

GUARDIAN

FALL PROTECTION



TESTED IN Z359.7/ISO 17025
COMPLIANT LAB

THE NEW ANSI Z359.18-2017 ANCHORAGE CONNECTOR STANDARD

The following is a brief overview of the new ANSI Z359.18-2017 Safety Requirements for Anchorage Connectors for Active Fall Protection Systems standard, and Guardian's decision to seek compliance with the standard. For information on some of the most commonly asked question we've received, please see our Z359.18-2017 FAQ [here](#).

HISTORY

The American National Standards Institute (ANSI) was founded in 1918 to standardize development of certain areas of manufacturing, safety, and engineering. It is composed of safety professionals, engineers, and experts from a variety of

industries. In 1992, ANSI released Z359.1 *Safety Requirements for Personal Fall Arrest Systems, Subsystems, and Components*, which addressed fall arrest systems in non-construction occupations. Since its initial release, ANSI has twice reviewed and updated Z359.1, and in 2007, ANSI expanded its Fall Protection Code by releasing individual product standards to better address the different elements of fall protection systems in greater detail. ANSI standards reflect the most current performance and manufacturing guidelines for fall protection equipment, and bodies such as OSHA often refer to their standards when drafting subsequent regulatory legislation. Unlike with OSHA standards, manufacturer compliance with ANSI standards is voluntary, but is considered

desirable given the additional technical guidance provided. As a world leader in fall protection safety, Guardian Fall Protection seeks to maintain 100% compliance with ANSI standards for all of its products, and follows the recommendations of the committee, including the new requirements found in Z359.18-2017 *Safety Requirements for Anchorage Connectors for Active Fall Protection Systems*. Until 2017, fall protection anchorage connector performance requirements were governed by the legally enforceable OSHA 1926 Subpart M, and voluntary ANSI Z359.1-2007 standards.

From a practical standpoint concerning anchorage connectors, these two standards are essentially identical. Both require anchorage connectors to withstand a static 5,000 lbs. load, while OSHA provides an alternative guideline of requiring the anchorage connector to withstand a 2:1 safety factor relative to the potential impact energy of a falling worker. Over time, ANSI recognized that the requirements found in Z359.1-2007, while still helping to improve worker safety, were "...overly simplistic..." and went back to the testing lab to create a standard that, "...more closely represents actual use of the anchorage connectors." The result is Z359.18-2017.

THE TRANSITION

The release of Z359.18 coincides with the restructuring of Z359.1 away from a product standard (to an overview document, instead), and the introduction of individual standards for the component parts of fall protection products. As part of this shift away from Z359.1 as a product standard, the latest 2016 release of Z359.1 prohibits any product from being labeled as meeting Z359.1 after the effective date of the standard (originally 8/2017 but later amended to 2/2018). For any manufacturer to claim an anchorage connector is ANSI compliant, the anchorage connector must be tested against, and pass every applicable

element of the new Z359.18-2017 standard; Z359.1 compliance is no longer permitted. Please note, however, that Z359.18 is not retroactively applicable. Any anchor currently bearing the Z359.1-2007 mark is still fully compliant and safe for use, including those already installed, or those that may be purchased, while Z359.18 testing is conducted.

ANCHOR TYPES

According to the American Society of Safety Engineers (ASSE), who, along with committee members representing various manufacturers (including Guardian), draft ANSI standards, Z359.18-2017, "...represents a significant step forward in the realm of anchorage connectors." Instead of treating all anchors the same, it introduces three new "types" of anchors (A, T, and D) based on intended application or performance. It also introduces much more stringent compliance testing by establishing guidelines for dynamic strength testing (drop testing), residual strength testing (repeating a dynamic test on an anchor), and serviceability load testing (ensuring an anchor will not deform under normal working conditions). In addition to new strength performance standards, Z359.18 also introduces extensive corrosion tests to ensure the longevity of anchorage connectors when exposed to the elements. In all, the new Z359.18 standard is the most advanced and aggressive standard for anchorage connectors, and is designed to push the industry forward to help create the safest and most durable fall protection anchorage connectors available.

IMPROVED FACILITIES

In response to the stringent new testing requirements, immediately following the release of Z359.18, Guardian Fall Protection made significant investments and upgrades

to its testing facilities. This included installing a dedicated anchorage connector testing tower, certifying our testing lab to the ISO 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories standard, and validating testing procedures for the wide variety of substrate requirements demanded by Z359.18. This long-term investment not only reaffirms Guardian's commitment to be a world leader in fall protection solutions, it will allow us to bring our current anchorage connectors into Z359.18 compliance faster, and also remarkably shorten the research and development time for new products.

ACTIVE TESTING

Guardian Fall Protection is actively testing anchorage connectors to the new Z359.18 standard. Because of the more demanding performance standards required by Z359.18 as compared to Z359.1-2007 or OSHA 1926 Subpart M, Z359.18 compliance testing will take an appreciable amount of time to complete. In addition to testing, Z359.18 also requires manufacturers to assess all compatible substrates, fasteners, and installation orientations to provide the most accurate installation guidance possible. The goal is to ensure anchorage performance in the real world matches that found in the lab. It should be noted that all Z359.18 compliant anchorage connectors will still remain fully compliant with all OSHA regulations.

During the testing phase, until individual compliance is established, anchorage connectors are prohibited by ANSI from carrying the previous Z359.1 compliance mark, and may subsequently carry only the OSHA Subpart M compliance statement.

These anchorage connectors should be considered completely safe for use as directed by the instructions.

Guardian has already completed Z359.18 compliance testing for many anchorage connectors, and will be releasing them into the market as quickly as possible. As future anchorage connectors achieve Z359.18 compliance, Guardian will announce any new compliance statements through our regular media channels, including our official Z359.18 compliance bulletin [here](#).

For additional information, including comprehensive FAQs, please [click here](#).

PROGRESSION

ANSI Z359.18-2017 is clearly a "next generation" standard, and goes well beyond any existing performance standard for anchorage connectors. Compliance is intended to be challenging in an effort to push safety performance forward to meet the greater demands of the industry at large. By choosing to adhere to this more demanding Z359.18-2017 standard, Guardian maintains its ongoing dedication to providing the worker at height the most effective fall protection equipment available.



NEED MORE INFORMATION?

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