Hot rolled steel taper flange I sections
Tolerances on shape and dimensions
English version of DIN EN ISO 10024

DIN EN 10024

ICS 77.140.70

Descriptors: Steel, I sections, tolerances.

This standard, together with DIN 1025-1, May 1995 edition, supersedes DIN 1055-1, October 1963 edition.

I-Profile mit geneigten inneren Flanschflächen; Grenzabmaße und Formtoleranzen

European Standard EN 10024:1995 has the status of a DIN Standard.

A comma has been 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.*

It should be noted that it is not intended to specify nominal sizes of I sections.

Amendments

In comparison with DIN 1025-1, October 1963 edition, the following amendments have been made:

a) Sizes of I sections are no longer specified.

b) Some tolerances on flange thickness, web thickness, out-of-squareness, web off-centre, straightness and length have been amended.

c) A limit deviation of +4 % has been specified for the mass.

Previous editions

DIN 1612: 1924-09, 1932-01, 1943x-03; DIN 1025-1: 1926-10, 1932-02, 1939-08, 1940x-07, 1959-07, 1963-10.

EN comprises 3 pages.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 10024

March 1995

ICS 77.140.70

Descriptors: Steel, I sections, tolerances.

English version

Hot rolled steel taper flange I sections
Tolerances on shape and dimensions

Poutrelles en I à ailes inclinées laminées à chaud; tolérances de forme et de dimensions

I-Profile mit geneigten inneren Flanschflächen; Grenzabmaße und Formtoleranzen

This European Standard was approved by CEN on 1995-02-06.

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

Contents

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 proposals made by ECISS/TC 11/WG 3.

This European Standards 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 September 1995 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, United Kingdom.

1 Scope

This European Standard specifies requirements for tolerances on dimensions, shape and mass of hotrolled steel taper flange I sections, except stainless steel taper flange I sections.

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 10079 Definition of steel products

3 Definitions

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

4 Tolerances on dimensions and shape

4.1 Height

Any deviations of the height (h) from the nominal value shall be within the tolerance given in table 1.

4.2 Flange width

Any deviations of the flange width (b) from the nominal value shall be within the tolerance given in table 1.

4.3 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 tolerance given in table 1.

4.4 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 tolerance given in table 1.

4.5 Out-of-squareness

The out-of-squareness of the section ($k + k'$) shall not exceed the value given in table 1.

4.6 Web off-centre

The mid-thickness of the web shall not deviate from the mid-width position on the flange by more than the distance (e) given in table 1.

4.7 Straightness

The straightness (q_{xx} or q_{yy}) shall comply with the requirements given in table 1.

5 Tolerance on mass

The mass of a batch or piece shall be within ± 4,0 % of the calculated mass (see table 1). The mass deviation is the difference between the actual mass of the batch or piece and the calculated (theoretical) mass. The theoretical mass shall be determined taking the density as 7,85 kg/dm³.

6 Tolerance on length

The sections shall be cut to ordered lengths to tolerances (see table 1) of either

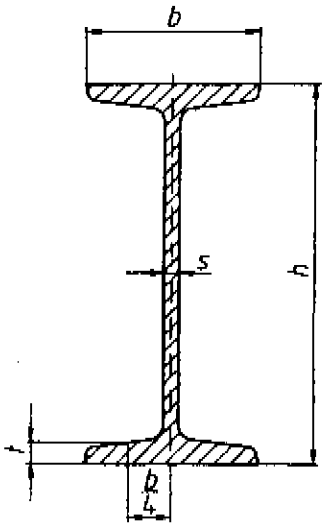
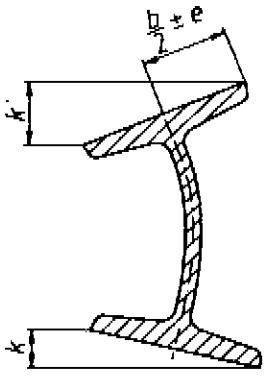
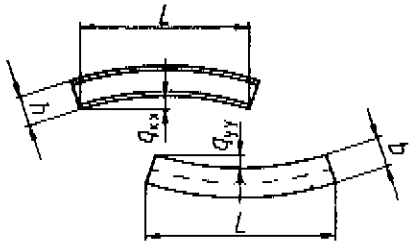
a) ± 50 mm

or, by agreement,

b) $^{+100}_{0}$ mm.

Table 1: Tolerances on dimensions of hotrolled steel taper flange I sections

Dimensions in mm

Designation	Property	Range	Tolerance
	Height h	$h \leq 200$ $200 < h \leq 400$ $400 < h$	+2,0/−2,0 +3,0/−3,0 +4,0/−4,0
	Flange width b	$b \leq 75$ $75 < b \leq 100$ $100 < b \leq 125$ $125 < b$	+1,5/−1,5 +2,0/−2,0 +2,5/−2,5 +3,0/−3,0
	Web thickness s	$s \leq 7$ $7 < s \leq 10$ $10 < s$	+0,5/−1,0 +0,7/−1,5 +1,0/−2,0
	Flange thickness t	$t \leq 7$ $7 < t \leq 10$ $10 < t \leq 20$ $20 < t$	+1,5/−0,5 +2,0/−1,0 +2,5/−1,5 +2,5/−2,0
	Out-of-squareness $k + k'$	$b \leq 100$ $100 < b$	2,0 2% of b
	Web off-centre e	$b \leq 100$ $100 < b$	2,0 3,0
	Straightness q_{xx} and q_{yy}	$80 < h \leq 180$ $180 < h \leq 360$ $360 < h$	0,3 % of L 0,15% of L 0,1 % of L
Batch or piece	Mass		± 4%
	Length L		+50/−50 (standard) +100/0 (by agreement)