
Fire-resistance tests —

**Part 2:
Lift landing door assemblies**

Essais de résistance au feu —

Partie 2: Assemblage de porte palière d'ascenseur

Sample Document

get full document from standards.iteh.ai



Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Test equipment	2
5 Test conditions	2
6 Test specimen	3
6.1 Size of specimen.....	3
6.2 Number of specimens.....	3
6.3 Supporting construction.....	3
6.4 Installation of specimen.....	3
7 Conditioning	5
8 Clearances	5
9 Functionality test	5
10 Application of instrumentation	5
10.1 Temperature measurements.....	5
10.1.1 Furnace-temperature measurement instrument.....	5
10.1.2 Gas temperature measurement.....	5
10.1.3 Unexposed-face temperature measurement.....	5
10.1.4 Position of the thermocouples to determine the maximum temperature.....	6
10.2 Pressure measurements.....	7
10.2.1 Furnace pressure measurement.....	7
10.2.2 Gas flow pressure measurement.....	7
10.3 Gas flow measurement.....	7
10.4 CO ₂ concentration.....	7
10.4.1 Furnace.....	7
10.4.2 Gas flow.....	7
10.5 Heat-flux measurement.....	7
10.6 Deflection.....	7
11 Test procedure	7
11.1 Gap measurements.....	7
11.2 Functionality test.....	11
11.3 Flow measurement verification.....	12
11.4 Fire test.....	12
12 Performance criteria	12
12.1 Integrity (E).....	12
12.2 Insulation (I).....	12
12.3 Radiation (W).....	12
13 Termination of test	12
14 Test report	13
15 Field of direct application of test results	13
16 Classification procedure and declaration of performance	13
16.1 Classification periods.....	13
16.2 Declaration of performance.....	14
16.3 Classification periods.....	14
Annex A (normative) Description of the canopy and measuring system	15

Annex B (normative) Standard supporting construction	18
Annex C (normative) Verification procedure for leakage rate measurement	19
Annex D (normative) Calculation of leakage rate	21
Annex E (informative) Extrapolation rule for the leakage rate for higher lift landing door assemblies	23
Annex F (informative) Interpreting the leakage rate curve	25
Annex G (informative) Marking information	26

Sample Document

get full document from standards.iteh.ai

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 92, *Fire safety*, SC 2, *Fire containment*, in collaboration with Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

This second edition cancels and replaces the first edition (ISO 3008-2:2014), which has been technically revised.

A list of all the parts in the ISO 3008 series can be found on the ISO website.

Introduction

The need for certain lift landing door assemblies to act as a fire barrier against the transfer of a fire via the lift well has been identified. This document specifies a procedure for this purpose. The document follows the general principles of ISO 834-1 and, where appropriate, the principles of ISO 3008.

Lift landing doors are not included in the scope of ISO 3008.

NOTE [Annexes E, F](#) and [G](#) contain information on extrapolating the leakage rate for higher lift landing door assemblies, interpreting the leakage rate curve and marking information for the door frame assembly.

Sample Document

get full document from standards.iteh.ai

Fire-resistance tests —

Part 2: Lift landing door assemblies

CAUTION — The attention of all persons concerned with managing and carrying out this fire-resistance test is drawn to the fact that fire testing may be hazardous and that there is a possibility that toxic and/or harmful smoke and gases may be evolved during the test. Mechanical and operational hazards may also arise during the construction of test elements or structures, their testing and disposal of test residues. An assessment of all potential hazards and risks to health shall be made by the laboratory and safety precautions shall be identified and provided. Written safety instructions shall be issued. Appropriate training shall be given to relevant personnel. Laboratory personnel shall ensure that they follow written safety instructions at all times.

1 Scope

This document specifies the method of test for determining the fire-resistance of lift landing door assemblies which can be exposed to a fire from the landing side. The procedure is applicable to all types of lift landing door assemblies used as a means of access to lifts in buildings and which are intended to provide a fire barrier to the spread of fire via the lift well.

The procedure allows for the measurement of integrity and, if required, the measurement of radiation and thermal insulation.

No requirements other than the verification that the specimen is operational are included for the mechanical conditioning before the test.

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.

ISO 834-1, *Fire-resistance tests — Elements of building construction — Part 1: General requirements*

ISO 834-4, *Fire-resistance tests — Elements of building construction — Part 4: Specific requirements for loadbearing vertical separating elements*

ISO 834-8, *Fire-resistance tests — Elements of building construction — Part 8: Specific requirements for non-loadbearing vertical separating elements*

ISO 3008, *Fire-resistance tests — Door and shutter assemblies*

ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements*

ISO 9705, *Reaction to fire tests — Room corner test for wall and ceiling lining products*

ISO 13943, *Fire safety — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 834-1, ISO 3008, ISO 13943 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>

3.1

associated supporting construction

specific construction in which the *door assembly* (3.4) is installed as intended for use in practice and which is used to close off the furnace and provide the levels of restraint and thermal heat transfer to be experienced in normal use

3.2

lift landing door

door designed to be installed in the lift well opening on a landing to provide access to the lift

3.3

door opening

width of the clear opening allowing free passage through the open lift landing door

3.4

door assembly

complete assembly, including any frame or guide, door leaf or leaves, which is provided for access to and from the lift and the landing and includes all panels, hardware, sealing materials and any operating components

3.5

standard supporting construction

form of construction used to close off the furnace and to support the *door assembly* (3.4) being evaluated and which has a quantifiable influence on both the thermal heat transfer between the construction and the test specimen and provides known resistance to thermal distortion

3.6

leakage rate

total flow of hot gases passing through openings and gaps of the *door assembly* (3.4), due to overpressure on the landing side

4 Test equipment

4.1 The test equipment and vertical panel furnace referred to in this document shall be as specified in ISO 834-1.

4.2 The canopy shall be as specified in [Annex A](#).

4.3 The equipment for measuring the leakage rate shall be as specified in [Annex A](#).

4.4 The equipment for measuring heat flux shall be as specified in ISO 3008.

5 Test conditions

5.1 The furnace shall be controlled to follow the heating conditions of the standard test as defined in ISO 834-1.

5.2 The furnace shall be controlled to maintain a positive pressure on the exposed side over the entire height of the specimen such that the pressure at the sill level is in the range of 2 Pa \pm 2 Pa.

6 Test specimen

6.1 Size of specimen

The specimen shall be full size or the maximum size that can be accommodated in the furnace. The typical size of the front opening of the furnace is 3 m × 3 m. In order to expose a required minimum width of 200 mm of supporting construction for a typical 3 m × 3 m furnace, the opening in the supporting construction is restricted to 2,6 m × 2,8 m (width × height).

6.2 Number of specimens

One specimen is required for the test.

6.3 Supporting construction

6.3.1 A standard supporting construction shall be as described in [Annex B](#).

6.3.2 An associated supporting construction shall be representative of the specific construction into which the test specimen is intended to be installed for use in practice.

6.4 Installation of specimen

6.4.1 The specimen shall be mounted in a supporting construction having a fire-resistance rating of equal or greater than the hourly rating of the assembly to be tested. The supporting construction shall be built first within the test frame leaving an aperture of the specified size. The width of the supporting construction on the two vertical sides and the top shall be not less than 200 mm. See [Figure 1](#).

get full document from standards.iteh.ai