



**SLOVENSKI STANDARD**  
**oSIST prEN 10051:2009**  
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Hot-rolled strip and plate/sheet cut from wide strip of non-alloy and alloy steels -  
 Tolerances on dimensions and shape

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Warmgewalztes Band und Blech abgelängt aus Warmbreitband aus unlegierten und  
 legierten Stählen - Grenzabmaße und Formtoleranzen

Bandes et tôles issues de larges bandes laminées à chaud en aciers alliés et non alliés -  
 Tolérances sur les dimensions et la forme

**Ta slovenski standard je istoveten z: prEN 10051**

**ICS:**

77.140.50 Flat steel products and semi-products

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NORME EUROPÉENNE  
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English Version

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Grenzabmaße und Formtoleranzen

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COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (prEN 10051:2009) has been prepared by Technical Committee ECISS/TC 12 “Structural steels and steels for pressure purposes - Dimensions and tolerances”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 10051:1997.

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**(standards.iteh.ai)**

SIST EN 10051:2012

<https://standards.iteh.ai/catalog/standards/sist/4fe679a8-93d9-4d45-b4fc-d67c42491265/sist-en-10051-2012>

## 1 Scope

This European Standard specifies tolerances on dimensions and shape for continuously hot-rolled uncoated plate/sheet and strip with a maximum width of 2 200 mm of non-alloy and alloy steels in accordance with Table 1 (see also Annex A). This European Standard also applies to hot-rolled strip for cold rolling.

**Table 1 — Field of application**

Product	Thickness mm	Steel grades according to: (but not limited to)
wide strip (width: $600 \text{ mm} \leq w \leq 2\,200 \text{ mm}$ ), Sheet/Plate cut from wide strip, strip $w < 600 \text{ mm}$ slit from wide strip	$\leq 25 \text{ mm}$	EN 10025-2 to –6, EN 10028-2 to –6, EN 10083-2 and –3, EN 10084, EN 10085, EN 10111, EN 10120, EN 10149-2 and –3, EN 10207 EN 10208-2 prEN 10338 EN ISO 4957

This European Standard does not apply to stainless steels and not to hot-rolled strip rolled in widths  $< 600 \text{ mm}$  [EN 10048].

## 2 Normative references

The following referenced documents are indispensable for the application 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 10020, *Definition and classification of grades of steel*

EN 10048, *Hot-rolled narrow steel strip - Tolerances on dimensions and shape*

EN 10079, *Definition of steel products*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **non-alloy and alloy steels**

see EN 10020

### 3.2

#### **wide strip and sheet/plate**

see EN 10079

### 3.3

#### **crown**

difference in thickness between one of the edges and the centre of a rolled product

## 4 Information to be supplied by the purchaser

### 4.1 General

The following information shall be supplied by the purchaser at the time of enquiry and order:

- a) the quantity to be delivered;
- b) designation of the product (wide strip, sheet/plate cut from wide strip, strip slit from wide strip);
- c) number of this dimensional standard (EN 10051);
- d) nominal thickness and width in mm;
- e) the letters GK if strip and sheet/plate with trimmed edges is ordered (see 5.1);
- f) nominal length in mm (for sheet and plate);
- g) width tolerances for sheet/plate with thickness > 10 mm (see 6.3);
- h) tolerances on flatness for sheet/plate of category D (see 6.4.2 and Table 10);
- i) flatness requirements for wide strip and strip < 600 mm wide slit from strip (see 7.4);
- j) edge camber requirements for strip < 600 mm wide slit from wide strip (see 7.5).

### 4.2 Options

A number of Options are specified in Annex B. In the event that the purchaser does not indicate his wish to implement any of these Options, the supplier shall supply in accordance with the basic specification (see 4.1 and 5.1).

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### 4.3 Example

EXAMPLE 1 20 sheets according to this European Standard with nominal thickness of 2,0 mm, nominal width 1 200 mm, with trimmed edges (GK), nominal length 2 500 mm of steel 34Cr4 (1.7033) as specified in EN 10083-3:

**20 sheets EN 10051 – 2,0 x 1 200GK x 2 500  
steel EN 10083-3 – 34Cr4**

EXAMPLE 2 5 t of strip according to this European Standard with nominal thickness of 4,5 mm, nominal width 1 500 mm, with mill edges of steel S235JR (1.0038), as specified in EN 10025-2:

**5 t strip EN 10051 – 4,5 x 1 500  
steel EN 10025-2 – S235JR**

## 5 Delivery condition

**5.1** Sheet/plate and strip shall be supplied with mill edges or with trimmed edges (GK), as agreed at the time of enquiry and order (see Annex B, Option a). In the absence of information on the form of supply, sheet/plate and strip shall be supplied with mill edges.

**5.2** The possibility of delivering coils with welding seams can be agreed at the time of enquiry and order. The indication of the location of the weld can be agreed at the same time (see Annex B, Option b).

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5.3 Where no specific choice is made by the purchaser concerning points g, h, i and j the supplier shall refer back to the purchaser.

## 6 Tolerances for sheet/plate

### 6.1 Thickness

6.1.1 The tolerances on thickness for continuously hot-rolled low carbon steel sheet/plate for cold forming according to EN 10111 are given in Table 2.

**Table 2 — Tolerances on thickness for hot-rolled low carbon steel sheet/plate and strip for cold forming**

Dimensions in mm

Nominal thickness $t$	Tolerances for a nominal width $w$			
	$w \leq 1\,200$	$1\,200 < w \leq 1\,500$	$1\,500 < w \leq 1\,800$	$w > 1\,800$
$t \leq 2,00$	$\pm 0,13$	$\pm 0,14$	$\pm 0,16$	—
$2,00 < t \leq 2,50$	$\pm 0,14$	$\pm 0,16$	$\pm 0,17$	$\pm 0,19$
$2,50 < t \leq 3,00$	$\pm 0,15$	$\pm 0,17$	$\pm 0,18$	$\pm 0,20$
$3,00 < t \leq 4,00$	$\pm 0,17$	$\pm 0,18$	$\pm 0,20$	$\pm 0,20$
$4,00 < t \leq 5,00$	$\pm 0,18$	$\pm 0,20$	$\pm 0,21$	$\pm 0,22$
$5,00 < t \leq 6,00$	$\pm 0,20$	$\pm 0,21$	$\pm 0,22$	$\pm 0,23$
$6,00 < t \leq 8,00$	$\pm 0,22$	$\pm 0,23$	$\pm 0,23$	$\pm 0,26$
$8,00 < t \leq 11,00$	$\pm 0,24$	$\pm 0,25$	$\pm 0,25$	$\pm 0,28$

6.1.2 The tolerances on thickness for steels are given in Tables 3 to 6. These tolerances are indicated as categories A, B, C, D. The dimensional tolerances of steel grades which do not have a specified minimum yield strength are the ones of category D.



**Table 3 — Tolerances on thickness for strip and sheet/plate of steel grades with a specified minimum yield strength  $R_e \leq 300$  MPa (category A)**

Dimensions in mm

Nominal thickness $t$	Tolerances for a nominal width $w$			
	$w \leq 1\,200$	$1\,200 < w \leq 1\,500$	$1\,500 < w \leq 1\,800$	$w > 1\,800$
$t \leq 2,00$	$\pm 0,17$	$\pm 0,19$	$\pm 0,21$	—
$2,00 < t \leq 2,50$	$\pm 0,18$	$\pm 0,21$	$\pm 0,23$	$\pm 0,25$
$2,50 < t \leq 3,00$	$\pm 0,20$	$\pm 0,22$	$\pm 0,24$	$\pm 0,26$
$3,00 < t \leq 4,00$	$\pm 0,22$	$\pm 0,24$	$\pm 0,26$	$\pm 0,27$
$4,00 < t \leq 5,00$	$\pm 0,24$	$\pm 0,26$	$\pm 0,28$	$\pm 0,29$
$5,00 < t \leq 6,00$	$\pm 0,26$	$\pm 0,28$	$\pm 0,29$	$\pm 0,31$
$6,00 < t \leq 8,00$	$\pm 0,29$	$\pm 0,30$	$\pm 0,31$	$\pm 0,35$
$8,00 < t \leq 10,00$	$\pm 0,32$	$\pm 0,33$	$\pm 0,34$	$\pm 0,40$
$10,00 < t \leq 12,50$	$\pm 0,35$	$\pm 0,36$	$\pm 0,37$	$\pm 0,43$
$12,50 < t \leq 15,00$	$\pm 0,37$	$\pm 0,38$	$\pm 0,40$	$\pm 0,46$
$15,00 < t \leq 25,00$	$\pm 0,40$	$\pm 0,42$	$\pm 0,45$	$\pm 0,50$

**Table 4 — Tolerances on thickness for strip and sheet/plate of steel grades with a specified minimum yield strength  $300 \text{ MPa} < R_e \leq 360$  MPa (category B)**

Dimensions in mm

Nominal thickness $t$	Tolerances for a nominal width $w$			
	$w \leq 1\,200$	$1\,200 < w \leq 1\,500$	$1\,500 < w \leq 1\,800$	$w > 1\,800$
$T \leq 2,00$	$\pm 0,20$	$\pm 0,22$	$\pm 0,24$	—
$2,00 < t \leq 2,50$	$\pm 0,21$	$\pm 0,24$	$\pm 0,26$	$\pm 0,29$
$2,50 < t \leq 3,00$	$\pm 0,23$	$\pm 0,25$	$\pm 0,28$	$\pm 0,30$
$3,00 < t \leq 4,00$	$\pm 0,25$	$\pm 0,28$	$\pm 0,30$	$\pm 0,31$
$4,00 < t \leq 5,00$	$\pm 0,28$	$\pm 0,30$	$\pm 0,32$	$\pm 0,33$
$5,00 < t \leq 6,00$	$\pm 0,30$	$\pm 0,32$	$\pm 0,33$	$\pm 0,36$
$6,00 < t \leq 8,00$	$\pm 0,33$	$\pm 0,35$	$\pm 0,36$	$\pm 0,40$
$8,00 < t \leq 10,00$	$\pm 0,37$	$\pm 0,38$	$\pm 0,39$	$\pm 0,46$
$10,00 < t \leq 12,50$	$\pm 0,40$	$\pm 0,41$	$\pm 0,43$	$\pm 0,49$
$12,50 < t \leq 15,00$	$\pm 0,43$	$\pm 0,44$	$\pm 0,46$	$\pm 0,53$
$15,00 < t \leq 25,00$	$\pm 0,46$	$\pm 0,48$	$\pm 0,52$	$\pm 0,58$

**Table 5 — Tolerances on thickness for strip and sheet/plate of steel grades with a specified minimum yield strength  $360 \text{ MPa} < R_e \leq 420 \text{ MPa}$  (category C)**

Dimensions in mm

Nominal thickness $t$	Tolerances for a nominal width $w$			
	$w \leq 1\,200$	$1\,200 < w \leq 1\,500$	$1\,500 < w \leq 1\,800$	$w > 1\,800$
$t \leq 2,00$	$\pm 0,22$	$\pm 0,25$	$\pm 0,27$	–
$2,00 < t \leq 2,50$	$\pm 0,23$	$\pm 0,27$	$\pm 0,30$	$\pm 0,33$
$2,50 < t \leq 3,00$	$\pm 0,26$	$\pm 0,29$	$\pm 0,31$	$\pm 0,34$
$3,00 < t \leq 4,00$	$\pm 0,29$	$\pm 0,31$	$\pm 0,34$	$\pm 0,35$
$4,00 < t \leq 5,00$	$\pm 0,31$	$\pm 0,34$	$\pm 0,36$	$\pm 0,38$
$5,00 < t \leq 6,00$	$\pm 0,34$	$\pm 0,36$	$\pm 0,38$	$\pm 0,40$
$6,00 < t \leq 8,00$	$\pm 0,38$	$\pm 0,39$	$\pm 0,40$	$\pm 0,46$
$8,00 < t \leq 10,00$	$\pm 0,42$	$\pm 0,43$	$\pm 0,44$	$\pm 0,52$
$10,00 < t \leq 12,50$	$\pm 0,46$	$\pm 0,47$	$\pm 0,48$	$\pm 0,56$
$12,50 < t \leq 15,00$	$\pm 0,48$	$\pm 0,49$	$\pm 0,52$	$\pm 0,60$
$15,00 < t \leq 25,00$	$\pm 0,52$	$\pm 0,55$	$\pm 0,59$	$\pm 0,65$

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**Table 6 — Tolerances on thickness for strip and sheet/plate of steel grades with a specified minimum yield strength  $420 \text{ MPa} < R_e \leq 900 \text{ MPa}$  (category D)**

Dimensions in mm

Nominal thickness $t$	Tolerances for a nominal width $w$			
	$w \leq 1\,200$	$1\,200 < w \leq 1\,500$	$1\,500 < w \leq 1\,800$	$w > 1\,800$
$t \leq 2,00$	$\pm 0,24$	$\pm 0,27$	$\pm 0,29$	–
$2,00 < t \leq 2,50$	$\pm 0,25$	$\pm 0,29$	$\pm 0,32$	$\pm 0,35$
$2,50 < t \leq 3,00$	$\pm 0,28$	$\pm 0,31$	$\pm 0,34$	$\pm 0,36$
$3,00 < t \leq 4,00$	$\pm 0,31$	$\pm 0,34$	$\pm 0,36$	$\pm 0,38$
$4,00 < t \leq 5,00$	$\pm 0,34$	$\pm 0,36$	$\pm 0,39$	$\pm 0,41$
$5,00 < t \leq 6,00$	$\pm 0,36$	$\pm 0,39$	$\pm 0,41$	$\pm 0,43$
$6,00 < t \leq 8,00$	$\pm 0,41$	$\pm 0,42$	$\pm 0,43$	$\pm 0,49$
$8,00 < t \leq 10,00$	$\pm 0,45$	$\pm 0,46$	$\pm 0,48$	$\pm 0,56$
$10,00 < t \leq 12,50$	$\pm 0,49$	$\pm 0,50$	$\pm 0,52$	$\pm 0,60$
$12,50 < t \leq 15,00$	$\pm 0,52$	$\pm 0,53$	$\pm 0,56$	$\pm 0,64$
$15,00 < t \leq 25,00$	$\pm 0,56$	$\pm 0,59$	$\pm 0,63$	$\pm 0,70$

## 6.2 Length

The tolerances on length for sheet/plate shall be as given in Table 7.