

Air-Duct Filters (KLF - Series)



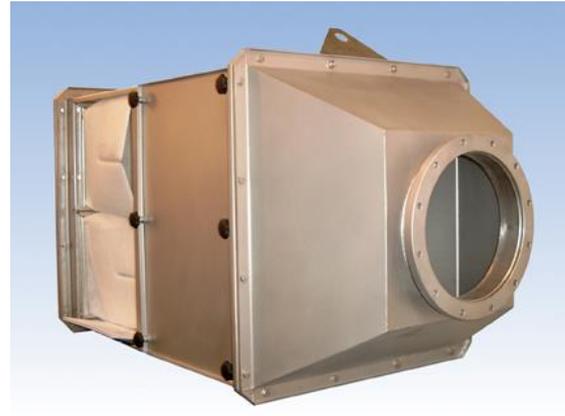
Air-Duct filters are used as intake filters for e.g. Fans (blowers) and compactors (compressors) or used as process filters in ventilation systems.

All metal parts of the filter are available either in stainless steel 1.4301, stainless steel 1.4571 or steel RSt 37-2 (DIN 17000).

Functionality

The sucked air passes through the inlet area into the duct air filter. There it flows through the built-in filter inserts. Depending on the application, pocket filters, frame filters, compact filters or suspended matter filters are optionally used. The number and the execution of the filter inserts are determined according to the technical data of the plant. With correspondingly large amounts of air, it is necessary to use several filter inserts next to and above each other as a filter wall.

By appropriate inspection openings, the filter inserts can be pulled out of the receiving frame or pushed into it. Thus, a simple change of filter inserts is possible.



A corresponding device depending on the type of filter inserts provides the necessary tightness of the system.

If required, it is also possible to install filter inserts of different filter classes one behind the other so that a graded coarse and fine filtration takes place. We recommend grading a maximum of 3 classes per filter level. For each filtration stage a separate inspection opening is provided.

Filter sizes

The size of the air-duct filters depends on the volumetric flow as well as the local and plant technical conditions. The following table gives some examples of common sizes when using pocket filters of filter class M5 (DIN EN 779:2012).

Type	Performance	Number of pockets	Size of the filter pockets
KLF 10	900 m ³ /h	1 x 1	287 x 287 mm
KLF 15	1.700 m ³ /h	1 x 1	287 x 592 mm
KLF 30	3.400 m ³ /h	1 x 1	592 x 592 mm
KLF 65	6.800 m ³ /h	2 x 1	592 x 592 mm
KLF 100	10.200 m ³ /h	3 x 1	592 x 592 mm
KLF 135	13.600 m ³ /h	2 x 2	592 x 592 mm
KLF 200	20.400 m ³ /h	3 x 2	592 x 592 mm
KLF 270	27.200 m ³ /h	4 x 2	592 x 592 mm
KLF 300	30.600 m ³ /h	3 x 3	592 x 592 mm
KLF 400	40.800 m ³ /h	4 x 3	592 x 592 mm
KLF 540	54.400 m ³ /h	4 x 4	592 x 592 mm
KLF 680	68.000 m ³ /h	5 x 4	592 x 592 mm
KLF 850	85.000 m ³ /h	5 x 5	592 x 592 mm

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Designs

Depending on the application, the aerodynamically designed air-duct filter is available in six different versions.

- **Version 1** (Intake of outside air)
Entrance: Weather protection with slats
Output: conical transition to round flange
- **Version 2** (Intake of outside air)
Entrance: Weather protection with slats
Output: rectangular flange
- **Version 3** (Intake of inside air)
Entrance: simple protective grid
Output: conical transition to round flange
- **Version 4** (Intake of inside air)
Entrance: simple protective grid
Output: rectangular flange
- **Version 5** (Intake in the canal)
Entrance: conical transition to round flange
Output: conical transition to round flange
- **Version 6** (Intake in the canal)
Entrance: rectangular flange
Output: rectangular flange

Filter inserts

The number and selection of filter inserts depends on various factors. The following filter inserts are available for our air-duct filters.

➤ Pocket filters

The standard filter inserts for air-duct filters are the pocket filters. These are available as coarse filters (G3 / G4), as medium filters (M5 / M6) and as fine filters (F7 / F9). The filter medium consists of fine synthetic fibers. The mounting frame is optionally made of metal (25 mm) or plastic (20/25 mm). The different versions result in a wide range for these applications.



➤ Frame filters

The frame filters have the advantage over the pocket filters of lesser depth. Preferably, these are therefore used in tight spaces. These simple filter cells are available in different versions. Glass fiber cells in filter classes G2 and G3 as well as filter cells made of synthetic material in filter classes G4-F9 are manufactured. The standard depths of the cells are 24, 48 and 96 mm. In principle, these cells can be manufactured in almost all special sizes.



➤ Compact filters

The compact filters have a large filter area due to the pleated filter material and thus have a significantly higher throughput capacity compared to a pocket filter with the same size. Thus, large volume flows on a small area are possible. The compact filters are available in filter classes M5-F9.



➤ Suspended matter filters

These filter inserts are made of high-quality glass fiber media and are available in the filter classes (E11-H14). They are used as the last filter stage often in clean rooms, in medical technology and in pharmacy. The filters are available in various sizes and with different frame materials (MDF, plywood, plastic, galvanized sheet steel, stainless steel, aluminum).



More detailed information about the various filter inserts can be found on the following product information sheets.

- **Pocket filters** 5.100
- **Frame filters** 5.110
- **Compact filters** 5.120
- **Suspended matter filters** 5.130