SLOVENSKI STANDARD
oSIST prEN 15287-1:2021

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Dimniki - Projektiranje, vgradnja in pregled - 1. del: Dimniki in povezovalni dimovodi za ogrevalne naprave v nezatesnjenih prostorih

Chimneys - Design, installation and commissioning - Part 1: Chimneys and connecting flue pipes for non-room sealed combustion appliances

Abgasanlagen - Planung, Montage und Abnahme - Teil 1: Senkrechte Teile von Abgasanlagen und Verbindungsstücke für raumluftabhängige Verbrennungseinrichtungen

Conduits de fumée - Conception, installation et mise en oeuvre - Partie 1: Conduits de fumée et conduits de raccordement pour appareils à combustion qui dépendent de l'air dans la pièce

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91.060.40 Dimniki, jaški, kanali Chimneys, shafts, ducts

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English Version

Chimneys - Design, installation and commissioning - Part 1: Chimneys and connecting flue pipes for non-room sealed combustion appliances

Conduits de fumée - Conception, installation et mise en service - Partie 1: Conduits de fumée et conduits de raccordement pour appareils de combustion qui prélèvent l'air comburant dans la pièce

Abgasanlagen - Planung, Montage und Abnahme - Teil 1: Senkrechte Teile von Abgasanlagen und Verbindungsstücke für raumluftabhängige Verbrennungseinrichtungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 166.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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European foreword

This document (prEN 15287-1:2021) has been prepared by Technical Committee CEN/TC 166 "Chimneys", the secretariat of which is held by ASI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15287-1:2007+A1:2010.

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.

This European Standard is part of the series *Chimneys — Design, installation and commissioning*:

— *Part 1: Chimneys and connecting flue pipes for non-room sealed combustion appliances;*

— *Part 2: Chimneys and connecting flue pipes for room sealed combustion appliances.*

Currently the standard series EN 1856, *Chimneys — Requirements for metal chimneys,* is also under revision and if accepted, modifications to the normative text will be have to be made regarding metal chimneys.

In comparison with the previous edition, the following technical modifications have been made:

a) restructuring of the chapters and annexes;

b) harmonization of the text with part 2;

c) updating the content according to EN 1443:2019;

d) adoption of all relevant terms from EN 1443:2019;

e) description of the designation and classes of a chimney according to EN 1443:2019;

f) expanding the specifications for accessories;

g) schematic illustrations of examples of installation configurations;

h) recommendations for some minimum distances from combustible material;

i) scope now covers positive pressure chimneys.

Introduction

CEN/TC 166 started with its programme on standardization of chimneys approximately 30 years ago, with standards for interfaces, for products, for tests and last but not least for design, installation, construction and commissioning matters.

In the last years, first priority in the work program was given to product and test standards.

In the meantime most of the product and test standards were published or are nearly ready for publication. In order to introduce the products in a simple way on the markets of the different Member States, some common rules for design, installation, and commissioning especially with reference to the designation of a chimney were considered helpful.

Initially, CEN/TC 166/SC 2 started the work on execution standards for metal chimneys, the first standard already been published as EN 12391-1 in 2003.

In order not to repeat this work in all material orientated WGs and SCs, CEN/TC 166 decided in 2002 to give the task to WG 1 to develop a material independent design, installation and commissioning standard.

CEN/TC 166/WG 1 started the work in 2003 and decided first to draft two documents, one for chimneys connected to non-room sealed combustion appliances and one for chimneys connected to room sealed combustion appliances.

1 Scope

This document describes the method of specifying the design, installation and labelling criteria for system chimneys, construction of custom-built chimneys, the relining of existing chimneys and connecting flue pipes for non-room sealed combustion appliances as well as the use of chimney products. It also gives information on commissioning of chimneys.

This document applies to chimneys which are subject to the following limiting conditions (specified in EN 13084-1 - freestanding chimneys):

— the horizontal distance between the building and the chimney outer wall not to exceed 1 m;

— the distance between the supports not to exceed 4 m;

— the distance above the last structural attachment not to exceed 3 m.

The methods in this part of this document are applicable to chimneys and connecting flue pipes for non-room sealed combustion appliances. The methods in Part 2 of this European Standard are applicable to chimneys and connecting flue pipes for room sealed combustion appliances.

For the purpose of this document the term “installation” includes construction.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1443:2019, *Chimneys - General requirements*

EN 1457-1, *Chimneys - Clay/ceramic flue liners - Part 1: Flue liners operating under dry conditions - Requirements and test methods*

EN 1457-2, *Chimneys - Clay/ceramic flue liners - Part 2: Flue liners operating under wet conditions - Requirements and test methods*

EN 1749, *Classification of gas appliances according to the method of supplying combustion air and of evacuation of the combustion products (types)*

EN 1806, *Chimneys - Clay/ceramic flue blocks for single wall chimneys - Requirements and test methods*

EN 1856-1, *Chimneys - Requirements for metal chimneys - Part 1: System chimney products*

EN 1856-2, *Chimneys - Requirements for metal chimneys - Part 2: Metal flue liners and connecting flue pipes*

EN 1857, *Chimneys - Components - Concrete flue liners*

EN 1858, *Chimneys — Components — Concrete flue blocks*

EN 12446, *Chimneys - Components - Concrete outer wall elements*

EN 13063-1, *Chimneys — System chimneys with clay/ceramic flue liners — Part 1: Requirements and test methods for sootfire resistance*

EN 13063-2, *Chimneys — System chimneys with clay/ceramic flue liners — Part 2: Requirements and test methods under wet conditions*

EN 13069, *Chimneys - Clay/ceramic outer walls for system chimneys - Requirements and test methods*

EN 13084-1, *Free-standing chimneys - Part 1: General requirements*

EN 13084-2, *Free-standing chimneys - Part 2: Concrete chimneys*

EN 13084-4, *Free-standing chimneys - Part 4: Brick liners - Design and execution*

EN 13084-5, *Free-standing chimneys - Part 5: Material for brick liners - Product specifications*

EN 13084-6, *Free-standing chimneys - Part 6: Steel liners - Design and execution*

EN 13084-7, *Free-standing chimneys - Part 7: Product specifications of cylindrical steel fabrications for use in single wall steel chimneys and steel liners*

EN 13084-8, *Free-standing industrial chimneys - Part 8: Design and execution of mast construction with satellite components*

EN 13216-1, *Chimneys - Test methods for system chimneys - Part 1: General test methods*

EN 13384-1:2015+A1:2019, *Chimneys — Thermal and fluid dynamic calculation methods — Part 1: Chimneys serving one combustion appliance*

EN 13384-2, *Chimneys — Thermal and fluid dynamic calculation methods — Part 2: Chimneys serving more than one combustion appliance*

EN 13502, *Chimneys - Requirements and test methods for clay/ceramic flue terminals*

EN 14241-1, *Chimneys - Elastomeric seals and elastomeric sealants - Material requirements and test methods - Part 1: Seals in flue liners*

EN 14297, *Chimneys - Freeze-thaw resistance test method for chimney products*

EN 14471, *Chimneys — System chimneys with plastic flue liners — Requirements and test methods*

EN 16475-1, *Chimneys - Accessories - Part 1: Chimney silencers - Requirements and test methods*

EN 16475-2, *Chimneys - Accessories - Part 2: Chimney fans - Requirements and test methods*

EN 16475-3, *Chimneys — Accessories — Part 3: Draught regulators, standstill opening devices and combined secondary air devices – Requirements and test methods*

EN 16475-4, *Chimneys - Accessories - Part 4: Flue dampers - Requirements and test methods*

EN 16475-6, *Chimneys - Accessories - Part 6: Access components - Requirements and test methods*

EN 16475-7, *Chimneys — Accessories — Part 7: Rain caps — Requirements and test methods*

EN 16497-1, *Chimneys - Concrete System Chimneys - Part 1: Non-balanced flue applications*

EN ISO 17225-1, *Solid biofuels - Fuel specifications and classes - Part 1: General requirements (ISO 17225-1:2021)*

EN ISO 17225-2, *Solid biofuels - Fuel specifications and classes - Part 2: Graded wood pellets (ISO 17225-2:2021)*

EN ISO 17225-3, *Solid biofuels - Fuel specifications and classes - Part 3: Graded wood briquettes (ISO 17225-3:2021)*

EN ISO 17225-4, *Solid biofuels - Fuel specifications and classes - Part 4: Graded wood chips (ISO 17225-4:2021)*

EN ISO 17225-5, *Solid biofuels - Fuel specifications and classes - Part 5: Graded firewood (ISO 17225-5:2014)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1443:2019 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

NOTE Examples of chimney construction identifying individual component terminology and definitions are given in Figures A.1, A.2 and A.3 in Annex A.

3.1
fire compartment
part of the building comprising one or more rooms, spaces or storeys constructed to prevent the spread of fire

3.2
combustion appliance
unit generating products of combustion which need to be conveyed to the outside atmosphere

Note 1 to entry: E.g. heating appliances, cooking appliances, motors, CHPs (en: combined heat power).

[SOURCE: EN 1443:2019, definition 3.1]

3.3
flue
passage for conveying the products of combustion to the outside atmosphere

[SOURCE: EN 1443:2019, definition 3.2]

3.4
flue gas
gaseous portion of the products of combustion conveyed in a flue

[SOURCE: EN 1443:2019, definition 3.3]

3.5
products of combustion
products resulting from the combustion of fuel (gaseous, liquid and solid constituents)

[SOURCE: EN 1443:2019, definition 3.4]

3.6
chimney
structure consisting of a wall or walls enclosing a flue or flues conveying the products of combustion into the outside atmosphere

Note 1 to entry: The generic word "chimney", when used in this document, refers to chimneys used to convey the products of combustion from any combustion appliance to the outside atmosphere, and thus includes all other terms of common use, such as: vents, flues, shafts, exhaust systems, flue ducts, etc.

[SOURCE: EN 1443:2019, definition 3.5]

3.7
chimney stack
construction enclosing more than one flue

3.8
single-wall chimney
chimney with only one wall

[SOURCE: EN 1443:2019, definition 3.17]

3.9
multi-wall chimney
chimney consisting of a flue liner and at least one additional wall

[SOURCE: EN 1443:2019, definition 3.18]

3.10
system chimney
chimney that is installed using a combination of compatible chimney components, obtained or specified as a kit from one manufacturing source with product responsibility for the whole chimney

[SOURCE: EN 1443:2019, definition 3.19]

3.11
custom-built chimney
chimney that is installed or built on-site using a combination of compatible components that may be from one or different sources

[SOURCE: EN 1443:2019, definition 3.20]

3.12
relining
process of renovating or replacing the flue liner of a chimney

[SOURCE: EN 1443:2019, definition 3.21]

3.13
flue liner
rigid or flexible inner wall of a chimney consisting of components the inner surface of which is in contact with products of combustion

[SOURCE: EN 1443:2019, definition 3.6, modified by substituting “surface” by “inner surface”]

3.14
flue liner kit
flue liner that is installed using a combination of compatible flue liner components, obtained or specified as a kit from one manufacturing source with product responsibility for the whole flue liner including all its components

Note 1 to entry: A flue liner kit is not considered a system chimney.

[SOURCE: EN 1443:2019, definition 3.7]

3.15
rigid flue liner
straight flue liner that cannot bend without permanent deformation

3.16
flexible flue liner
tube having a single or multi-skin construction that is able to bend in any direction without permanent deformation

3.17
outer wall
external wall of a chimney on the outer surface of which the minimum distance to combustible material is referred

[SOURCE: EN 1443:2019, definition 3.22, modified by substituting “from the surface of which the distance to combustible is measured” with “, on the outer surface of which the minimum distance to combustible is referred”]

3.18
enclosure
additional structure, combustible or non-combustible, built around a chimney

Note 1 to entry: An enclosure which is specified as a part of the chimney is considered an “outer wall” of the chimney.

Note 2 to entry: Enclosures can for example give additional safety in case of fire, provide additional heat transfer resistance, prevent accidental human contact, prevent impact damage and can be used for decorative purposes.

[SOURCE: EN 1443:2019, definition 3.23]

3.19
mid feather wall
dividing wall separating multiple flues within a chimney stack