
Safety requirements for lifts (elevators) —
Part 4:
Global conformity assessment
procedures (GCAP) — Certification and
accreditation requirements

Exigences de sécurité des ascenseurs —

Partie 4: Procédures d'évaluation globale de conformité — Conditions de certification et d'accréditation





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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

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order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn.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.

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 22559-4 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** ISO/TS 22559-3 sets prerequisite requirements that must be fulfilled before applying for global conformity assessment procedure (GCAP) certificate of conformity in accordance with this part of ISO 22559.
- 0.5** This part of ISO/TS 22559 sets procedures for certification of conformity of lifts, 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, 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/IEC 17021 for GCABs (see 3.4). Assessment of conformity to the ISO/TS 22559 series of documents does not imply conformity to ISO 9001.

Safety requirements for lifts (elevators) —

Part 4: Global conformity assessment procedures (GCAP) — Certification and accreditation requirements

1 Scope

This part of ISO/TS 22559 specifies

- a) requirements for certification of conformity for model lifts, lift (elevator) systems, lift components or lift functions by global conformity assessment bodies (GCAB) (see Clause 4),

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”.

- b) related responsibilities of GCABs (see Clause 4), and
- c) requirements for accreditation of GCABs, and guidance and clarification to ISO/IEC Guide 65 (see Clause 5 and Clause 6 which pertain to the certification of lifts, lift components and lift functions).

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/IEC 17011, *Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies*

ISO/IEC 17020, *General criteria for the operation of various types of bodies performing inspection*

ISO/IEC 17021, *Conformity assessment — Requirements for bodies providing audit and certification of management systems*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

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 22559-3:2011, *Safety requirements for lifts (elevators) — Part 3: 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) — Prerequisites for certification of conformity of lift systems, lift components and lift functions*

NOTE Some of the references in ISO/IEC Guide 65:1996 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**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

3.12**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

3.13**technical compliance documentation****TCD**

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

4 Certification of conformity of lift systems, lift components and lift functions

4.1 General

The manufacturer or its agent, supplier, or installer shall obtain a GCAP certificate of conformity to ISO/TS 22559-1 for model lifts, individual lift systems, lift components or lift functions (see 4.3), whichever is applicable.

4.2 Certification of a lift system versus model lift

4.2.1 In the case of a model lift, the GCAP certificate of conformity shall be obtained based on the initial representative model. Subsequent series-produced lifts with the same design and configuration as the model representative shall not be required to be submitted for certification (see ISO/TS 22559-3:2011, 4.6.2).

4.2.2 Where a lift system, not designated as a model lift, is installed, it shall be certified individually.

4.3 Application for certification

4.3.1 The application for certification of a model lift, individual lift system, lift components or lift functions shall be submitted to a GCAB by an applicant (see 3.1), i.e. either the manufacturer or its agent, supplier, or installer.

4.3.2 The application shall include:

- a) Name and address of:
 - 1) the manufacturer or its agent, supplier, or installer, or
 - 2) if the applicant for certification is other than the manufacturer, the name of the manufacturer and place(s) of manufacture.
- b) The applicant is permitted to apply to another GCAB under the following conditions:
 - 1) any previous application, with identification information, shall be submitted;
 - 2) written detailed explanation as to why the application is being submitted to another GCAB(s); and
 - 3) if a GCAP certificate of conformity has been previously refused, the GCAB's documented grounds for refusal (see 4.4.5) shall be provided.
- c) Technical compliance documentation (see ISO/TS 22559-3:2011, 4.6.3);

- d) Lift component and lift function samples or lift location for examination, as follows:
- 1) in the case of a lift component or lift function, one or more representative samples of the component or function or details of the location where it can be examined, or
 - 2) in the case of a model lift or lift system, details of the location where the model lift or lift system can be examined.

This lift shall include all parts and be capable of serving at least three levels (top, middle and bottom) unless the model lift or lift system is specifically limited in scope to two levels.

4.4 Certification and follow-up process

4.4.1 The GCAB shall:

- a) examine the TCD and verify that the model lift or lift system, lift component or lift function meets the relevant GESRs, and
- b) perform or have performed appropriate checks and tests necessary to determine:
 - 1) whether the solutions adopted by the manufacturer of the lift component or lift function meet the requirements of this part of ISO/TS 22559, allowing the component or function to perform properly when correctly fitted on a lift as specified in the applicant's TCD, or
 - 2) whether the model lift or lift system conforms to the requirements of this part of ISO/TS 22559.

4.4.2 When the GCAB is satisfied that the representative model lift, lift system, lift component or lift function conforms to the applicable requirements of ISO/TS 22559-1 and ISO/TS 22559-3, the GCAB shall issue a GCAP certificate of conformity to the applicant.

The certificate and supporting documents, if any, shall include the following:

- a) name and address of the certificate holder,
- b) name and address of the manufacturer,
- c) name, address and signature of the GCAB,
- d) unique identification and description of the product certified, which may be identified by model, type or range of products,
- e) name and address of the test laboratory and date and identification of test report(s),
- f) statement of conformity to ISO/TS 22559-1 and ISO/TS 22559-3, and
- g) place and date of issue of the certificate.

4.4.3 The holder of a GCAP certificate of conformity for a lift, lift component or lift function shall inform the GCAB in writing of any modifications to the lift, component or function on which the current certification depends. The GCAB shall examine the modifications and inform the certificate holder whether the GCAP certificate of conformity remains valid.

4.4.4 Where a GCAB is requested to certify modifications to a lift, lift component or lift function for which the GCAP certificate of conformity was issued by a different GCAB, the GCAB shall obtain the relevant information from the original certificate holder or the original GCAB, having first obtained permission from the original certificate holder.

NOTE Certification of modifications could occur to address unique site conditions which require a single modification to a certified product.

GCABs are required to maintain confidentiality with the respective certificate holders.

4.4.5 If the GCAB refuses to issue a GCAP certificate of conformity, it shall state in writing the detailed grounds for refusal.

NOTE Provision for appeal of a GCAB's decision is one of the requirements for accreditation of GCABs under ISO/IEC Guide 65.

5 Accreditation of GCABs

5.1 Applicants to become a GCAB shall be able to demonstrate their competence in a product certification process (see also 6.1.5).

5.2 GCABs shall conform to the requirements of ISO/IEC Guide 65 and this part of ISO/TS 22559.

5.3 The accrediting body shall comply with ISO/IEC 17011.

NOTE 1 Current signatories to the International Accreditation Forum Multilateral Agreement for Product Certification meet this requirement.

NOTE 2 International Accreditation Forum guidance document IAF-GD 5 provides guidance in this area.

6 Guidance or clarification to ISO/IEC Guide 65

6.1 The requirements of ISO/IEC Guide 65 apply in full except where modified or interpreted by the following clauses or subclauses, which supplement or clarify the corresponding requirements of ISO/IEC Guide 65.

6.1.1 ISO/IEC Guide 65:1996, 1.2 a)

The ISO 22559 certification system used by the GCAB would normally include an examination of the applicant's TCD.

6.1.2 ISO/IEC Guide 65:1996, Clause 2, References

See Clause 2 of this part of ISO/TS 22559.

6.1.3 ISO/IEC Guide 65:1996, Clause 3, Definitions

See Clause 3 of this part of ISO/TS 22559.

6.1.4 ISO/IEC Guide 65:1996, 4.1.3

The criteria against which the products of a supplier (applicant) are evaluated shall be those outlined in ISO/TS 22559-1 and ISO/TS 22559-3.

6.1.5 ISO/IEC Guide 65:1996, 4.3, Operations

6.1.5.1 The GCAB shall evaluate conformity with ISO/TS 22559-1 and ISO/TS 22559-3.

6.1.5.2 The GCAB shall demonstrate to the accreditation body, or equivalent, that all conformity assessment activities it conducts (testing, inspection, quality management system evaluation, surveillance, etc.) are carried out in a competent and reliable manner, consistent with the applicable requirements of the normative documents for these activities.

6.1.5.3 In conducting its certification operations, the GCAB shall observe, as appropriate, the requirements for the suitability and competence of the body(ies) or person(s) carrying out testing, inspection and certification/registration as specified in ISO/IEC 17020, ISO/IEC 17021 and ISO/IEC 17025.

6.1.6 ISO/IEC Guide 65:1996, 4.6, Conditions and procedures for granting, maintaining, extending, suspending and withdrawing certification

6.1.6.1 The GCAB shall have a policy and documented procedures for suspension, withdrawal or reduction of the scope of the GCAP certificate of conformity, which shall also specify the subsequent actions. The GCAB shall serve reasonable notice of impending suspension of the GCAP certificate of conformity to the certificate holder. The GCAB and the certificate holder shall endeavour to resolve the reasons for the suspension, withdrawal or reduction before it takes effect.

6.1.6.2 Where the GCAB has evidence that a certified lift used in accordance with its intended purpose is liable to endanger the safety of persons, the GCAB shall suspend its GCAP certificate of conformity and require the certificate holder to inform all interested parties immediately.

6.1.6.3 Situations where the GCAB may suspend the GCAP certificate of conformity might include the following:

- a) the holder of a GCAP certificate of conformity for a certified lift, lift component or lift function has failed to meet certification requirements and conditions that directly affect the safety of persons;
- b) the holder of a GCAP certificate of conformity does not allow audits to be conducted at the required frequencies;
- c) the holder of a GCAP certificate of conformity has voluntarily requested a suspension.

6.1.6.4 While under suspension, the GCAP certificate of conformity is temporarily invalid. The GCAB shall have enforceable arrangements with the holder of its GCAP certificate of conformity to ensure that in case of suspension the holder of the GCAP certificate of conformity refrains from further promotion of its certification. The GCAB shall make the suspended status of the certification publicly available (see ISO/IEC Guide 65:1996, 4.6) and shall take any other measures it deems appropriate.

6.1.6.5 Failure to resolve the issues that have resulted in the suspension in a time established by the GCAB, with notice to the holder of a GCAP certificate of conformity, shall result in withdrawal or reduction of the scope of the GCAP certificate of conformity.

NOTE In most cases the suspension would not exceed six months.

6.1.6.6 The GCAB shall modify the GCAP certificate of conformity holder's scope of the GCAP certificate of conformity to exclude the parts not meeting the requirements, when the certificate holder has failed to meet the certification requirements for those parts of the scope of the GCAP certificate of conformity.

6.1.6.7 The GCAB shall have enforceable arrangements with the certificate holder concerning conditions of withdrawal ensuring upon notice of withdrawal of certification that the certificate holder discontinues advertising matter that contains any reference to the GCAP certificate of conformity.

6.1.6.8 Upon request by any party, the GCAB shall correctly state the status of a GCAP certificate of conformity.

6.1.7 ISO/IEC Guide 65:1996, 4.8, Documentation

6.1.7.1 A new subclause 4.8.3, Directory of GCAP certificates of conformity, shall be added after ISO/IEC Guide 65:1996, 4.8.2.

6.1.7.1.1 ISO/IEC Guide 65, 4.8.3.1

The GCAB shall maintain and make publicly accessible, or provide upon request, by any means it chooses, a directory of valid GCAP certificates of conformity that show as a minimum, for each GCAP certificate of conformity, the following:

- a) name of the certificate holder and manufacturer of the product;

- b) name of products;
- c) geographical location (e.g. city and country) of the certificate holder;
- d) geographical location of the headquarters and any sites of a multi-site manufacturer who is the holder of the GCAP certificate of conformity.

NOTE The directory of valid GCAP certificates of conformity does not include suspended or withdrawn certificates.

6.1.8 ISO/IEC Guide 65:1996, 4.9, Records

6.1.8.1 A new subclause 4.9.3 shall be added after ISO/IEC Guide 65, 4.9.2.

Each GCAB shall maintain up-to-date records, available in a publicly accessible medium, containing the relevant information concerning:

- a) GCAP certificates of conformity issued;
- b) GCAP certificates of conformity suspended or withdrawn.

6.1.9 ISO/IEC Guide 65:1996, 5.2, Qualification criteria

After 5.2.1 insert the following:

GCAB personnel involved in certification activities shall have, where appropriate for their task and responsibility:

- a) sufficient knowledge and experience in engineering to adequately perform the work required;
- b) knowledge of ISO 14798 risk assessment methodology;
- c) knowledge of ISO/TS 22559-1, ISO/TS 22559-2, ISO/TS 22559-3 and ISO/TS 22559-4;
- d) knowledge of lift-related safety codes and standards;
- e) familiarity with lift industry terminology;
- f) ability to read and understand architectural, installation, layout drawings and circuit diagrams;
- g) working knowledge of electrical, electronic, mechanical and other principles related to lifts, lift components and lift functions being evaluated, assessed and certified;
- h) working knowledge of the functions and operations of lifts, lift components and lift functions being evaluated, assessed and certified.

6.1.10 ISO/IEC Guide 65:1996, 8.2.2

The GCAB should receive from the applicant the information required in 4.3.2 and in ISO/TS 22559-3:2011, 4.6.

6.1.11 ISO/IEC Guide 65:1996, Clause 10, Evaluation

The GCAB shall evaluate the products submitted for certification by the applicant against the requirements of ISO/TS 22559-1 and ISO/TS 22559-3. The GCAB shall examine the TCD to verify that the lift, lift component or lift function conforms to the relevant GESRs, and

- a) for a lift component or lift function, perform or have performed appropriate checks and tests necessary to determine whether the solutions adopted by the manufacturer of the component or function conform to the requirements of ISO/TS 22559-1, allowing the component or function to perform properly when correctly fitted on a lift as specified in the applicable TCD, or
- b) for a lift, perform or have performed the appropriate checks and tests necessary to determine whether the lift conforms to the requirements of ISO/TS 22559-1.

6.1.12 ISO/IEC Guide 65:1996, Clause 12, Decision on certification

6.1.12.1 ISO/IEC Guide 65:1996, 12.3

The GCAB shall provide each applicant for certification with formal certification documents in the form of a GCAP certificate of conformity to ISO/TS 22559-1, authenticated by an officer who has been assigned such responsibility. The certificate shall include data listed in 4.4.2.

Bibliography

- [1] ISO 9001:2000, *Quality management systems — Requirements*
- [2] ISO/IEC 17030:2003, *Conformity assessment — General requirements for third-party marks of conformity*
- [3] ISO 19011:2002, *Guidelines for quality and/or environmental management systems auditing*
- [4] ISO/IEC Guide 27:1983, *Guidelines for corrective action to be taken by a certification body in the event of misuse of its mark of conformity*
- [5] ISO/IEC Guide 53:2005, *Conformity assessment — Guidance on the use of an organization's quality management system in product certification*

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