

ANSI/ASSP A10.31-2019

Safety Requirements, Definitions and
Specifications for Digger Derricks



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS



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**American National Standard
Construction and Demolition Operations**

**Safety Requirements, Definitions and
Specifications for Digger Derricks**

Secretariat

American Society of Safety Professionals
520 N. Northwest Highway
Park Ridge, Illinois 60068

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Foreword (This Foreword is not a part of American National Standard A10.31-2019.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

- A10.1 Pre-Project & Pre-Task Safety & Health Planning
- A10.2 Safety, Health and Environmental Training (under development)
- A10.3 Powder-Actuated Fastening Systems
- A10.4 Personnel Hoists and Employee Elevators
- A10.5 Material Hoists
- A10.6 Demolition Operations
- A10.7 Use, Storage, Handling and Site Movement of Commercial Explosives and Blasting Agents
- A10.8 Scaffolding
- A10.9 Concrete and Masonry Construction
- A10.10 Temporary and Portable Space Heating Devices
- A10.11 Personnel Nets
- A10.12 Excavation
- A10.13 Steel Erection
- A10.15 Dredging
- A10.16 Tunnels, Shafts and Caissons
- A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
- A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
- A10.19 Pile Installation and Extraction Operations
- A10.20 Ceramic Tile, Terrazzo and Marble Work
- A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities
- A10.22 Rope-Guided and Non-Guided Workers' Hoists
- A10.23 Safety Requirements for the Installation of Drilled Shafts
- A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
- A10.25 Sanitation in Construction
- A10.26 Emergency Procedures for Construction Sites
- A10.27 Hot Mix Asphalt Facilities
- A10.28 Work Platforms Suspended from Cranes or Derricks
- A10.29 Pre-Planning, Installation, Inspection and Use of Fall Protection for Construction and Demolition (under development)
- A10.30 Installation of Anchors and Micropiles (under development)
- A10.31 Digger-Derricks
- A10.32 Personal Fall Protection Used in Construction and Demolition Operations
- A10.33 Safety and Health Program Requirements for Multi-Employer Projects
- A10.34 Public Protection
- A10.35 Pressure Testing of Steel and Copper Piping Systems (under development)
- A10.37 Debris Nets
- A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
- A10.39 Construction Safety and Health Audit Program
- A10.40 Reduction of Musculoskeletal Problems in Construction
- A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
- A10.43 Confined Spaces in Construction and Demolition Operations
- A10.44 Lockout/Tagout in Construction
- A10.46 Hearing Loss Prevention
- A10.47 Highway Construction Safety
- A10.48 Communication Structures
- A10.49 Control of Health Hazards

One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee standards. If these standards are adopted for governmental use, the reference of other national codes or standards in individual volumes may be changed to refer to the corresponding regulations.

Normative Requirements

This standard uses the single column format common to many international standards. The normative requirements appear aligned to the left margin. To meet the requirements of this standard, machinery, equipment and process suppliers and users must conform to these normative requirements. These requirements typically use the verb "shall."

NOTE: The informative or explanatory notes in this standard appear indented, in italics, in a reduced font size, which is an effort to provide a visual signal to the reader that this is an informative note, not normative text, and is not to be considered part of the requirements of this standard; this text is advisory in nature only. The suppliers and users are not required to conform to the informative note. The informative note is presented in this manner in an attempt to enhance readability and to provide explanation or guidance to the sections they follow.

Revisions: The A10 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant section number(s), the proposed wording and the reason for the proposal. Pertinent documentation would enable the A10 Committee to process the changes in a more-timely manner.

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No one but the A10 Committee (through the A10 Secretariat) is authorized to provide any interpretation of this standard.

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Standard Approval: This standard was processed and approved for submittal to ANSI by the American National Standards Committee on Safety in Construction and Demolition Operations, A10. Approval of the standard does not necessarily imply (nor is it required) that all Committee members voted for its approval. At the time ANSI approved this standard, the A10 Committee had the following members:

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AMERICAN NATIONAL STANDARD A10.31 SAFETY REQUIREMENTS, DEFINITIONS AND SPECIFICATIONS FOR DIGGER DERRICKS

1. Scope, Purpose, Requirements, Application and Exceptions

1.1 Scope

1.1.1 Equipment Covered. This standard applies to special multipurpose vehicle-mounted machines, commonly known as digger derricks. These machines are primarily designed to accommodate components that dig holes and/or set poles and position materials and apparatus.

NOTE: Depending on their use, digger derricks may be defined as a crane by government regulations, and operator's certification may be required.

1.1.2 Equipment Excluded. Excluded from this standard are general-purpose cranes, designed only for lifting service and machines primarily designed for digging holes.

1.1.3 Uniform Specification Data. This standard establishes uniform requirements for design, specifications and dimensions.

1.1.4 Responsibilities. This standard defines the respective responsibilities of the manufacturer, dealer, installer, owner, user, operator, lessor or lessee, and broker of the digger derrick.

1.2 Purpose

This standard applies to the establishment of criteria for design, manufacture, testing, inspection, installation, maintenance, use, training and operation of vehicle-mounted digger derricks to achieve the following objectives:

1. prevention of personal injuries and accidents
2. uniformity in ratings
3. understanding by manufacturers, dealers, installers, owners, users, operators, lessors or lessees, and brokers of their respective responsibilities

1.3 Requirements

The requirements of this standard shall be met or exceeded.

1.4 Application

The design and manufacturing requirements of this standard apply to all digger derricks manufactured on or after the effective date. All other provisions apply to new or existing units in use on or after the effective date of this standard, regardless of their date of manufacture.

2. Referenced and Related Standards

2.1 Referenced American National Standards

This standard is intended to be used in conjunction with the following standards.

ANSI/SAIA A92.2-2015, *Vehicle Mounted Elevating and Rotating Aerial Devices*

ANSI/NEMA Z535.1-2017, *Safety Colors*

ANSI/NEMA Z535.3-2017, *Criteria for Safety Symbols*

ANSI/NEMA Z535.4-2017, *Product Safety Signs and Labels*