**

Test results on a common cartridge configuration. Initial efficiency is excellent for below 1 micron. Once the cartridge achieves a proper dust cake, the efficiency will increase. MERV should only be one of many factors in choosing the optimum media for your application.

Basis Weight 108 lbs/300 ft²

Nano-Fiber Technology!

Common Applications
- Gas Turbine Inlet Filter
- Mineral Processes
- Dry Chemical Processes
- Fiberglass
- Paper Dust
- Weld Smoke Fume
- Powder Coating
- Shot Blast

CA-178 Media Performance

**Frazier Permeability - CFM**

Permeability of 20 is excellent for paper media. The higher the permeability, the greater the airflow and throughput. Higher airflow leads to decreased energy costs.

**Strength - Mullen Burst (Dry) PSI**

Dry Mullen of 50 PSI is moderate for dust filtration applications. The higher the mullen burst, the stronger the media. Strength in media leads to longer filter life.

**Ashrae 52.2 “MERV”**

Test results on a common cartridge configuration. Initial efficiency is excellent for below 1 micron. Once the cartridge achieves a proper dust cake, the efficiency will increase. MERV should only be one of many factors in choosing the optimum media for your application.

Basis Weight 108 lbs/300 ft²

Nano-Fiber Technology!
Installations

Metal Fabricating Welding Fumes

Plastic Composites Dust

Metal Fabricating Welding Fumes

Polishing/Grinding Brass Castings Dust

Flour, Starch, and Garlic Dust from Mixers

Rubber Refacing Process Dust
Installations

Fugitive Dust from Paper Shredding

Fume Extraction from Laser Cutting

Shot Blasting Steel Casting Dust

Fume Extraction from Plasma Cutting

Steel Grinding Process Dust

Composite Grinding Dust
Bringing superior conditions to the workplace and the environment

For more than 60 years, Nederman has developed, manufactured and marketed products and system 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, Automotive, Composite Manufacturing, Food, Paper, Chemical, Pharmaceutical and many others.

Today companies all over the world are using equipment from Nederman.