
Safety requirements for lifts (elevators) —

Part 3:

**Global conformity assessment
procedures (GCAP) — Prerequisites for
certification of conformity of lift systems,
lift components and lift functions**

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Exigences de sécurité des ascenseurs —

*Partie 3: Procédures d'évaluation globale de conformité — Prérequis
pour la certification de la conformité des systèmes, des composants et
des fonctions des ascenseurs*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

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An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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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.

ISO/TS 22559-3 was prepared by Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

ISO/TS 22559 consists of the following parts, under the general title *Safety requirements for lifts (elevators)*:

- *Part 1: Global essential safety requirements (GESRs)*
- *Part 2: Safety parameters meeting the global essential safety requirements (GESRs)*
- *Part 3: Global conformity assessment procedures (GCAP) — Prerequisites for certification of conformity of lift systems, lift components and lift functions*
- *Part 4: Global conformity assessment procedures (GCAP) — Certification and accreditation requirements*

Introduction

- 0.1** The objective of the ISO/TS 22559 series of documents is stated in the Introduction to ISO/TS 22559-1 and ISO/TS 22559-2.
- 0.2** ISO/TS 22559-1 has established global essential safety requirements (GESRs) for lifts (elevators) by addressing hazards and safety risks that may be encountered on a lift (elevator). The GESRs state safety objectives that a lift (elevator) should achieve.
- 0.3** ISO/TS 22559-2 sets criteria for achieving conformity with safety requirements of GESRs by specifying global safety parameters (GSPs) that should be used and implemented, where applicable, in a lift (elevator) to eliminate hazards or mitigate safety risks addressed in the GESRs.
- 0.4** This part of ISO/TS 22559 sets prerequisite requirements that must be fulfilled before applying for a global conformity assessment procedure (GCAP) certificate of conformity in accordance with ISO/TS 22559-4.
- 0.5** ISO/TS 22559-4 sets procedures for certification of conformity of lift systems, lift components and lift functions and for accreditation of conformity assessment bodies (GCABs).
- 0.6** The ISO/TS 22559 series of documents provides a process for assessment of conformity of lift systems, lift components or lift functions with the safety requirements specified in ISO/TS 22559-1. It includes a structured methodology for establishing, documenting and demonstrating that necessary and appropriate protective measures are taken to eliminate hazards or sufficiently mitigate risks. This process is particularly useful for establishing safety of lift systems, lift components or lift functions involving innovative design or new technologies. If one is using the process, Parts 1 to 4 of the ISO/TS 22559 series should be used.
- 0.7** This part of ISO/TS 22559 envisages that a quality management system is used, e.g. ISO 9001 for applicants (see 3.1) and ISO 17021 for GCABs (see 3.4). Assessment of conformity to the ISO/TS 22559 series of documents does not imply conformity to ISO 9001.

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Safety requirements for lifts (elevators) —

Part 3: Global conformity assessment procedures (GCAP) — Prerequisites for certification of conformity of lift systems, lift components and lift functions

1 Scope

This part of ISO/TS 22559 specifies prerequisite requirements for application for a global conformity assessment procedure (GCAP) certificate of conformity for new lift (elevator) systems, lift components or lift functions.

NOTE Hereinafter in this part of ISO/TS 22559, the term “lift” is used instead of the term “elevator”. The term “lift system” is also used to describe a “lift”.

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.

ISO/IEC Guide 65:1996, *General requirements for bodies operating product certification systems*

ISO 9000, *Quality management systems — Fundamentals and vocabulary*

ISO 14798:2009, *Lifts (elevators), escalators and moving walks — Risk assessment and reduction methodology*

ISO/IEC 17000, *Conformity assessment — Vocabulary and general principles*

ISO/TS 22559-1:2004, *Safety requirements for lifts (elevators) — Part 1: Global essential safety requirements (GESRs)*

ISO/TS 22559-2:2010, *Safety requirements for lifts (elevators) — Part 2: Safety parameters meeting the global essential safety requirements (GESRs)*

ISO/TS 22559-4:2011, *Safety requirements for lifts (elevators) — Part 4: Global conformity assessment procedures (GCAP) – Certification and accreditation requirements*

NOTE Some of the references in ISO/IEC Guide 65 are superseded by the above references or documents listed in the Bibliography.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9000, ISO/IEC 17000, ISO/TS 22559-1, ISO/TS 22559-2 and the following apply.

3.1

applicant

party that applies for a GCAP certificate of conformity

NOTE An applicant could be the designer, manufacturer or its authorized representative, installer or supplier.

**3.2
certification**

procedure whereby a GCAB certifies that specified requirements are met

**3.3
GCAP certificate of conformity**

statement from a GCAB, based on a decision following assessment, that conformity with specified requirements relating to a model lift, lift system, lift component or lift function has been demonstrated

**3.4
global conformity assessment body
GCAB**

product certification body, competent to perform product safety evaluation, which awards certificates of conformity stating that the product (lift, component or lift function) meets the requirements of ISO/TS 22559-1

NOTE 1 A certification body, duly accredited in accordance with ISO/TS 22559-4 for this activity by a Multilateral Recognition Agreement (MLA) member of the International Accreditation Forum (IAF) would normally be deemed to meet the requirements of a GCAB.

NOTE 2 Where the term “certification body” is used in ISO/IEC Guide 65, it shall be understood to mean GCAB (see ISO/TS 22559-4:2011, Clauses 5 and 6).

**3.5
global essential safety requirement
GESR**

globally agreed upon essential safety requirement, as published in ISO/TS 22559-1

**3.6
global safety parameter
GSP**

globally agreed upon safety parameter, as published in ISO/TS 22559-2

**3.7
installer**

organization (e.g. manufacturer, its authorized representative) that erects certified lift systems or lift components or lift functions

**3.8
life cycle**

period of usage of a lift component, lift function or lift system

**3.9
lift component**

element or part contributing to the composition of the whole lift

**3.10
lift function**

mode of action by which a lift system or lift component fulfils its purpose

**3.11
manufacturer**

organization that takes responsibility for the design and manufacture of the lift or lift component

**3.12
model lift**

representative lift whose technical compliance documentation shows the way in which the GESRs will be met for series-produced lifts having a defined range of application and operation

**3.13
supplier**

organization (e.g. manufacturer or its authorized representative, or installer) who provides certified lift systems, or supplies lift components or lift functions for use in a lift system

3.14**technical compliance documentation****TCD**

assembly of various data and documents prepared to document compliance with GESRs

4 Prerequisites for certification of lifts, lift components and lift functions**4.1 Process**

4.1.1 This process is based on a structured application of GESRs specified in ISO/TS 22559-1.

4.1.2 This part of ISO/TS 22559 requires applicants for certification to demonstrate conformity with the requirements of the GESRs by following the procedures specified in 4.1.3 to 4.7.

4.1.3 The manufacturer or its authorized representative, the installer or supplier, as applicable, shall be responsible for achieving and demonstrating compliance by performing the following steps:

- a) define the subject of the safety assessment (see 4.2);
- b) identify and implement applicable GESRs (see 4.3 and 4.4);
- c) conduct the risk assessment (see 4.3.3);
- d) eliminate or mitigate identified risks sufficiently by implementing protective measures, including GSPs, in accordance with ISO/TS 22559-2, where appropriate (see 4.4);
- e) produce a TCD (see 4.6); and
- f) submit the TCD along with the application (see ISO/TS 22559-4:2011, 4.3) to the GCAB for conformity assessment and certification (see ISO/TS 22559-4).

4.2 Description of the subject of safety assessment

4.2.1 The subject of safety assessment shall be clearly identified, described and illustrated.

EXAMPLE The lift system to be assessed may be a model lift without a machine room.

4.2.2 If the subject of the assessment is a range of products, all variations within the range shall be specified.

EXAMPLE A range of products with different duty loads, operating speeds, rise and other variations.

4.2.3 It is only necessary to define the particular characteristics of the subject that impact safety.

EXAMPLE If the subject of assessment relates to a lift car door model, the speed or rise of the lift, and other lift features may not be relevant. In such case, the sole subject of analysis and assessment will be the car door.

4.3 Implementing GESRs

4.3.1 When assessing the safety of a lift system, lift component or lift function, the applicability of GESRs shall be determined by using one of the procedures described in ISO/TS 22559-1:2004, 5.2.2.

4.3.2 To verify and demonstrate that a lift system or lift component or lift function complies with an applicable GESR, risk assessment in accordance with ISO 14798 shall be carried out and the results documented.

NOTE For documentation of risk assessment, see ISO 14798:2009, Annex A.