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**Dimovodne naprave - Oprema - 6. del: Sestavni deli za dostop - Zahteve in preskusne metode**

Chimneys - Accessories - Part 6: Access components - Requirements and test methods

Abgasanlagen - Zubehörteile - Teil 6: Reinigungsverschlüsse - Anforderungen und Prüfmethode

Cheminées - Accessoires - Partie 6 : Éléments d'accès - Exigences et méthodes d'essai

**Ta slovenski standard je istoveten z: prEN 16475-6****ICS:**

91.060.40 Dimniki, jaški, kanali Chimneys, shafts, ducts

**oSIST prEN 16475-6:2016****en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 16475-6**

January 2016

ICS 91.060.40

English Version

## Chimneys - Accessories - Part 6: Access components - Requirements and test methods

Cheminées - Accessoires - Partie 6 : Éléments d'accès -  
Exigences et méthodes d'essai

Abgasanlagen - Zubehörteile - Teil 6:  
Reinigungsverschlüsse - Anforderungen und  
Prüfmethoden

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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

<b>Contents</b>	<b>Page</b>
European foreword.....	4
Introduction .....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions .....	6
4 Product characteristics.....	7
4.1 General.....	7
4.2 Mechanical resistance and stability .....	7
4.2.1 Freedom of movement of the door .....	7
4.2.2 Impact resistance of the door .....	7
4.2.3 Inner door security.....	7
4.3 Thermal performance .....	7
4.3.1 Reaction to fire.....	7
4.3.2 Resistance to fire (internal to external) .....	7
4.4 Hygiene, health and environment.....	8
4.4.1 Gas tightness.....	8
4.4.2 Condensate resistance.....	8
4.4.3 Corrosion resistance.....	8
4.4.4 Dangerous substances.....	8
4.5 Thermal resistance.....	8
4.6 Materials.....	9
4.6.1 Access components in contact with combustion products .....	9
4.6.2 Additional information on other materials of construction.....	9
4.6.3 Freeze/thaw resistance .....	9
4.7 Operational requirements.....	9
4.7.1 Handling .....	9
4.7.2 Angle of opening.....	9
4.7.3 Closing mechanism.....	9
4.7.4 Space for additional information .....	10
5 Testing, assessment and sampling methods .....	10
5.1 Manufacturer's declaration for type test.....	10
5.2 Mechanical resistance and stability .....	10
5.2.1 Free movement test.....	10
5.2.2 Swing ball test.....	10
5.3 Thermal performance tests.....	12
5.3.1 General.....	12
5.3.2 Test Assembly.....	12
5.3.3 Test procedure .....	13
5.4 Gas tightness.....	14
5.4.1 Test assembly .....	14
5.4.2 Test Procedure.....	15
5.4.3 Test results .....	15
6 Assessment and verification of constancy of performance – AVCP.....	15
6.1 General.....	15

6.2	Type testing .....	15
6.2.1	General .....	15
6.2.2	Test samples, testing and compliance criteria.....	16
6.2.3	Test reports .....	17
6.2.4	Shared other party results .....	17
6.2.5	Cascading determination of the product type results.....	17
6.3	Factory production control (FPC).....	18
6.3.1	General .....	18
6.3.2	Requirements.....	19
6.3.3	Product specific requirements .....	21
6.3.4	Initial inspection of factory and of FPC.....	22
6.3.5	Continuous surveillance of FPC .....	22
6.3.6	Procedure for modifications.....	22
6.3.7	One-off components, pre-production products (e.g. prototypes) and components produced in very low quantity.....	23
7	Classification and designation .....	23
7.1	General .....	23
7.2	Temperature classes and test temperature.....	24
7.3	Gas tightness class .....	24
7.4	Condensate resistance class .....	25
7.5	Corrosion resistance.....	25
7.6	Soot fire resistance and distance to combustible material .....	25
8	Marking, labelling and packaging.....	25
8.1	Access component .....	25
8.2	Packaging.....	25
8.3	Product information – Manufacturer’s instructions.....	25
	Annex A (normative) Choice of size for type test and sampling .....	27
	Annex B (informative) Sampling for factory productions control .....	28
B.1	Sampling plans.....	28
B.2	Inspection levels and procedures.....	28
	Annex C (normative) Factory production control.....	30
C.1	General .....	30
C.2	Materials, including coatings.....	30
C.3	Seals and sealants.....	30
C.4	Manufacturing checks.....	30
	Annex D (informative) Recommended test sequence .....	31
	Annex E (informative) Calculation of thermal resistance .....	32
	Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No. 305/2011 .....	33

## European foreword

This document (prEN 16475-6:2016) 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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA which is an integral part of this document.

This European Standard forms a part of the series of standards for chimney accessories:

- *Part 1: Silencers*
- *Part 2: Chimney fans*
- *Part 3: Draught regulators, standstill opening devices and combined secondary air devices*
- *Part 4: Flue dampers*
- *Part 5: Explosion/implosion relief devices*
- *Part 6: Access components (this part)*
- *Part 7: Rain caps*

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## Introduction

The main purpose of access components is to allow the chimney to be inspected and cleaned. It may be possible to utilize the access component for measurement purposes.

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**prEN 16475-6:2016 (E)****1 Scope**

This European Standard specifies the requirements and test methods for access components comprising a frame and a door or doors which provide access to the flue of a chimney for the purpose of inspection or cleaning.

Access components for higher nominal working temperature than 450 °C, positive pressure and wet applications are not covered by this standard.

The standard is limited to access components with a door opening area up to 0,27 m<sup>2</sup>.

Products not freely ventilated are excluded from this standard.

This standard also specifies the requirements for marking, manufacturers' instruction, product information and evaluation of conformity.

Access components already tested together with system chimney products or other chimney components, e.g. flue liners, are not covered by this standard.

**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 1443, *Chimneys - General requirements*.

EN 1561, *Founding - Grey cast irons*

EN 1563, *Founding - Spheroidal graphite cast irons*

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

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

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

EN 10131, *Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape*

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

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

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

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 1443, EN 1856-1 and EN 1857, and the following apply.

**3.1 access component**

component comprising a frame and a door or doors installed in the chimney to provide access to the flue for the purpose of inspection or cleaning



### 3.2

#### **nominal dimensions**

dimensions of the opening of the access component

## **4 Product characteristics**

### **4.1 General**

The access component shall fulfill the following requirements.

### **4.2 Mechanical resistance and stability**

#### **4.2.1 Freedom of movement of the door**

When tested according to 5.2.1 the access component shall be able to move freely when opened and closed 100 times before and 10 times after the thermal tests, and meet the requirement of 4.4.1.

#### **4.2.2 Impact resistance of the door**

When tested according to 5.2.2 the access component shall also be able to be opened and closed freely before and after the thermal tests.

#### **4.2.3 Inner door security**

An access component with a separate inner door shall have means for preventing the inner door from falling into the chimney. This criteria is fulfilled if the inner door is secured, e.g. to the access component frame by a steel rope, or a bar.

### **4.3 Thermal performance**

#### **4.3.1 Reaction to fire**

As the fire reaction is not relevant for access components, no declaration is necessary.

#### **4.3.2 Resistance to fire (internal to external)**

##### **4.3.2.1 General**

The manufacturer shall declare that freely ventilated access component for chimneys designated "G" the minimum distance to combustible material without thermal testing shall be 400 mm from the front face of the access component (distance xx in Figure 2). The minimum distance to combustible material to the side of an access component (distance yy in Figure 2) shall be 200 mm.

For chimneys designated "O" the distance from the access component from the front face of the access component can be reduced to minimum 200 mm. The minimum distance to combustible material to the side of an access component shall be 100 mm.

The minimum distance to combustible material can be reduced to 50 % of the above values if a radiation shield creating an air gap, made from non-combustible material, is installed between the access component and the adjacent combustible materials.

Access components for chimneys designated 'O' and maximum T160 the distance from the front or the side may be minimum 50 mm.

Freely ventilated means that ventilation of the space around the access component is not enclosed by, e.g. fitting it in a cupboard.

The declared distance to combustible material of the access component (see distances xx, and yy in Figure 2) shall be not less than the above distances or otherwise confirmed by testing in accordance with 5.3.

**prEN 16475-6:2016 (E)**

If tested according to 5.3 the temperature on the combustible material shall not exceed 85 °C during the heat stress test and shall not exceed 100 °C during the sootfire test.

A multiple layer access component may only be designated G if the outer surface temperature does not change by more than 10 % when the heat stress test is repeated after the sootfire test.

**4.3.2.2 Heat stress**

The access component shall be tested to the designated nominal working temperature in accordance with 5.3.3.2 and the requirements of 4.2 and 4.4 shall be met.

**4.3.2.3 Sootfire**

The access component designated sootfire resistant shall be tested in accordance with 5.3.3.3 and the requirements of 4.2 and 4.4 shall be met.

**4.4 Hygiene, health and environment****4.4.1 Gas tightness**

When an access component is tested according to the test method described in 5.4 both before and after the thermal performance tests, the leakage rate shall not be greater than 1,0 l·s<sup>-1</sup>·m<sup>-1</sup> of joint length at a test pressure of 20 Pa and shall be measured on the largest door size in a manufacturer's range suitable for a chimney of 200 mm diameter or equivalent area.

NOTE The parameter N1 or N2 of the chimney is not changed by the installation of such an access component.

**4.4.2 Condensate resistance**

Access components to this standard shall be designated 'Dry'.

**4.4.3 Corrosion resistance**

Access components having materials to this standard (see 4.6.1) shall be designated with the corrosion class 3.

**4.4.4 Dangerous substances**

National regulations on dangerous substances may require verification and declaration on release, and sometimes content, when construction products covered by this standard are placed on those markets.

In the absence of European harmonized test methods, verification and declaration on release/content should be done taking into account national provisions in the place of use.

NOTE An informative database covering European and national provisions on dangerous substances is available at the Construction web site on EUROPA accessed through:

<http://ec.europa.eu/enterprise/construction/cpd-ds/>.

**4.5 Thermal resistance**

The outer door of the access component shall have a minimum thermal resistance of 0,05 m<sup>2</sup> ·K/W. This is deemed to be fulfilled for concrete with a wall thickness of X mm and for metal with insulation of at least 1 cm thickness.

The thermal resistance of an access component may be calculated using the method in Annex E.

## 4.6 Materials

### 4.6.1 Access components in contact with combustion products

The part of the access component, multi-layer or not, in contact with the products of combustion shall have a minimum material specification of one of the following:

- cast iron to EN 1561 or EN 1563: minimum thickness 4 mm;
- zinc coated mild steels to EN 10131: minimum thickness 1,25 mm;
- stainless steel: minimum material number according to EN 10088-1 of 1.4301 or higher number<sup>1)</sup>, minimum thickness 0,6 mm;
- concrete: minimum density 1 700 kg/m<sup>3</sup>, thickness to give maximum overall weight of 6,5 kg;
- clay as specified in EN 13063-1.

### 4.6.2 Additional information on other materials of construction

Other materials used in access components shall not show any deformation, permanent or temporary, when the relevant material of the access component is tested in accordance with 5.3 that will affect the performance of the access component.

### 4.6.3 Freeze/thaw resistance

Access components of metal construction are deemed to be freeze/thaw resistant.

Access components of concrete material are deemed to be freeze/thaw resistant when tested in accordance with EN 14297.

## 4.7 Operational requirements

### 4.7.1 Handling

An access component shall have a facility to handle the openable part.

The access component shall have no sharp edges that can cause injury when handled, or damage cleaning or inspection tools.

### 4.7.2 Angle of opening

A hinged door shall open at least to an angle of 140°, or be removable.

### 4.7.3 Closing mechanism

A hinged door shall have the operating part of the closing mechanism consisting of either:

- A square spigot of  $(7 \pm 0,1)$  mm x  $(7 \pm 0,1)$  mm cross-section, with a length of at least 6,5 mm operating a latch mechanism.
- In an 18 mm diameter circular recess, at least 6,5 mm deep.
- A lever operating a latch mechanism.

NOTE A concrete access door may close under its own weight, e.g. by fitting into a recess.

1) A stainless material type of a higher number means any steel according to the material list of EN 1856-2:2009.