



SLOVENSKI STANDARD

SIST EN 16282-4:2017

01-april-2017

**Oprema za profesionalne kuhinje - Sestavni deli za prezračevanje v kuhinjah - 4.
del: Dovodi in odvodi zraka - Projektiranje in varnostne zahteve**

Equipment for commercial kitchens - Components for ventilation in commercial kitchens -
Part 4: Air inlets and outlets; design and safety requirements

Bauelemente in gewerblichen Küchen - Einrichtungen zur Be- und Entlüftung - Teil 4:
Luftdurchlässe; Gestaltungs- und Sicherheitsanforderungen

Équipement pour cuisines professionnelles - Éléments de ventilation pour cuisines
professionnelles - Partie 4 : Entrées et sorties d'air ; conception et exigences de sécurité

<https://standards.iteh.ai/catalog/standards/sist/faad49cc-5c1e-4381-bf8b-812501b5faad/sist-en-16282-4-2017>

Ta slovenski standard je istoveten z: EN 16282-4:2016

ICS:

91.140.30	Prezračevalni in klimatski sistemi	Ventilation and air-conditioning systems
97.040.99	Druga kuhinjska oprema	Other kitchen equipment

SIST EN 16282-4:2017

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 16282-4:2017](https://standards.iteh.ai/catalog/standards/sist/faad49cc-5c1e-4381-bf8b-812501b5faad/sist-en-16282-4-2017)

<https://standards.iteh.ai/catalog/standards/sist/faad49cc-5c1e-4381-bf8b-812501b5faad/sist-en-16282-4-2017>

EUROPEAN STANDARD

EN 16282-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2016

ICS 97.040.99

English Version

Equipment for commercial kitchens - Components for ventilation in commercial kitchens - Part 4: Air inlets and outlets; design and safety requirements

Équipement pour cuisines professionnelles - Éléments de ventilation pour cuisines professionnelles - Partie 4 : Entrées et sorties d'air ; conception et exigences de sécurité

Bauelemente in gewerblichen Küchen - Einrichtungen zur Be- und Entlüftung - Teil 4: Luftdurchlässe; Gestaltungs- und Sicherheitsanforderungen

This European Standard was approved by CEN on 22 July 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	5
4 Designations	6
4.1 Supply air side	6
4.2 Extract air side	6
5 Construction and function	7
5.1 General remarks	7
5.2 Adjustment in the room	7
5.2.1 Supply air passage devices	7
5.2.2 Extract air passage devices	7
5.3 Design, construction and function	7
5.4 Air passage devices materials and surfaces	7
6 Technical safety requirements	9
7 Hygienic requirements	9
7.1 General remarks	9
7.2 Cleaning intervals	10
8 Instructions	10
8.1 Installation instructions	10
8.2 Operating instructions	11
Bibliography	12

Ifeh STANDARD PREVIEW

(standards.ifeh.ai)

[SIST EN 16282-4:2017](https://standards.ifeh.ai/catalog/standards/sist/1a4d49cc-5c1e-4581-b18b-812501b51aad/sist-en-16282-4-2017)<https://standards.ifeh.ai/catalog/standards/sist/1a4d49cc-5c1e-4581-b18b-812501b51aad/sist-en-16282-4-2017>

European foreword

This document (EN 16282-4:2016) 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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 16282-4:2016 (E)**1 Scope**

This European Standard specifies the requirements covering the construction and operation of air inlets and outlets components including technical safety, ergonomic and hygienic features.

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, food is stored.

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

A method of verification of each requirement is also specified.

Unless otherwise specified, the requirements of this standard need to 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 and 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 10088-1, *Stainless steels - Part 1: List of stainless steels*

prEN 16282-1, *Equipment for commercial kitchens - Components for ventilation of commercial kitchens - Part 1: General requirements including calculation method*

EN 16282-2, *Equipment for commercial kitchens - Components for ventilation of commercial kitchens - Part 2: Kitchen ventilation hoods; design and safety requirements*

EN 16282-3, *Equipment for commercial kitchens - Components for ventilation in commercial kitchens - Part 3: Kitchen ventilation ceilings - Design and safety requirements*

prEN 16282-6, *Equipment for commercial kitchens - Components for ventilation of commercial kitchens - Part 6: Aerosol separators; design and safety requirements*

EN ISO 3274, *Geometrical product specifications (GPS) - Surface texture: Profile method - Nominal characteristics of contact (stylus) instruments (ISO 3274)*

EN ISO 4287, *Geometrical product specifications (GPS) - Surface texture: Profile method - Terms, definitions and surface texture parameters (ISO 4287)*

EN ISO 4288, *Geometrical product specifications (GPS) - Surface texture: Profile method - Rules and procedures for the assessment of surface texture (ISO 4288)*

EN ISO 13565-1, *Geometrical product specifications (GPS) - Surface texture: Profile method; surfaces having stratified functional properties - Part 1: Filtering and general measurement conditions (ISO 13565-1)*

EN ISO 13565-2, *Geometrical product specifications (GPS) - Surface texture: Profile method; surfaces having stratified functional properties - Part 2: Height characterization using the linear material ratio curve (ISO 13565-2)*

3 Terms and definitions

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

3.1

kitchen

part of a building where cooking processes are carried out, their connecting floors and distribution corridors, ancillary rooms such as food stores, cold rooms, food preparation areas and appliances are being cleaned

3.2

supply air side

3.2.1

supply air distributor

component in circular, quadratic or rectangular construction with built-in parts steering air in different direction

3.2.2

textile air passage device

lint-free fabric hose permeable to air installed in ceiling area for low induction when supplying air

3.2.3

air passage components and respective air flow modes of supply air

3.2.3.1

displacement air terminal device wall

device for creating an horizontal unidirectional air flow, located near to the floor for the supply of low velocity and turbulence free air movement

Note 1 to entry: It looks like a box with perforated outlets incorporating arrangements steering and distributing the air.

3.2.3.2

displacement air terminal device ceiling

device for creating a vertical unidirectional air flow, located in the ceiling for the supply of low velocity and turbulence free air movement

3.2.3.3

mixed stream

air passage device

air supply components for direct installation in plane ceilings with high velocity air impulse

Note 1 to entry: Used as vertical, horizontal and tangential air outlet.

3.3

extract air side

3.3.1

aerosol

separated grease/oil/water mixture

3.3.2

separator

device for the efficient separation of airborne solid or liquid particles, based on the effect of mechanical forces that deflect the particles out of the airflow

EN 16282-4:2016 (E)

3.3.3

extract air passage device without aerosol separating function

component built into the ceiling without aerosol separating function for flush installations with attached air collecting box and air duct outlet or for direct installation in existing extract air passage device

Note 1 to entry: With a regulating device which can be easily accessed.

4 Designations

4.1 Supply air side

Supply air passage devices are shown in Table 1.

Table 1 shows examples of current ceiling configuration and design criteria, but manufacturers are free to follow the alternative designs and configuration, provided, that the product/equipment conforms to the essential requirements of the relevant directives and/or national regulations.

Table 1 — Designations for supply air passage devices

Design	Standard designation		
	Designations	EN number	Classification
Displacement air terminal device wall	Air passage component	EN 16282-4	- D1
Displacement air terminal device ceiling	Air passage component	EN 16282-4	- D2
Mixed stream - vertical, horizontal and tangential air passage device	Air passage component	EN 16282-4	- D3
Textile air passage device ^a	Air passage component	EN 16282-4	- D4
^a only in preparation area			

EXAMPLE The designations for a displacement air terminal device ceiling (D2) are as follows:

Air Passage EN 16282-4-D2

4.2 Extract air side

Types of extract air passage components and their denominations are given Table 2.

The text in Table 2 shows examples of current ceiling configuration and design criteria, but manufacturers are free to use alternative designs and configuration, provided that the product/equipment conform to the essential requirements of the relevant directives and/or national regulations.

Table 2 — Designations for extract air passage devices

Type	Name of standard		
	Designations	Number	Attribute
Extract air passage device without aerosol separating function	Air passage component	EN 16282-4	- D5
Extract air passage with aerosol separating function	Air passage component	EN 16282-4	- D6

NOTE The requirements for the aerosol separator are given in prEN 16282-6.

5 Construction and function

5.1 General remarks

The requirements shall be verified by inspection and/or measuring.

5.2 Adjustment in the room

5.2.1 Supply air passage devices

For displacement air terminal device wall air passage component, ground clearance of 0,2 m minimum installation height shall be provided for reasons of cleaning. The installation height shall be chosen in order to fulfil comfort requirements and to avoid any risk of bypass the supply air directly to the extract air. The requirements of prEN 16282-1 shall be fulfilled.

5.2.2 Extract air passage devices

Aerosol-loaded extract air from kitchens such as:

- cooking areas;
- portioning rooms;
- meal distribution areas;
- meal serving areas (also in the dining hall);
- crockery and washing-up rooms;

shall be conditioned prior to the access in the air duct using effective aerosol separation in accordance with EN 16282-2 and EN 16282-3.

Extract air passage devices without aerosol separator are only permitted to be used within areas in which no aerosol occurs.

5.3 Design, construction and function

The air inlet shall be mounted to be flush fitting. The area where particles accumulate shall be as small as possible.

5.4 Air passage devices materials and surfaces

Air passage devices, except aerosol separators shall be manufactured and installed so that a front side adjustment of the nominal volumetric flow rate is possible.