

	<p style="text-align: center;">Hot rolled I and H sections (I series) Dimensions, mass and static parameters</p>	<p style="text-align: center;">DIN 1025-1</p>												
<p>ICS 77.140.70</p> <p>Descriptors: Steel, sections, dimensions.</p> <p>Warmgewalzte I-Träger – Teil 1: Schmale I-Träger, I-Reihe – Maße, Masse, statische Werte</p> <p><i>In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.</i></p> <p style="text-align: center;">Dimensions in mm</p> <p>Foreword</p> <p>This standard has been prepared by the <i>Normenausschuß Eisen und Stahl</i> (Steel and Iron Standards Committee).</p> <p>DIN 1025-1 has been revised to take into account the publication of the European Standard (DIN EN 10024) which specifies requirements for tolerances and mass of hot rolled steel taper flange I sections.</p> <p>Amendments</p> <p>The following amendments have been made to the October 1963 edition:</p> <ol style="list-style-type: none"> a) Tolerances are no longer specified, as they are covered by DIN EN 10024. b) I sections 425, 475 and 600 are no longer included. <p>Previous editions</p> <p>DIN 1612: 1924-09, 1932-01, 1943x-03; DIN 1025-1: 1926-10, 1932-02, 1939-08, 1940x-07, 1959-07, 1963-10.</p> <p>1 Scope</p> <p>This standard specifies dimensions, masses and static parameters for hot rolled I sections with narrow taper flanges.</p> <p>The standard does not cover:</p> <ol style="list-style-type: none"> a) hot rolled I and H sections with parallel flanges (IPB series; cf. DIN 1025-2); b) hot rolled I and H sections with thin webs and flanges (IPBl series; cf. DIN 1025-3); c) hot rolled I and H sections with thick webs and flanges (IPBv series; cf. DIN 1025-4); d) hot rolled I and H sections with narrow parallel flanges (IPE series; cf. DIN 1025-5). <p>2 Normative references</p> <p>This 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 titles of the publications are listed below. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.</p> <table border="0"> <tr> <td>DIN 1025-2</td> <td>Hot rolled I and H sections (IPB series) – Dimensions, mass and static parameters</td> </tr> <tr> <td>DIN 1025-3</td> <td>Hot rolled I and H sections (IPBl series) – Dimensions, mass and static parameters</td> </tr> <tr> <td>DIN 1025-4</td> <td>Hot rolled I and H sections (IPBv series) – Dimensions, mass and static parameters</td> </tr> <tr> <td>DIN 1025-5</td> <td>Hot rolled I and H sections (IPE series) – Dimensions, mass and static parameters</td> </tr> <tr> <td>DIN EN 10024</td> <td>Hot rolled steel taper flange I sections – Tolerances on shape and dimensions</td> </tr> <tr> <td>DIN EN 10025</td> <td>Hot rolled unalloyed structural steel products – Technical delivery conditions (includes Amendment A1 : 1993)</td> </tr> </table> <p style="text-align: right;">Continued on pages 2 and 3.</p> <p style="text-align: center;">Translation by DIN-Sprachendienst.</p> <p style="text-align: center;">In case of doubt, the German-language original should be consulted as the authoritative text.</p>			DIN 1025-2	Hot rolled I and H sections (IPB series) – Dimensions, mass and static parameters	DIN 1025-3	Hot rolled I and H sections (IPBl series) – Dimensions, mass and static parameters	DIN 1025-4	Hot rolled I and H sections (IPBv series) – Dimensions, mass and static parameters	DIN 1025-5	Hot rolled I and H sections (IPE series) – Dimensions, mass and static parameters	DIN EN 10024	Hot rolled steel taper flange I sections – Tolerances on shape and dimensions	DIN EN 10025	Hot rolled unalloyed structural steel products – Technical delivery conditions (includes Amendment A1 : 1993)
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Table 1: Dimensions, mass and static parameters for I sections with narrow taper flange

Section designation I	Dimensions for						Section area, in cm ²	Mass, in kg/m	Surface area, in m ² /m	Static parameters ¹⁾						S _x ²⁾ cm ³	s _x ³⁾ cm
	h	b	s	t	r ₁	r ₂				I _x cm ⁴	W _x cm ³	i _x cm	I _y cm ⁴	W _y cm ³	i _y cm		
80	80	42	3,9	5,9	3,9	2,3	7,57	5,94	0,304	77,8	19,5	3,20	6,29	3,00	0,91	11,4	6,84
100	100	50	4,5	6,8	4,5	2,7	10,6	8,34	0,370	171	34,2	4,01	12,2	4,88	1,07	19,9	8,57
120	120	58	5,1	7,7	5,1	3,1	14,2	11,1	0,439	328	54,7	4,81	21,5	7,41	1,23	31,8	10,3
140	140	66	5,7	8,6	5,7	3,4	18,2	14,3	0,502	573	81,9	5,61	35,2	10,7	1,40	47,7	12,0
160	160	74	6,3	9,5	6,3	3,8	22,8	17,9	0,575	935	117	6,40	54,7	14,8	1,55	68,0	13,7
180	180	82	6,9	10,4	6,9	4,1	27,9	21,9	0,640	1450	161	7,20	81,3	19,8	1,71	93,4	15,5
200	200	90	7,5	11,3	7,5	4,5	33,4	26,2	0,709	2140	214	8,00	117	26,0	1,87	125	17,2
220	220	98	8,1	12,2	8,1	4,9	39,5	31,1	0,775	3060	278	8,80	162	33,1	2,02	162	18,9
240	240	106	8,7	13,1	8,7	5,2	46,1	36,2	0,844	4250	354	9,59	221	41,7	2,20	206	20,6
260	260	113	9,4	14,1	9,4	5,6	53,3	41,9	0,906	5740	442	10,4	288	51,0	2,32	257	22,3
280	280	119	10,1	15,2	10,1	6,1	61,0	47,9	0,966	7590	542	11,1	364	61,2	2,45	316	24,0
300	300	125	10,8	16,2	10,8	6,5	69,0	54,2	1,03	9800	653	11,9	451	72,2	2,56	381	25,7
320	320	131	11,5	17,3	11,5	6,9	77,7	61,0	1,09	12510	782	12,7	555	84,7	2,67	457	27,4
340	340	137	12,2	18,3	12,2	7,3	86,7	68,0	1,15	15700	923	13,5	674	98,4	2,80	540	29,1
360	360	143	13,0	19,5	13,0	7,8	97,0	76,1	1,21	19610	1090	14,2	818	114	2,90	638	30,7
380	380	149	13,7	20,5	13,7	8,2	107	84,0	1,27	24010	1260	15,0	975	131	3,02	741	32,4
400	400	155	14,4	21,6	14,4	8,6	118	92,4	1,33	29210	1460	15,7	1160	149	3,13	857	34,1
450	450	170	16,2	24,3	16,2	9,7	147	115	1,48	45850	2040	17,7	1730	203	3,43	1200	38,3
500	500	185	18,0	27,0	18,0	10,8	179	141	1,63	68740	2750	19,6	2480	268	3,72	1620	42,4
550	550	200	19,0	30,0	19,0	11,9	212	166	1,80	99180	3610	21,6	3490	349	4,02	2120	46,8

1) I = second moment of area, W = section modulus.

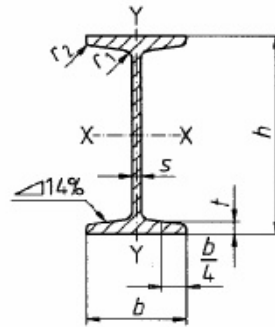
i = radius of gyration.

2) S_x = moment of first order of half the cross section.

3) s_x = I_x : S_x = distance between centres of compression and tension.

The values given for section area, mass, surface area and the static parameters have been specified as a function of the other dimensions given in this table.

3 Designation



The standard designation shall give, in the following order:

- a) the product name (i.e. I section);
- b) the DIN number (i.e. DIN 1025);
- c) the steel name or material number;
- d) the section designation as in table 1.

EXAMPLE:

The designation of a hot rolled I section complying with this standard, made from steel grade S235JR (material number 1.0037) as specified in DIN EN 10025 and designated I 360, shall read:

I section DIN 1025 – S235JR – I 360

or

I section DIN 1025 – 1.0037 – I 360

4 Dimensions and mass

4.1 Hot rolled I sections with narrow taper flanges shall have the dimensions specified in table 1.

4.2 The nominal length shall be specified at the time of ordering.

4.3 Sections shall have the masses specified in table 1, which have been calculated assuming a density of 7,85 kg/dm³.

5 Tolerances

The dimensions of sections are subject to the tolerances specified in DIN EN 10024.

6 Material

Sections shall preferably be of one of the steel grades specified in DIN EN 10025. The desired steel grade shall be specified at the time of ordering.