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BSI Standards Publication

## Dimensions and tolerances of bright steel products of stainless and other special steels

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## National foreword

This British Standard is the UK implementation of EN 10278:2023. It supersedes BS EN 10278:1999, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/105, Steels for Heat Treatment, Alloy Steels, Free-Cutting Steels and Stainless Steels.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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### Amendments/corrigenda issued since publication

Date	Text affected
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EUROPÄISCHE NORM

November 2023

ICS 77.140.60

Supersedes EN 10278:1999

English Version

## Dimensions and tolerances of bright steel products of stainless and other special steels

Dimensions et tolérances des produits en acier  
transformés à froid à partir d'acier inoxydable et  
autres aciers spéciaux

Maße und Grenzabmaße von Blankstahlerzeugnissen  
aus nichtrostenden und anderen besonderen Stählen

This European Standard was approved by CEN on 25 September 2023.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 10278:2023) has been prepared by Technical Committee CEN/TC 459/SC 5 “Steels for heat treatment, alloy steels, free-cutting steels and stainless steels”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 10278:1999.

The main changes compared to the previous edition EN 10278:1999 are listed below:

- bright steels of EN 10277 are excluded from the scope of this document and its application is restricted to stainless steels and special steels which can be delivered as bright products, e.g. tool steels, roller bearing steels, etc.;
- surface condition and tolerance classes revised;
- this document can now also be used for cold heading steels both in form of bars and wire (for wire not concerning length and straightness);
- deviation from straightness revised;
- editorially revised.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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## 1 Scope

This document applies to bright steel products in the drawn, turned or ground condition delivered in straight lengths. This document is mainly applied to stainless steels of EN 10088-3 and other product standards, e.g. tool steels, roller bearing steels.

This document can also be used for cold heading steels in the form of bars and wire; in case of wire, the thickness and tolerances apply but not the length and the straightness.

The non-alloy and alloy steels of EN 10277 are no longer included.

This document does not cover cold rolled products and cut lengths produced from strip or sheet by cutting.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10079, *Definition of steel products*

EN 10088-3, *Stainless steels — Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes*

EN 10204, *Metallic products — Types of inspection documents*

EN ISO 9443, *Surface quality classes for hot-rolled bars and wire rod (ISO 9443)*

ISO 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

ISO 10474, *Steel and steel products — Inspection documents*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10079 (for drawn products) and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1

#### **thickness**

nominal dimension of the product

Note 1 to entry: This means:

- a) the diameter in the case of rounds;
- b) the lateral length in the case of squares;
- c) the width over flats in the case of hexagons;
- d) the shorter lateral length in the case of flats (rectangular bars) and wide-flats.

For special sections, 'thickness' shall be specified at the time of enquiry and order.