

BS EN 779:2012



BSI Standards Publication

Particulate air filters for general ventilation — Determination of the filtration performance

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National foreword

This British Standard is the UK implementation of EN 779:2012. It supersedes BS EN 779:2002 which is withdrawn.

BS EN 779:2012 provides a system of checking the filtration performance of air filters used in air conditioning systems. The use of this revised version of BS EN 779 will ensure a more rigorous check of the quality and performance of air filters used in air conditioning systems. This in turn will result in improved air quality in indoor working environments.

The test procedures used in this standard are based on established techniques developed over decades, but using modern digital instrumentation. The multiple mechanisms involved in air filtration are complex and difficult to model, and consequently the testing techniques themselves have also become complex.

A result of this is that the performance grading of air filters cannot be carried out reproducibly in terms of their effectiveness in the removal of atmospheric particulate air pollution. Tests using artificial (synthetic) particulate contamination are used to grade these filters.

The BS EN 779:2012 test system grades (ranks) air filters according to their particulate removal capability. This varies and may increase or decrease significantly during the lifetime of the filter. Users of this standard need to be aware that the term 'average efficiency', which occurs in the classification table and in other places, is a test parameter that relates only to tests using artificial test contamination in artificial test conditions. The value of this parameter obtained in the test procedures does not correspond with or relate directly to the installed performance of air filters in ventilation systems. This value cannot be used to estimate or predict the effectiveness of these filters in removing particulate atmospheric pollution.

Conversely, the 'minimum efficiency' is a minimum performance criterion. Under normal operating conditions the particulate removal capability of the filter will not fall below this value.

BSI experts, together with experts in CEN and ISO, are actively supporting an ISO project to develop new performance criteria for air filters for use in general ventilation. The new standard is scheduled for publication in 2015 and will rank filters in terms of their performance in the removal of particulate air pollution.

The UK participation in its preparation was entrusted to Technical Committee MCE/21/3, Air filters other than for air supply for I.C. engines and compressors.

A list of organizations represented on this committee can be obtained on request to its secretary.

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