

**SS EN 1993-1-12:2009(2023)**  
**EN 1993-1-12:2007, IDT**  
(ICS 91.010.30; 91.080.10)

**SINGAPORE STANDARD**

**Eurocode 3 : Design of steel structures**

– Part 1-12 : Additional rules for the extension of EN 1993  
up to steel grades S 700

This national standard is the identical implementation of EN 1993-1-12 : 2007 and is adopted with permission of CEN, Rue de la Science 23 B - 1040 Brussels

Confirmed 2023

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S 700

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## **National Foreword**

This Singapore Standard was prepared by the Technical Committee on Building Structure and Sub-structure under the purview of the Building and Construction Standards Committee.

This SS EN is the identical implementation of EN 1993-1-12 : 2007 'Eurocode 3 : Design of steel structures – Part 1-12 : Additional rules for the extension of EN 1993 up to steel grades S 700' including the Corrigendum EN 1993-1-12 : 2007 / AC : 2009 and is adopted with the permission of CEN, Rue de la Science 23 B - 1040 Brussels.

Attention is drawn to the following:

- The comma has been used throughout as a decimal marker whereas in Singapore Standards, it is a practice to use a full point on the baseline as the decimal marker.
- The Singapore Standards which implement international or European publications referred to in this document may be found in the SS Electronic Catalogue at:  
<https://www.singaporestandardseshop.sg>

The EN gives values with notes indicating where national choices may be made. Where a normative part of the EN allows for national choice to be made, the range and possible choice will be given in the normative text, and a note will qualify it as a Nationally Determined Parameter (NDP). NDPs can be a specific value for a factor, a specific level or class, a particular method or a particular application rule if several are proposed in the EN.

The requirements of this SS EN 1993-1-12 : 2007 are to be read in conjunction with the Singapore National Annex (NA) to SS EN 1993-1-12 : 2007 which contains information on the Singapore Nationally Determined Parameters and is published separately.

National choice is allowed in EN 1993-1-12 through the following clauses:

- 2.1 (3.1(2))
- 2.1 (3.2.2(1))
- 2.1 (5.4.3(1))
- 2.1 (6.2.3(2))
- 2.8 (4.2(2))
- 3 (1)

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

**NOTE**

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions. Where SSs are deemed to be stable, i.e. no foreseeable changes in them, they will be classified as "mature standards". Mature standards will not be subject to further review unless there are requests to review such standards.*
2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore and the Singapore Standards Council shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR. Although care has been taken to draft this standard, users are also advised to ensure that they apply the information after due diligence.*
3. *Compliance with a SS or TR does not exempt users from any legal obligations.*

English Version

## Eurocode 3 - Design of steel structures - Part 1-12: Additional rules for the extension of EN 1993 up to steel grades S 700

Eurocode 3 - Calcul des structures en acier - Partie 1-12 :  
Règles additionnelles pour l'utilisation de l'EN 1993 jusqu'à  
la nuance d'acier S 700

Eurocode 3: Bemessung und Konstruktion von Stahlbauten  
- Teil 1-12: Zusätzliche Regeln zur Erweiterung von EN  
1993 auf Stahlsorten bis S 700

This European Standard was approved by CEN on 6 July 2006.

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 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 Management Centre has the same status as the official versions.

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



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<b>Contents</b>	<b>Page</b>
<b>Foreword.....</b>	<b>3</b>
<b>1 General .....</b>	<b>3</b>
1.1 Scope .....	3
1.2 Normative references .....	4
1.3 Symbols .....	4
<b>2 Additional rules to EN 1993-1-1 to EN 1993-1-11.....</b>	<b>5</b>
2.1 Additional rules to EN 1993-1-1 .....	5
2.2 Additional rules to EN 1993-1-2 .....	6
2.3 Additional rules to EN 1993-1-3 .....	6
2.4 Additional rules to EN 1993-1-4 .....	6
2.5 Additional rules to EN 1993-1-5 .....	7
2.6 Additional rules to EN 1993-1-6 .....	7
2.7 Additional rules to EN 1993-1-7 .....	7
2.8 Additional rules to EN 1993-1-8 .....	7
2.9 Additional rules to EN 1993-1-9 .....	8
2.10 Additional rules to EN 1993-1-10 .....	8
2.11 Additional rules to EN 1993-1-11 .....	9
<b>3 Additional rules to application parts EN 1993-2 to EN 1993-6 .....</b>	<b>9</b>

## Foreword

This European Standard EN 1993-1-12, “Eurocode 3: Design of steel structures: Part 1-12: Additional rules for the extension of EN 1993 up to steel grades S 700”, has been prepared by Technical Committee CEN/TC250 « Structural Eurocodes », the Secretariat of which is held by BSI. CEN/TC250 is responsible for all Structural Eurocodes.

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 August 2007, and conflicting National Standards shall be withdrawn at latest by March 2010.

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

## National annex for EN 1993-1-12

This standard gives alternative procedures, values and recommendations with notes indicating where national choices may have to be made. Therefore the National Standard implementing EN 1993-1-12 should have a National annex containing all Nationally Determined Parameters to be used for the design of steel structures to be constructed in the relevant country.

National choice is allowed in EN 1993-1-12 through:

- 2.1 (3.1(2))
- 2.1 (3.2.2(1))
- 2.1 (5.4.3(1))
- 2.1 (6.2.3(2))
- 2.8 (4.2(2))
- 3 (1)

## 1 General

### 1.1 Scope

(1) This EN 1993-1-12 gives rules that can be used in conjunction with parts

- EN1993-1-1
- EN 1993-1-2
- EN 1993-1-3
- EN 1993-1-4
- EN 1993-1-5
- EN 1993-1-6
- EN 1993-1-7
- EN 1993-1-8