



Standard Specifications for Personal Climbing Equipment¹

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1. Scope

1.1 These specifications cover acceptance testing of climbers and climber straps, body belts and positioning straps with locking snaphooks, and harnesses used by workers in the climbing of poles, trees, towers, and other structures. Minimum performance criteria for arc resistance of harnesses are included for workers who may be exposed to thermal hazards of momentary electric arcs or flame.

1.2 Three types of climbers, Types A, B, and C, and two types of climber straps, Types A and B, are covered.

1.3 Two types of body belts, Types A and B, are covered.

1.4 Three types of positioning straps, Types A, B, and C, are covered.

1.5 Two types of harnesses, Types A and B, are covered.

1.6 The values stated in inch-pound units are to be regarded as the standard.

1.7 The following safety hazards caveat pertains only to the test method portions, 9.2, 14.3, 15.3, and Sections 18.3, 19, and 20 of these specifications: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

B 117 Practice for Operating Salt Spray (Fog) Apparatus
E 1891 Specification for Arc and Flame Resistant Rainwear
F 1958/F 1958M Test Method for Determining the Ignitability of Non-flame-Resistant Materials for Clothing by Electric Arc Exposure Method Using Mannequins

2.2 ANSI Standard:

Z359.1 Safety Requirements for Personal Fall Arrest Sys-

tems, Subsystems and Components³

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *billet*—the free (buckle hole) end of a belt or strap as opposed to the buckle end, which is designed to pass through the buckle for closing.

3.1.2 *body belt attachment*—a system of straps and buckles which allow the harness wearer to use a body belt in conjunction with the harness.

3.1.3 *dee-ring, D-ring*—a steel straight-sided (no protrusions along edge of dee-ring; see Fig. 1) forging in a circle configuration with an integral stirrup to accept the belt, assembled into a body belt for the purpose of accepting the snaphooks of a positioning strap.

3.1.4 *design test, n—for arc and flame resistant materials*, one made on a sample treated as representative of an industrial product; these tests will not generally be repeated in quantity production.

3.1.5 *dripping, n—in electric arc testing*, a material response evidenced by flowing of the fiber polymer, the fabric, or the fabric coating, and the evidence of droplets from the material, that characterizes overall performance relative to reducing the transfer of heat that is sufficient to cause a second-degree burn.

3.1.6 *electric arc ignition, n—as related to electric arc exposure*, a response that causes the ignition of the material which is accompanied by heat and light, and then subsequent burning for at least 5 s, or consumption of at least 25 % of the exposed test specimen area.

3.1.7 *full body harness*—a component with a design of straps which is fastened about the person in a manner so as to contain the torso and distribute the fall arrest forces over at least the upper thighs, pelvis, chest, and shoulders with means for attaching it to other components or sub-systems.

3.1.8 *gaff*—a component of a pole or tree climber attached to the climber shank, similar to a spur, which is shaped to permit the secure penetration of the pole or tree trunk.

¹ These specifications are under the jurisdiction of ASTM Committee F18 on Electrical Protective Equipment for Workers and are the direct responsibility of Subcommittee F18.15 on Worker Personal Equipment.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from the American National Standards Institute, ANSI, 25 W. 43rd St., 4th Floor, New York, NY 10036.