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

GB/T 6315-2025

Replacing GB/T 6315-2008

Vernier, dial and digital display universal bevel protractors

游标、带表和数显万能角度尺

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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 6315-2008 "Vernier, Dial and Digital Universal Angle Scales". Compared with GB/T 6315-2008, except for the structure... Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The applicable resolution range has been changed (see Chapter 1, Chapter 1 of the.2008 edition);
- b) The terms and definitions of "digital universal angle gauge" and "maximum permissible error (MPE)" have been removed (see 3.2 of the.2008 edition);
- c) The interaction requirements between the digital universal protractor and the dial universal protractor in the interaction process have been added (see 5.2.2~5.2.4);
- d) The data output requirements have been changed (see 5.9.2,.2008 version 5.9.2);
- e) The description of the geometric tolerances has been changed (see 5.12.1,.2008 version 5.12.1);
- f) The form and position errors of Type II vernier, dial indicator, and digital universal angle gauge have been modified (see 5.12.3,.2008 edition of 5.12.3);
- g) The form and position errors of Type II vernier, dial indicator, and digital universal angle ruler with different scale divisions have been increased, and the ruler with a resolution of 1' has been improved. Parallelism requirements between the measuring surfaces of the measuring facet and the base scale (see 5.12.6);
- h) Added the requirement that the ruler and the base ruler be in the same plane (see 5.12.9);
- i) The comment in the maximum permissible error section has been modified, adding a requirement for a maximum permissible error of 10" graduations, and deleting the graduation value. The maximum permissible error requirement for a 30' millimeter (see Table 7,.2008 edition);

- j) The requirements for temperature change testing have been changed (see 6.1,.2008 edition of 6.1);
- k) The requirements for the damp heat test have been changed (see 6.2,.2008 edition of 6.2);

1 Scope

GB/T 6315-2025 is the Chinese national standard covering the universal bevel protractor in its three readouts - the scale interval and the indication error, the flatness and straightness of the blades, the locking, and the calibration of the instrument itself. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 6315-2008.

This document specifies the types, basic parameters, requirements, and testing procedures for vernier, dial indicator, and digital universal bevel protractors (hereinafter collectively referred to as "universal bevel protractors"). Test methods, test conditions, test methods, and marking and packaging. This document applies to vernier universal bevel gauges with graduations of 2' and 5' and measuring ranges of 0°~320° and 0°~360°, respectively. The graduations of 2' and 5' are applicable to... 5', a universal bevel protractor with a measuring range of 0°~360°, and digital universal protractors with resolutions of 10", 1' and 5', and measuring ranges of 0°~360°. Design and production of angle rulers.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 2423.3-2016 Environmental Testing - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 17163 and GB/T 17164, as well as the following terms and definitions, apply to this document.

4 Types and Basic Parameters

4.1 Schematic diagrams of the universal angle ruler are shown in Figures 1 to 4.