

KORSTNAD. NÕUDED JA KATSEMEETODID
RUUMIVÄLISE ÕHUVARUSTUSEGA KÜTTESEADMETE
METALLKORSTENDELE JA MATERJALIST
SÕLTUMATUTELE ÕHUVARUSTUSKANALITELE. OSA 1:
VERTIKAALSED ÕHUTUSSEADMED/ÕHULÕÕRID
C6-TÜÜPI SEADMETELE

Chimneys - Requirements and test methods for metal chimneys and material independent air supply ducts for roomsealed heating applications - Part 1: Vertical air/flue terminals for C6-type appliances

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 14989-1:2007 sisaldab Euroopa standardi EN 14989-1:2007 ingliskeelset teksti.	This Estonian standard EVS-EN 14989-1:2007 consists of the English text of the European standard EN 14989-1:2007.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 28.02.2007.	Date of Availability of the European standard is 28.02.2007.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.060.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards 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 a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

ICS 91.060.40

English Version

Chimneys - Requirements and test methods for metal chimneys
and material independent air supply ducts for roomsealed
heating applications - Part 1: Vertical air/flue terminals for C6-
type appliances

Conduits de fumée - Exigences et méthodes d'essais pour
conduits de fumées métalliques et conduits d'alimentation
en air pour tous matériaux pour des appareils de
chauffages étanches - Partie 1 : Terminaux verticaux
air/fumée pour appareils de type C6

Abgasanlagen - Anforderungen und Prüfverfahren für
Metall-Abgasanlagen und materialunabhängige
Luftleitungen für raumluftunabhängige Anlagen - Teil 1:
Senkrecht angeordnete Luft/Abgas-Aufsätze für
Abgasanlagen mit Gasgeräten des Typs C6

This European Standard was approved by CEN on 7 January 2007.

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: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Symbols	8
5 Manufacturer's declaration for type test	10
6 Dimensions and tolerances	11
7 Performance requirements	11
7.1 Mechanical resistance and stability	11
7.1.1 Vertical load on the air/flue terminal	11
7.1.2 Wind load	11
7.2 Hygiene, health and environment	11
7.2.1 Gas tightness of the flue	11
7.2.2 Gas tightness of the air supply duct	11
7.3 Safety in use	11
7.3.1 Thermal performance	11
7.3.2 Thermal resistance	12
7.3.3 Rainwater ingress	12
7.3.4 Aerodynamic properties of the terminal	13
7.3.5 Resistance to ice formation	15
7.3.6 Resistance to penetration by foreign objects	15
7.3.7 Materials	15
8 Product information	16
8.1 Manufacturer's instructions	16
8.2 Minimum information to be included in the manufacturer's instructions	16
8.3 Sampling points	17
9 Marking	17
9.1 Air/flue terminal	17
9.2 Packaging	18
10 Designation	18
10.1 General	18
10.2 Temperature classes and test temperature	19
10.3 Pressure class	19
10.4 Condensate resistance class	20
10.5 Corrosion resistance	20
10.5.1 Corrosion resistance	20
10.5.2 Flue duct material specification for terminals	20
10.6 Resistance to fire (internal to external): Soot fire resistance and distance to combustible material	21
10.7 Additional characteristics	21
10.7.1 Wind class	21
10.7.2 Ice/rain class	21
10.7.3 Pilot flame class	22
11 Evaluation of conformity	22
11.1 General	22

11.2	Type testing	22
11.2.1	General	22
11.2.2	Further type testing	23
11.2.3	Sampling for type testing	23
11.3	Factory production control (FPC)	23
11.3.1	General	23
11.3.2	Equipment	24
11.3.3	Raw materials and components	24
11.3.4	Product testing and evaluation	24
11.3.5	Non conforming products	24
12	Test methods	25
12.1	Mechanical resistance and stability	25
12.1.1	Vertical load on the air/flue terminal	25
12.1.2	Wind load	25
12.1.3	Gas tightness of the flue	25
12.1.4	Gas tightness of the air supply duct	26
12.2	Safety in use	26
12.2.1	Test environment	26
12.2.2	Test assembly	27
12.2.3	Hot gas generator	28
12.2.4	Procedure	29
12.3	Rainwater ingress	37
12.3.1	Test assembly	37
12.3.2	Procedure	38
12.4	Aerodynamic behaviour of air/flue terminal	38
12.4.1	Test assembly	38
12.4.2	Test procedure	42
12.4.3	Results	44
12.5	Icing test	44
12.5.1	Test assembly	44
12.6	Resistance to penetration by foreign objects	45
12.6.1	Test assembly	45
12.6.2	Procedure	45
12.6.3	Results	45
12.7	Low temperature test	46
Annex A (informative)	Typical dimensions	47
Annex B (informative)	Sampling for factory production control	51
Annex C (normative)	Choice of size for type test and sampling	53
Annex D (normative)	Factory production control	55
Annex E (normative)	Method of measuring the hot gas temperature	57
Annex ZA (informative)	Clauses of this European Standard addressing the provisions of the EU Construction Products Directive	58
Bibliography		64

Foreword

This document (EN 14989-1:2007) 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 August 2007, and conflicting national standards shall be withdrawn at the latest by November 2008.

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.

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 United Kingdom.

Introduction

This standard covers vertical air/flue terminals with metal flue ducts for chimneys for roomsealed heating applications meaning the combination of flue duct and air supply duct needed for the correct functioning of a C₆ roomsealed appliance.

The current requirements and test methods apply to balanced flue type applications. Requirements and test methods for other roomsealed applications will follow in separate documents.

A standard covering the design, installation and commissioning of room sealed heating applications is in the current CEN/TC 166 work program, which includes this Part 1: Vertical Terminals for C₆-type appliances, and Part 2: Flue and air supply ducts for individual roomsealed appliances.

1 Scope

This standard specifies the requirements and test methods for positive pressure air/flue terminals with metal flue ducts for C₆₂- and C₆₃-type gas appliances, which convey air for combustion, and 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.

NOTE The classification of gas appliances is according to CEN/TR 1749.

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*

EN 1443:2003, *Chimneys - General requirements*

EN 1856-1:2003, *Chimneys - Requirements for metal chimneys - Part 1: System chimney products*

EN 1856-2:2004, *Chimneys - Requirements for metal chimneys - Part 2: Metal liners and connecting flue pipes*

EN 1859:2000, *Chimneys - Metal chimneys - Test methods*

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

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

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1443:2003, EN 1859:2000, EN 1856-1:2003, EN 1856-2:2004 and the following apply.

3.1

air/flue terminal

terminal unit consisting of a flue duct, which may be provided with a cover, and an air supply duct for the connection of a roomsealed appliance

3.2

air supply duct

independent duct in a building, or a structural part of an air/flue terminal, conveying combustion air to a roomsealed appliance