EN 779:2002

European Standard for Coarse and Fine Filters

In 2002, the European Committee for Standardization introduced a new standard. EN779:2002 for general ventilation filters. The test procedures described in this standard have been developed from those used in previous standards EN779:1993 and Eurovent 4/9:1997 where air-flow, pressure drop, arrestance and filtration efficiency are all measured and filters classified according to the results obtained.

Classification

The EN779:2002 classification system comprises of groups F and G filters with classification determined from the average filtration efficiency with respect to neutralised DEHS particles of 0,4 µm diameter. Filters found to have an average efficiency value of less than 40% will be allocated to group G and the efficiency reported as "<40%". The classification on G filters is based on their average arrestance with the loading dust. Initiatives to address the potential problems of particle re-entrainment, shedding and the in-service charge neutralisation characteristics of certain types of media have been included in annexes A and B. Filters are classified according to their efficiency (arrestance) under the following test conditions:

- The air flow shall be 0,944 m^3/s (3400m^3/h) if the manufacturer does not specify any rated air flow rate;
- 250 Pa maximum final pressure drop for Coarse (G) filters;
- 450 Pa maximum final pressure drop for Fine (F) filters.

If the filters are tested at 0.944 m^3/s and at maximum final pressure drops, they are classified according to the table below. For instance G3, F7. Filters tested at airflows and final pressure drops different from those above shall be classified according to the table. However the classification shall be qualified by test conditions in parentheses, e.g. G4 (0,7m^3/s, 200 Pa), F7 (1.25 m^3/s).

Filter Class	Final Pressure Drop Pa	Average arrestance (Am) of synthetic dust %	Average efficiency (Em) of 0,4 µm particles %
G1	250	$50 \leq Am \leq 65$	-

G2	250	65 ≤ Am < 80	-
G3	250	80 ≤ Am < 90	-
G4	250	90 ≤ Am	-
F5	450	-	40 ≤ Em < 60
F6	450	-	60 ≤ Em < 80
F7	450	-	80 ≤ Em < 90
F8	450	-	90 ≤ Em < 95
F9	450	-	95 ≤ Em

Note: 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 life.