Extended application of results from fire resistance tests for service installations - Part 2: Fire dampers

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15882-2:2015 sisaldab Euroopa standardi EN 15882-2:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 15882-2:2015 consists of the English text of the European standard EN 15882-2:2015.
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 15.04.2015.	Date of Availability of the European standard is 15.04.2015.
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 13.220.99

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15882-2

April 2015

ICS 13.220.99

English Version

Extended application of results from fire resistance tests for service installations - Part 2: Fire dampers

Application étendue des résultats des essais de résistance au feu des installations de service - Partie 2 : Clapets résistant au feu

Erweiterter Anwendungsbereich der Ergebnisse aus Feuerwiderstandsprüfungen für Installationen - Teil 2: Brandschutzklappen

This European Standard was approved by CEN on 11 January 2015.

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

Ref. No. EN 15882-2:2015 E

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Determination of worst case 6

5 Conditions and application rules 6
5.1 Change of fixing damper to supporting construction 6
5.2 Multiple damper assemblies 7
5.2.1 E Classification only 7
5.2.2 EI, E-S, EI-S Classifications 8
5.3 Alternative penetration seals 8

6 Influence of parameters and factors on fire damper performance 9

7 Critical parameters and factors 9
7.1 General 9
7.2 Common operational parameters and factors 9
7.3 Constructional parameters 9
7.4 Parameters of components of damper 10
7.5 Installing parameters 11

8 Methodology 12

9 Report of the extended application analysis 20

Bibliography 22

Foreword

This document (EN 15882-2:2015) has been prepared by Technical Committee CEN/TC 127 “Fire safety in 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 October 2015 and conflicting national standards shall be withdrawn at the latest by October 2015.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

EN 15882, *Extended application of results from fire resistance tests for service installations* consists of the following parts:

— *Part 1: Ducts*

— *Part 2: Fire dampers*

— *Part 3: Penetration seals*

— *Part 4: Linear joint seals*

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, 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.

Introduction

It should be noted that fire-resisting dampers are special products that are exposed to different conditions to other elements of construction; in particular they are subjected to significantly different pressure regimes. Also, integrity is evaluated by leakage measurements. Consequently, this European Standard may adopt a different approach to other extended field of application standards, with more emphasis on testing.

1 Scope

This European Standard provides guidance and rules to notified bodies (for fire dampers) to allow them to produce/validate an extended field of application report for fire dampers. This standard identifies the parameters that affect the fire resistance of dampers. It also identifies the factors that need to be considered when deciding whether, or by how much, the parameter can be extended when contemplating the fire resistance performance of an untested, or untestable variation in the construction.

This European Standard explains the principles behind how a conclusion on the influence of specific parameters/constructional details relating to the relevant criteria (E,I,S) can be achieved.

This European Standard does not cover dampers used for smoke control.

This European Standard only applies to extended fields of application based on tests successfully undertaken to EN 1366-2. Only test reports that have a total test time where the criteria are fulfilled that is in excess of the required classification period by a margin of either 10 % or 12 min, whichever is the least, are to be considered. Each classification (E,I,S) is to be considered individually – consequently E (134 min achieved) may be extended, but EI (61 min achieved) may not be extended for a classification of EI60.

Additionally, leakage determined during such tests is to be at least 10 % below the leakage limits for E, or for E-S, dependent on classification achieved, given in EN 13501-3 before the EXAP rules can be applied. The 10 % below the leakage limits is to be fulfilled for the extended period in addition to the classification period.

By application of this European Standard, it should be possible to identify what specifications should be tested to maximize the field of application. Some information on test programmes is given for guidance purposes.

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 1363-1, *Fire resistance tests - Part 1: General Requirements*

EN 1366-1:2014, *Fire resistance tests for service installations - Part 1: Ventilation ducts*

EN 1366-2, *Fire resistance tests for service installations - Part 2: Fire dampers*

EN 13501-3, *Fire classification of construction products and building elements - Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers*

EN 15882-1, *Extended application of results from fire resistance tests for service installations - Part 1: Ducts*

ISO 10294-4, *Fire resistance tests - Fire dampers for air distribution systems - Part 4: Test of thermal release mechanism*