

Guidance Document

Guidance document on assuring filter quality when filters are changed

Filters are an essential element in ventilation systems in ensuring good Indoor Air Quality (IAQ) and levels of hygiene.

With the introduction of the new ISO 16890 (2016-12) the filter testing and qualification procedure has been changed to a more realistic classification based on ePM 1, ePM2.5, and ePM10 values. This allows a detailed filter selection based on outdoor particulate matter. Therefore, the new standard is an important improvement.

Filter quality is rightly being accounted for in the review of Regulation (EU) 1254/2014, energy labelling requirements for residential ventilation units, see *'EVIA initial position on EU 1253 and 1254/2014 Review – Residential aspects'*¹, in terms of both filter quality and pressure drop:

- **Para 1.5 on Filter quality - 'Information on filters and other IAQ parameters in the label':**

"The additional advantages of better filtration is not yet visible. A filter has a direct impact on [the Size-exclusion chromatography] SEC value. An information of filter performance should be added on the label. Furthermore, an information about IAQ controls options shall be given".

- **Para 1.7.2 on Filter pressure drop - 'Filter clogging and compensation':**

Indication of the filter quality and the filter pressure drop is based on data, measurements and calculations provided by the manufacturer of the ventilation unit of which the filters are a component. It is important that the specified filter data reflect performance across the lifetime of the ventilation unit, in particular if the filters are replaced.

The use of replacement filters for ventilation devices need not be a problem, provided it can be demonstrated that these filters have at least the same or better performance characteristics and data specifications as the originally supplied/installed filters.

However, it is important that this can be demonstrated via labelling as already suggested by EVIA during the review of Regulation (EU) 1254/2014 and in line with the method proposed in Eurovent's *'Recommendation for Residential Air Filter Performance Measurements'*². A label on the ventilation device with filter information and corresponding labelling of the filter makes clear which filter is correct for a given ventilation unit.

EVIA proposal:

Filters tested and classified shall be labelled with the following minimum information requirements:

- Manufacturer, Name, Trademark or other means of identification;
- Filter performance: Group name and efficiency in accordance with ISO 16890 at specified air flow including initial pressure drop;
- Indication for waste disposal of used filters, possibly to be depicted by a symbol.

¹ [EVIA initial position on EU 1253 and 1254/2014 Review – Residential aspects](#)

² [Eurovent 4/22 - 2015: Industry Recommendation for Residential Air Filter Performance Measurements](#)

The starting point is that filters for all residential units are provided with filter labelling information. As such when filters are changed the end-user may be reminded that the information on the filter should match with the label on the ventilation unit.

EVIA would support extending ISO 16890 to include an indication that the operating point is specified in the filter specification for a ventilation unit (flow/pressure drop).

About EVIA:

The European Ventilation Industry Association (EVIA)'s mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU Member States. Our membership is composed of 42 member companies and 6 national associations across Europe, realising an annual turnover of over 7 billion euros and employing more than 45,000 people in Europe. EVIA aims to promote highly energy efficient ventilation applications across Europe, with high consideration for health and comfort aspects. Fresh and good indoor air quality is a critical element of comfort and contributes to keeping people healthy in buildings.