

Cold formed welded steel structural hollow sections -
Part 2: Tolerances, dimensions and sectional properties

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 10219-2:2019 sisaldab Euroopa standardi EN 10219-2:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 10219-2:2019 consists of the English text of the European standard EN 10219-2:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Cold formed welded steel structural hollow sections - Part 2: Tolerances, dimensions and sectional properties

Profils creux de construction soudés, formés à froid en
aciers - Partie 2 : Tolérances, dimensions et
caractéristiques du profil

Kaltgeformte geschweißte Hohlprofile für den Stahlbau
- Teil 2: Grenzabmaße, Maße und statische Werte

This European Standard was approved by CEN on 20 March 2019.

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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.

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European foreword

This document (EN 10219-2:2019) has been prepared by Technical Committee CEN/TC 459 “ECISS - European Committee for Iron and Steel Standardization”¹, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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 10219-2:2006.

The main changes with respect to the previous edition are listed below:

- a) elliptical hollow sections were added;
- b) Annex A concerning the additional tolerances for piling tubes was removed;
- c) subclause 5.2 was added with one option;
- d) in Table 3 the length tolerances for exact length were changed;
- e) in 7.1 one paragraph was added;
- f) standard was editorially revised.

This standard consists of the following parts:

- EN 10368, *Steel structural hollow sections – General (Characteristics, evaluation of conformity and marking)* (in preparation)
- EN 10219-1, *Cold formed welded steel structural hollow sections - Part 1: Technical delivery conditions*
- EN 10219-2, *Cold formed welded steel structural hollow sections - Part 2: Tolerances, dimensions and sectional properties*
- EN 10219-3, *Cold formed welded steel structural hollow sections - Part 3: Technical delivery conditions for mechanical engineering purposes* (in preparation)

It forms part of a series of standards on hollow sections together with EN 10210-1 to EN 10210-3.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

¹ Through its subcommittee SC 3 “Structural steels other than reinforcements” (secretariat: DIN)

1 Scope

This document specifies tolerances for cold formed welded circular, square, rectangular and elliptical structural hollow sections, manufactured in wall thicknesses up to 40 mm, in the following size ranges:

- circular: Outside diameters up to 2 500 mm;
- square: Outside dimensions up to 500 mm × 500 mm;
- rectangular: Outside dimensions up to 500 mm × 300 mm;
- elliptical: Outside dimensions up to 480 mm × 240 mm.

The formulae for calculating sectional properties of sections manufactured to the dimensional tolerances of this standard, to be used for the purposes of structural design, are given in Annex A.

Dimensions and sectional properties for a limited range of more common sizes are given in Annex B.

NOTE The designation of the sections' major axis (yy) and minor axis (zz) aligns with the axis designation used for structural design in the structural Eurocodes.

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 10219-1, *Cold formed welded structural hollow sections of non-alloy and fine grain steels — Part 1: Technical delivery conditions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10219-1 apply.

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

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

4 Symbols

For the purposes of this document, the symbols defined in Table 1 apply.

Table 1 — Symbols and definitions

Symbol	Unit	Definition
A	cm ²	Cross-sectional area
A_m	mm ²	Area of the surface delimited by the perimeter at mid-thickness
A_s	m ² /m	Superficial area per metre length
B	mm	Specified side dimension of a square hollow section. Specified dimension of the shorter side of a rectangular hollow section. Specified outside dimension of an elliptical section on its minor axis
C_1/C_2	mm	Length of corner region of a square or rectangular hollow section