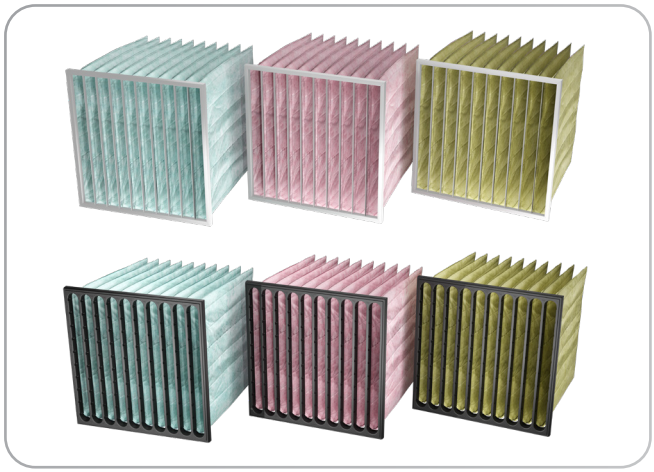
# Hi-Flo

Energy efficient bag filter



## Typical applications

General HVAC

Residential and commercial buildings

High demand applications

## Benefits

- Stable efficiency achieved by mechanical filtration
- Low energy consumption during service
- Long service life
- Wide range of filtration efficiencies
- Light and ergonomic XL frame
- Transparent environmental data with EPDs
- No prefiltration stage required due to high dust capacity

## Description

Hi-Flo is a premium bag filter used for filtration of particles of sizes typically found in the outdoor air. The filters utilize non-charged glass fibre media that ensures stable removal of particles throughout the entire service life. This is achieved by purely mechanical filtration mechanisms. The Hi-Flo media is continuously developed to decrease its resistance to airflow and increase its dust holding capacity, which results in low energy consumption of the filters.

Hi-Flo filters are used in HVAC applications as final filters in industrial, commercial and residential applications, and also serves as prefilters in HEPA installations to improve indoor air quality and comfort. Hi-Flo bag filters are also used in the exhaust air or in recirculation systems to protect the air handling units.

## Product specifications

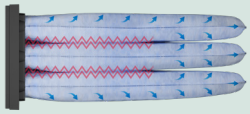
The Hi-Flo family consist of five filtration classes acc.to ISO 16890 – from the lowest ePM10 60%, through ePM2,5 50%, ePM1 60%, ePM1 70% and up to ePM1 85%.

The air-laid glass fibre media is proprietary engineered by using bimodal distribution of fibers. The pockets are sewn to a conical shape that ensures full utilization of the filtration media.
In addition, the outer tapered geometry of the pockets prevents overlapping with the adjacent filters which otherwise could result in damaging or wetting the bags. The combination of the engineered media and the pocket geometry ensures low operational resistance to airflow and high dust capacity.
This contributes to low energy consumption and helps to achieve longer service life of the filters, which means less waste and lower maintenance cost.

Hi-Flo filters are available with various types of frames: galvanized steel, 100% recycled plastic or wooden; all with either 25 mm or 20 mm header depth.

## Conical pockets

Conical stitching



Non-conical stitching
blocked air passage

When sewing the pockets the threads distance is carefully calculated to keep the conical shape of the pockets.
This shape ensures that the media is fully utilized. The airflow is evenly distributed through the entire media area which reduces the filter's resistance.

## Tapered geometry

Tapered

Straight

The outer geometry of the pockets is formed into a tapered shape. When assembled into a filter this shape prevents the pockets to touch the AHU walls or the nearest filters. If the pockets would contact AHU's floor, they could get wet from the condensate that often gathers there. In case the pockets rub against the adjecent filters, the filter media may tear from the friction.

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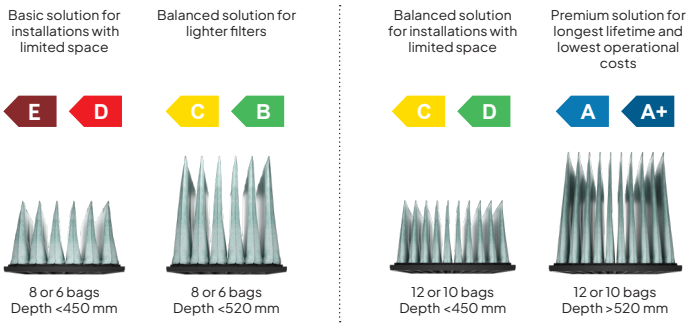
## Filter performance

The Hi-Flo family consists of various size models – due to number of pockets and due to filter depth. The standard depths are 640 mm, 600 mm, 520 mm, and 370 mm. Selection of the model defines the filter performance in terms of airflow resistance, dust capacity and finally the energy consumption. For energy saving solutions choose models with many and long pockets.



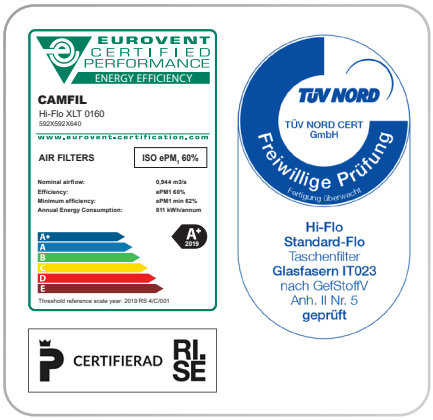

## Data

| | | | |
|---|---|---|---|
| **Type** | Bag (pocket) filter | **Max. Pressure drop** | 500 Pa |
| **Frame** | XL – injection molded, 100% recycled plastic (Polystyrene)<br>G – extruded plastic (Polypropylene, Polystyrene, ABS)<br>Galvanized steel<br>Wooden | **Rec. final pressure drop (acc.to EN 13053)** | Initial pressure drop + 100 Pa or initial pressure drop x3 (whichever is lower) |
| **Media** | Air-laid glass fibre | **Max airflow** | 1,25 x nominal airflow |
| **Separators** | Synthetic threads and hotmelt | **Max. temperature** | 70°C |
| **Gasket** | (optional)<br>Endless poured gasket (Polyurethane)<br>Flat gasket (Polyethylene or Neoprene) | **Max. RH** | 100% |
| **Installation** | Front or side access installations in air handling units, filter walls and ducted housings.<br>Mounting frames with mechanical or spring clamping systems. | | |

## Certifications

The filters are certified by Eurovent programme and come with the energy classification label. The performance is tested by independent laboratories that issue ISO 16890 test reports. Additionally, the Hi-Flo filters are P-mark certified. The P-mark is an independent certification developed by RISE laboratory which among others aspects guarantees stable filtration efficiency when exposed to real-life conditions. The two programmes require annual sampling to verify the performance is acc. to the specification.

The filtration media used in the Hi-Flo family is not a subject to static charging and retain its efficiency throughout the entire service life, and therefore fulfil the requirements of VDI guideline 6022. The bio solubility and health safety of the filter media in accordance with EU Directive 97/69/EC, Note Q / GefStoffV, Annex II No. 5 (2), is confirmed by a TÜV certificate. As a part of the certification the entire supply chain is audited annually to ensure the right glass fiber is used for the Hi-Flo filters.




## Ordering information

| Family name | Filter class acc.to ISO 16890 | Dimensions (mm) | No. of bags | Header frame (mm) | Gasket type | Gasket location |
|---|---|---|---|---|---|---|
| Hi-Flo = with galvanized steel frame | 1060 = ePM10 60% | WxHxD (various options available) | Example: 10 (various options available) | 25 | Empty = no gasket | 1 = clean side |
| Hi-Flo XLT or XLS = with injection molded plastic frame | 2550 = ePM2,5 50% | | | 20 | FG = flat gasket | 2 = dirty side |
| Hi-Flo G = with extruded plastic frame | 0160 = ePM1 60% | | | | PU = endless gasket | 3 = two sides, vertical |
| Hi-Flo W = with wooden frame | 0170 = ePM1 70% | | | | | 4 = two sides, horizontal |
| Hi-Flo SS = with stainless steel frame | 0185 = ePM1 85% | | | | | 5 = one side, vertical |
| | | | | | | 6 = one side, horizontal |
| | | | | | | 7 = around circumference |