



Filter modules MF series
All filters used are tested/certified
to the standards
CEN 779 - EUROVENT 4/4 - CEN EN 1822



Efficiency H12* 99,97% 1 ≥ P > 0,3 µm

*The reference to the class H is indicative only

APPLICATIONS

MF filter modules were developed for use as filtration systems in centralised systems or individual work stations for the extraction of welding fumes.

They are proposed in three versions, different from each other by type of filtration and the context to be used in depending on the pollutant that must be filtrated:

- MFE: electrostatic filtration.
- MFT-H: mechanical filtration with rigid bag pocket filters.
- MFC: filtration with activated carbons.

The three types in some cases may be combined with each other (e.g. mechanical + activated carbon) to get even more complete solutions.

Given the high level of efficiency of the filters installed in the various modules they can be extended also to handle other types of fumes; for example, depending on their composition, these filters can handle welding fumes (also oil-laden), for air treatment in civil plants, to eliminate low concentration of airborne solvent, and for general deodorization processes.

Given their compact dimensions, the filters can be installed in confined spaces, in addition they can be installed in suspended solutions to help optimise the use of available space in the workplace.

CONSTRUCTION FEATURES

- Load-bearing enclosure composed of die cast aluminium profiles supporting sandwich panels in prepainted sheet steel (RAL 7032 grey) with internal galvanization, with interposed 25 mm thick layer of expanded polystyrene foam.
- Filter runners in galvanized steel, so fashioned to allow easy and highly intuitive insertion of the filters.

MF-E



The electrostatic filter module is composed of a self-loading frame made of extruded aluminium profiles supporting pre-painted RAL 7032 grey sandwich panels with galvanized interior face and interposed 25 mm thick layer of expanded polyurethane foam to ensure complete air-tightness of the module.

The interior of the unit contains the filters mounted on runners: 2 prefilter, one metal mesh anti-intrusion spark trap filter, one polyester pleated filter with efficiency class EU4-G4. The filter is composed of an electrostatic cell with patented system, having filtration class A to UNI 11254, equivalent to class H12 to UNI 1822, which provides constant efficiency up to a load of 600 g of fine particulate.

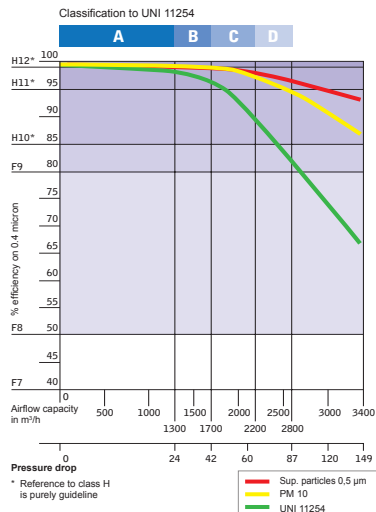
MF E



| MOD. MF-E | AIRFLOW CAPACITY | PRESSURE DROP | FILTRATION CLASS | EFFICIENCY ILH | POWER SUPPLY | DIMENSIONS | Ø IN/OUT* | TOT. WEIGHT |
|-----------|--------------------|---------------|------------------|----------------|--------------|---------------|-----------|-------------|
| | m ³ / h | Pa | CLASSE | MAX. - MIN. % | Volt | LxHxP mm | mm | Kg |
| 50 | 1300-3400 | 25-150 | A - D | 99,60 - 93,20 | 230-50 | 700x700x600 | 250 | 60 |
| 70 | 1950-5000 | | | | | 700x1040x600 | 300 | 80 |
| 100 | 2600-6800 | | | | | 700x1400x600 | 350 | 100 |
| 120 | 3900-10200 | | | | | 700x1740x600 | 450 | 120 |
| 150 | 4550-11800 | | | | | 1400x1040x600 | | 140 |
| 200 | 5200-13600 | | | | | 1400x1400x600 | 500 | 160 |

* The IN/OUT diameters are recommended and available in the optional inlet and outlet hoppers.

EFFICIENCY DATA

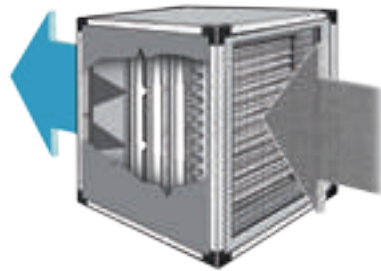


FILTERS COMPOSITION

| MOD. | 50 E | 70 E | 100 E | 120 E | 150 E | 200 E | FILTER THICKNESS | EFFICIENCY | PENETRATION |
|--|------|------|-------|-------|-------|-------|------------------|-----------------|----------------|
| Metal mesh prefilter 287x592x22 | No | 1 | No | 1 | 2 | No | 22 mm | G2 25% | 10 ≥ P µm |
| Metal mesh prefilter 592x592x22 | 1 | 1 | 2 | 2 | 2 | 4 | | | |
| Pleated prefilter 287x592x98 | No | 1 | No | 1 | 2 | No | 98 mm | EU4 - G4 70% | 10 ≥ P > 3 µm |
| Pleated prefilter 592x592x98 | 1 | 1 | 2 | 2 | 2 | 4 | | | |
| Electrostatic filter 287x592x218 | No | 1 | No | 1 | 2 | No | 218 mm | H12* 99,97% | 1 ≥ P > 0,3 µm |
| Electrostatic filter 592x592x218 | 1 | 1 | 2 | 2 | 2 | 4 | | | |

The mechanical filtration filter module is composed of a self-loading frame made of extruded aluminium profiles supporting RAL 7032 grey prepainted sandwich panels with galvanized interior face and interposed 25 mm thick layer of expanded polyurethane foam to ensure complete air-tightness of the module. The interior of the unit contains the filters mounted on runners.

In the special MF TH AIR CLEANER for laboratories and controlled air quality environments, the unit retains the technical-construction features of the standard AIR CLEANER with the exception of the filter section, due to the inclusion of a HEPA pocket bag filter (totally combustible) with filtration class H12, certified to EN 1822.



MF T - MF TH

| MOD. MF | AIRFLOW CAPACITY | PRESSURE DROP | FILTRATION CLASS | EFFICIENCY ILH | FILTERING SURFACE | DIMENSIONS | Ø IN/OUT* | TOT. WEIGHT |
|---------|-------------------|---------------|------------------|----------------|-------------------|---------------|-----------|-------------|
| | m ³ /h | Pa | CLASS | % | m ² | LxHxP mm | mm | Kg |
| 50 T | 5000 | 600 | F8 | 95% | 17 | 700x700x600 | 300 | 40 |
| 70 T | 7000 | | | | 25,5 | 700x1040x600 | 350 | 60 |
| 100 T | 10000 | | | | 34 | 700x1400x600 | 400 | 80 |
| 120 T | 12000 | | | | 42,5 | 700x1740x600 | 450 | 100 |
| 150 T | 15000 | | | | 51 | 1400x1040x600 | 500 | 120 |
| 200 T | 20000 | | | | 68 | 1400x1400x600 | 600 | 140 |
| 50 TH | 5000 | 600 | H12 | 99,97% | 17 | 700x700x600 | 300 | 40 |
| 70 TH | 7000 | | | | 25,5 | 700x1040x600 | 350 | 60 |
| 100 TH | 10000 | | | | 34 | 700x1400x600 | 400 | 80 |
| 120 TH | 12000 | | | | 42,5 | 700x1740x600 | 450 | 100 |
| 150 TH | 15000 | | | | 51 | 1400x1040x600 | 500 | 120 |
| 200 TH | 20000 | | | | 68 | 1400x1400x600 | 600 | 140 |

* The IN/OUT diameters are recommended and available in the optional inlet and outlet hoppers.

MF FILTERS COMPOSITION

| MOD. | 50 T | 70 T | 100 T | 120 T | 150 T | 200 T | FILTER THICKNESS | EFFICIENCY | PENETRATION |
|---|------|------|-------|-------|-------|-------|------------------|-----------------|----------------|
| Metal mesh prefilter 287x592x22 | No | 1 | No | 1 | 2 | No | 22 mm | G2 25% | 10 ≥ P μm |
| Metal mesh prefilter 592x592x22 | 1 | 1 | 2 | 2 | 2 | 4 | | | |
| Pre-filtro Pieghettato 287x592x98 | No | 1 | No | 1 | 2 | No | 98 mm | EU4 - G4 70% | 10 ≥ P > 3 μm |
| Pleated prefilter 592x592x98 | 1 | 1 | 2 | 2 | 2 | 4 | | | |
| Pocket bag filter 287x592x292 | No | 1 | No | 1 | 2 | No | 292 mm | F8 95% | 1 ≥ P > 0,3 μm |
| Pocket bag filter 592x592x292 | 1 | 1 | 2 | 2 | 2 | 4 | | | |

MF-C



The activated carbon filter module is composed of a self-loading frame made of extruded aluminium profiles supporting RAL 7032 grey prepainted sandwich panels with galvanized interior face and interposed 25 mm thick layer of expanded polyurethane foam. The interior of the unit contains the filters mounted on runners. The filter is composed of activated vegetable carbon extruded in cylindrical pieces. The filter is composed of activated vegetable carbon extruded in cylindrical pieces and vibration-filled in the Ø 160 mm 400 mm length cartridge: Individual cartridges, weighing approximately 3 kg each, are inserted in an array in a specific holder plate and can be easily changed once saturated.

MF C



| MOD. MF C | AIRFLOW CAPACITY | PRESSURE DROP | CARTRIDGES | | CARBON WEIGHT SINGLE MODULE | DIMENSIONS | Ø IN/OUT* | TOT. WEIGHT |
|-----------|------------------|---------------------|------------|-------------|-----------------------------|---------------|-----------|-------------|
| | mc / h | Pa | N° | Ø mm x L mm | Kg | LxHxP mm | mm | Kg |
| 50 | 3000 | min. 200 max 300 | 9 | 160 x 400 | 28 | 700x700x600 | 250 | 60 |
| 70 | 4500 | | 14 | | 44 | 700x1040x600 | 300 | 80 |
| 100 | 6000 | | 18 | | 56 | 700x1400x600 | 350 | 100 |
| 120 | 7500 | | 23 | | 72 | 700x1740x600 | | 120 |
| 150 | 9000 | | 28 | | 87 | 1400x1040x600 | 400 | 140 |
| 200 | 12000 | | 36 | | 112 | 1400x1400x600 | 450 | 160 |

N.B. On request we produce modules with Ø 140 mm cartridges containing activated carbon for special applications.

** The IN/OUT diameters are recommended and available in the optional inlet and outlet hoppers.*

MF FILTERS COMPOSITION

| MOD. | 50 C | 70 C | 100 C | 120 C | 150 C | 200 C | FILTER THICKNESS | EFFICIENCY | PENETRATION |
|--|------|------|-------|-------|-------|-------|------------------|------------|-------------|
| Metal mesh prefilter 287x592x10 | No | 1 | No | 1 | 2 | No | 10 mm | G2 25% | 10 ≥ P µm |
| Metal mesh prefilter 592x592x10 | 1 | 1 | 2 | 2 | 2 | 4 | | | |
| Carbon filters 305x610x400 | No | 1 | No | 1 | 2 | No | 400 x Ø 160 mm | 3,1 Kg | |
| Carbon filters 610x610x400 | 1 | 1 | 2 | 2 | 2 | 4 | | | |
| Metal mesh postfilter 287x592x10 | No | 1 | No | 1 | 2 | No | 10 mm | G2 25% | 10 ≥ P µm |
| Metal mesh postfilter 592x592x10 | 1 | 1 | 2 | 2 | 2 | 4 | | | |

Filter modules can be coupled to create filtration / deodorisation units that can be utilised in a broad range of different applications. A combination can be created with electrostatic and activated carbon filters or a combination with mechanical rigid pocket bag filters and activated carbon filters.

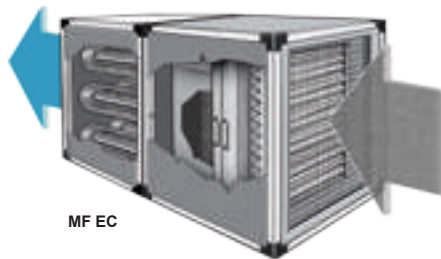
These filtration units can be obtained also with various separate modules because we supply a specific connection kit designed to allow several modules to be fixed together; it is also possible, for the smaller sizes, to choose a suspended installation solution utilising specific mounting brackets.

It is important to consider that this type of filter is useful when a series of different work processes create gases or odours that must be removed prior to expulsion into the atmosphere; this highly compact provides both microparticulate removal and gas and odour removal in a single filter.

COMBINATIONS BETWEEN FILTER MODULES



MF TC



MF EC

| MOD. | AIRFLOW CAPACITY | PRESSURE DROP | MODULE 1 | MODULE 2 | DIMENSIONS |
|--------|--------------------|---------------------|----------------------------|------------------------------|----------------|
| | m ³ / h | Pa | MOD. MF | MOD. MF C | |
| 50 EC | 1300-3000 | min. 250 max 400 | Filtrazione elettrostatica | Filtrazione a carboni attivi | 700x700x1200 |
| 70 EC | 1950-4500 | | | | 700x1040x1200 |
| 100 EC | 2600-6000 | | | | 700x1400x1200 |
| 120 EC | 3900-7500 | | | | 700x1740x1200 |
| 150 EC | 4550-9000 | | | | 1400x1040x1200 |
| 200 EC | 5200-12000 | | | | 1400x1400x1200 |




| | | | | | |
|--------|-------|-----|-----------------------|------------------------------|----------------|
| 50 TC | 3000 | 900 | Filtrazione meccanica | Filtrazione a carboni attivi | 700x700x1200 |
| 70 TC | 4500 | | | | 700x1040x1200 |
| 100 TC | 6000 | | | | 700x1400x1200 |
| 120 TC | 7500 | | | | 700x1740x1200 |
| 150 TC | 9000 | | | | 1400x1040x1200 |
| 200 TC | 12000 | | | | 1400x1400x1200 |



The quoted performance data were measured using suitable instruments in our laboratories.

N.B.: The airflow capacity of the combined filter (i.e. the two filter modules together) was established taking into account exclusively the module having the lowest maximum airflow capacity; this measure serves to increase the efficiency and working life of the other filter section.

ACCESSORIES



| WALL MOUNTING BRACKET | SQUARE TO ROUND ADAPTERS | PLENUM FOR SUCTION ARM |
|--|---|---|
|  <p>Wall mounting kit composed of galvanized steel brackets and guides for fixing to the filter module.</p> <p>Suspended installation is compatible only with the smaller modules to facilitate installation and eliminate possible risks associated with wall mounting of excessively heavy modules.</p> <ul style="list-style-type: none"> • Kit for MF 50 (E - T - C) • Kit for MF 50 (EC - TC) • Kit for MF 70 (E - T - C) |  <p>Galvanized steel hopper to secure to the filter module for connection to the rigid suction and expulsion ducts. 2 adapters are required for correct installation.</p> |  <p>Adaptor in paint-finished welded sheet steel for connection between MF 50 filtering module and IBS - IBSA - IBF series suction arm.</p> <p>N.B.: This accessory is used to create a wall-mounted module for mechanical or electrostatic filtration by means of modules MF 50 T and MF 50 E.</p> <p>The price list already contains the wall-mounted unit complete with extractor fan in the various configurations.</p> |

| DIFFERENTIAL PRESSURE GAUGE | REGISTER DAMPER |
|---|--|
|  <p>Differential pressure device with instantaneous analogical indication of the measured value.</p> <p>N.B.: This accessory is used to achieve complete and instant control of the condition of the filters.</p> |  <p>Circular butterfly damper with graduated control in galvanised sheet steel, to be installed to obtain greater control over the air flow rate and velocity, and also to adjust the performance of the suction fan in order to ensure it operates within its standard parameters.</p> |