



Standard Test Method for Verification of Ski Binding Test Devices¹

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1. Scope

1.1 This test method defines procedures to determine agreement between a standard apparatus for measuring the release moments of ski bindings and a test device of unspecified design.

1.2 This test method also covers procedures for checking agreement between individual devices of identical but unspecified design, intended for determining the release moments of ski bindings.

1.3 Values expressed in newton meters, newtons, and centimeters are to be regarded as the standard.

1.4 Values expressed in units of torque may be converted to the appropriate force values when devices which indicate force are used.

1.5 *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:

- E 4 Practices for Load Verification of Testing Machines²
- E 29 Practice for Using Significant Digits in Test Data to Determine Conformance With Specification³
- E 74 Practice for Calibration of Force Measuring Instruments for Verifying the Load Indication of Testing Machines²
- E 456 Terminology Relating to Quality and Statistics³
- F 504 Method for Measuring Release Moments of Adult Alpine Ski Bindings⁴
- F 1061 Specification for Ski Binding Test Devices⁵
- F 1063 Practice for Functional Inspections and Adjustments for Alpine Ski/Boot/Binding Systems⁵
- F 1064 Practice for Sampling and Inspection of Complete Alpine Ski/Boot/Binding Systems in Rental Applications⁵

¹ This test method is under the jurisdiction of ASTM Committee F-27 on Snow Skiing and is the direct responsibility of Subcommittee F27.10 on Binding Test Procedures.

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² *Annual Book of ASTM Standards*, Vol 03.01.

³ *Annual Book of ASTM Standards*, Vol 14.02.

⁴ *Annual Book of ASTM Standards*, Vol 15.07.

⁵ *Annual Book of ASTM Standards*, Vol 15.07.

3. Terminology

3.1 *Definitions*—The terms and abbreviations used in this document are defined in accordance with Method F 504, Specification F 1061, Practice E 456, Methods E 4 and E 74.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *a*—difference between the calibration of the specific device tested for agreement with an instrument of the type described in Method F 504 and the calibration of an individual device of the same design.

3.2.2 *d*—agreement between the test device and the standard apparatus described in Method F 504 and Section 9 of this test method.

3.2.3 *r*—imprecision of the device tested.

3.2.4 *operating range (OR)*—the portion of the full range of the device which may be employed in accordance with Practices F 1063 and F 1064. OR shall be defined by the user in accordance with the Inspection section of Annex 2 of Practices F 1063 and F 1064.

3.2.5 *recommended operating range (ROR)*—the portion of the full range of the test device that is in accordance with Proposed Specification P 193.

3.2.6 *reference binding*—a binding or group of bindings used in the verification of a test device.

3.2.7 *standard apparatus*—laboratory equipment including a test frame and instrumentation used as the basis for comparison with the test device.

3.2.8 *test device*—a machine for determining the release moments of ski/boot/binding systems.

3.3 *Symbols:*

3.3.1 M_z —a moment in a horizontal plane as shown in the figure in Method F 504 which illustrates terminology relating to the boot/ski system.

3.3.2 M_y —a moment in a vertical plane with the ski as shown in the figure in Method F 504 which illustrates terminology relating to the boot/ski system.

4. Significance and Use

4.1 Results obtained by this test method can be used to determine the suitability of specific test device designs in measuring the release moments of ski/boot/binding systems.

4.2 This test method provides a means by which manufacturers of test devices and manufacturers of releasable ski bindings can provide compatible instructions to facilities which perform the final inspection of the complete boot/binding/ski system prior to use.