

ICS 61.060
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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 3294-2025

Replacing GB/T 3294-2018

Test method of inspection for last sizes

鞋楦尺寸检测方法

(English Translation)

Issued on: October 31, 2025

Implemented on: May 1, 2026

Issued by: State Administration for Market Regulation

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces GB/T 3294-2018 "Methods for Testing Shoe Last Dimensions". Compared with GB/T 3294-2018, the only changes are structural adjustments and coding.

Aside from the logical changes, the main technical changes are as follows.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2018 edition);
- b) Added terms and definitions for "shortest path distance", "continuous shortest path distance", and "convexity/concavity" (see Chapter 3);
- c) The principle has been added (see Chapter 4);
- d) The requirements for the instrumentation and equipment have been added, including a shoe last measuring instrument and a clay column (see 5.5 and 5.7), and the requirements for shoe strap rulers and straightedges have been changed.
(See 5.1, 5.3, and 4.1, 4.3 in the 2018 edition);
- e) Sampling requirements have been changed (see Chapter 6, Chapter 5 of the 2018 edition);
- f) The determination of benchmark points and baselines has been removed from the test procedures (see 6.1 in the 2018 edition);
- g) General requirements have been added to the test procedures, including methods A for last suspension, effective last length, forefoot print width, heel circumference, and heel lift.

The measurement methods are described in sections 7.1, 7.4, 7.5, 7.8.1, 7.10, and 7.14.

h) The following parameters were modified during the testing process. last length, heel tolerance, instep girth, forefoot width, instep girth, short heel circumference, and heel width (footprint).

Methods for measuring width and body width, last thickness, front tilt, and convexity/concavity (see 7.2, 7.3, 7.6, 7.7, 7.9, 7.11, 7.12, 7.13).

7.14, 7.15, 6.2, 6.3, 6.4 and Appendix A, 6.5, 6.7 and Appendix B, 6.8, 6.9, 6.10, 6.11 of the 2018 edition.

6.14);

i) Data processing has been removed (see Chapter 7 in the 2018 edition);

j) The test report requirements have been changed (see Chapter 8, Chapter 8 of the 2018 edition).

This document is modified to adopt ISO 19409:2022 "Footwear - Footwear size system - Measurement of last dimensions".

Compared with ISO 19409:2022, this document has undergone many structural adjustments. A table comparing the changes in structural numbering between the two documents is provided.

See Appendix A.

The technical differences between this document and ISO 19409:2022, and the reasons therefor, are as follows.

---The terminology and definition of "convexity/concavity" have been changed (see 3.3, ISO 19409:2022) for ease of use in the standard;

---The uniform measurement accuracy requirements for instruments and equipment (see section 5.1 of ISO 19409:2022) have been removed to facilitate the use of the standard;

---The accuracy requirements for shoe strap rulers, right-angle rulers, straight rulers, shoe last measuring instruments, and tripod parallel gauges have been added to the instrument and equipment list (see 5.1).

(5.2, 5.3, 5.5, 5.8) to facilitate standard use;

---The requirements for vernier calipers in instruments and equipment have been modified (see 5.6, 5.7 of ISO 19409:2022) to facilitate the use of the standard;

---A "pre-test instrument for standardization" (see 5.9) has been added to the instrumentation to facilitate the use of standards;

---ISO/T S19407.2015 (see Chapter 7) has been replaced with the normatively referenced GB/T 36935-2025 to adapt to my country's national standards.

Improve technical conditions and enhance operability;

---The general rules for test procedures have been updated to include requirements for computerized digital measurement (see 7.1) to facilitate the use of the standard;

---The methods for measuring the effective length and toe thickness of shoe lasts have been expanded to include a method for determining the centerline of the sole (see 7.5, 7.13), facilitating the use of the standard;

---Method 1 for measuring heel circumference has been updated to include a method for determining the center point O of the heel by drawing a last pattern (see 7.6.2), which facilitates standardization.

use;

---A measurement method for short heel circumference has been added (see 7.11) to facilitate standard use;

---The general requirements for heel width have been amended (see 7.12.1, 7.9.1 of ISO 19409:2022) to facilitate the use of the standard;

---Added a method for determining the forefoot contact point in the measurement of the heel and forefoot (see 7.14) to facilitate the use of the standard;

---A method for measuring the bottom center region has been added to the convexity/concavity measurement (see 7.15.4) to facilitate standard use;

---A method for measuring the slope length of the last has been added (see 7.16) to facilitate the use of the standard;

---Added a method for measuring the anterior point of the last (see 7.17) to facilitate the use of the standard;

---The test report requirements have been changed (see Chapter 8 of ISO 19409:2022) to facilitate the use of the standard.

The following editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Methods for Testing Shoe Last Sizes";

---Added a description of the step height and modified the schematic diagram of the heel height measuring instrument (see 5.4);

---The measurement diagrams for post-tolerance and last suspension amount have been modified (see Figures 6 and 7);

---The note illustrating the effective length markings for shoe lasts has been removed;

---The position of point H1 in Figure 9 and the explanation of the index symbols in Figure 9

have been changed (see Figure 9);

---Note 2 (see 7.6.5) has been added to Method 4 for measuring instep circumference of shoe lasts;

---The 'l' and its description have been removed from the diagram showing the locations of the three protruding points for measuring plantar circumference;

---The description of method B for measuring forefoot print width has been changed (see 7.8.2);

---The description of method 1 for measuring tarsal circumference has been changed (see 7.9.1);

---The first schematic diagram for tarsal circumference measurement method 2 has been deleted, the second schematic diagram has been modified, and the annotations on the diagrams have been removed (see Figure 13);

---A schematic diagram of the modified tarsal circumference measurement method 3 (see Figure 14);

---The description of the location for measuring the last thickness has been changed (see 7.13);

---Note 2 has been added to the measurement methods for the rear and front heels (see 7.14);

---The schematic diagram for convexity and concavity measurement has been revised, and the index number descriptions in the diagram have been added (see Figure 21).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Footwear (SAC/TC305).

1 Scope

This document describes the measurement methods for basic shoe last dimensions. Shoe last dimensions can be measured physically using actual shoe lasts, or using appropriate...

The software performs equivalent virtual measurements on digital 3D shoe last models.

This method is applicable to all types of shoe lasts.

Note: The dimensions of shoe lasts may not be exactly the same as the part and size of the foot.