SLOVENSKI STANDARD
SIST EN 10058:2019

01-februar-2019

Nadomešča:
SIST EN 10058:2004

Vroče valjane ploske jeklene palice in jeklene široke plošče za splošne namene - Mejni odstopki mer in tolerance oblik

Hot rolled flat steel bars and steel wide flats for general purposes - Dimensions and tolerances on shape and dimensions

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

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

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Ta slovenski standard je istoveten z: **EN 10058:2018**

ICS:

77.140.60	Jeklene palice in drogovi	Steel bars and rods

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 10058

November 2018

ICS 77.140.60

Supersedes EN 10058:2003

English Version

Hot rolled flat steel bars and steel wide flats for general purposes - Dimensions and tolerances on shape and dimensions

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

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

This European Standard was approved by CEN on 5 October 2018.

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

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European foreword

This document (EN 10058:2018) has been prepared by Technical Committee ECISS/TC 103 “Structural steels other than reinforcement”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.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 10058:2003.

In comparison to the previous edition following technical changes were made:

— width of 130 and 140 mm were added for the flat bars;

— wide flats were introduced in this standard with widths of 160, 170, 180 and 200 mm;

— for wide flats maximum permissible thickness variation was introduced;

— standard was editorially revised.

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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.

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1 Scope

This document specifies the nominal dimensions and the tolerances on dimensions and shape of hot-rolled steel flat bars and steel wide flats for general purposes.

This document is not applicable to spring leaves, see EN 10092-1.

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 10079, *Definition of steel products*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10079 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

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4 Designation

The designation of hot-rolled steel flat bars or steel wide flats shall comprise:

— the term “flat bar” or “wide flat”;

— the number of this European Standard (EN 10058);

— dimensions in mm (width x thickness x length);

— type of 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 flat bar EN 10058 — 20x5x6000M
steel EN 10025–2 — S235JR

5 Dimensions

Hot rolled flat bars and steel wide flats 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.

NOTE For manufacturing reasons the corners may have undefined rounded shape.

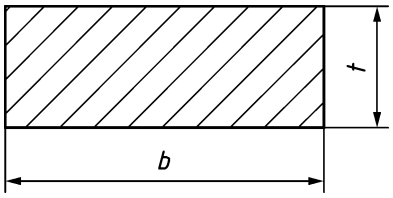


Figure 1 — Hot rolled steel flat bar and steel wide flat

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Table 1 — Preferred dimensions and mass of hot rolled steel flat bars and steel wide flats for general purposes

	Width *b* mm	Thickness, *t* in mm														
		4	5	6	8	10	12	15	20	25	30	35	40	50	60	80
		mass in kg/m [a] [b]														
Flat bars	10		0,393													
	12		0,471	0,565												
	15		0,589	0,707	0,942	1,18										
	16		0,628	0,754	1,00	1,26										
	20	0,628	0,785	0,942	1,26	1,57	1,88	2,36								
	25	0,785	0,981	1,18	1,57	1,96	2,36	2,94								
	30	0,942	1,18	1,41	1,88	2,36	2,83	3,53	4,71							
	35	1,11	1,37	1,65	2,20	2,75	3,30	4,12	5,50							
	40	1,26	1,57	1,88	2,51	3,14	3,77	4,71	6,28	7,85	9,42					
	45	1,41	1,77	2,12	2,83	3,53	4,24	5,30	7,07	8,83	10,60					
	50	1,57	1,96	2,36	3,14	3,93	4,71	5,89	7,85	9,81	11,8					
	60	1,73	2,36	2,83	3,77	4,71	5,65	7,07	9,42	11,8	14,1	16,5	18,8			
	70	1,88	2,75	3,30	4,40	5,50	6,59	8,24	11,0	13,7	16,5	19,2	22,0			
	80		3,14	3,77	5,02	6,28	7,54	9,42	12,6	15,7	18,8	22,0	25,1	31,4	37,7	
	90		3,53	4,24	5,65	7,07	8,48	10,6	14,1	17,7	21,2	24,7	28,3	35,3	42,4	
	100		3,93	4,71	6,28	7,85	9,42	11,8	15,7	19,6	23,6	27,5	31,4	39,3	47,1	
	120			5,65	7,54	9,42	11,3	14,1	18,8	23,6	28,3	33,0	37,7	47,1	56,5	
	130				8,16	10,2	12,3	15,3	20,4	25,5	30,6	35,7	40,8	51,0	62,2	
	140				8,79	11,0	13,2	16,5	22,0	27,5	33,0	38,5	44,0	55,0	65,9	
	150			7,06	9,42	11,8	14,1	17,7	23,6	29,4	35,3	41,2	47,1	58,9	70,7	94,2
Wide flats	160				10,1	12,6	15,1	18,8	25,1	31,4	37,7	44,0	50,2	62,8	75,4	
	170				10,7	13,3	16,0	20,0	26,7	33,4	40,0	46,7	53,4	66,7	80,1	
	180				11,3	14,1	17,0	21,2	28,3	35,3						
	200				12,6	15,7	18,8	23,6	31,4	39,4						

[a] Calculated using density of 7,85 kg/dm³.

[b] The masses of stainless steel flats shall be obtained by multiplying *b* x *t* by the density according to EN 10088–1.

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6 Tolerances on dimensions and shape

6.1 Thickness (*t*)

The deviation from nominal thickness (*t*) shall be within the tolerance given in Table 2.

6.2 Width (*b*)

The deviation from nominal width (*b*) shall be within the tolerance given in Table 2.

6.3 Length (*L*)

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

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 Out-of-squareness (*u*)

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

6.6 Maximum permissible variation in thickness across the width for wide flats

The maximum permissible variation in thickness across the width is 0,5 mm for width > 150 mm.

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Table 2 — Tolerances on dimensions and shape of hot rolled steel flat bars and steel wide flats for general purposes

Dimensions in millimetres

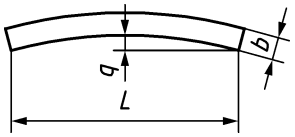
Width *b*	Nominal width	Limit deviation [a]
See Figure 1	$10 \le b \le 40$ $40 < b \le 80$ $80 < b \le 100$ $100 < b \le 120$ $b > 120$	±0,75 ±1 ±1,5 ±2 ±2,5
Thickness *t*	Nominal thickness	Limit deviation [a]
See Figure 1	$t \le 20$ $20 < t \le 40$ $40 < t \le 80$	±0,5 ±1 ±1,5
Straightness *q* 	Nominal cross-section	Tolerance in the plane of *b*
	$b \le 150$ for $b \times t < 1\,000$ mm² for $b \times t \ge 1\,000$ mm² $b > 150$	- $q \le 0{,}4$ % of L $q \le 0{,}25$ % of L $q \le 0{,}4$ % of L
Out-of-squareness *u*	Nominal thickness	Tolerance
See Figure 2	$10 \le t \le 25$ $25 < t \le 40$ $40 < t \le 80$	0,5 1 1,5
Thickness variation across width	Nominal width	Thickness variation
See Figure 1	$b > 150$	±0,5
[a] If agreed at the enquiry and order the total ranges for permissible deviations may be entirely on the plus side.		

Table 3 — Tolerances on lengths

Type of length [a]	**Range** mm	**Limit deviation** [b]
Manufacturing length (M)	3 000 to 13 000 with a range of 2 000 per order item	10 % of bars supplied may be below the minimum for the ordered range but not more than 75 % of the minimum of the range.
Fixed length (F)	3 000 to 13 000	±100 mm
Exact length (E)	< 6 000 ≥ 6 000 to ≤ 13 000	±25 mm ±50 mm
[a] The purchaser shall indicate at the time of enquiry and order the type of length required and the length range or length required. [b] If agreed at the enquiry and order, the total ranges for permissible deviations may be entirely on the plus side.		

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7 Measurement

7.1 Thickness and width

The thickness and width shall be measured at any point situated at least 100 mm from the end of the bar. Cold shearing may deform the bar ends. The condition of the ends may be agreed at time of enquiry and order.

7.2 Length

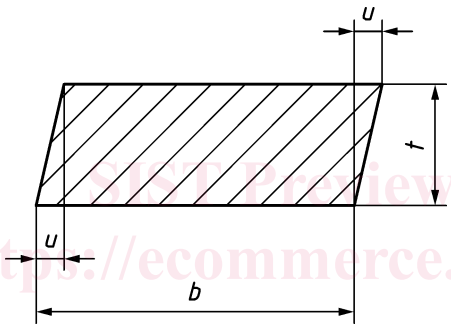
The length shall be measured as the longest length of the bar.

7.3 Straightness

The straightness shall be measured over the total length *L* of the bar.

7.4 Out-of-squareness

The out-of-squareness shall be measured according to Figure 2 as the difference *u* on the nominal width *b.*



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Figure 2 — Out-of-squareness

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7.5 Maximum permissible variation in thickness across the width for wide flats

The variation in thickness across the width shall be determined along a line running perpendicular to the longitudinal axis of the product with the measuring points being at least 20 mm from the longitudinal edges and at least 100 mm from the ends of the bar.