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BSI Standards Publication

Ventilation in hospitals - Coherent hierarchic structure and common terms and definitions for a standard related to ventilation in hospitals

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National foreword

This Published Document is the UK implementation of CEN/TS 16244:2018.

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

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English Version

Ventilation in hospitals - Coherent hierarchic structure and common terms and definitions for a standard related to ventilation in hospitals

Ventilation des hôpitaux - Structure hiérarchique cohérente et termes et définitions usuels pour une norme relatives à la ventilation dans les hôpitaux

Krankenhauslüftung - Coherent hierarchische Struktur und gemeinsame Begriffe für die Normung in Bezug auf Lüftung in Krankenhäusern

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European foreword

This document (CEN/TS 16244:2018) has been prepared by Technical Committee CEN/TC 156/WG 18 “Ventilation in Hospitals”, the secretariat of which is held by NEN.

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Introduction

The aim of CEN/TC 156 working group 18 is to establish a standard for all aspects of ventilation in hospitals. This Technical Specification (TS) is work item 00156231 of CEN/TC 156 and gives a framework and structure for the parts of the standard "Ventilation in Hospitals". Based on this framework the standard will be developed. The TS also provides preliminary definitions to be used in the standard and gives an overview of the scope.

The standard "Ventilation in hospitals" could be applied to all healthcare premises whether located in a hospital, clinic or other premises where healthcare services are delivered. It will include the specific high risk areas and covers the aspects of construction and ventilation that provide defined levels of air quality/cleanliness for classification of these areas. The standard will deal with the design, classification, operation and maintenance phase of a project. The standard will not consider the general ventilation aspects covered by other standards or the medical implications.

The resulting standard is intended for healthcare managers, design, construction and commissioning engineers, estates managers and operations managers.

When drafting the parts of the standard for ventilation in hospitals, at least the following standards will be taken into account for normative references:

EN 308, *Heat exchangers — Test procedures for establishing the performance of air to air and flue gases heat recovery devices*

EN 1506, *Ventilation for buildings — Sheet metal air ducts and fittings with circular cross-section — Dimensions*

EN 1507, *Ventilation for buildings — Sheet metal air ducts with rectangular section — Requirements for strength and leakage*

EN 1751, *Ventilation for buildings — Air terminal devices — Aerodynamic testing of dampers and valves*

EN 1822 series, *High efficiency air filters (EPA, HEPA and ULPA)*

EN 1886, *Ventilation for buildings — Air handling units — Mechanical performance*

EN 10088-1, *Stainless steels — Part 1: List of stainless steels*

EN 12097, *Ventilation for buildings — Ductwork — Requirements for ductwork components to facilitate maintenance of ductwork systems*

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

EN 12237, *Ventilation for buildings — Ductwork — Strength and leakage of circular sheet metal ducts*

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

EN 13030, *Ventilation for buildings - Terminals. Performance testing of louvres subjected to simulated rain*

EN 13053, *Ventilation for buildings — Air handling units — Rating and performance for units, components and sections*

EN 13779, *Ventilation for non-residential buildings — Performance requirements for ventilation and room-conditioning systems*

EN 15780, *Ventilation for buildings — Ductwork — Cleanliness of ventilation systems*

EN 16032, *Acoustics — Measurement of sound pressure level from service equipment in buildings*

EN 60068-2-11, *Environmental testing — Part 2: Tests — Test Ka: Salt mist (IEC 60068-2-11)*

EN ISO 9000, *Quality management systems — Fundamentals and vocabulary (ISO 9000)*

EN ISO 14644-1, *Cleanrooms and associated controlled environments — Part 1: Classification of air cleanliness by particle concentration (ISO 14644-1)*

EN ISO 14644-3, *Cleanrooms and associated controlled environments — Part 3: Test methods (ISO 14644-3)*

EN ISO 16890 series, *Air filters for general ventilation — Part 1: Technical specifications, requirements and classification system based upon particulate matter efficiency (ePM)*

For the consistency in the standard on ventilation in hospitals, the preliminary terms, definitions and abbreviated terms defined in Clauses 3 and 4 will be used. Part 1, the general part, will repeat (possibly with improvement) the terms that are necessary for all parts of the standard. If additional definitions or adaption of the given definitions are necessary they will be defined in the specific part of the standard.

1 Scope

This Technical Specification sets out the framework and structure for the standard related to ventilation in hospitals. It gives the requirements for the drafting of the parts of the standard, including preliminary terms and definitions.

The standard for ventilation in hospitals is intended for all healthcare premises where healthcare services are delivered. It is applicable for healthcare services located in a hospital, clinic or other premises. This includes general and specific risk areas, within healthcare and provides defined levels of air quality/cleanliness for classification of these areas. The standard addresses the minimum requirements for ventilation systems. It specifies the design, installation, operation, qualification process and maintenance of the ventilation systems.

The standard describes the following hygienic issues related to the ventilation system:

a) air quality (e.g. cleanliness levels, temperature, humidity, air quantity);

b) the protection of patients, staff and visitors against harmful agents;

c) reducing the growth of microorganisms (e.g. clean-ability, accessibility, wet surfaces, accumulation of particles);

d) control of the airflow direction (e.g. tightness of systems and constructions, pressure difference).

The standard describes a structured approaches for all phases from design up to and including maintenance and requalification and gives minimum requirements for the ventilation systems:

a) minimum user requirement specification (URS);

b) functional design requirements (FD);

c) requirements for components in the detailed design (DD).

This standard is intended for healthcare ventilation system project managers, designers, construction and commissioning engineers, estates managers and operations/facilities managers.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
active sampling of air
sampling of *air* by a sampling tube or probe using a pump and collection of microbial particles on to an agar surface or filter surface to determine the microbial load (CFU/m^3)

3.2
air lock
enclosed space having two doors, situated between two environments with different air conditions, making it possible to pass from one environment to the other without significant disturbance to either

[SOURCE: ISO 6707-1]