

AMERICAN NATIONAL STANDARD

ANSI/ASSE Z359.16-2016
Safety Requirements for
Climbing Ladder Fall Arrest Systems

Part of the Fall Protection Code



AMERICAN SOCIETY OF
SAFETY ENGINEERS



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American National Standard

**Safety Requirements for
Climbing Ladder Fall Arrest Systems**

Secretariat

American Society of Safety Engineers

529 N. Northwest Highway
Park Ridge, Illinois 60068

Approved November 2, 2016

American National Standards Institute, Inc.

American National Standard

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Published February 2017 by:

American Society of Safety Engineers
520 N. Northwest Highway
Park Ridge, Illinois 60068
(847) 699-2929 • www.asse.org

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Printed in the United States of America

Foreword (This Foreword is not a part of American National Standard Z359.16-2016.)

This standard, national in scope, was developed by an Accredited Standards Committee functioning under the procedures of the American National Standards Institute, with the American Society of Safety Engineers (ASSE) as secretariat.

It is intended that every employer whose operations fall within the scope and purpose of the standard will adopt the guidelines and requirements detailed in this standard.

The need for this standards activity grew out of the continuing development of a series of fall protection-related standards. The focus is to tie the elements of those standards together and provide the tools with which employers may develop the programs that incorporate those elements. This standard also brings together the administrative requirements of those fall protection standards. It should be noted, as in all Z359-series standards, that this standard applies to occupational activities. It does not apply to sports activities such as mountaineering.

Neither the standards committee, nor the secretariat, states that this standard is perfect or in its ultimate form. It is recognized that new developments are to be expected, and that revisions of the standard will be necessary as the state-of-the-art progresses and further experience is gained. It is felt, however, that uniform guidelines for fall protection programs are very much needed and that the standard in its present form provides for the minimum criteria necessary to develop and implement a comprehensive managed fall protection program.

The Z359 Committee acknowledges the critical role of design in influencing the use of proper fall protection equipment. Designs which eliminate fall hazards through the proper application of the hierarchy of safety controls are the preferred method for fall protection. Design deficiencies often increase the risk for employees who may be exposed to fall hazards: examples are 1) lack of rail systems to prevent falls from machines, equipment and structures; 2) failure to provide engineered anchorages where use of personal fall arrest systems are anticipated; 3) no provision for safe access to elevated work areas; 4) installation of machines or equipment at heights, rather than floor/ground level to preclude access to elevated areas; 5) failure to plan for the use of travel restriction or work positioning devices. To that end, this series of standards also provides guidance for design considerations for new buildings and facilities.

Basic fall safety principles have been incorporated into these standards, including hazard survey, hazard elimination and control and education and training. The primary intent is to ensure a proactive approach to fall protection. However, the reactive process of accident investigation is also addressed to ensure that adequate attention is given to causation of falls.

The Z359 Committee solicits public input that may suggest the need for revisions to this standard. Such input should be sent to the Secretariat, ASC Z359, American Society of Safety Engineers, 520 N. Northwest Highway, Park Ridge, Illinois 60068.

This standard was developed and approved for submittal to ANSI by the American National Standards Committee on Standards for Fall Protection, Z359. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z359 Committee had the following members:

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STANDARD REQUIREMENTS

1. SCOPE, PURPOSE, APPLICATION, EXCEPTIONS AND INTERPRETATIONS

1.1 Scope. This standard establishes requirements for the performance, design, marking, qualification testing, instructions for use, inspection, maintenance, storage and removal from service of vertically oriented Climbing Ladder Fall Arrest Systems (CLFAS) consisting of flexible and rigid carriers with multiple attachment points and associated carrier sleeves for users within the capacity range of 130 to 310 pounds (59 to 141kg). See Figure 1 for examples of CLFAS equipment.

1.2 Purpose and Application.

1.2.1 This standard applies to manufacturers, distributors, purchasers and authorized persons that use climbing ladder fall arrest systems in occupations requiring personal protection against falls from heights. It applies only to installations that are vertical (90 +/- 1 degrees) when viewed from the front elevation and within 15 degrees of vertical when viewed from the side elevation and that do not slope towards the climber. See Figure 2 for installation configurations.

1.2.2 Before any equipment shall bear the marking "Z359.16" or be represented in any way as being in compliance with this standard, all applicable requirements of this standard shall be met through qualification and verification testing according to ANSI/ASSE Z359.7, *Qualification and Verification Testing of Fall Protection Products*.

1.2.3 Unless otherwise specified, the values stated in this standard are expressed as nominal values. Except for temperature limits, values which are not stated as maxima or minima shall be subject to a tolerance of +/- 5%. Unless otherwise specified, the ambient temperature for testing shall be between 35°F (1.7°C) and 100°F (37.8°C) and the temperature limits shall be subject to an accuracy of +/- 2°F (+/- 1°C).

1.2.4 In this standard, values for measurement are followed by an equivalent in parentheses, but only

EXPLANATORY INFORMATION

(Not part of American National Standard Z359.16)

E1.2.1 *This is a voluntary consensus standard. The legal requirements for protection against falls from heights are established by applicable regulatory bodies governing occupational safety.*