

American National Standard for

TRANSPORT PLATFORMS



SCAFFOLD & ACCESS
INDUSTRY ASSOCIATION



PREVIEW ONLY

Page Intentionally Left Blank

ANSI/SAIA A92.10-2023

Date of Publication: March 1, 2023

This Standard will become effective: March 1, 2024

This Standard was approved by the American National Standards Institute: February 10, 2023

The effective date is established by the standards developer and not by the American National Standards Institute.

This Standard was developed under procedures accredited as meeting the criteria for American National Standards (ANS). The Consensus Committee that approved the Standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed Standard was made available for public review and comment which provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public at large.

The Scaffold & Access Industry Association, Inc. (SAIA) does not “approve,” “rate,” or “endorse” any item, construction, proprietary device or activity.

The Scaffold & Access Industry Association, Inc. (SAIA) does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document and does not undertake to ensure anyone utilizing a standard against liability for infringement of any applicable Letters Patent, nor assume any such liability. Users of this Standard are expressly advised that the determination of the validity of any such patent rights, and the risk of the infringement of such rights, is entirely their own responsibility.

Participation by federal agency representative(s) or person(s) affiliated within the industry is not to be interpreted as government or industry endorsement of this standard.

The Scaffold & Access Industry Association, Inc. (SAIA) accepts responsibility for only those interpretations issued in accordance with governing ANSI Essential Requirements which preclude the issuance of interpretations by individual volunteers.

**ANSI/SAIA
A92.10-2023**

**AMERICAN NATIONAL STANDARD
for Transport Platforms**

**Secretariat:
Scaffold & Access Industry Association, Inc.**

**Approved: February 10, 2023
American National Standards Institute, Inc.**

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered and a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of approval. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by:
Scaffold & Access Industry Association, Inc.
400 Admiral Boulevard
Kansas City, MO 64106
816.595.4860 • www.saiaonline.org • info@saiaonline.org

Copyright ©2023 by the Scaffold & Access Industry Association Inc.
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system, or otherwise, without the prior written permission of the publisher.

Printed in the United States of America

Foreword

This foreword is not part of the American National Standard for A92.10-2023.

This standard is one of a series on aerial platforms developed under the committee procedures of the American National Standards Institute. The A92 standards committee was organized by the Institute in 1948. The Scaffold & Access Industry Association, Inc. serves as Secretariat.

The primary objective of this standard is to prevent accidents associated with the use of Transport Platforms by establishing requirements for design manufacture, installation, maintenance, performance, use and training.

Interpretations and Suggestions for Improvement

All inquiries requesting an interpretation of the Committee's approved American National Standards shall be in writing and directed to the Secretariat. The A92 Committee shall approve the interpretation before submission to the inquirer. Only the A92 Committee is authorized to provide any interpretation of this standard.

All requests for interpretation and all suggestions for improvement shall be forwarded in writing to the ASC A92 Committee, c/o Secretariat ~ Scaffold & Access Industry Association, 400 Admiral Boulevard, Kansas City, MO 64106.

The A92 Committee solicits comments on and criticism of the requirements of the standards. The standards will be revised from time to time when necessary or desirable, as demonstrated by the experience gained from the application of the standards. Proposals for improvement of this standard will be welcome. Proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed rationale for the proposal including any pertinent documentation.

This Standard was processed and approved for submittal to ANSI by Accredited Standards Committee A92 - Aerial Platforms. The ASC A92 Main Committee's approval of the standard does not necessarily imply that all committee members voted for its approval.

At the time the ASC A92 committee approved this standard, the A92 - Aerial Platforms Committee had the following members:

Joshua Chard, Ph.D., Chairman
Frank Bonesteel, Vice-Chairman
DeAnna Martin, Secretary

Alimak Group USA, Inc.....	Gregory Janda/Tony Dragone
Altec Industries Inc.....	Bryan Hall/Robert Crowder
Altec Neuco	Butch Barron/Eric Lumberg
American Rental Association	John McClelland/Kevin Gern
Arrowhead Aerial Products, Inc.....	Sharon McCarty

Arrowhead Product Development, Inc	Gary Werkhoven
Aspen Aerials, Inc.....	Patrick Clark/Justin Laskowski
Association of Equipment Manufacturers (AEM).....	Jeff Jurgens
Beta Max Inc.	Dave Reinert
Blazing Technologies.....	Robert Backer
Blue & White Product Safety Consultants.....	Stephen Forgas
Bonesteel Construction Company	Frank Bonesteel
BrandSafway	Don Allen
Brent Hoover LLC	Brent Hoover
Brewington & Company	John Brewington
CED Technologies, Inc.	George Wharton
Century Elevators.....	Eric A. Schmidt, P.E.
CPWR The Center for Construction Research and Training	Michael KassmanGary Gustafson
Diversified Inspections/ ITL.....	Jerry Tanner/Ralph Goodwin
Duke Energy Carolina East	David Benson/Sammy Nifong
Duke Energy Florida	Donald Barrows
Dur-A-Lift Inc.....	Douglas Brinkhous
Eckstine and Associates, Inc.....	Dennis Eckstine/Matthew Eckstine
Elliott Equipment Company	Alan Calta/Matt Gill
Entergy Services, LLC	Carey Stallings
EPRO Safety Solutions	Albert Eccles
Evulich & Associates	Barris Evulich
ExxonMobil.....	Frank Radio
EZ Scaffold.....	James Hinton
Florida Power and Light Company	Glenn Martin
Fraco Products Ltd.	Francois Villeneuve/Shanon Beekman
GB MEWP Consulting, LLC.....	Carl Kishline
Genie Industries.....	Jason Berry/Harrison Jenkins
Global Rentals	Joshua Chard, Ph.D.
Global Safety & Equipment Inc.	Geoffrey Arther
H&E Equipment Services, Inc.	Frankie Wynn
Haulotte Group	Kevin Gildea, P.E.
Heath and Associates	Frederick Heath
Helix Electrix	Christopher Hughes/Eric Simmons
Herc Rentals	Jordan W. Thomas
Hubbell Power Systems, Inc.....	Dustin Sullivan
Hugg & Hall Equipment.....	Bob Hendricks
Hy-Brid Lifts/ Custom Equipment	Ben Froland
Hydro Mobile Inc.....	Kevin O'Shea/Sony Trudel
IBEW Local 164	Michael DeGiglio
International Masonry Institute (IMI).....	David Wysocki/Donald Borchert
IPAF, Ltd.....	Tony Groat/Dan Moss
IREX Contracting Group.....	Tom Pokornik
IVES Training & Compliance Group Inc.	Robert Vetter

JLG Industries Inc.	Mark Vaughn/Devin Mellott
KHL Group/Access, Lift & Handlers Magazine	Tony Radke
Klimer Platforms Inc.	James Gordon/Ihton Frederick
Lee Electrical Construction Inc.	John Cook/ Jason Lee
Lewis Tree Service	Samuel Luna
Lift-A-Loft Corporation	Doug Jeurissen
Lynn Ladder & Scaffolding	Michael Naglieri
McClain & Co., Inc.....	Daniel McClain
MEC Aerial Work Platforms	Gary Crook/Mark Kroeker
MEWPs Inc.	Richard Staples/Scott Loura
ML Cranes & Equipment.....	Mickey Hodges
Moog USA Inc.	Martin Schweizer/Cindy Watson
Niftylift Inc.	Steven Redding/James Clare
OEM Controls, Inc	Paul Rohaly/Robert Wuertz
Palfinger North America, LLC.....	Bobby Taylor/Will Urban
Phenix Technologies.....	Mark Miller
Pike Electric, LLC.....	Andy Cleary/Kevin Watson
Piranha Safety	Eric Moran/Homer Kyle
Power Equipment Leasing Co, Inc	Tracy Schroeder/Kyle Schroeder
ReechCraft Inc.	Jason Solhjem/Shane Nickel
Reynolds Engineering Services Inc.	Stephen Reynolds
RLH Consulting LLC	Richard Hoffelmeyer
Salt River Project (SRP)	Brendan King/Jason Kleiber
SEA, LTD	Brian Boggess
Skanska USA Building	Spencer Hasenkopf
Skyjack Inc.	Ian McGregor/Diego Cardenas
Snorkel International LLC	Jeff Eckhardt, P.E./Tony Deatherage
Southern California Edison	Randy Stone
Southern Company - Alabama Power Company	Herman Scott/Jenny Taylor
Sunbelt Rentals.....	Brian Clark
Sunstate Equipment Co.	Jake Kidd
Superior Scaffold Services Inc.	Shawn MacDonald
Technology International Co.....	Michael Zhou
Terex South Dakota, Inc.....	Dan Brenden/Craig Ries
Terex Utilities, Inc.	Nick Cammisa/David Sexton
TESCO Equipment LLC.....	Alan Wagamon
THD Rental	Donald Satterfield
The Boeing Company	Matthew Hastings
The Townsend Corporation	Mark Kimbrough
The VON Corporation	Martin von Herrmann
Time Manufacturing Company	James Christian/Brian Davis
TNT Equipment Co.	Michael Solomon
Tower Safety & Instruction	Kathy Gill
TrainMOR / Morrison Industrial Equipment	Scott Ahner

Tutus LLC	Forrest Hester
United Rentals	Teresa Kee/Russ Jeansonne
Utility Truck Equipment & Parts LLC	John Mlaker
Vollmer-Gray Engineering	Paul Guthorn
Waco Boom Company Ltd	Jonathan Woods/Bob Simon
Wiss, Janney, Elstner Associates Inc.	Jason Kamman
Xtreme Manufacturing	Jake Adkins/Jonathan Rasa
Zachry Group	Randy Alanis

Subcommittee A92.10 Standards for Transport Platforms, which developed this standard, had the following members:

Gregory Janda

David Reinert

Ted Beville

Don Allen

Eric Schmidt

James Hinton

Francois Villeneuve

Shanon Beekman

Brett Friedel

Bernard (Barney) Hanna

Kevin O'Shea

Sony Trudel

Daniel J (Dan) Moss

James Gordon

Ihton Frederick

Jason Solhjem

Sam Ingber

Shawn MacDonald

Michael Solomon

Contents

Section	Page
1.Scope, purpose, and application	1
1.9 Referenced & Related Standard.....	3
1.10 Definitions	4
2.Hazards.....	11
3.Safety requirements and/or measures	13
3.1 Structural and stability calculations.....	13
3.1.1 General.....	13
3.1.2 Loads and forces	13
3.1.3 Load combinations and safety factors	18
3.1.4 Structural calculations	19
3.1.5 Stability calculations	20
3.2 General machine requirements, base frame, chassis, and mast	21
3.2.1 General machine requirements.....	21
3.2.2Base frame.....	22
3.2.3 Mast structure	23
3.2.4 Mast design with regard to erection	24
3.2.5 Mast ties	24
3.3 Platform	24
3.3.1 General.....	24
3.3.2 Guarding.....	25
3.3.3 Access.....	26
3.4 Drive systems for elevation.....	27
3.4.1 General.....	27
3.4.2 Rack and pinion system.....	27
3.4.3 Screw Drive System.....	29
3.4.4 Ratchet Drive System	30
3.4.5 Braking system.....	31
3.4.6 Buffers	32
3.5 Means to prevent the platform from failing with overspeed	33
3.5.1 General.....	33
3.5.2 Overspeed safety device and overspeed detector.....	33
3.5.3 Multiple drive units.....	34
3.6 Means for emergency, lowering and raising the transport platform	35
3.7 Electrical systems.....	36
3.7.1 General.....	36
3.7.2 Safety switches	37
3.8 Control systems	37
3.9 Drive systems powered by internal combustion engines	38
3.10 Hydraulic systems	38
3.11 Special requirements for safety devices that depend on auxiliary circuits	40
3.12 Travel limit switches	40
3.13 Controls.....	41
4.Verification of safety requirements and/or measures.....	43
4.1 Design check	43
4.2 Practical tests.....	43

4.2.1 General.....	43
4.2.2 Overload test	43
4.2.3 Functional tests	43
5 Information for use	45
5.1 Operating manual	45
5.1.1 Comprehensive information	45
5.1.2 Content of the operating manual	45
5.2 Marking.....	50
5.2.1 General.....	50
5.2.2 Information, non-varying.....	50
5.2.3 Information, varying.....	51
5.3 Responsibilities of dealers	51
5.4 Responsibilities of owners.....	55
5.5 Responsibilities of users	59
5.6 Responsibilities of operators.....	67
5.7 Responsibilities of lessors.....	73
5.8 Responsibilities of lessee	73
5.9 Responsibilities of brokers	74
Footnote	75
Annex A Informative for Structural calculation principles	76
Annex B Minimum approach distances	78

ANSI/SAIA A92.10-2023
American National Standard for Transport Platforms

1. Scope, Purpose, and Application

1.1 Scope and Purpose

This standard applies to Transport Platforms that are primarily used as a tool of the trade to vertically transport authorized persons, along with materials and necessary tools, to various access levels on a building or structure for construction, renovation, maintenance, or other types of work. (See Figure I and Figure II on the following pages for typical examples of equipment covered). Some of the key requirements of this standard include, but are not limited to the following:

- a) Only authorized persons defined by this Standard are permitted to be on the Transport Platform. The authorized persons shall have the necessary knowledge or experience or shall have received training prior to being on the Transport Platform. As a minimum, the training for Transport Platforms shall be the same as training requirements for scaffolds as set out in OSHA-CFR Subpart L, Scaffolds -1926.454 -Training Requirements.1 (end of document)
- b) the maximum number of authorized persons permitted on the platform shall be limited to the number equaling no more than 50% of the platform rated load capacity at 200 lbs per person
- c) the maximum vertical travel speed of the Transport Platform shall not exceed 40 ft/min (12 m/min)
- d) the Transport Platform shall operate at a safe minimum travel distance of 18 in. (0.46 m) from the building or structure
- e) the Transport Platform shall be operated from controls located on the platform by an authorized person trained by a competent person

1.2 Application

This standard is applicable to transport platforms elevated by a mechanical drive system and guided by and moving along their supporting masts, where the mast requires lateral restraint from separate supporting structures. This standard is applicable to any combination of the following alternatives:

- a) one or more masts
- b) mast of fixed or variable length
- c) vertical masts or inclined between 00 and 300 to the vertical
- d) driven using electric, pneumatic, hydraulic motors or internal combustion engines