



SLOVENSKI STANDARD

SIST EN 2040:2017

01-oktober-2017

Aeronavtika - Pravokotno valjane jeklene palice - Mere - Toleranca js 16

Aerospace series - Rectangular steel bars rolled - Dimensions - Tolerance js 16

Luft- und Raumfahrt - Flachstangen aus Stahl gewalzt - Abmessungen - Toleranz js 16

Série aérospatiale - Barres plates laminées en acier - Dimensions - Tolérance js 16

Ta slovenski standard je istoveten z: EN 2040:2017

[SIST EN 2040:2017](https://standards.iteh.ai/catalog/standards/sist/86ca55da-6e2c-4cad-8ef2-6838d7e1ab5f/sist-en-2040-2017)

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ICS:

49.025.10	Jekla	Steels
77.140.60	Jeklene palice in drogovi	Steel bars and rods

SIST EN 2040:2017

en,fr,de

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EUROPEAN STANDARD

EN 2040

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2017

ICS 49.025.10

English Version

Aerospace series - Rectangular steel bars rolled - Dimensions - Tolerance js 16

Série aérospatiale - Barres plates laminées en acier -
Dimensions - Tolérance js 16

Luft- und Raumfahrt - Rechteckige Stangen aus Stahl
gewalzt - Abmessungen - Toleranz js 16

This European Standard was approved by CEN on 14 May 2017.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 2040:2017) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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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EN 2040:2017 (E)**1 Scope**

This European Standard specifies the dimensions, tolerances and physical constants of rolled rectangular steel bars, used in aerospace construction.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

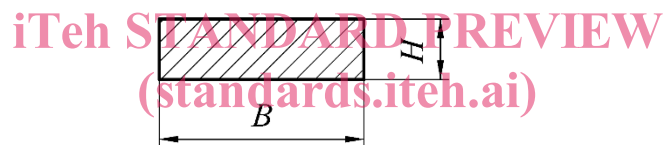
EN 2030, *Aerospace series — Steel X105CrMo17 (1.3544) — Hardened and tempered — Bars — $D_e \leq 150$ mm*

3 Materials

The materials are defined in the material standards and technical specification.

4 Required characteristics

The dimensions, tolerances and linear mass are defined in Figure 1 and Table 1.



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Figure 1

Table 1 (1 of 2)

Dimensions and tolerances in millimetres

Width	Thickness <i>H</i>																				
	3	4	5	6	7	8	10	12	15	18	20	25	30	32	35	40	45	50	60		
<i>B</i>	Tolerance (js 16)	Tolerance (js 16)																			
		± 0,375					± 0,45				± 0,55				± 0,65				± 0,80		
		Linear mass ^a (kg/m)																			
10	± 0,55	0,235	0,314	0,393	0,471	0,550	-	-	-	-	-	-	-	-	-	-	-	-	-		
12		0,283	0,377	0,471	0,565	0,659	0,754	-	-	-	-	-	-	-	-	-	-	-	-		
14		0,330	0,440	0,550	0,659	0,769	0,879	-	-	-	-	-	-	-	-	-	-	-	-		
16		0,377	0,502	0,628	0,754	0,879	1,00	1,26	-	-	-	-	-	-	-	-	-	-	-		
18		0,424	0,565	0,707	0,848	0,989	1,13	1,41	-	-	-	-	-	-	-	-	-	-	-		
20	± 0,65	0,471	0,628	0,785	0,942	1,10	1,26	1,57	1,88	2,36	2,83	-	-	-	-	-	-	-	-		
22		0,518	0,691	0,864	1,04	1,21	1,38	1,73	2,07	2,59	3,11	-	-	-	-	-	-	-	-		
25		0,589	0,785	0,981	1,18	1,37	1,57	1,96	2,36	2,94	3,53	-	-	-	-	-	-	-	-		
28		0,659	0,879	1,10	1,32	1,54	1,76	2,20	2,64	3,30	3,96	-	-	-	-	-	-	-	-		
30		0,707	0,942	1,18	1,41	1,65	1,88	2,36	2,83	3,53	4,24	4,71	-	-	-	-	-	-	-		
32	± 0,80	0,754	1,00	1,26	1,51	1,76	2,01	2,51	3,01	3,77	4,52	5,02	-	-	-	-	-	-	-		
35		0,824	1,10	1,37	1,65	1,92	2,20	2,75	3,30	4,12	4,95	5,50	6,87	8,24	8,79	-	-	-	-		
40		0,942	1,26	1,57	1,80	2,20	2,51	3,14	3,77	4,71	5,65	6,28	7,85	9,42	10,0	-	-	-	-		
45		-	1,41	1,77	2,12	2,47	2,83	3,53	4,24	5,30	6,36	7,07	8,83	10,6	11,3	-	-	-	-		
50		-	1,57	1,96	2,36	2,75	3,14	3,93	4,71	5,89	7,06	7,85	9,81	11,8	12,6	-	-	-	-		
55	± 0,95	-	1,73	2,16	2,59	3,02	3,45	4,32	5,18	6,48	7,77	8,64	10,8	13,0	13,8	-	-	-	-		
60		-	1,88	2,36	2,83	3,30	3,77	4,71	5,65	7,07	8,48	9,42	11,8	14,1	15,1	16,5	18,8	21,2	-		
65		-	2,04	2,55	3,06	3,57	4,08	5,10	6,12	7,65	9,18	10,2	12,8	15,3	16,3	17,9	20,4	23,0	-		
70		-	2,20	2,75	3,30	3,85	4,40	5,50	6,59	8,24	9,89	11,0	13,7	16,5	17,6	19,2	22,0	24,7	27,5	-	
75		-	2,36	2,94	3,53	4,12	4,71	5,89	7,07	8,83	10,6	11,8	14,7	17,7	18,8	20,6	23,6	26,5	29,4	-	
80	-	2,51	3,14	3,77	4,40	5,02	6,28	7,54	9,42	11,3	12,6	15,7	18,8	20,1	22,0	25,1	28,3	31,4	-		

Table 1 (2 of 2)

Dimensions and tolerances in millimetres

Width	Thickness <i>H</i>																			
	3	4	5	6	7	8	10	12	15	18	20	25	30	32	35	40	45	50	60	
<i>B</i>	Tolerance (js 16)	Tolerance (js 16)																		
		± 0,375			± 0,45			± 0,55			± 0,65			± 0,80				± 0,95		
		Linear mass ^a (kg/m)																		
90	± 1,10	-	-	3,53	4,24	4,95	5,65	7,07	8,48	10,6	12,7	14,1	17,7	21,2	22,6	24,7	28,3	31,8	35,3	42,4
100		-	-	3,93	4,71	5,50	6,23	7,85	9,42	11,8	14,1	15,7	19,6	23,6	25,1	27,5	31,4	35,3	39,2	47,1
110		-	-	-	5,10	6,04	6,91	8,64	10,4	13,0	15,5	17,3	21,6	25,9	27,6	30,2	34,5	38,9	43,2	51,8
120		-	-	-	5,65	6,59	7,54	9,42	11,3	14,1	17,0	18,8	23,6	28,3	30,1	33,0	37,7	42,4	47,1	56,5
130	± 1,25	-	-	-	6,12	7,14	8,16	10,2	12,2	15,3	18,4	20,4	25,5	30,6	32,7	35,7	40,8	45,9	51,0	61,2
140		-	-	-	-	7,69	8,79	11,0	13,2	16,5	19,8	22,0	27,5	33,0	35,2	38,5	44,0	49,5	55,0	65,9
150		-	-	-	-	8,24	9,42	11,8	14,1	17,7	21,2	23,6	29,4	35,3	37,7	41,2	47,1	53,0	58,9	70,6
160		-	-	-	-	8,79	10,0	12,6	15,1	18,8	22,6	25,1	31,4	37,7	40,2	44,0	50,2	56,5	-	-
180		-	-	-	-	9,89	11,3	14,1	17,0	21,2	25,4	28,3	35,3	42,4	45,2	49,5	56,5	63,6	-	-
200	± 1,45	-	-	-	-	-	-	15,7	18,8	23,6	28,3	31,4	39,2	47,1	50,2	55,0	62,8	70,6	-	-
250		-	-	-	-	-	-	19,6	23,6	29,4	35,3	39,2	49,1	58,9	62,8	68,7	78,5	88,3	-	-
300	± 1,60	-	-	-	-	-	-	-	28,3	35,3	42,4	47,1	58,9	70,6	75,4	82,4	94,2	106	-	-
400	± 1,80	-	-	-	-	-	-	-	-	47,1	56,5	62,8	78,5	94,2	100	110	126	141	-	-

^a Calculated on the basis of 7,85 kg/m³.

Table 2 (1 of 2)

Dimensions and tolerances in millimetres

Width <i>B</i>	Thickness <i>H</i>																		
	3	4	5	6	7	8	10	12	15	18	20	25	30	32	35	40	45	50	60
	Dimensional code																		
10	AA	AB	AC	AD	AE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	AF	AG	AH	AJ	AK	AL	-	-	-	-	-	-	-	-	-	-	-	-	-
14	AM	AN	AP	AQ	AR	AS	-	-	-	-	-	-	-	-	-	-	-	-	-
16	AT	AU	AV	AW	AY	AZ	BA	-	-	-	-	-	-	-	-	-	-	-	-
18	BB	BC	BD	BE	BF	BG	BH	-	-	-	-	-	-	-	-	-	-	-	-
20	BJ	BK	BL	BM	BN	BP	BQ	BR	BS	BT	-	-	-	-	-	-	-	-	-
22	BU	BV	BW	BY	BZ	CA	CB	CC	CD	CE	-	-	-	-	-	-	-	-	-
25	CF	CG	CH	CJ	CK	CL	CM	CN	CP	CQ	-	-	-	-	-	-	-	-	-
28	CR	CS	CT	CU	CV	CW	CY	CZ	DA	DB	-	-	-	-	-	-	-	-	-
30	DC	DD	DE	DF	DG	DH	DJ	DK	DL	DM	DN	-	-	-	-	-	-	-	-
32	DP	DQ	DR	DS	DT	DU	DV	DW	DY	DZ	EA	-	-	-	-	-	-	-	-
35	EB	EC	ED	EE	EF	EG	EH	EJ	EK	EL	EM	EN	EP	EQ	-	-	-	-	-
40	ER	ES	ET	EU	EV	EW	EY	EZ	FA	FB	FC	FD	FE	FF	-	-	-	-	-
45	-	FG	FH	FJ	FK	FL	FM	FN	FP	FQ	FR	FS	FT	FU	-	-	-	-	-
50	-	FV	FW	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GJ	-	-	-	-	-
55	-	GK	GL	GM	GN	GP	GQ	GR	GS	GT	GU	GV	GW	GY	-	-	-	-	-
60	-	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HJ	HK	HL	HM	HN	HP	HQ	-	-
65	-	HR	HS	HT	HU	HV	HW	HY	HZ	JA	JB	JC	JD	JE	JF	JG	JH	-	-
70	-	JJ	JK	JL	JM	JN	JP	JQ	JR	JS	JT	JU	JV	JW	JY	JZ	KA	KB	-
75	-	KC	KD	KE	KF	KG	KH	KJ	KK	KL	KM	KN	KP	KQ	KR	KS	KT	KU	-
80	-	KV	KW	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LJ	LK	LL	LM	LN	-