

# MCP SmartFilter Ex

Cartridge filter for both indoor and outdoor installations. It is suitable for smoke, fumes, dust and combustible dust and can be used for many different industries.



## MCP SmartFilter Ex

- ✓ Gain control over filtration performance with Insight Analytics. Nederman's unique monitoring technology
- ✓ Optimized footprint through innovative cartridge design with high airflow
- ✓ Reduced TCO through intelligent cleaning system, long filter cartridge life-time and optimized footprint
- ✓ Future Proof system that is IoT prepared- Insight Ready
- ✓ Controller, HMI and Gateway all in one unit with the Insight Control Panel.

MCP SmartFilter Ex is a multi-purpose filtration system. It is customizable to perfectly fit customer specific demands with airflow up to 28 000 m<sup>3</sup>/h. Suitable for smoke, fumes, dust and combustible dust and can be used in several different applications such as welding, metal cutting and general dust.

The modular design allows for standalone solutions as well as multi-filter solutions for extended requirements. With a new and innovative cartridge design - the squircle shape utilizes the square space within the dust collector in the most optimal way and generates high cartridge airflow. Thus, decreasing the size and hence the footprint of the system.

Constructed with 2 mm galvanized steel panels, it is easy to install, cost effective to ship and provides corrosion protection. The design is optimized for long filter lifetime providing low cost of ownership.

Insight ready control with advanced pulse cleaning logic provides for full system operation including control and monitoring, as well as gateway functionality for cloud communication.

It has full compliance to global directives, especially important on combustible dust (ATEX) applications. The MCP SmartFilter has a large accessories program including; fans, inlets, bins etc. and the cartridges are available in a wide variety of materials.

## MCP SmartFilter Ex

|                                     |                                                                           |
|-------------------------------------|---------------------------------------------------------------------------|
| [ProductCertifications]             | [ex]                                                                      |
| [ProductFilterefficiency]           | 99.9                                                                      |
| [ProductCompressedairconsumption]   | 60 litres per cleaning pulse at 6,0 bar compressed air                    |
| [ProductInstallation]               | [Indoor], [Outdoor]                                                       |
| [ProductMaterial]                   | 2 mm galvanised sheet metal                                               |
| [ProductSuitableForCombustableDust] | True                                                                      |
| [ProductFiltercleaningMethod]       | [Pulsejet]                                                                |
| [ProductApplication]                | [fumes], [dust]                                                           |
| [ProductWorkingpressure]            | Vacuum max. 6 kPa. Overpressure max. 0 Pa. (1,5 kPa for silotop solution) |
| [ProductDustbinvolume]              | 50 or 100 litre bin                                                       |
| [ProductFilterArea]                 | Polyester: 30 to 192 m <sup>2</sup>                                       |
| [ProductCapacityMax]                | 4500 to 28000                                                             |
| [ProductOperatingTemperature]       | -20 to +70 Deg. C.                                                        |

## Models

|                                                                                     | Item no       | [ItemFilterType] | [ItemNbrofFilterElements] |
|-------------------------------------------------------------------------------------|---------------|------------------|---------------------------|
|    | MCP-2-BS-Ex   | [cartridge]      | 8                         |
|    | MCP-4-16S-Ex  | [cartridge]      | 16                        |
|    | MCP-6-24S-Ex  | [cartridge]      | 24                        |
|    | MCP-8-32S-Ex  | [cartridge]      | 32                        |
|    | MCP-2-BSL-Ex  | [cartridge]      | 8                         |
|  | MCP-4-16SL-Ex | [cartridge]      | 16                        |
|  | MCP-6-24SL-Ex | [cartridge]      | 24                        |
|  | MCP-8-32SL-Ex | [cartridge]      | 32                        |

# Product Marking of MCP SmartFilter Ex

C E  II 1D/3D/- c Ex h IIIC 120°C Da/Dc/-

Product marking of MCP SmartFilter Ex

| Pred,max | KST                                                                                                                       | Zone Placement        |
|----------|---------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 0,3 bar  | St1 (0 to 200 bar m s <sup>-1</sup> )<br>St2 (> 200 to 300 bar m s <sup>-1</sup> )<br>St3 (> 300 bar m s <sup>-1</sup> )* | None-zone<br>Zone 22* |

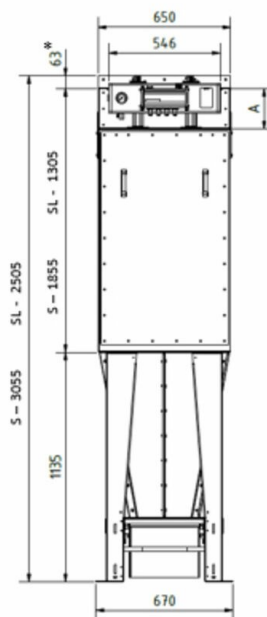
\*Not available as standard, available by request

MCP SmartFilter Ex specifications

## Cartridge material

- SC100 – Spunbond polyester
- SC140 – Spunbond polyester with antistatic treatment
- SC141 – Spunbond polyester with antistatic treatment and PTFE coating
- SC150 – Spunbond polyester with ePTFE membrane
- SC151 – Spunbond polyester with antistatic treatment and ePTFE membrane
- SC178/SC179 – 80% cellulose, 20% polyester material with nanofiber
- SC190 – Spunbond polyester with PTFE coating

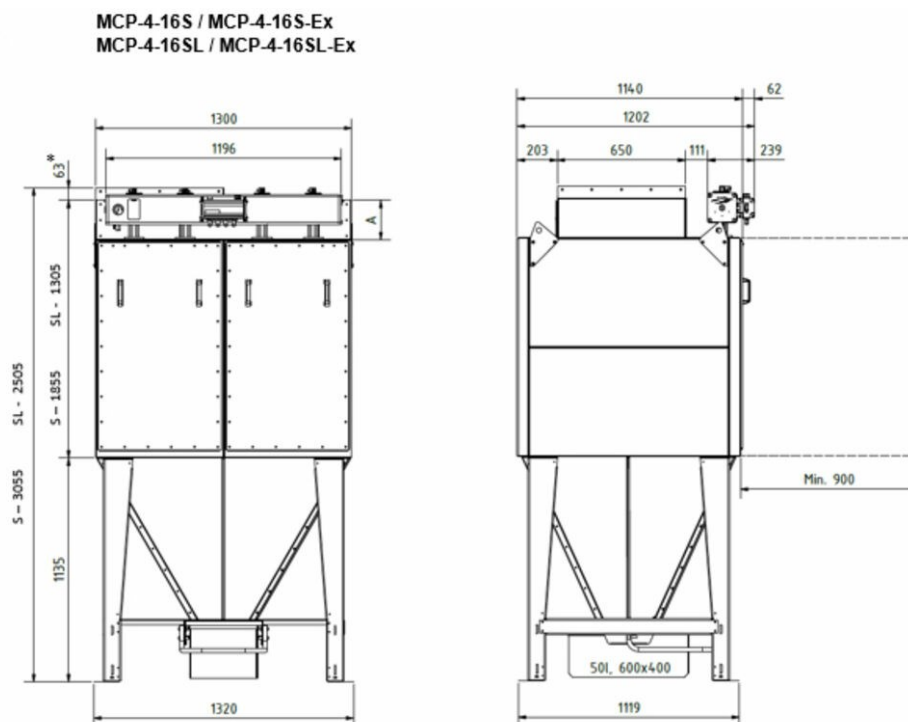
MCP-2-8S / MCP-2-8S-Ex  
MCP-2-8SL / MCP-2-8SL-Ex



All dimensions in mm. If 50 liter bin with wheels 90 mm must be added to the height. \* to be included only if a top mounted FM fan is used (transition for fan).

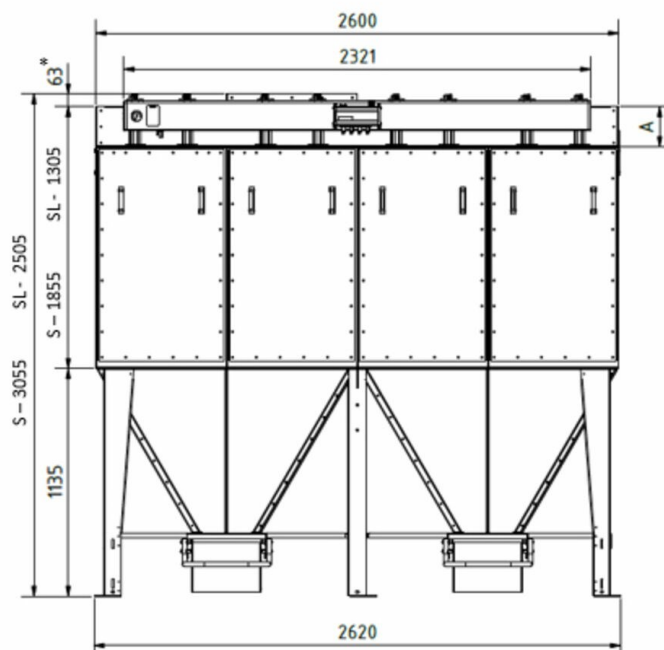
## A – Height of Clean Air Chamber (mm)

| 200               | 350                  | 500                  | 650                  |
|-------------------|----------------------|----------------------|----------------------|
| Shown in drawings | Add 150 mm in height | Add 300 mm in height | Add 450 mm in height |



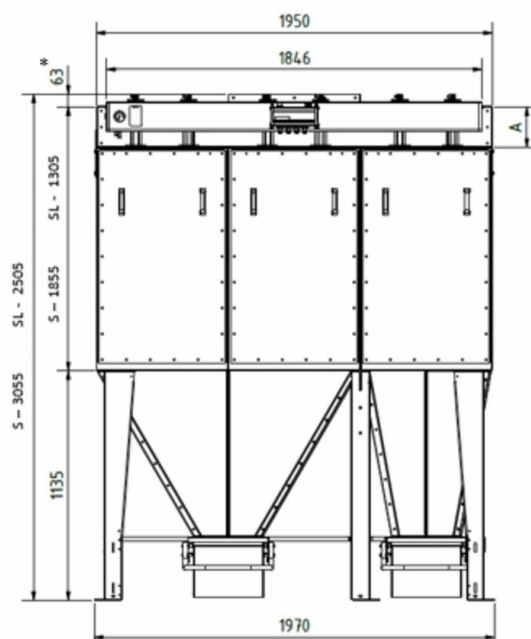
All dimensions in mm. If 50 liter bin with wheels 90 mm must be added to the height. \* to be included only if a top mounted FM fan is used (transition for fan).

**MCP-8-32S / MCP-8-32S-Ex**  
**MCP-8-32SL / MCP-8-32SL-Ex**



All dimensions in mm. If 50 liter bin with wheels 90 mm must be added to the height. \* to be included only if a top mounted FM fan is used (transition for fan).

**MCP-6-24S / MCP-6-24S-Ex**  
**MCP-6-24SL / MCP-6-24SL-Ex**



All dimensions in mm. If 50 liter bin with wheels 90 mm must be added to the height. \* to be included only if a top mounted FM fan is used (transition for fan).



## Filter area

| Filter type                 | Quantity of cartridges | SC100, SC140, SC141, SC150, SC151, SC190 | Filter area (m²) |       | Max. airflow (m³/h)* |
|-----------------------------|------------------------|------------------------------------------|------------------|-------|----------------------|
|                             |                        |                                          | SC178            | SC179 |                      |
| MCP-2-8S<br>MCP-2-8S-Ex     | 8                      | 48,0                                     | 105,6            | 52,0  | 7000                 |
| MCP-4-16S<br>MCP-4-16S-Ex   | 16                     | 96,0                                     | 211,2            | 104,0 | 14000                |
| MCP-6-24S<br>MCP-6-24S-Ex   | 24                     | 144,0                                    | 316,8            | 156,0 | 21000                |
| MCP-8-32S<br>MCP-8-32S-Ex   | 32                     | 192,0                                    | 422,4            | 208,0 | 28000                |
| MCP-2-8SL<br>MCP-2-8SL-Ex   | 8                      | 30,4                                     | 67,2             | 32,8  | 4500                 |
| MCP-4-16SL<br>MCP-4-16SL-Ex | 16                     | 60,8                                     | 134,4            | 65,6  | 9000                 |
| MCP-6-24SL<br>MCP-6-24SL-Ex | 24                     | 91,2                                     | 201,6            | 98,4  | 13500                |
| MCP-8-32SL<br>MCP-8-32SL-Ex | 32                     | 121,6                                    | 268,8            | 131,2 | 18000                |

\*Max. air flow is dependent on the dust type, etc.

## Accessories

| Figure | Description                                                                                                                                                                          | Figure | Description                                                                                                       |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------|
|        | Top mounted FM-fans 50 Hz or 60 Hz up to 14000 m³/h                                                                                                                                  |        | Leg height extensions from 0 mm to 2000 mm to fit larger bins/containers, rotary valves and big bags              |
|        | Combifab remote fans 50 Hz or 60 Hz                                                                                                                                                  |        | Leg width extension 300 mm to left, right or both sides to fit larger bins/containers, rotary valves and big bags |
|        | Noise enclosure to reduce fan and motor break-out-noise of FM-fans                                                                                                                   |        | Suspension below rotary valve for big bag                                                                         |
|        | Dual silencer to reduce air flow, fan noise and motor break-out-noise of FM-fans (available with grid (indoor use), grid and rain cover (outdoor use) or flange for duct connection) |        | Isolation box for pressure tank incl. cleaning valves                                                             |
|        | Regulation (iris) damper at fan inlet for FM-fans                                                                                                                                    |        | Access platform with ladder for maintenance                                                                       |
|        | Dust bins (50 l, 50 l with wheels and 100 l with wheels)                                                                                                                             |        | Lime feeder NFKG-70                                                                                               |
|        | Plastic bag in the dust bin with pressure compensation set 'bin balancing'                                                                                                           |        | Several sensors available for extraction, filtration and discharge process                                        |
|        | Rotary valves NRS3 and NRSZ3                                                                                                                                                         |        | Water separator and pressure regulator                                                                            |
|        | Dust discharge valve NFUS3                                                                                                                                                           |        | QF-duct system                                                                                                    |