

Equipment for commercial kitchens - Components for ventilation in commercial kitchens - Part 1: General requirements including calculation method

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 16282-1:2017 sisaldab Euroopa standardi EN 16282-1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 16282-1:2017 consists of the English text of the European standard EN 16282-1:2017.
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English Version

Equipment for commercial kitchens - Components for  
ventilation in commercial kitchens - Part 1: General  
requirements including calculation method

Équipement pour cuisines professionnelles - Éléments  
de ventilation pour cuisines professionnelles - Partie 1:  
Exigences générales et méthode de calcul

Bauelemente in gewerblichen Küchen - Einrichtungen  
zur Be- und Entlüftung - Teil 1: Allgemeine  
Anforderungen einschließlich Berechnungsmethoden

This European Standard was approved by CEN on 11 May 2017.

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COMITÉ EUROPÉEN DE NORMALISATION  
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## European foreword

This document (EN 16282-1:2017) 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of an identical text or by endorsement, at the latest by January 2018, and conflicting national standards shall be withdrawn at the latest by January 2018.

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.

The activities of CEN/TC 156/WG 14, cover the calculation of the air volume and the design and testing of major components of ventilation equipment for commercial kitchens.

The structure of the standard series is as follows:

EN 16282 *Equipment for commercial kitchens – Components for ventilation in commercial kitchens*

- *Part 1: General requirements including calculation method*
- *Part 2: Kitchen ventilation hoods; Design and safety requirements*
- *Part 3: Kitchen ventilation ceilings; Design and safety requirements*
- *Part 4: Air inlets and outlets; Design and safety requirements*
- *Part 5: Air duct; Design and dimensioning*
- *Part 6: Aerosol separators; Design and safety requirements*
- *Part 7: Installation and use of fixed fire suppression systems*
- *Part 8: Installations for treatment of cooking fumes; Requirements and testing*

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## 1 Scope

This European Standard specifies general requirements, such as ergonomic aspects in relation to ventilation of the kitchen (temperature, air aspects, moisture, noise, etc.), including a method for calculating the airflows.

This European Standard is applicable to ventilation systems in commercial kitchens, associated areas and other installations processing foodstuffs intended for commercial use. Kitchens and associated areas are special rooms in which meals are prepared, where tableware and equipment is washed, cleaned and food is stored.

This European Standard is applicable to kitchen ventilation systems except those in domestic kitchens.

Unless otherwise specified, the requirements of this standard should be checked by way of inspection and/or measurement.

**NOTE** Please note the possible existence of additional or alternative national regulations on installation, appliance requirements and inspection, maintenance, operation.

## 2 Normative references

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

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

EN 13779:2007, *Ventilation for non-residential buildings - Performance requirements for ventilation and room-conditioning systems*

EN 16282-5:2017, *Equipment for commercial kitchens — Components for ventilation in commercial kitchens — Part 5: Air duct; Design and dimensioning*

EN ISO 7730, *Ergonomics of the thermal environment - Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria (ISO 7730)*

## 3 Terms, definitions, symbols and abbreviated terms

For the purposes of this document, the terms, definitions, symbols and abbreviated terms given in EN 12792 and the following apply.

### 3.1 Terms and definitions

#### 3.1.1

##### **capture velocity**

airflow velocity in the free space between the lower part of the hood and the cooking appliance

#### 3.1.2

##### **sensible heat**

$\dot{Q}_s$  Heat which results in a change in temperature and is therefore measurable

#### 3.1.3

##### **simultaneity factor $\phi$**

ratio of actual power consumption divided by total power of appliances