

**Ouch!**  
**They've still got their**  
**Camfil F7-filters.**

Clean air solutions

## The new standard forces our competitors to be better – but not as good!

At Camfil, we have always put every effort into improving indoor environments. Thus, no one is more pleased than us that, from 2012, a new air filter standard imposes tougher requirements. Unfortunately, the requirements are not as tough as we would have liked. For example, our Hi-Flo XLT7 (a class F7 filter) has a minimum filtration efficiency of 54 percent. For an F7 filter, the new standard requires no more than 35 percent. However, that does not meet the quality levels we have set for ourselves. Indeed, our development of the market's most efficient, energy-optimised filters will continue.

Hi-Flo F7

54% ME

Standard

35% ME

Classification of air filters<sup>1)</sup>

| Group  | Class | Final pressure drop (test) Pa | Average arrestance (Am) of synthetic dust % | Average efficiency (Em) for 0.4 µm particles % | Minimum efficiency <sup>2)</sup> for 0.4 µm particles % |
|--------|-------|-------------------------------|---|--|---|
| Coarse | G1    | 250                           | 50 ≤ Am < 65                                | -  | -   |
|        | G2    | 250                           | 65 ≤ Am < 80                                | -  | -   |
|        | G3    | 250                           | 80 ≤ Am < 90                                | -  | -   |
|        | G4    | 250                           | 90 ≤ Am                                     | -  | -   |
| Medium | M5    | 450                           | -   | 40 ≤ Em < 60                                   | -   |
|        | M6    | 450                           | -   | 60 ≤ Em < 80                                   | -   |
| Fine   | F7    | 450                           | -   | 80 ≤ Em < 90                                   | 35  |
|        | F8    | 450                           | -   | 90 ≤ Em < 95                                   | 55  |
|        | F9    | 450                           | -   | 95 ≤ Em  | 70  |

**NOTE**

<sup>1)</sup> The characteristics of atmospheric dust vary widely in comparison with those of the synthetic loading dust used in the tests. Because of this, the test results do not provide a basis for predicting either operational performance or service life. Loss of media charge or shedding of particles or fibres can also adversely affect efficiency.

<sup>2)</sup> Minimum efficiency is the lowest of any of the following three values: initial efficiency, discharged efficiency or efficiency throughout the test's loading procedure.



# What does EN 779:2012 do?

The new European standard for air filters (EN779:2012) comes into force in 2012. Its purpose is to classify air filters based on their lowest filtration efficiency. This latter is also referred to as minimum efficiency (ME). The standard is an initiative that we welcome and a step towards better indoor environments.

The new standard will help to eradicate a number of problems. One of these is presented by electrostatic charged synthetic filters. While such filters can demonstrate good initial filtration efficiency, they discharge extremely rapidly. This entails a considerable deterioration in their air cleaning ability.

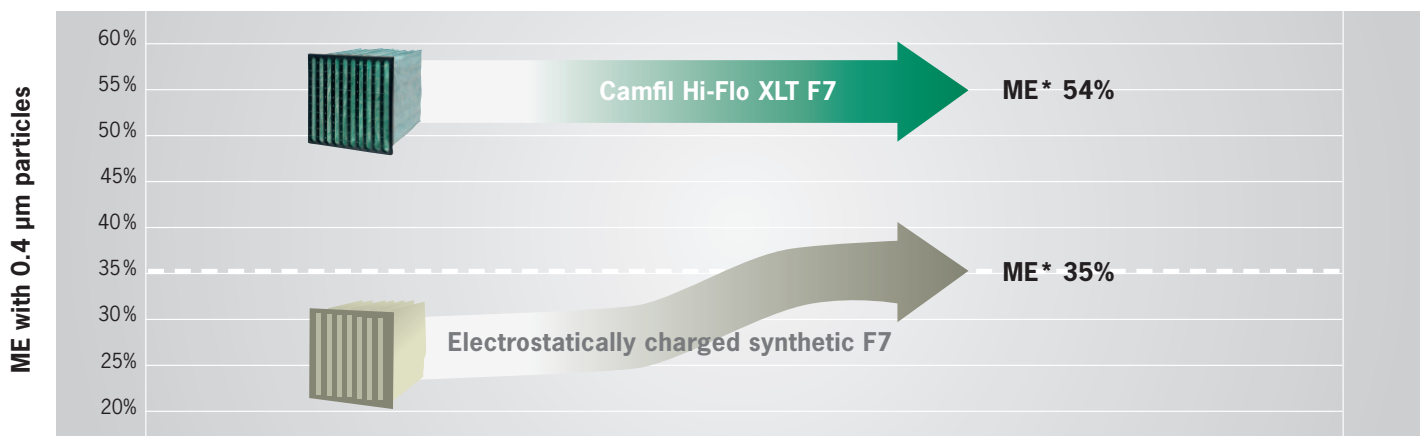
## Not all filters are the same – even when they are in the same class!

The problem with the new classification is that, although the worst filters will vanish from the market, there is room for good filters to be made worse. Although energy savings can be achieved by having the lowest possible pressure drop, such development could be retrograde. For example, with 0.4  $\mu\text{m}$  particles, our Hi-Flo XLT7 (class F7) filter has an ME value of a full 54 percent. However, for classification as an F7 filter, the standard requires no more than 35 percent.



Unfortunately, one result of the foregoing is that far too many European properties are now using F7 class filters that have ME values of between 5 and 10 percent. This means that as much as 90 to 95 percent of the contaminants in the outdoor air find their way into buildings and pollute the indoor environment.

By basing classification on ME value, the new standard will force these filters out of the market. At the same time, it will contribute to the development of synthetic filter materials offering considerably higher particle separation. Regrettably, the price for this will include higher pressure drops and increased energy consumption.



ME = Minimum efficiency as per EN 779:2012

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