



SLOVENSKI STANDARD

SIST EN 10059:2004

01-junij-2004

Hot rolled square steel bars for general purposes - Dimensions and tolerances on shape and dimensions

Hot rolled square steel bars for general purposes - Dimensions and tolerances on shape and dimensions

Warmgewalzte Vierkantstäbe aus Stahl für allgemeine Verwendung - Maße, Formtoleranzen und Grenzabmaße

Carrés en acier laminés a chaud pour usages généraux - Dimensions et tolérances sur la forme et les dimensions

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Ta slovenski standard je istoveten z: EN 10059:2003

ICS:

77.140.60 Jeklene palice in drogovi Steel bars and rods

SIST EN 10059:2004

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 10059

October 2003

ICS 77.140.60

English version

Hot rolled square steel bars for general purposes - Dimensions and tolerances on shape and dimensions

Carrés en acier laminés à chaud pour usages généraux -
Dimensions et tolérances sur la forme et les dimensions

Warmgewalzte Vierkantstäbe aus Stahl für allgemeine
Verwendung - Maße, Formtoleranzen und Grenzabmaße

This European Standard was approved by CEN on 18 September 2003.

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 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 Management Centre has the same status as the official versions.

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

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN 10059:2003 (E)

Contents	page
Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Designation	4
5 Dimensions	4
6 Tolerances on dimensions and shape	6
6.1 Size (a)	6
6.2 Length (L)	6
6.3 Corner radius (r)	6
6.4 Straightness (q)	6
6.5 Twist	6
6.6 Out-of-squareness (u)	6
7 Measurement	8
7.1 Size	8
7.2 Length	8
7.3 Corner radius	8
7.4 Straightness	8
7.5 Twist	8
7.6 Out-of-squareness	8

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Foreword

This document (EN 10059:2003) has been prepared by Technical Committee ECISS/TC 11 "Structural steel sections and hot rolled steel bars for engineering use — Dimensions and tolerances", the secretariat of which is held by BSI.

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 April 2004, and conflicting national standards shall be withdrawn at the latest by April 2004.

This European Standard replaces:

EURONORM 59-78 *Hot rolled square bars for general purposes.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 10059:2003 (E)**1 Scope**

This European Standard specifies the nominal dimensions and the tolerances on dimensions and shape of hot-rolled finished square steel bars for general purposes.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 10079:1992, *Definition of steel products*.

EN 10088-1, *Stainless steels — Part 1: List of stainless steels*.

3 Terms and definitions

For the purposes of this European Standard the terms and definitions given in EN 10079:1992 apply.

4 Designation

The designation of hot-rolled square steel bars shall comprise:

- the term "square bar";
- the number of this European Standard (EN 10059);
- the dimensions in mm (size x length (M, F or E, see Table 3));
- the number of the quality standard and the steel name or steel number of the ordered steel.

EXAMPLE

Square bar EN 10059 - 60x6000M

steel EN 10025 - S235JR

5 Dimensions

Hot rolled square bars for general purposes complying with this European Standard shall be delivered with the specified dimensions range given in Table 1 and illustrated in Figure 1. The preferred dimensions are presented in Table 1.

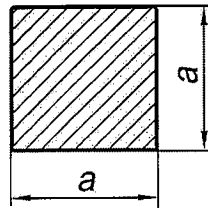


Figure 1 — Hot rolled square bar

Table 1 — Preferred sizes, mass and size tolerances of hot rolled square bars for general purposes

Size a	Limit deviation ^a	Mass ^{b c}	Area of cross section	Size a	Limit deviation ^a	Mass ^{b c}	Area of cross section
(mm)	(mm)	(kg/m)	(cm ²)	(mm)	(mm)	(Kg/m)	(cm ²)
8	± 0,4	0,502	0,64	40	± 0,8	12,6	16,0
10		0,785	1,00	45		15,9	20,3
12		1,13	1,44	50		19,6	25,0
13		1,33	1,69	55		23,7	30,3
14		1,54	1,96	60		28,3	36,0
15	± 0,5	1,77	2,25	65	± 1,0	33,2	42,3
16		2,01	2,56	70		38,5	49,0
18		2,54	3,24	75		44,2	56,3
20		3,14	4,00	80		50,2	64,0
22		3,80	4,84	90		63,6	81,0
24	± 0,6	4,52	5,76	100	± 1,3	78,5	100
25		4,91	6,25	110		95,0	121
26		5,31	6,76	120	± 1,5	113	144
28		6,15	7,84	130		133	169
30		7,07	9,00	140		154	196
32	± 0,6	8,04	10,2	150	± 1,8	177	225
35		9,62	12,3				

^a When ordering, the total ranges for the permissible deviations may, by agreement, be entirely on the plus side.

^b Calculated using density of 7,85 kg/dm³

^c The masses of stainless steel bars shall be multiplied by the factors according to EN 10088-1.

EN 10059:2003 (E)**6 Tolerances on dimensions and shape****6.1 Size (a)**

The deviation from nominal size (a) shall be within the tolerance given in Table 1.

6.2 Length (L)

Depending on the type of length square bars shall be cut to lengths within tolerances given in Table 3.

6.3 Corner radius (r)

The corner radius (r) shall comply with the requirements given in Table 2.

6.4 Straightness (q)

The straightness shall comply with the requirements given in Table 2. The requirements for waviness may be agreed at the time of enquiry and order.

6.5 Twist

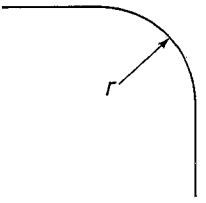
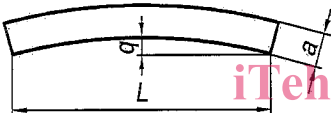
Twist shall comply with the requirements given in Table 2.

6.6 Out-of-squareness (u)

Out-of-squareness (u) shall be within the tolerance given in Table 2.

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Table 2 — Tolerances on dimensions and shape of hot rolled square bars for general purposes

Dimensions in mm		
Corner radius r	Nominal size	r
	$8 \leq a \leq 12$	$r \leq 1$
	$12 < a \leq 20$	$r \leq 1,5$
	$20 < a \leq 30$	$r \leq 2$
	$30 < a \leq 50$	$r \leq 2,5$
	$50 < a \leq 100$	$r \leq 3$
	$100 < a \leq 150$	$r \leq 4$
Straightness q	Nominal size	Tolerance
	$a \leq 25$	<i>Not fixed</i>
	$25 < a \leq 80$	$q \leq 0,4 \% \text{ of } L$
	$80 < a$	$q \leq 0,25 \% \text{ of } L$
Twist	Nominal size	Tolerance
	$8 \leq a \leq 14$	$4^\circ/\text{m}$ with a max. of 24°
	$14 < a \leq 50$	$3^\circ/\text{m}$ with a max. of 18°
	$50 < a$	$3^\circ/\text{m}$ with a max. of 15°
Out-of-squareness u	Nominal size	Tolerance
See Figure 2	$a \leq 50$	1,50
	$50 < a \leq 75$	2,25
	$75 < a \leq 100$	3,00
	$100 < a \leq 150$	4,50