

## European Standard for Coarse and Fine Filters

The European Committee for Standardization (CEN) has established a new standard for general ventilation air filters, EN779:2012. Where the existing EN779:2002 was already widely accepted as a standard for testing and classifying coarse and fine filters based on average efficiency, the revised standard is again an important step forward.

The EN779:2012 introduces an air filter classification for fine filters F7 to F9 based on minimum efficiency (ME). ME is defined as the lowest value of three different tests for 0.4  $\mu\text{m}$  particles; initial efficiency, efficiency throughout the test's loading procedure and discharged efficiency. Those air filters that do not meet the ME requirements will lose their original efficiency classification and will automatically drop one or more classes. With this revised methodology, the new EN779 will address the negative effects on Indoor Air Quality (IAQ) caused by underperforming air filters that currently exist in the market. Although many air filters have demonstrated compliant average efficiencies, some do lose their particulate collection functionality over time and therewith become a gateway for airborne contamination in buildings. With the implementation of ME requirements in EN779:2012, the industry is now stimulated to develop fine filters with an improved efficiency throughout the entire installation cycle.

Fine filters previously rated as F5 or F6 to EN779:2002 are not required to meet an ME value in the new situation. To clearly differentiate these from those that do, filter classes F5 and F6 have been renamed to M5 and M6 as part of a new medium filter category.

Class	Final Pressure Drop			
Pa	Average arrestance ( $A_m$ )	Average efficiency ( $E_m$ )	Minimum Efficiency	
of synthetic dust %				
of 0,4 $\mu\text{m}$ particles %				
for 0.4 $\mu\text{m}$ particles %				
G1	250	50	<	A
G2	250	65	<	A
G3	250	80	<	A

G4	250	90	<	A
M5	450	-	40	<
M6	450	-	60	<
F7	450	-	80	<
F8	450	-	90	<
F9	450	-	95	<

**Note** : The characteristics of atmospheric dust vary widely compared to those of the