



TESTED ACCORDING TO
VDI 6022

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MINI PLEAT FILTER CELLS,
TYPE MFC

MFC

FOR LARGE VOLUME FLOW RATES AND LONG FILTER LIFE

Prefilters or final filters for the separation of fine dust and particulate filters for the most critical requirements in ventilation and air conditioning systems

- Filter groups ISO ePM10, ISO ePM1 (fine dust filter) and EPA, HEPA (particulate filter)
- Performance data tested according to ISO 16890, or to EN 1822-1 and ISO 29463-2 to ISO 29463-5
- Eurovent Certification for fine dust filters
- Filter media for special requirements, glass fibre papers with spacers made of thermoplastic hot-melt adhesive
- Low initial differential pressure due to ideal pleat position and largest possible filter area
- Compact V-design with low installation depths
- Installation options in HEPA particulate filter housings for duct installation of the types KSF, KSFS and DCA
- Meets the hygiene requirements of VDI 6022

General Information



Application

- Mini Pleat filter cell type for the separation of fine dust and suspended particles such as aerosols, toxic dusts, viruses and bacteria from the supply and extract air in ventilation systems with large volume flow rates and the requirement for long filter life
- Fine dust filter: Prefilter or final filter for the separation of fine dust in ventilation and air conditioning systems.
- Particulate filter: Main or final filter used for the most critical requirements of air cleanliness and sterility in areas such as production, research, medicine, pharmaceuticals industry, and nuclear engineering

Special characteristics

- Leak test as standard for all HEPA filters of filter classes H13, H14

Classification

- Eurovent Certification for fine dust filters
- Hygiene Conformity

Nominal sizes

- B × H × D [mm]

Filter classes

Filter groups

- ISO ePM10 acc. to ISO 16890
- ISO ePM1 acc. to ISO 16890
- EPA according to EN 1822
- HEPA according to EN 1822

Filter classes

- ePM10 55 %
- ePM1 60 %
- ePM1 90 %
- E11
- H13
- H14

Options

- V: Increased volume flow rate
- FNU: Flat profile seal on the upstream side
- FND: Flat profile seal on the downstream side
- TGU: Test groove seal on the upstream side (only for filter classes H13, H14)
- WS: Without seal
- OT: Oil mist test (only for filter classes H13, H14)
- OTC: Oil mist test with certificate (only for filter classes H13, H14)

Construction

- GAL: Frame made of galvanised steel
- STA: Frame made of stainless steel

Useful additions

- HEPA filter housing for duct installation available as a single unit (KSF, KSFS, DCA) or as a system combination (KSFSSP)

Construction features

- Compact V-design
- Circumferential flat profile seal on the upstream side
- Versions optionally with a test groove seal (filter classes H13, H14) on the upstream side. The flat profile seal can also be arranged on the downstream side

Material and surfaces

- Filter media made of high-quality, wet-strength glass fibre papers, pleated
- Spacers provide a uniform spacing of the pleats
- Sealing compound made of permanently elastic two-component polyurethane adhesive
- Frame optionally made of stainless steel

Standards and guidelines

- Tested according to ISO 16890; International standard for general ventilation and air conditioning; classification of separation efficiency based on the measured fractional separation efficiency, which is processed into a reporting system for the fine dust separation efficiency (ePM)
- For fine dust filters, the fractional separation efficiency of a certain size range is determined by aerosols (DEHS and KCl)

- Depending on the test values, the filters are classified into filter groups ISO ePM10 and ISO ePM1
- Testing of particulate filters to EN 1822-1 and ISO 29463-2 up to ISO 29463-5 (EPA, HEPA and ULPA filters): Standards for testing of filtration performance in the factory, based on particle counting method using a liquid test aerosol
- Uniform classification of particulate filters according to separation efficiency, using a test aerosol with an average particle size within the minimum separation efficiency (MPPS)
- Particulate filters are classified into the filter groups EPA (filter classes E10, E11, E12), HEPA (filter classes H13, H14) and ULPA (filter classes U15, U16, U17), according to the values determined for local separation efficiency and integral separation efficiency.
- Hygiene conformity in accordance with VDI 6022, VDI 3803, DIN 1946 Part 4, ÖNORM H 6020, SWKI VA 104-01 and WKI 99-3 as well as EN 16798

TECHNICAL INFORMATION

| | | | |
|---|-----|-----|-----|
| Fractional efficiency ePM10 [%] to ISO 16890 | 55 | - | - |
| Fractional efficiency ePM1 [%] to ISO 16890 | - | 60 | 90 |
| Maximum operating temperature [°C] | 80 | 80 | 80 |
| Maximum relative humidity [%] | 100 | 100 | 100 |

| | | | |
|--|------|---------|----------|
| Filter class according to EN 1822 | E11 | H13 | H14 |
| Efficiency [%] according to EN 1822 | > 95 | > 99.95 | > 99.995 |
| Maximum operating temperature [°C] | 80 | 80 | 80 |
| Maximum relative humidity [%] | 100 | 100 | 100 |

Specification text

Mini Pleat filter cells MFC for the separation of fine dust and suspended particles such as aerosols, toxic dusts, viruses and bacteria from the supply and extract air in ventilation systems. Used as fine dust filters, prefilters or final filters in AHU units; or as particulate filters, main or final filters for highest requirements of air purity and sterility, in areas such as industry, research, medicine, pharmaceuticals, and nuclear technology. Low installation depth due to compact V-design, for systems with high volume flow rates and long filter service lives. Filter media made of high-quality, wet-strength glass fibre papers, with spacers. Optimum pleat position and largest possible filter area allow low initial differential pressures. Mini Pleat filter cells available in usual market sizes, filter groups ISO ePM10, ISO ePM1 (fine dust filters) and EPA, HEPA (particulate filters). Mini pleat filter cells are equipped with a circumferential flat profile seal on the upstream side as standard. Optionally available with test groove seal on the upstream side. Mini Pleat filter cells used as fine dust filters are certified by Eurovent.

Special features

- Leak test as standard for all HEPA filters of filter classes H13, H14

Materials and surfaces

- Filter media made of high-quality, wet-strength glass fibre papers, pleated
- Spacers provide a uniform spacing of the pleats
- Sealing compound made of permanently elastic two-component polyurethane adhesive
- Frame optionally made of stainless steel

Construction

- GAL: Frame made of galvanised steel
- STA: Frame made of stainless steel

Sizing data

- Filter group [ISO 16890]
- Separation efficiency [%]
- Filter class [EN 1822]
- Volume flow rate [m³/h]
- Initial differential pressure [Pa]
- Nominal size [mm]

| | | | | | | | | | | | | | |
|-----|---|-----|---|---|-----|---|-----------------|---|---|---|-----|---|----|
| MFC | - | H13 | - | - | GAL | / | 610 × 610 × 292 | / | S | / | FNU | / | OT |
| | | | | | | | | | | | | | |
| 1 | | 2 | 3 | | 4 | | 5 | | 6 | | 7 | | 8 |

1 Type

MFC Mini Pleat filter cell

2 Classification

ePM1 Fractional efficiency ePM1 acc. to ISO 16890
 ePM10 Fractional efficiency ePM10 acc. to ISO 16890
 E11 Filter class E11 according to EN 1822
 H13 Filter class H13 according to EN 1822
 H14 Filter class H14 according to EN 1822

3 Separation efficiency

Degree of separation according to ISO 16890

4 Construction

GAL Frame made of galvanised sheet steel
 STA Frame made of stainless steel

5 Nominal size [mm]

Width × height × depth

Width and depth cannot be changed

Height

305, 610, 762 6 Category Volume flow rate

S Standard

M medium

X high

7 Seal

WS without seal

FNU Flat seal on the upstream side

TGU Test groove seal on the upstream side

FND Flat seal on the downstream side

8 Testing

No registration: without leakage test

OT Oil mist test (only H13, H14)

OTC Oil mist test with certificate (only H13, H14)

Order example: MFC-H13-GAL/610×610×292/S/FNU/OT

| | |
|---------------------------|---------------------------------------|
| Type | MFC - Mini Pleat filter cell |
| Classification | Filter class H13 according to EN 1822 |
| Construction variant | Frame made of galvanised sheet steel |
| Nominal size [mm] | Width 610, height 610, depth 292 |
| Seal | Flat seal on the upstream side |
| Testing | Oil mist test |
| Category Volume flow rate | Standard |