



Hot rolled steel equal flange tees
with radiused root and toes
Dimensions and tolerances on shape and dimensions
English version of DIN EN 10055

DIN
EN 10055

ICS 77.140.70

Supersedes DIN 1024,
March 1982 edition.

Descriptors: Steel, tees, dimensions, tolerances.

Warmgewalzter gleichschenkliger T-Stahl mit gerundeten Kanten und Übergängen; Maße, Grenzabmaße und Formtoleranzen

European Standard EN 10055:1995 has the status of a DIN Standard.

A comma is used as the decimal marker.

National foreword

This standard has been prepared by ECISS/TC 11.

The responsible German body involved in its preparation was the *Normenausschuß Eisen und Stahl* (Steel and Iron Standards Committee), Technical Committee *Warmgewalzte Profilerzeugnisse*.

Amendments

In comparison with DIN 1024, March 1982 edition, the following amendments have been made:

- a) Wide flange tees are no longer specified, as are types T20, T25, T45 and T90.
- b) Specifications for length and tolerances on length have been amended.

Previous editions

DIN 1612: 1924-09, 1932-01, 1943x-03; DIN 1024: 1926-07, 1940x-07, 1959-06, 1963-10, 1981-08, 1982-03.

EN comprises 4 pages.

Bearbeitet: **Normung**

4,18

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English version

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Fers T en acier à ailes égales et à coins arrondis en acier laminés à chaud; dimensions et tolérances sur la forme et les dimensions

Warmgewalzter gleichschenkliger T-Stahl mit gerundeten Kanten und Übergängen; Maße, Grenzabmaße und Formtoleranzen

This European Standard was approved by CEN on 1995-06-30.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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Foreword

This European Standard has been prepared by ECISS/TC 11 'Structural steel sections', the Secretariat of which is held by BSI. Its specifications are based on EURONORM 55.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by May 1996 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies requirements for the nominal dimensions and the tolerances on dimensions, shape and mass of hot rolled steel equal flange tees with radiused root and toes. These requirements do not apply to equal flange tees produced from stainless steel.

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.

EN 10025 Hot rolled products of non-alloy structural steels; technical delivery conditions

EN 10079 Definition of steel products

3 Definitions

For the purposes of this European Standard, the definitions given in EN 10079 apply.

4 Designation

The designation of hot rolled equal flanged tees shall comprise:

- the term 'tee';
- the number of this European Standard;
- the letter 'T';
- the height, h , in mm;
- number of quality standard and name or material number of the steel ordered.

EXAMPLE:

Tee EN 10055 – T40 – steel EN 10025 – S235JR

5 Dimensions

Hot rolled equal flange tees with radiused root and toes as covered in this European Standard shall be produced to the dimensions given in table 1 and illustrated in figure 1.

6 Tolerances on dimensions and shape

6.1 Section height

Any deviations of the height, h , from the nominal value shall be within the tolerances given in table 2.

6.2 Flange width

Any deviations of the flange width, b , from the nominal value shall be within the tolerances given in table 2.

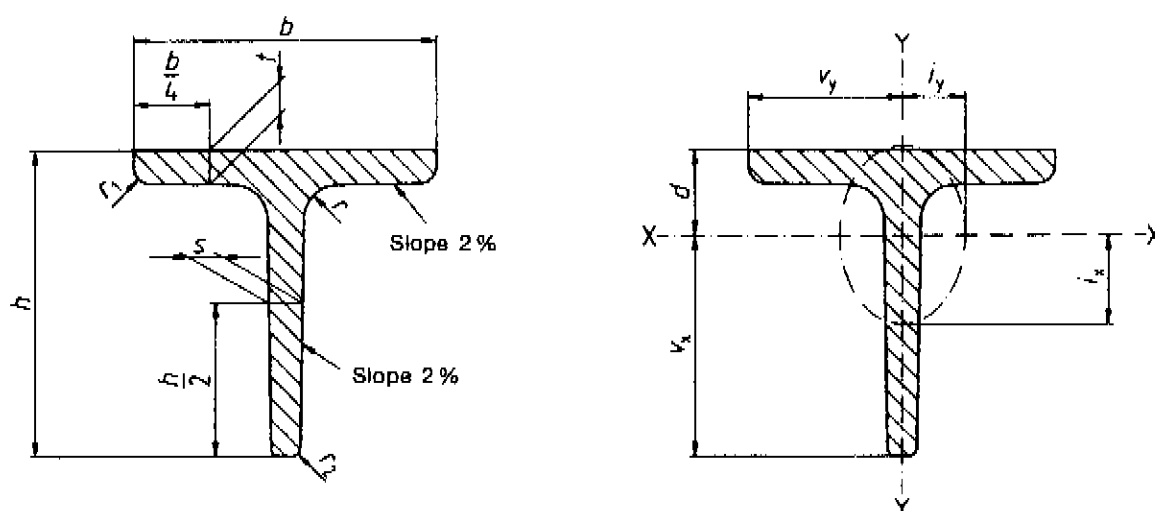


Figure 1: Hot rolled steel equal flange tees with radiused root and toes

Table 1: Designation and dimensions of hot rolled steel equal flange tees with radiused root and toes

Designation	Mass	Cross-sectional area	Dimensions						Position of centre of gravity	Characteristics with respect to the axes					
			Height	Width	Thickness	Radii				X-X			Y-Y		
						h	b	s, t		r	r_1	r_2	d	I_x	$\frac{I_x}{v_x}$
kg/m	cm ²	mm						cm	cm ⁴	cm ³	cm	cm ⁴	cm ³	cm	
T30	1,77	2,26	30	30	4	4	2	1	0,85	1,72	0,80	0,87	0,87	0,58	0,62
T35	2,33	2,97	35	35	4,5	4,5	2,5	1	0,99	3,10	1,23	1,04	1,57	0,90	0,73
T40	2,96	3,77	40	40	5	5	2,5	1	1,12	5,28	1,84	1,18	2,58	1,29	0,83
T50	4,44	5,66	50	50	6	6	3	1,5	1,39	12,1	3,36	1,46	6,06	2,42	1,03
T60	6,23	7,94	60	60	7	7	3,5	2	1,66	23,8	5,48	1,73	12,2	4,07	1,24
T70	8,32	10,6	70	70	8	8	4	2	1,94	44,5	8,79	2,05	22,1	6,32	1,44
T80	10,7	13,6	80	80	9	9	4,5	2	2,22	73,7	12,8	2,33	37,0	9,25	1,65
T100	18,4	20,9	100	100	11	11	5,5	3	2,74	179	24,6	2,92	88,3	17,7	2,05
T120	23,2	29,6	120	120	13	13	6,5	3	3,28	366	42,0	3,51	178	29,7	2,45
T140	31,3	39,9	140	140	15	15	7,5	4	3,80	660	64,7	4,07	330	47,2	2,88

6.3 Web thickness

Any deviations of the web thickness, s , from the nominal value, when measured at the mid-width position of the web, shall be within the tolerances given in table 2.

6.4 Flange thickness

Any deviations of the flange thickness, t , from the nominal value, when measured at a distance equal to $b/4$ from the mid-width position of the flange, shall be within the tolerances given in table 2.

6.5 Out-of-squareness

The out-of-squareness of the section, k , shall not exceed the maximum given in table 2.

6.6 Symmetry

The eccentricity, e , shall not be greater than that given in table 2, with

$$e = \frac{b_1 - b_2}{2}$$

6.7 Straightness

Any deviations from the straightness, q_{xx} or q_{yy} , shall not exceed the value given in table 2.

7 Tolerances on mass

The mass of a unit shall be within - 8% of the calculated mass for thicknesses s up to 4 mm and t up to 7 mm (see table 2) and within -6% of the calculated mass for thicknesses s and t greater than 7 mm. The calculated mass shall be determined using a density of 7,85 kg/dm³.

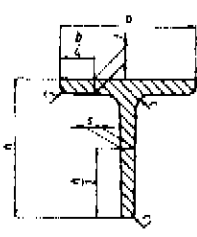
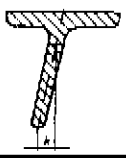
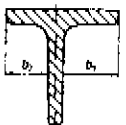
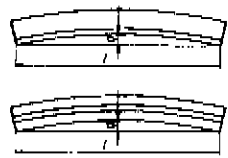
8 Tolerances on length

The sections shall be cut to ordered lengths, L , to tolerances in accordance with table 2.

NOTE: L represents the longest useable length of the section assuming that the ends of the section have been cut square.

Table 2: Tolerances on dimensions and shape of hot rolled steel equal flange tees with radiused root and toes

Dimensions in mm

1 Cross-sectional dimensions			
	Nominal dimensions	Tolerances on	
		<i>b, h</i>	<i>s, t</i>
	$b \leq 50$	± 1	$\pm 0,5$
	$50 < b \leq 100$	$\pm 1,5$	$\pm 0,75$
	$100 < b$	$\pm 2,0$	$\pm 1,0$
2 Out-of-squareness, <i>k</i>			
	Nominal dimensions	Tolerances	
	$b, h \leq 100$	$k \leq 1$	
	$100 < b, h$	$k \leq 1,5$	
3 Symmetry (eccentricity), <i>e</i> $e = \frac{b_1 - b_2}{2}$			
	Nominal dimensions	Tolerances	
	$b \leq 60$	$e \leq 1$	
	$60 < b$	$e \leq 1,5$	
4 Length, <i>L</i>			
<p><i>L</i> represents the longest useable length of the section, assuming that the ends of the section have been cut square. The tolerances requested shall be stated in the order. If agreed at the time of ordering, either all plus tolerances or all minus tolerances may be accepted.</p>			Tolerances
		Normal tolerance	± 100
		Closer tolerances	± 50
			± 25
		± 10	
5 Deviation from straightness, <i>q</i>			
	Normal straightness: the deviation (<i>q</i>) is to be measured over the total length (<i>L</i>) of the section.		
	Nominal dimensions	Tolerances	
	$50 \leq b, h \leq 100$	$q \leq 0,4\%$ of <i>L</i>	
6 Mass applicable to individual sections			
	Thickness	Tolerances	
	$4 \leq s, t \leq 7$	-8%	
	$7 < s, t$	-6%	
The deviation in mass of sections taken individually is the difference between the 'as-supplied' mass and the theoretical mass of each section.			