

ASME A120.1-2021
(Revision of ASME A120.1-2014)

Safety Requirements for Powered Platforms and Traveling Ladders and Gantries for Building Maintenance

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**

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FOREWORD

This Standard provides for the safe design of powered platforms for building maintenance, where window cleaning and related services are accomplished by means of suspended equipment at heights in excess of 35 ft (11 m) above a safe surface, e.g., grade, street, floor, or roof level.

The provisions of the Standard are intended to apply to all known systems used to support suspended maintenance equipment as well as the suspended equipment itself (either permanently installed or transportable equipment). Guidelines are also included for a building's structural support areas as well as the building surfaces that actually interface with the equipment.

The Standard does not apply to other suspended powered platforms used for remedial renovations or modifications to buildings. The safe use of these types of scaffolds is addressed by American National Standard ANSI A108. The A120.1 Standard also does not relate to any service performed by persons supported by equipment covered by any of the ANSI A92 Standards.

The purpose of this Standard is to ensure the protection of all powered-platform users as well as persons potentially exposed to use of the equipment. In developing this Standard, safety has been held as the primary consideration. The Standard requires that permanently installed or transportable equipment be properly designed by a qualified professional engineer, taking into account specific building features rather than attempting to accommodate the system to a building's structure and façade features that may not be suitable for its safe operation. In addition, care has been taken so as not to exclude or render obsolete any existing product or equipment.

Operation and maintenance instructions in this safety standard are intended for general applications. The equipment manufacturer and/or installer shall be consulted for specific operating or maintenance instructions.

This Standard reflects the evolution of a project begun in 1962 by the American National Standards Committee on Window Cleaning Safety, A39. At that time, the Committee recognized that a new method was being developed for cleaning fixed sash windows by means of a special scaffolding. In order to deal expertly with this new development, a new project was established, separate from that handled by the A39 Committee. Following a general conference, the American National Standards Committee on Powered Platforms, ANSI A120, was formed, with the National Safety Council acknowledged as sponsor. In 1965, the American Society of Mechanical Engineers (ASME) was approved as co-sponsor. In 1984, the Building Owners and Managers Association International was approved as secretariat.

A previous edition of the Standard, A120.1-1977, was administratively withdrawn in 1989. This Standard had established safety requirements for the design, construction, installation, inspection, and use of power-operated platforms for exterior building maintenance. The Standard did not apply to temporary equipment used for construction work or to devices raised and lowered manually.

A120.1-1992 was the result of joint action by participating organizations under the auspices of the American National Standards Institute (ANSI). That Standard was approved through two votes of the ANSI A120 Committee, at a meeting in New York City (October 17, 1991), and by letter ballot (dated December 30, 1991).

In 1995, ASME again assumed sponsorship of the Standard. ASME A120.1-1996 was approved by ANSI on April 17, 1996. ASME A120.1-2001 was approved by ANSI on July 3, 2001. ASME A120.1-2006 was approved by ANSI on September 20, 2006. ASME A120.1-2008 was approved by ANSI on July 16, 2008. ASME A120.1-2014 was approved by ANSI on March 4, 2014.

ASME A120.1-2021 was approved by ANSI on December 14, 2021.

ASME A120 COMMITTEE

Safety Requirements for Powered Platforms for Building Maintenance

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

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Secretary, A120 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.

Interpretations. Upon request, the A120 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 A120 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 A120 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 submitting 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 A120 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 A120 Standards Committee.

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ASME A120.1-2021

SUMMARY OF CHANGES

Following approval by the ASME A120 Committee and ASME, and after public review, ASME A120.1-2021 was approved by the American National Standards Institute on December 14, 2021.

ASME A120.1-2021 includes the following changes identified by a margin note, **(21)**.

<i>Page</i>	<i>Location</i>	<i>Change</i>
1	1.3.1	Last sentence added
2	1.5	Added and subsequent paragraphs redesignated
2	1.6	Updated
3	1.7	(1) Definitions of <i>automatic equipment hook (jib)</i> , <i>building maintenance unit (BMU)</i> , <i>continuous means of engagement</i> , <i>intermittent stabilization anchor (ISA)</i> , <i>jib</i> , <i>luffing</i> , <i>mast</i> , <i>obstacle</i> , <i>slewing</i> , <i>spreader bar</i> , <i>unmanned platform</i> , and <i>unmanned suspended equipment</i> added (2) Definitions of <i>failure</i> and <i>transportable equipment</i> revised
6	2.2	2.2.1 designation and page 2.2.2 added
6	2.3	Paragraphs 2.3.1 through 2.3.3.3 revised in their entirety
8	2.3.6	Added and subsequent paragraphs redesignated
9	3.1.1	Last paragraph added
10	3.1.2	Revised
10	3.1.4	Revised in its entirety
12	3.2.4	Last sentence in subpara. (a) revised
13	3.2.9	Added
13	Table 3.2.9-1	Added
15	3.5	Revised in its entirety
16	Figure 3.5.1-1	Added
20	3.7.4.10	Revised
22	3.7.5.10	Added
24	3.10.1.4	Revised
24	3.10.1.5	Revised
25	3.10.2	Subparagraph (b) revised
26	3.11.2.9	Added and subsequent paragraph redesignated
27	Table 4.3.2-1	Former Table 4.3.2 redesignated
28	5.1	Last paragraph added
28	5.1.2	Subparagraph (i) revised
29	5.1.3	Revised in its entirety
30	5.2.2	Revised
34	Mandatory Appendix II	Added
36	Nonmandatory Appendix A	Added

SAFETY REQUIREMENTS FOR POWERED PLATFORMS AND TRAVELING LADDERS AND GANTRIES FOR BUILDING MAINTENANCE

1 GENERAL RECOMMENDATIONS AND DEFINITIONS

1.1 Scope

This Standard establishes safety requirements for powered platforms (scaffolds) for buildings where window cleaning and related services are accomplished by means of suspended equipment at heights in excess of 35 ft (11 m) above a safe surface (e.g., grade, street, floor, or roof level). Additionally, this Standard establishes safety requirements for permanent traveling ladders and gantries (TLG).

It pertains to either permanently installed or transportable equipment meeting the requirements of this Standard.

Powered platforms and TLGs may be used or operated by one or more persons engaged in services such as normal building maintenance. The equipment may also be used for tasks such as caulking, metal polishing, reglazing, or other building repairs.

This Standard does not apply to other suspended powered platforms used for remedial renovations or modifications to buildings. The safe use of these scaffolds is included in ANSI A10.8-2001, Safety Requirements for Scaffolding.

This Standard does not relate to any service performed by persons supported by equipment covered by any of the ANSI A92 standards.

1.2 Purpose

The purpose of this Standard is to ensure the protection of powered-platform users and traveling ladder and gantry users, and persons exposed to equipment used with the previously described maintenance of buildings.

It is intended for use by architects, engineers, designers, manufacturers, inspectors, purchasers, building owners, and others associated with the installation of powered platforms and traveling ladders and gantries.

Additionally, it is recommended for use by enforcement agencies having jurisdiction over the installation of powered platforms and traveling ladders and gantries to ensure that the platforms meet the safety provisions of this Standard.

1.3 Application of This Standard

1.3.1 Applications. This Standard applies to the installation of all powered platforms and traveling ladders and gantries. Permanent powered platforms shall be provided on all buildings with vertical platform travel exceeding 300 ft (91 m). (21)

1.3.2 Deviations. Deviation from the requirements of this Standard may be granted by the enforcing authority if it is determined that a specific requirement creates practical difficulty or excessive hardship, or where the specific requirement prevents the use of a novel design, only when equivalent safety is provided.

1.3.3 Alterations

(a) Any existing building being serviced may continue to be serviced until the building is altered, requiring a modification of the installation. Alteration of the building and equipment modification shall then be made to comply with the applicable parts of this Standard.

(b) If the authority having jurisdiction believes that hazards exist to warrant a change in an existing installation, the authority may require compliance with any part of this Standard. If a qualified person deems that a hazard exists, the hazard shall be corrected, and the correction shall be in compliance with this Standard.

(c) Once a building permit is issued or modified, the current version of the Standard shall apply.

1.4 Applicable Units

This edition of the Standard uses U.S. Customary units with acceptable metric (SI) units shown in parentheses.

NOTE: The metric values stated may not be exact equivalents to the U.S. Customary units.

Information on the usage of SI units and their conversion from U.S. Customary units is contained in the IEEE/ASTM SI 10-1997, Standard for the Use of the International System of Units (SI): The Modern Metric System; or ASME Guide SI-1, Orientation and Guide for Use of SI (Metric) Units.