

**ASME A18.1-2020**  
(Revision of ASME A18.1-2017)

# **Safety Standard for Platform Lifts and Stairway Chairlifts**

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**AN AMERICAN NATIONAL STANDARD**



**The American Society of  
Mechanical Engineers**

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Two Park Avenue • New York, NY • 10016 USA

Date of Issuance: February 26, 2021

The next edition of this Standard is scheduled for publication in 2023. This Standard will become effective 6 months after the Date of Issuance.

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# FOREWORD

The consensus committee that approved the Standard was balanced to ensure that individuals from competent and concerned interests have had an opportunity to participate.

This Standard is intended to serve as the basis for state, municipal, and other jurisdictional authorities in drafting regulations governing the installation, testing, inspection, maintenance, alteration, and repair of platform lifts and stairway chairlifts. It is also intended as a standard reference of safety requirements for the guidance of architects, engineers, insurance companies, manufacturers, and contractors, and as a standard of safety practices for owners and managers of structures where equipment covered in the scope of this Standard is used.

This Standard is available for public review on a continuing basis. This provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

Safety codes and standards are intended to enhance public health and safety. Revisions result from committee consideration of factors such as technological advances, new data, and changing environmental and industry needs. Revisions do not imply that previous editions were inadequate.

It should be pointed out that any governmental jurisdiction has authority over any particular installation. Inquiries dealing with problems of a local character should be directed to the proper authority of such jurisdiction. It is recommended that, prior to adoption, all pertinent state and local laws or ordinances be reviewed and where there is a conflict with any of the requirements of this Standard, an exception to such conflicting requirement be noted, quoting the section of the law that applies.

Equipment covered by this Standard was originally incorporated as a 1983 supplement to ANSI/ASME A17.1-1981, Safety Code for Elevators and Escalators. In ANSI/ASME A17.1b-1983, a new Part XXI covering private residence inclined stairway chairlifts and inclined and vertical wheelchair lifts was added. Part XX was added to cover these same devices installed in buildings other than private residences.

In 1996, as a result of the effort to harmonize the ASME A17.1 Code and the CAN/CSA-B44 Safety Code for Elevators, a new Main Committee on Platform Lifts and Stairway Chairlifts was established. The Committee developed the first edition, which incorporated Parts XX and XXI, as well as the applicable cross-references in ASME A17.1-1996, up to and including ASME A17.1a-1997.

The first edition of this Standard was approved by The American Society of Mechanical Engineers (ASME) Committee on Platform Lifts and Stairway Lifts, was approved and designated as an American National Standard by the American National Standards Institute (ANSI) on June 21, 1999, and issued on July 26, 1999. The ASME A18.1a-2001 Addenda was approved on January 30, 2001, and issued on March 26, 2001. The ASME A18.1b-2001 Addenda was approved on December 11, 2001, and issued on April 11, 2002.

The second edition of this Standard was approved by ANSI on July 29, 2003, and was issued on September 12, 2003. The third edition of this Standard was approved by ANSI on May 6, 2005, and was issued on November 29, 2005. The fourth edition of this Standard was approved by ANSI on July 3, 2008, and was issued on August 28, 2008. The fifth edition of this Standard was approved by ANSI on August 31, 2011, and was issued on October 31, 2011. The sixth edition of this Standard was approved by ANSI on July 10, 2014, and was issued on September 12, 2014. The seventh edition of this Standard was approved by ANSI on August 3, 2017, and was issued on October 5, 2017. The eighth edition of this Standard was approved by ANSI on June 18, 2020, and was issued on February 26, 2021.

# ASME A18 COMMITTEE

## Safety Standard for Platform Lifts and Stairway Chairlifts

(The following is the roster of the Committee at the time of approval of this Standard.)

### STANDARDS COMMITTEE OFFICERS

**W. Richardson**, *Chair*  
**D. W. Boydston**, *Vice Chair*  
**E. Dominguez**, *Secretary*

### STANDARDS COMMITTEE PERSONNEL

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<b>J. T. Herrity</b> , U.S. Department of the Navy, Naval Facilities Command	<b>A. DiGiovanni</b> , <i>Alternate</i> , Hoveround Corp.
<b>F. M. Hoch</b> , Inclinator Company of America	<b>T. Evans</b> , <i>Alternate</i> , Underwriters Laboratories of Canada
<b>R. S. Hultstrom</b> , Elevator Industry Work Preservation Fund	<b>R. J. Murphy</b> , <i>Alternate</i> , Garaventa Lift
<b>P. M. Isaac</b> , Gable Elevator	<b>T. E. O'Brien</b> , <i>Alternate</i> , Bruno Independent Living Aids, Inc.
<b>D. Kalgren</b> , KONE	<b>J. H. Burpee</b> , <i>Contributing Member</i> , State of Maine
<b>T. A. Kassens</b> , Bruno Independent Living Aids, Inc.	<b>G. L. Harmon</b> , <i>Contributing Member</i> , Retired
<b>S. Leathley</b> , Stannah Stairlifts	<b>C. McDilda</b> , <i>Contributing Member</i> , EEIS
<b>M. W. McKinley</b> , McKinley Elevator Corp.	<b>S. Mercier</b> , <i>Contributing Member</i> , Regie du Batiment du Quebec
<b>S. J. Mehalko</b> , Harmar Mobility, LLC	<b>J. L. Meyer</b> , <i>Contributing Member</i> , National Elevator Inspection Services, a Bureau Veritas Co.
<b>R. J. Munch</b> , Hoveround Corp.	<b>W. R. Page</b> , <i>Contributing Member</i> , Bruno Independent Living Aids, Inc.
<b>J. E. Newstrom</b> , Arrow Lift	<b>J. Rearick</b> , <i>Contributing Member</i> , Rearick and Co., Inc.
<b>W. Richardson</b> , Savaria Concord Lifts, Inc.	<b>C. D. Robinson</b> , <i>Contributing Member</i> , Elevator Inspection, LLC
<b>W. P. Rockhold</b> , ACME Home Elevator	
<b>J. R. Runyan</b> , State of Washington	

# CORRESPONDENCE WITH THE A18 COMMITTEE

**General.** ASME Standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by requesting interpretations, proposing revisions or a case, and attending Committee meetings. Correspondence should be addressed to:

Secretary, A18 Standards Committee  
The American Society of Mechanical Engineers  
Two Park Avenue  
New York, NY 10016-5990  
<http://go.asme.org/Inquiry>

**Proposing Revisions.** Revisions are made periodically to the Standard to incorporate changes that appear necessary or desirable, as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

**Proposing a Case.** Cases may be issued to provide alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee web page.

Requests for Cases shall provide a Statement of Need and Background Information. The request should identify the Standard and the paragraph, figure, or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

**Interpretations.** Upon request, the A18 Standards Committee will render an interpretation of any requirement of the Standard. Interpretations can only be rendered in response to a written request sent to the Secretary of the A18 Standards Committee.

Requests for interpretation should preferably be submitted through the online Interpretation Submittal Form. The form is accessible at <http://go.asme.org/InterpretationRequest>. Upon submittal of the form, the Inquirer will receive an automatic e-mail confirming receipt.

If the Inquirer is unable to use the online form, he/she may mail the request to the Secretary of the A18 Standards Committee at the above address. The request for an interpretation should be clear and unambiguous. It is further recommended that the Inquirer submit his/her request in the following format:

- |                         |   |
|-------------------------|---|
| Subject:                | Cite the applicable paragraph number(s) and the topic of the inquiry in one or two words.   |
| Edition:                | Cite the applicable edition of the Standard for which the interpretation is being requested.  |
| Question:               | Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. Please provide a condensed and precise question, composed in such a way that a "yes" or "no" reply is acceptable. |
| Proposed Reply(ies):    | Provide a proposed reply(ies) in the form of "Yes" or "No," with explanation as needed. If entering replies to more than one question, please number the questions and replies.   |
| Background Information: | Provide the Committee with any background information that will assist the Committee in understanding the inquiry. The Inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain proprietary names or information.                                 |

Requests that are not in the format described above may be rewritten in the appropriate format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

Moreover, ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the inquiry information submitted, it is the opinion of the Committee that the Inquirer should seek assistance, the inquiry will be returned with the recommendation that such assistance be obtained.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not “approve,” “certify,” “rate,” or “endorse” any item, construction, proprietary device, or activity.

**Attending Committee Meetings.** The A18 Standards Committee regularly holds meetings and/or telephone conferences that are open to the public. Persons wishing to attend any meeting and/or telephone conference should contact the Secretary of the A18 Standards Committee.

# ASME A18.1-2020

## SUMMARY OF CHANGES

Following approval by the ASME A18 Committee and ASME, and after public review, ASME A18.1-2020 was approved by the American National Standards Institute on June 18, 2020.

ASME A18.1-2020 includes the following changes identified by a margin note, **(20)**.

<i>Page</i>	<i>Location</i>	<i>Change</i>
1	1.3	(1) Definitions of <i>inspection and tests acceptance, periodic, and routine</i> deleted (2) Definitions of <i>performance area</i> and <i>Type A safeties</i> added (3) Definition of <i>inclined stairway chairlift</i> editorially revised
6	Table 1.5-1	(1) Entry for ANSI/ASSE A10.4 updated (2) Cross-references under "A18.1 References" updated to reflect revisions in text
7	Table 1.5-2	Revised
8	2.1	Revised
8	2.1.1.2	Revised in its entirety
9	2.1.2.7	Revised in its entirety
10	2.1.3.3	Revised in its entirety
12	2.1.4.4	Revised in its entirety
13	2.1.5.2	Revised
13	2.1.6	Added and former 2.1.6 through 2.1.10 redesignated
16	2.3.8	Revised
18	2.6.2	Revised
18	2.6.3	Editorially revised
18	2.6.5	Revised
18	2.6.9	Added
19	2.7.1	Revised
21	2.8.6	Revised
21	2.9.5	Revised
21	2.10.1	Revised
22	2.10.10	Revised in its entirety
23	2.11.1	Revised
23	2.11.2	Revised
23	2.12	Revised
25	3.3.1.7	Added
27	3.6.6	Revised
29	3.8.3.1	Revised
29	3.10.1	Revised
30	3.10.10	Revised in its entirety
31	3.11.1	Editorially revised

<i>Page</i>	<i>Location</i>	<i>Change</i>
31	3.11.2	Revised
31	3.11.3	Added
31	3.12	Revised
34	4.8.1.2	Revised
34	4.8.3.1	Revised
35	4.10.1	Revised
36	5.1.1.2	Revised in its entirety
39	5.3.8	Revised
40	5.6.3	Editorially revised
42	5.8.6	Revised
42	5.9.5	Revised
42	5.10.1	Revised
43	5.10.10	Revised in its entirety
44	5.12	Added
44	6.2.1.2	Revised
45	6.3.1.7	Added
45	6.3.5	Editorially revised
47	6.6.4.3	Editorially revised
48	6.8.1.2	Revised
48	6.8.4	Revised
49	6.10.1	Revised
50	6.10.10	Revised in its entirety
50	6.12	Added
53	7.8.1.2	Editorially revised
53	7.8.4	Revised
54	7.10.1	Revised
56	8.1.4.8	Subparagraph (c) editorially revised
57	8.1.7.2.1	Editorially revised
60	9.7	In the nomenclature, unit of measure for A revised
62	9.9	(1) Paragraph 9.9.1 deleted, subsequent paragraphs redesignated, and cross-references updated (2) Former paras. 9.9.2 and 9.9.3 revised
64	10	Revised in its entirety
66	11.1.2	Subparagraph (c) revised
67	Nonmandatory Appendix A	Added
68	Nonmandatory Appendix B	Added

# SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS

## 1 INTRODUCTION

### 1.1 Scope

**1.1.1 Equipment Covered by This Standard.** This safety Standard covers the design, construction, installation, operation, inspection, testing, maintenance, and repair of inclined stairway chairlifts and inclined and vertical platform lifts intended for transportation of a mobility-impaired person only. The device shall have a limited vertical travel, operating speed, and platform area. Operation shall be under continuous control of the user/attendant. The device shall not penetrate more than one floor. A full passenger enclosure on the platform shall be prohibited.

**1.1.2 Equipment Not Covered by This Standard.** Equipment not covered by this Standard includes, but is not limited to, the following:

(a) elevators, escalators, moving walkways, material lifts, and dumbwaiters within the scope of ASME A17.1-1997 and later editions

(b) personnel hoists within the scope of ANSI/ASSE A10.4

(c) manlifts within the scope of ASME A90.1

(d) powered platforms and equipment for exterior and interior building maintenance within the scope of ASME A120.1

(e) portable equipment

(f) amusement devices

(g) stage and orchestra lifts

**1.1.3 Application.** This Standard applies to new installations only, except [section 10](#), which applies to new and existing installations.

**1.1.4 Effective Date.** The requirements of this edition of the Standard are effective as of the date established by the local regulations of the authority having jurisdiction. Where the Standard has not been adopted by local regulation and a specific edition has not been stipulated by contractual agreement, compliance with this edition is recommended as of the effective date listed in the front of the document.

### 1.2 Purpose and Exceptions

The purpose of this Standard is to provide for the safety of life and limb, and to promote public welfare.

The provisions of this Standard are not intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety to those prescribed by this Standard, provided that there is technical documentation to demonstrate the equivalency of the system, method, or device.

The specific requirements of this Standard shall be permitted to be modified by the authority having jurisdiction based on technical documentation or physical performance verification to allow alternative arrangements that will assure safety equivalent to that which would be provided by conformance to the corresponding requirements of this Standard.

### 1.3 Definitions

(20)

This section defines various terms used in this Standard.

*alteration:* any change to equipment other than maintenance, repair, or replacement.

*approved:* acceptable to the authority having jurisdiction.

*authority having jurisdiction:* organization, office, or individual responsible for approving equipment. Where compliance with this Standard has been mandated by law, the “authority having jurisdiction” is the federal, state, or local department or individual so designated in the enacting legislation or administrative regulation.

*authorized personnel:* persons who have been instructed in the operation of the equipment and designated by the owner to manage the use of the equipment.

*building code:* an ordinance that sets forth requirements for building design and construction, or where such an ordinance has not been enacted, the International Code Council (ICC), International Building Code (IBC), and International Residential Code (IRC) are the code standards.

*cable, traveling:* see *traveling cable*.

*capacity:* see *rated load*.

*certified:* a certification by a testing laboratory, a professional engineer, a manufacturer, or a contractor that a device or an assembly conforms to the requirements of this Standard.