

Ventilation for buildings - Ductwork - Cleanliness of ventilation systems

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NATIONAL FOREWORD

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ICS 91.140.30

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ICS 91.140.30

English Version

Ventilation for buildings - Ductwork - Cleanliness of ventilation systems

Ventilation des bâtiments - Réseaux de conduits - Propreté
des systèmes de ventilation

Lüftung von Gebäuden - Luftleitungen - Sauberkeit von
Lüftungsanlagen

This European Standard was approved by CEN on 11 September 2011.

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Foreword

This document (EN 15780:2011) has been prepared by Technical Committee CEN/TC 156 "Ventilation for buildings", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This European Standard applies to both new and existing ventilation and air conditioning systems and specifies the assessment criteria of cleanliness, cleaning procedures of these systems, and the validation of the effectiveness of cleaning applies also to products, which conform to EN 1505, EN 1506, EN 13053, EN 13180 and EN 13403, used in air conditioning and ventilation systems for human occupancy defined in the scope of CEN/TC 156. This European Standard does not apply to installations for industrial processes.

Cleanliness of ventilation systems is considered important for human comfort and health, energy consumption, system service life and for cleanliness of operations or processes carried out in the ventilated area.

Considerations for change of component as an alternative for cleaning (e.g. in case of flexible ducts and air filters) are also included.

This European Standard specifies general requirements and procedures necessary in assessing and maintaining the cleanliness of ducted ventilation, including:

- cleanliness quality classification;
- how to assess the need for cleaning (visual, measurements);
- assessment frequency (general guidance); guidance of system inspections in accordance with EN 15239, and EN 15240 when relevant;
- selection of cleaning method – to be in line with handing over documentation according to EN 12599;
- how to assess the result of cleaning.

This European Standard is a parallel standard to EN 12097, which specifies requirements for dimension, shape and location for access panels for cleaning and service in ductwork systems.

This European Standard is made as an umbrella standard with informative annexes that can be revised, completed and further added in future revisions of this European Standard for specific system types, and products or applications in the system, such as:

- Air Handling Units (AHU);
- filter;
- humidifiers;
- heat recovery units;
- decentralised air treatment units such as fan-coil units, induction units;
- terminal devices;
- kitchen extract equipment.

The main target groups of this European Standard are specifiers of the cleanliness quality classes and cleaning methods primarily system designers who also specify the system of access, building owners, services companies, maintenance companies, end users and consultancy and control companies.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12599, *Ventilation for buildings — Test procedures and measuring methods for handing over installed ventilation and air conditioning systems*

EN 12792:2003, *Ventilation for buildings — Symbols, terminology and graphical symbols*

EN 14799:2007, *Air filters for general air cleaning — Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12792:2003 and EN 14799:2007 and the following apply.

3.1

acceptable cleanliness level

amount of dust or other impurities not to be exceeded, according to the specified measurement method

3.2

acceptable post-clean level

no loose dust is detected visually on the duct surface after cleaning and the system is capable reaching an acceptable cleanliness level according to a defined measurement method

NOTE In case of conflict (e.g. between the building owner and the user), or uncertainty objective methods are needed to assess the cleanliness/dirtiness.

3.3

acceptable dust accumulation level (new ductwork)

acceptable cleanliness level on new ductwork as handed over from builder to user

NOTE In practice this means the quantity of pollution which is deemed acceptable.

3.4

cleanliness

state or level of pollution defined as acceptable according to specification and a particular measurement method

NOTE Cleanliness is not absolute, it is defined by limit values. Dirtiness is the exceeding of such a defined limit value.

3.5

cleanliness quality class

in the scope of this standard there are three levels of cleanliness quality standards to be applied to various buildings and types of system

- A. Low
- B. Medium
- C. High