DIN EN 1090-4

ICS 91.010.30; 91.080.13; 91.080.17

Supersedes
DIN EN 1090-4:2018-09

Execution of steel structures and aluminium structures – Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications; English version EN 1090-4:2018, English translation of DIN EN 1090-4:2020-06

Ausführung von Stahltragwerken und Aluminiumtragwerken –
Teil 4: Technische Anforderungen an tragende, kaltgeformte Bauelemente aus Stahl und tragende, kaltgeformte Bauteile für Dach-, Decken-, Boden- und Wandanwendungen;
Englische Fassung EN 1090-4:2018,
Englische Übersetzung von DIN EN 1090-4:2020-06

Exécution des structures en acier et des structures en aluminium –
Partie 4: Exigences techniques pour éléments et structures en acier formés à froid pour applications en toiture, plafond, paroi verticale et plancher;
Version anglaise EN 1090-4:2018,
Traduction anglaise de DIN EN 1090-4:2020-06

Document comprises 93 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

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A comma is used as the decimal marker.

National foreword

This document (EN 1090-4:2018) has been prepared by Technical Committee CEN/TC 135 “Execution of steel structures and aluminium structures” (Secretariat: SN, Norway).

The responsible German body involved in its preparation was *DIN-Normenausschuss Bauwesen* (DIN Standards Committee Building and Civil Engineering), Working Committee NA 005-08-14 AA “Fabrication of steel structures (national mirror committee for CEN/TC 135 and ISO/TC 167)”.

The standards DIN EN 1090-2 to DIN EN 1090-5 include the expression “if not otherwise specified” multiple times (see e.g. DIN EN 1090-4:2020-06, Table F.2). This expression has been interpreted by Working Group 14 of Technical Committee CEN/TC 135 for DIN EN 1090-4 to mean that Member States may continue to apply national provisions in deviation from this standard, where they exist.

The opening “if not otherwise specified” does not apply in Germany. One exception is Annex E. Here, DIN 55634, *Paints, varnishes and coatings — Corrosion protection of supporting thin-walled building components made of steel* applies by way of derogation for Germany.

Amendments

This standard differs from DIN EN 1090-4:2018-09 as follows:

a) an explanation on “if not otherwise specified” has been added in the National foreword.

Previous editions

DIN 18807-3: 1987-06
DIN 18807-3/A1: 2001-05
DIN EN 1090-4: 2018-09

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1090-4

July 2018

ICS 91.010.30; 91.080.13; 91.080.17

English Version

Execution of steel structures and aluminium structures - Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications

Exécution des structures en acier et des structures en aluminium - Partie 4: Exigences techniques pour éléments et structures en acier formés à froid pour applications en toiture, plafond, paroi verticale et plancher

Ausführung von Stahltragwerken und Aluminiumtragwerken - Teil 4: Technische Anforderungen an tragende, kaltgeformte Bauelemente aus Stahl und tragende, kaltgeformte Bauteile für Dach-, Decken-, Boden- und Wandanwendungen

This European Standard was approved by CEN on 6 February 2017.

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.

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COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 1090-4:2018) has been prepared by Technical Committee CEN/TC 135 “Execution of steel structures and aluminium structures”, the secretariat of which is held by SN.

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 January 2019, and conflicting national standards shall be withdrawn at the latest by January 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 is part of the EN 1090 series, which comprises the following parts:

— EN 1090-1, *Execution of steel structures and aluminium structures - Part 1: Assessment and verification of constancy of performance for structural components*

— EN 1090-2, *Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures*

— EN 1090-3, *Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures*

— EN 1090-4, *Execution of steel structures and aluminium structures - Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications*

— EN 1090-5, *Execution of steel structures and aluminium structures - Part 5: Technical requirements for cold-formed structural aluminium elements and cold-formed structures for roof, ceiling, floor and wall applications*

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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.

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1 Scope

This European Standard specifies requirements for the execution, i.e. the manufacture and the installation, of cold-formed structural steel members and sheeting and cold-formed structures for roof, ceiling, floor, wall and cladding applications.

This European Standard applies to structures designed according to the EN 1993 series.

This European Standard applies to structural members and sheeting to be designed according to EN 1993-1-3.

This European Standard may be used for structures designed according to other design rules provided that conditions for execution comply with them and any necessary additional requirements are specified.

This European Standard also specifies requirements for the execution i.e. the manufacture and the installation of structures made from cold formed profiled sheeting for roof, ceiling, floor and wall applications under predominately static loading or seismic loading conditions and their documentation.

This European Standard covers sheeting of structural classes I and II according to EN 1993-1-3 used in structures.

This European Standard covers structural members of all structural classes according to EN 1993-1-3.

Structural sheeting are understood here to be:

— profiled sheet, such as trapezoidal, sinusoidal or liner trays (Figure 1), or

Structural members are understood here to be:

— members (linear profiled cross sections) that are produced by cold forming (Figure 2).

This European Standard also covers:

— not welded built-up sections (Figure 2b and 2c);

— cold-formed hollow sections including the welding of the longitudinal seam, not covered by EN 10219-1;

— perforated, punctured and micro profiled sheeting and members;

NOTE 1 Welded built-up sections, are not covered, the execution provisions are given in EN 1090–2.

This European Standard also covers spacer constructions between the outer and inner or upper and lower skins for roofs, walls and ceilings made from cold-formed profiled sheeting and the connections and attachments of the afore mentioned elements as long as all are involved in load transfer.

This European Standard covers steel profiled sheeting for composite floors, e.g. during installation and in stage of pouring concrete.

Composite structural members where the interaction between dissimilar materials are an integral part of the structural behaviour such as sandwich panels and composite floors are not covered by this standard.

This European Standard does not cover the necessary analyses and detailing and execution rules for thermal insulation, moisture protection, noise control and fire protection.

This European Standard does not cover regulations of roof cladding and wall cladding, produced by traditional plumber methods or tinsmith methods.

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