ASME HST-3–2022
(Revision of ASME HST-3–2017)

Performance Standard for Lever Hoists

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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This next edition of this Standard is scheduled for publication in 2027.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. Interpretations are published on the Committee web page and under http://go.asme.org/InterpsDatabase. Periodically certain actions of the ASME HST Committee may be published as Cases. Cases are published on the ASME website under the HST Committee Page at http://go.asme.org/HSTcommittee as they are issued.

Errata to codes and standards may be posted on the ASME website under the Committee Pages to provide corrections to incorrectly published items, or to correct typographical or grammatical errors in codes and standards. Such errata shall be used on the date posted.

The HST Committee Page can be found at http://go.asme.org/HSTcommittee. There is an option available to automatically receive an e-mail notification when errata are posted to a particular code or standard. This option can be found on the appropriate Committee Page after selecting "Errata" in the "Publication Information" section.

The American Society of Mechanical Engineers
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FOREWORD

This Standard is one in a series that provides performance requirements for hoists and was originally issued in 1985. It was developed by the ASME HST Standards Committee, Hoists — Overhead. It is intended to serve as a guide to manufacturers of the equipment and to the purchasers and users of the equipment.

Standards in this series are:

HST-1 Performance Standard for Electric Chain Hoists
HST-2 Performance Standard for Hand Chain Manually Operated Chain Hoists
HST-3 Performance Standard for Lever Hoists
HST-4 Performance Standard for Overhead Electric Wire Rope Hoists
HST-5 Performance Standard for Air Chain Hoists
HST-6 Performance Standard for Air Wire Rope Hoists

This edition contains a Nonmandatory Appendix B that provides guidance for the manufacturer and the end user to assist in configuring a hoist to make it suitable for use in a potentially explosive environment.

The requirements of this Standard shall be applied with the requirements of ASME B30.21 for the products covered.

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

This Standard was approved by the American National Standard Institute as an American National Standard on March 31, 2022.

ASME HST COMMITTEE
Hoists — Overhead

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

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CORRESPONDENCE WITH THE HST 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, HST 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.

This Standard is always open for comment, and the Committee welcomes proposals for revisions. 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 HST 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 HST 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 HST 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 HST 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 HST Standards Committee. Future Committee meeting dates and locations can be found on the Committee Page at http://go.asme.org/HSTcommittee.

ASME HST-3-2022
SUMMARY OF CHANGES

Following approval by the ASME HST Committee and ASME, and after public review, ASME HST-3-2022 was approved by the American National Standards Institute on March 31, 2022.

ASME HST-3-2022 includes the following changes identified by a margin note, **(22)**.

Page	*Location*	*Change*
1	Section 3-0.1	Former subpara. (d)(5) deleted and subsequent subparagraph redesignated and revised
1	Section 3-0.2	(1) Definitions of *load*, *qualified person*, *rated load*, *shall*, and *should* revised (2) Definition of *may* added
4	Figure 3-0.1-2	Title revised
5	Figure 3-0.1-3	Title revised
5	Figure 3-0.1-4	Title revised
5	Section 3-0.3	Updated
6	Section 3-0.4	Title revised and second paragraph added
7	Section 3-1.2	Final paragraph added
7	Section 3-1.5	Added
13	A-1.4	Updated
14	A-2.2	First paragraph revised
18	A-5.1	Subparagraph (a) revised
19	Nonmandatory Appendix B	Added

Chapter 3-0
Scope, Definitions, References, and Appendix

SECTION 3-0.1: SCOPE (22)

(a) This Standard establishes performance requirements for chain, wire rope, and web strap lever hoists for lifting, pulling, and tensioning applications (see Figures 3-0.1-1 through 3-0.1-4).

(b) The specifications and information in this Standard apply to lever hoists of the following types:

(1) ratchet-and-pawl operation with

(-a) roller-type load chain lifting medium

(-b) welded-link-type load chain lifting medium

(-c) web-strap-type lifting medium

(-d) wire-rope-type lifting medium

(2) friction-brake operation with

(-a) roller-type load chain

(-b) welded-link-type load chain

(-c) web-strap-type lifting medium

(-d) wire-rope-type lifting medium

(c) Specially insulated lever hoists designed for handling high-voltage lines are not covered by this Standard.

(d) This Standard is applicable to hoists manufactured after the date on which this Standard is issued. This Standard is not applicable to

(1) damaged or malfunctioning hoists

(2) hoists that have been misused or abused

(3) hoists that have been altered without authorization of the manufacturer or a qualified person

(4) hoists used for lifting or supporting people

(5) hoists used for marine and other applications as required by the Department of Defense (DOD) unless Nonmandatory Appendix A has been invoked.

The requirements of this Standard shall be applied together with the requirements of ASME B30.21. Refer to ASME B30.21 for requirements pertaining to marking, construction, installation, inspection, testing, maintenance, and operation.

SECTION 3-0.2: DEFINITIONS (22)

abnormal operating conditions: environmental conditions that are unfavorable, harmful, or detrimental to the operation of a hoist, such as excessively high or low ambient temperatures; exposure to weather, corrosive fumes, dust-laden or moisture-laden atmospheres; and hazardous locations.

brake: a device, other than a motor, used for retarding or stopping motion of the load by friction or power means (see also *load-controlling mechanism*).

hazardous (classified) locations: locations where fire or explosion hazards may exist. Locations are classified depending on the properties of the flammable vapors, liquids, gases, or combustible dust or fibers that may be present and the likelihood that a flammable or combustible concentration or quantity is present (refer to ANSI/NFPA 70).

headroom (closed height): the distance between the saddle of the suspension hook and the saddle of the load hook when the load hook is in its fully retracted position (see Figure 3-0.1-1).

idler sprocket: a freely rotating device that changes the direction of the load chain, rope, or web strap.

lever hoist: a manually lever-operated device used to lift, lower, or pull a load and to apply or release tension.

lever pull: the average force, lbf (kN), exerted by the operator at the end of the operating lever (handle) to lift or pull rated load.