



**SLOVENSKI STANDARD**  
**SIST EN 10060:2004**

**01-junij-2004**

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

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

Warmgewalzte Rundstäbe aus Stahl - Maße, Formtoleranzen und Grenzabmaße

Ronds laminés a chaud - Dimensions et tolérances sur la forme et les dimensions

**Ta slovenski standard je istoveten z: EN 10060:2003**

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**ICS:**

77.140.60      Jeklene palice in drogovi      Steel bars and rods

**SIST EN 10060:2004**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 10060

October 2003

ICS 77.140.60

English version

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

Ronds laminés à chaud - Dimensions et tolérances sur la  
forme et les dimensions

Warmgewalzte Rundstäbe aus Stahl - Maße,  
Formtoleranzen und Grenzabmaße

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

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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  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN 10060:2003 (E)

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## Foreword

This document (EN 10060:2003) 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 60-77 *Hot rolled round bars for general purposes.*

EURONORM 65-80 *Hot rolled round steel bars for screws and rivets.*

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 10060:2003 (E)****1 Scope**

This European Standard specifies the nominal dimensions and the tolerances on dimensions and shape of hot-rolled round steel bars.

**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 round steel bars shall comprise:

- the term "round bar";
- the number of this European Standard (EN 10060);
- dimensions in mm (diameter and length (M, F or E, see Table 4));
- tolerance class P, if necessary;
- the number of the quality standard and the steel name or steel number of the ordered steel.

**EXAMPLE 1**

Round bar EN 10060 - 40x6000M

steel EN 10025 - S235JR

**EXAMPLE 2**

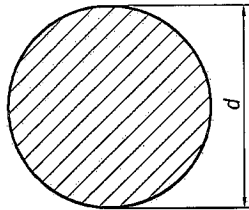
Round bar EN 10060 - 26,65x3600F - P

steel EN 10083-1 - 42CrMo4

## 5 Dimensions

Hot rolled round 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.

Hot rolled round bars for precision purposes complying with this European Standard shall be delivered with the specified dimensions range given in Table 1 and Table 2.



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Figure 1 — Hot rolled round bar  
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EN 10060:2003 (E)

Table 1 — Preferred dimensions, mass and dimensional tolerances of hot rolled round steel bars for general and precision purposes

Diameters <sup>a</sup> <i>d</i> (mm)	Limit deviation <sup>b</sup> Normal (mm)	Limit deviation <sup>b</sup> Precision ( <i>P</i> ) (mm)	Mass <sup>c, d</sup> (kg/m)	Area of cross section (cm <sup>2</sup> )	
10	± 0,4	± 0,15	0,617	0,785	
12			0,888	1,13	
13		± 0,20	± 0,20	1,04	1,33
14				1,21	1,54
15				1,39	1,77
16	1,58			2,01	
18	2,00			2,54	
19	± 0,5	± 0,20	2,23	2,84	
20			2,47	3,14	
22			2,98	3,80	
24			3,55	4,52	
25			3,85	4,91	
26	± 0,6	± 0,25	4,17	5,31	
27			4,49	5,73	
28			4,83	6,16	
30			5,55	7,07	
32			6,31	8,04	
35	± 0,8	± 0,30	7,55	9,62	
36			7,99	10,2	
38			8,90	11,3	
40			9,86	12,6	
42			10,9	13,9	
45	± 0,40	± 0,40	12,5	15,9	
48			14,2	18,1	
50			15,4	19,6	
52			16,7	21,2	
55			18,7	23,8	
60	± 1	± 0,50	22,2	28,3	
63			24,5	31,2	
65			26,0	33,2	
70			30,2	38,5	
73			32,9	41,9	
75	± 1,3	± 0,50	34,7	44,2	
80			39,5	50,3	
85			44,5	56,7	
90			49,9	63,6	
95			55,6	70,9	
100	± 1,5	Not applicable	61,7	78,5	
105			68,0	86,6	
110			74,6	95,0	
115			81,5	104	
120			88,8	113	
125	± 2	Not applicable	96,3	123	
130			104	133	
135			112	143	
140			121	154	



Table 1 — Preferred dimensions, mass and dimensional tolerances of hot rolled round steel bars for general and precision purposes (continued)

Diameters <sup>a</sup> <i>d</i> (mm)	Limit deviation <sup>b</sup> Normal (mm)	Limit deviation <sup>b</sup> Precision ( <i>P</i> ) (mm)	Mass <sup>c, d</sup> (kg/m)	Area of cross Section (cm <sup>2</sup> )
145	± 2	Not applicable	130	165
150			139	177
155			148	189
160			158	201
165	± 2,5		168	214
170			178	227
175			189	241
180			200	254
190			223	284
200			247	314
220	± 3		298	380
250	± 4		385	491

<sup>a</sup> Diameters greater than 250 mm may be delivered with the limit deviation of +/- 6,0 mm.  
<sup>b</sup> When ordering, the total ranges for the permissible deviations may, by agreement, be entirely on the plus side.  
<sup>c</sup> Calculated using density of 7,85 kg/dm<sup>3</sup>  
<sup>d</sup> The masses of stainless steel bars shall be multiplied by the factors according to EN 10088-1.

Table 2 — Dimensions, mass and dimensional tolerances of hot rolled round steel bars for precision applications, for example for screws and rivets

Diameter <i>d</i> (mm)	Limit deviation Precision ( <i>P</i> ) (mm)	Mass <sup>a, b</sup> (kg/m)	Area of section (cm <sup>2</sup> )	Dimension <i>d</i> (mm)	Limit deviation Precision ( <i>P</i> ) (mm)	Mass <sup>a, b</sup> (kg/m)	Area of section (cm <sup>2</sup> )
9,75	± 0,15	0,586	0,75	32,55	± 0,30	6,53	8,32
11,75		0,851	1,08	35,55		7,79	9,93
13,75	± 0,20	1,17	1,48	38,55	± 0,40	9,16	11,67
15,70		1,52	1,94	41,50		10,62	13,53
17,70		1,93	2,46	44,50		12,21	15,55
19,70		2,39	3,05	47,50		13,91	17,72
21,70		2,90	3,70	51,50		16,35	20,83
23,65	± 0,25	3,45	4,39				
26,65		4,38	5,58				
29,60		5,40	6,88				

<sup>a</sup> Calculated using density of 7,85 kg/dm<sup>3</sup>  
<sup>b</sup> The masses of stainless steel bars shall be multiplied by the factors according to EN 10088-1.