

**Korstnad. Nõuded metallkorstendele. Osa 1:
Korstnasüsteemi tooted**

Chimneys - Requirements for metal chimneys - Part 1:
System chimney products

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1856-1:2009 sisaldab Euroopa standardi EN 1856-1:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 03.06.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 1856-1:2009 consists of the English text of the European standard EN 1856-1:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 03.06.2009.

The standard is available from Estonian standardisation organisation.

ICS 91.060.40

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

English Version

Chimneys - Requirements for metal chimneys - Part 1: System
chimney products

Conduits de fumée - Prescriptions pour les conduits de
fumée métalliques - Partie 1: Composants de systèmes de
conduits de fumée

Abgasanlagen - Anforderungen an Metall-Abgasanlagen -
Teil 1: Bauteile für System-Abgasanlagen

This European Standard was approved by CEN on 7 May 2009.

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 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 Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	5
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Manufacturer's declaration for type test	13
5 Dimensions and tolerances	14
6 Performance requirements	14
6.1 General.....	14
6.2 Mechanical resistance and stability	14
6.2.1 Compressive strength	14
6.2.2 Tensile strength	15
6.2.3 Lateral strength	15
6.3 Resistance to fire (internal to external)	15
6.4 Sootfire resistance.....	15
6.5 Hygiene, health and environment, gas tightness	15
6.6 Safety in use.....	16
6.6.1 Thermal performance at normal operating conditions	16
6.6.2 Accidental human contact	16
6.6.3 Thermal resistance	17
6.6.4 Water vapour diffusion resistance	18
6.6.5 Condensate penetration resistance	18
6.6.6 Rainwater penetration resistance	18
6.6.7 Flow resistance	18
6.6.8 Other requirements for terminals.....	18
6.7 Durability	19
6.7.1 Durability of the flue liner against corrosion	19
6.7.2 Flue liner material specification	19
6.7.3 Freeze-thaw resistance	20
6.7.4 Flue liner seals.....	20
7 Product information.....	21
7.1 Manufacturer's instructions.....	21
7.2 Minimum information to be included in the manufacturer's documentation and instructions	21
8 Marking	22
8.1 General.....	22
8.2 Chimney sections, fittings or terminals	22
8.3 Chimney plate	22
8.4 Packaging	23
9 Product designation	23
10 Evaluation of conformity.....	23
10.1 General.....	23
10.2 Type testing.....	24
10.2.1 Initial type testing	24
10.2.2 Further type testing	24
10.2.3 Sampling for type testing.....	24

10.3	Factory production control (FPC).....	24
10.3.1	General	24
10.3.2	Equipment	25
10.3.3	Raw materials and components	26
10.3.4	Product testing and evaluation.....	26
10.3.5	Non conforming products	26
Annex A	(normative) Corrosion tests.....	27
A.1	Corrosion test method for products designated V1	27
A.1.1	General	27
A.1.2	Pass/Fail criteria	27
A.1.3	Sampling.....	27
A.1.4	Test methods	27
A.1.5	Evaluation.....	31
A.1.6	Test report.....	32
A.2	Corrosion test method for products designated V2	35
A.2.1	General	35
A.2.2	Pass/Fail criteria.....	35
A.2.3	Sampling.....	35
A.2.4	Test methods	35
A.2.5	Evaluation.....	37
A.2.6	Test report.....	38
A.3	Corrosion test method for products designated V3	39
A.3.1	General	39
A.3.2	Pass/Fail criteria	39
A.3.3	Sampling.....	40
A.3.4	Test methods	40
A.3.5	Evaluation.....	43
A.3.6	Test report.....	43
Annex B	(normative) Choice of size for type test and sampling.....	46
Annex C	(normative) Sampling for factory production control.....	47
C.1	Incoming material.....	47
C.1.1	Sampling plans	47
C.1.2	Acceptable quality level (AQL).....	47
C.1.3	Normal, tightened or reduced inspection	47
C.1.4	Single, double, multiple or sequential sampling.....	47
C.1.5	Batch quantity.....	47
C.1.6	The inspection level	47
C.2	In-process inspection	48
C.2.1	All dimensional aspects.....	48
C.2.2	Joint leakage tests	48
C.2.3	Insulation weight checks.....	48
C.2.4	Volume and density checks	48
C.2.5	Finished goods checks.....	48
Annex D	(normative) Factory production control	49
D.1	General	49
D.2	Insulation material.....	49
D.3	Metals, including coatings.....	49
D.4	Supports	49
D.5	Seals and sealants	49
D.6	Manufacturing checks.....	50
D.6.1	Dimensions	50
D.6.2	Other checks	50
Annex ZA	(informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive	51
ZA.1	Scope and relevant characteristics	51
ZA.2	Procedure(s) for attestation of conformity of metal system chimneys	53
ZA.2.1	System(s) of attestation of conformity.....	53

ZA.2.2 EC Declaration of conformity	54
ZA.3 CE marking and labelling.....	55
Bibliography	61

This document is a preview generated by EVS

Foreword

This document (EN 1856-1:2009) has been prepared by Technical Committee CEN/TC 166 "Chimneys", the secretariat of which is held by UNI.

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 December 2009, and conflicting national standards shall be withdrawn at the latest by March 2011.

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.

This document supersedes EN 1856-1:2003.

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 EC Directive 89/106/EEC.

For relationship with EC Directive 89/106/EEC, see informative Annex ZA, which is an integral part of this document.

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

Introduction

This European Standard has been prepared to be a harmonised standard to provide means of conforming to the essential requirements of the Construction Products Directive and associated EFTA regulations.

The generic word "chimney", when used in this European Standard, refers to systems with metallic liner used to convey the products of combustion from any appliance to the outside atmosphere, and thus includes all other terms of common use in the trade, such as vents, flues, shafts, exhaust systems, ducts, etc.

This European Standard addresses the durability against corrosion by the use of a minimum material specification for the flue liner as well as an interim solution for testing products for durability against corrosion. Three corrosion resistance tests and their requirements have been adopted from existing corrosion testing being undertaken in various member states (see Annex A).

This European Standard describes chimney components, from which system chimneys can be assembled as illustrated in Figure 1.

This document is a preview generated by EVS

1 Scope

This European Standard specifies the performance requirements for single and multi-wall system chimney products with rigid metallic liners (chimney sections, chimney fittings and terminals, including supports) with nominal diameter up to and including 1200 mm, used to convey the products of combustion from appliances to the outside atmosphere. It also specifies the requirements for marking, manufacturer's instructions, product information and evaluation of conformity. Metal liners and metal connecting flue pipes not covered here are included in EN 1856-2:2009.

This European Standard does not apply to structurally independent (free standing or self-supporting) chimneys.

2 Normative references

The following referenced documents are indispensable for the application 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 573-3, *Aluminium and aluminium alloys – Chemical composition and form of wrought products – Part 3: Chemical composition and form of products*

EN 1443:2003, *Chimneys – General requirements*

EN 1859, *Chimneys – Metal chimneys – Test methods*

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

EN 13384-1, *Chimneys – Thermal and fluid dynamic calculation methods – Part 1: Chimneys serving one appliance*

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

EN 15287 (all parts), *Chimneys – Design, installation and commissioning of chimneys*

EN ISO 3651-2, *Determination of resistance to intergranular corrosion of stainless steels. Part 2: Ferritic, austenitic and ferritic-austenitic (duplex) stainless steels. Corrosion test in media containing sulfuric acid (ISO 3651-2:1998)*

ISO 2859-1, *Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

3 Terms and definitions

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

3.1

appliance outlet

position where the products of combustion exit from the appliance (see Figure 1)

3.2

chimney

structure consisting of a wall or walls enclosing a flue or flues

[EN 1443:2003]