

BS 8899:2016



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Improvement of fire-fighting and evacuation provisions in existing lifts – Code of practice

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 October 2016. It was prepared by Technical Committee MHE/4, *Lifts, hoists and escalators*. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

For more than 75 years, lifts have been used by fire and rescue personnel in fighting fires and evacuation of persons from buildings, but each lift product offered different solutions as to their usability for this purpose. As long ago as 1986, BS 5588-5 gave recommendations for the design of fire-fighting lifts and suitable building design requirements. In more recent years, BS EN 81-72 has been developed to give definitive guidance on the design of new lifts for this purpose, with BS 9999 giving recommendations on suitable building design.

This has led to the potential obsolescence of lifts designed and installed prior to application of BS 5588-5 or BS EN 81-72, and it can be challenging for fire and rescue services and others to ascertain exactly which provisions are available on any given lift installation and whether the provisions can be used in practice.

BS 8899 has been developed to assist in improving fire-fighting and evacuation provision in lifts installed before the publication of BS EN 81-72:2015.

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

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Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. "organization" rather than "organisation").

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Introduction

In drawing up this British Standard, the following assumptions have been made:

- a) the lift is a conventional passenger lift with electric traction or hydraulic drive system as described in BS 2655-1, BS 5655-1, BS 5655-2, BS EN 81-1, BS EN 81-2 or BS EN 81-20;
- b) the lift is permanently installed into a building where each lift landing door is or can be accessed via a suitable fire and smoke protected area, such as described by BS 5588, BS 9991 or BS 9999. Typically, these protected areas would be:
 - 1) in buildings for commercial use – a protected lobby, fire-fighting lobby, or possibly protected stair enclosure;
 - 2) in buildings for residential use – a protected corridor, protected lobby, or possibly protected stair enclosure;
 - 3) alternative protected areas justified by building specific fire strategy and/or fire risk assessment;
- c) a lift for fire service use serves all floors of the building deemed necessary to fight fires in agreement with the local fire and rescue authorities;
- d) an evacuation lift serves all floors of the building deemed necessary to facilitate the evacuation of disabled people or those with limited mobility;
- e) lifts for fire service use are not part of escape routes, although they may be used for the evacuation of disabled people prior to use by fire-fighters as part of a fire strategy supported by a suitable fire risk assessment;
- f) evacuation lifts are not used for the general evacuation of the building, i.e. people other than those with disabilities or limited mobility;
- g) lifts intended to remain in use in the event of fire and any ancillary equipment (such as pumps to remove water from the lift pit) are connected to a secondary power supply, with automatic change over on failure of the primary supply, of suitable power and duration as described by BS 9999. This secondary supply is located in a fire-protected area, and the primary and secondary electrical power supply cables for the lift are fire-protected and separated from each other and other power supplies;

NOTE BS 8519 contains recommendations for fire-resistant power and control cable systems for life safety and fire-fighting applications.
- h) lift wells and machinery spaces do not contain sprinklers;
- i) the fire resistance of the lift well (including shared wells), the walls and doors of lobbies, fire doors, fire shutters, doors to machinery spaces, pulley and machine rooms, and any ducts containing hoses, piping or cables between machinery spaces and the lift well meets at least the minimum levels defined in BS 9991 or BS 9999 as applicable;
- j) the building design, fire strategy and management arrangements required for lifts to be used by the fire and rescue services or for evacuation have been addressed, e.g. by following the recommendations in BS 9999.

1 Scope

This British Standard gives recommendations for the improvement and maintenance of fire-fighting and evacuation provisions in existing lifts. It applies to lifts installed permanently into buildings that are either already designed for fire and rescue service use or as evacuation lifts, or intended to be modified to include such features.

This British Standard is not applicable to:

- new lifts, whether in new buildings or existing buildings, installed after the publication of this standard;
- lifts where the building regulations or standards for the fire safety of buildings require or recommend a lift to the level of a new fire-fighting lift, e.g. due to extension or change of use of the building;
- double-deck lifts;
- dual entry lifts, where the firefighters lift protected lobbies are not located consistently on the same side of the lift car on all floors served by the installation;
- lifts with partially enclosed wells;
- special cases such as potentially explosive atmospheres, extreme climate conditions and seismic conditions.

This British Standard covers the significant hazards, hazardous situations and events relevant to lifts for fire and rescue service use and evacuation lifts.

NOTE 1 BS EN 81-80 contains recommendations for the general improvement in safety of existing lifts relative to the base lift design standard. BS 8899 is intended to have a similar relationship with BS EN 81-72 and the evacuation lift recommendations in BS 9999.

This British Standard applies to the lift installation only. It does not give recommendations for the fire-resisting structure of the building or other elements of the building design and management.

NOTE 2 BS 9999 and BS 9991 contain recommendations related to additional building fire safety provisions needed to support the use of fire-fighting and evacuation lifts.

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.

BS 476-22, *Fire tests on building materials and structures – Part 22: Methods for determination of the fire resistance of non-loadbearing elements of construction*

BS 5655-11, *Lifts and service lifts – Part 11: Code of practice for the undertaking of modifications to existing electric lifts*

BS 5655-12, *Lifts and service lifts – Part 12: Code of practice for the undertaking of modifications to existing hydraulic lifts*

BS 8486-1, *Examination and test of new lifts before putting into service – Specification for means of determining compliance with BS EN 81 – Part 1: Electric lifts*¹⁾

¹⁾ This British Standard contains an informative reference to BS 8486-1:2007.