

ICS 77.150.30

CCS H 62



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

GB/T 16866-2026

Replacing GB/T 16866-2006

**Dimensions and tolerances of copper and copper alloy
seamless tubes**

铜及铜合金无缝管材外形尺寸及允许偏差

Issued on: May 25, 2026

Implemented on: December 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

4 Technical Requirements

4.1 Specifications

4.2 External dimensions and their permissible deviations

4.2.2 Wall thickness and its permissible deviation

Foreword

GB/T 16866-2026 | Dimensions and tolerances of copper and copper alloy seamless tubes

GB/T 16866-2026 English version. Dimensions and tolerances of copper and copper alloy seamless tubes ICS

62 National Standards of the People's Republic of China Replaces GB/T 16866-2006 Dimensions of seamless copper and copper alloy tubing and allowable deviation Published on 2026-05-

25 Implemented on December 1, 2026 State Administration for Market Regulation The State Administration for Standardization issued a statement.

1.Scope This document specifies the technical requirements and test methods for the external dimensions and permissible deviations of seamless copper and copper alloy tubing. This document applies to the production and delivery of extruded seamless round tubes and drawn seamless round and rectangular (square) tubes made of copper and copper alloys.

4.1 Specifications

4.1.1 Pipes are classified into circular pipes, square pipes and rectangular pipes according to their cross-sectional shape. A schematic diagram of the cross-sectional shape of pipes is shown in Figure 1.

4.1.2 Typical specifications for extruded round copper and copper alloy tubes shall conform to the provisions of Table

1.Other specifications of tubes shall be agreed upon by the supplier and the buyer.

4.1.3 Typical specifications for drawn round copper and copper alloy tubes shall conform to the provisions of Table

2.Other specifications of tubes shall be agreed upon by the supplier and the buyer.

a) Circular tube

c) Rectangular tube

4.2 External dimensions and their permissible deviations

4.2.1 Outer diameter (distance between two parallel outer surfaces) and its permissible deviation

4.2.1.1 Permissible Deviation of Outer Diameter of Circular Pipes The outer diameter and permissible deviation of extruded circular tubes shall conform to the specifications in Table

3. The average outer diameter and permissible deviation of drawn circular tubes shall... It complies with the requirements in Table 4.

4.2.1.2 Spacing between two parallel outer surfaces of drawn rectangular (square) tubes and its permissible deviation The distance between the two parallel outer surfaces of drawn rectangular (square) tubes and its allowable deviation shall conform to the provisions of Table 5.

4.2.2 Wall thickness and its permissible deviation

4.2.2.1 Wall thickness and permissible deviation of circular pipes The wall thickness and permissible deviations of extruded circular tubes shall conform to the provisions of Table

6. For drawn circular tubes with a nominal outer diameter not exceeding 250 mm... The wall thickness and its permissible deviation shall conform to the provisions of Table

7. The wall thickness and permissible deviation of drawn round tubes with a nominal outer diameter greater than 250 mm. The agreement shall be determined through negotiation between the supply and demand parties.

4.2.3.2 Length of drawn circular tubing and its permissible deviation 4.2.3.2.1 For drawn round straight tubes of fixed length or multiple length (to be negotiated by both the supplier and the buyer and specified in the order), the length is allowed to deviate slightly. The difference should conform to the provisions of Table

9. The length of multiples should include the sawing allowance when sawing segments, with each sawing allowance being 5mm. 4.2.3.2.2 Drawn round tubes with an outer diameter not exceeding 30mm and a wall thickness not exceeding 3mm can be supplied in coils with a length not less than 6000mm. The allowable deviation in the length of the tube shall conform to the provisions of Table 10.

4.2.3.3 Length of drawn rectangular (square) tubing and its permissible deviations The length and permissible deviations of drawn rectangular (square) tubing shall conform to the specifications in Table

11. Multiple lengths should include the sawing allowance for segmentation. The amount cut is 5mm per cut.

4.2.6 Cutting slope The ends of the pipes should be sawn cleanly (the cut end face can be retained for inspection). The bevel of round straight pipes should conform to the specifications in Table 15, and that of rectangular (square) pipes... The bevel angle of the straight pipe should conform to the requirements of Table 16.

4.2.7 Corner radius The fillet radius of rectangular (square) pipes shall conform to the provisions of Table 17.

4.2.8 Torque Unannealed, straight, drawn rectangular (square) tubes with a distance of not less than 12mm between their two parallel outer surfaces should have a torsion tolerance of [value missing] per 300mm. The angle of twist should not exceed 1° (accurate to 1°), and the total angle of twist should not exceed 20° .

5. Test Methods The measurement method for external dimensions shall be in accordance with the provisions of GB/T 26303.1-2010.