

Structural steel sections —

Part 1: Specification for hot-rolled sections

ICS 77.140.70

Confirmed December 2011

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee ISE/13, Structural steel sections, upon which the following bodies were represented:

British Constructional Steelwork Association Limited
Department for Transport — Highways Agency
Galvanizers Association
Institute of Healthcare Engineering and Estate Management
Steel Construction Institute
UK Steel Association

This British Standard, was published under the authority of the Standards Policy and Strategy Committee and comes into effect on 19 August 2005

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First published November 1903
Second edition August 1921
Third edition March 1932
Fourth edition February 1962
Fifth edition January 1972
Sixth edition November 1980
Seventh edition December 1993
Eighth edition August 2005

Amendments issued since publication

Amd. No.	Date	Comments

The following BSI references relate to the work on this British Standard:
Committee reference ISE/13
Draft for comment
05/30128028 DC

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Foreword

This part of BS 4 has been prepared by Technical Committee ISE/13. It supersedes BS 4-1:1993, which is withdrawn.

In this revision the former Table 8, Tapered flange channels has been deleted.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 13 and a back cover.

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1 Scope

This part of BS 4 specifies the dimensions and mass of the following hot-rolled structural steel sections:

- universal beams;
- universal columns;
- universal bearing piles;
- joists;
- structural tees cut from universal beams;
- structural tees cut from universal columns;
- parallel flange channels.

Mass, length and depth tolerances for taper flange joists and channels are also given.

NOTE Dimensional, mass, length and straightness tolerances for universal beams, columns and bearing piles are given in BS EN 10034.

2 Normative references

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

BS EN 10034, *Structural steel I and H sections — Tolerances on shape and dimensions*.

3 Designation

A section shall be designated by the serial size in millimetres (mm) and the mass per unit length in kilograms per metre (kg/m).

This form of designation shall be used in any enquiry and order.

EXAMPLE

A beam of 920.5 mm × 420.5 mm at 388 kg/m is designated a 914 × 419 × 388 beam.

4 Tolerances on universal beams, columns and bearing piles

Dimensional, mass, length and straightness tolerances on universal beams, columns and bearing piles shall be as given in BS EN 10034.

5 Mass and length tolerances for joists and channels

5.1 Mass

Tolerances shall be applied to the actual mass per unit length of the joist or channel.

The rolling tolerances shall be either:

- a) ± 2.5 % of the actual mass per unit length; or
- b) $+5$ % of the actual mass per unit length where a minimum mass per unit length is ordered.

5.2 Length

Joists or channels ordered as specified or as exact lengths shall be supplied as follows.

- a) *Specified lengths*. When a joist or channel is to be cut to a specified length, it shall be cut to within ± 25 mm of that length. When a minimum length is specified, it shall be cut to within $+50$ mm -0 mm of that minimum length.
- b) *Exact lengths*. When a section is to be cut to an exact length, it shall be cold sawn to within ± 3.2 mm of that length.

6 Tolerance on depth of section for joists and channels

The tolerance on the nominal depth of section shall be as given in Table 1.

Table 1 — Tolerances on nominal depth of joists and channels

Nominal depth mm	Maximum permissible variation from specified depth mm	
≤ 300	+3.2	−0.8
>300 ≤ 380	+4.0	−1.6
>380 ≤ 430	+4.8	−1.6

7 Dimensions of hot-rolled structural steel sections

The nominal dimensions of hot-rolled structural steel sections shall be as given in Table 2 to Table 8.

Table 2 — Universal beams

Section designation	Mass per unit length kg/m	Depth h mm	Width b mm	Web s mm	Flange t mm	Root radius r mm
914 × 419 × 388	388.0	921.0	420.5	21.4	36.6	24.1
914 × 419 × 343	343.3	911.8	418.5	19.4	32.0	24.1
914 × 305 × 289	289.1	926.6	307.7	19.5	32.0	19.1
914 × 305 × 253	253.4	918.4	305.5	17.3	27.9	19.1
914 × 305 × 224	224.2	910.4	304.1	15.9	23.9	19.1
914 × 305 × 201	200.9	903.0	303.3	15.1	20.2	19.1
838 × 292 × 226	226.5	850.9	293.8	16.1	26.8	17.8
838 × 292 × 194	193.8	840.7	292.4	14.7	21.7	17.8
838 × 292 × 176	175.9	834.9	291.7	14.0	18.8	17.8
762 × 267 × 197	196.8	769.8	268.0	15.6	25.4	16.5
762 × 267 × 173	173.0	762.2	266.7	14.3	21.6	16.5
762 × 267 × 147	146.9	754.0	265.2	12.8	17.5	16.5
762 × 267 × 134	133.9	750.0	264.4	12.0	15.5	16.5

Table 2 — Universal beams (*continued*)

Section designation	Mass per unit length kg/m	Depth	Width	Web	Flange	Root radius
		<i>h</i> mm	<i>b</i> mm	<i>s</i> mm	<i>t</i> mm	<i>r</i> mm
686 × 254 × 170	170.2	692.9	255.8	14.5	23.7	15.2
686 × 254 × 152	152.4	687.5	254.5	13.2	21.0	15.2
686 × 254 × 140	140.1	683.5	253.7	12.4	19.0	15.2
686 × 254 × 125	125.2	677.9	253.0	11.7	16.2	15.2
610 × 305 × 238	238.1	635.8	311.4	18.4	31.4	16.5
610 × 305 × 179	179.0	620.2	307.1	14.1	23.6	16.5
610 × 305 × 149	149.1	612.4	304.8	11.8	19.7	16.5
610 × 229 × 140	139.9	617.2	230.2	13.1	22.1	12.7
610 × 229 × 125	125.1	612.2	229.0	11.9	19.6	12.7
610 × 229 × 113	113.0	607.6	228.2	11.1	17.3	12.7
610 × 229 × 101	101.2	602.6	227.6	10.5	14.8	12.7
533 × 210 × 122	122.0	544.5	211.9	12.7	21.3	12.7
533 × 210 × 109	109.0	539.5	210.8	11.6	18.8	12.7
533 × 210 × 101	101.0	536.7	210.0	10.8	17.4	12.7
533 × 210 × 92	92.1	533.1	209.3	10.1	15.6	12.7
533 × 210 × 82	82.2	528.3	208.8	9.6	13.2	12.7
457 × 191 × 98	98.3	467.2	192.8	11.4	19.6	10.2
457 × 191 × 89	89.3	463.4	191.9	10.5	17.7	10.2
457 × 191 × 82	82.0	460.0	191.3	9.9	16.0	10.2
457 × 191 × 74	74.3	457.0	190.4	9.0	14.5	10.2
457 × 191 × 67	67.1	453.4	189.9	8.5	12.7	10.2
457 × 152 × 82	82.1	465.8	155.3	10.5	18.9	10.2
457 × 152 × 74	74.2	462.0	154.4	9.6	17.0	10.2
457 × 152 × 67	67.2	458.0	153.8	9.0	15.0	10.2
457 × 152 × 60	59.8	454.6	152.9	8.1	13.3	10.2
457 × 152 × 52	52.3	449.8	152.4	7.6	10.9	10.2
406 × 178 × 74	74.2	412.8	179.5	9.5	16.0	10.2
406 × 178 × 67	67.1	409.4	178.8	8.8	14.3	10.2
406 × 178 × 60	60.1	406.4	177.9	7.9	12.8	10.2
406 × 178 × 54	54.1	402.6	177.7	7.7	10.9	10.2
406 × 140 × 46	46.0	403.2	142.2	6.8	11.2	10.2
406 × 140 × 39	39.0	398.0	141.8	6.4	8.6	10.2

Table 2 — Universal beams (*continued*)

Section designation	Mass per unit length kg/m	Depth <i>h</i> mm	Width <i>b</i> mm	Web <i>s</i> mm	Flange <i>t</i> mm	Root radius <i>r</i> mm
356 × 171 × 67	67.1	363.4	173.2	9.1	15.7	10.2
356 × 171 × 57	57.0	358.0	172.2	8.1	13.0	10.2
356 × 171 × 51	51.0	355.0	171.5	7.4	11.5	10.2
356 × 171 × 45	45.0	351.4	171.1	7.0	9.7	10.2
356 × 127 × 39	39.1	353.4	126.0	6.6	10.7	10.2
356 × 127 × 33	33.1	349.0	125.4	6.0	8.5	10.2
305 × 165 × 54	54.0	310.4	166.9	7.9	13.7	8.9
305 × 165 × 46	46.1	306.6	165.7	6.7	11.8	8.9
305 × 165 × 40	40.3	303.4	165.0	6.0	10.2	8.9
305 × 127 × 48	48.1	311.0	125.3	9.0	14.0	8.9
305 × 127 × 42	41.9	307.2	124.3	8.0	12.1	8.9
305 × 127 × 37	37.0	304.4	123.4	7.1	10.7	8.9
305 × 102 × 33	32.8	312.7	102.4	6.6	10.8	7.6
305 × 102 × 28	28.2	308.7	101.8	6.0	8.8	7.6
305 × 102 × 25	24.8	305.1	101.6	5.8	7.0	7.6
254 × 146 × 43	43.0	259.6	147.3	7.2	12.7	7.6
254 × 146 × 37	37.0	256.0	146.4	6.3	10.9	7.6
254 × 146 × 31	31.1	251.4	146.1	6.0	8.6	7.6
254 × 102 × 28	28.3	260.4	102.2	6.3	10.0	7.6
254 × 102 × 25	25.2	257.2	101.9	6.0	8.4	7.6
254 × 102 × 22	22.0	254.0	101.6	5.7	6.8	7.6
203 × 133 × 30	30.0	206.8	133.9	6.4	9.6	7.6
203 × 133 × 25	25.1	203.2	133.2	5.7	7.8	7.6
203 × 102 × 23	23.1	203.2	101.8	5.4	9.3	7.6
178 × 102 × 19	19.0	177.8	101.2	4.8	7.9	7.6
152 × 89 × 16	16.0	152.4	88.7	4.5	7.7	7.6
127 × 76 × 13	13.0	127.0	76.0	4.0	7.6	7.6

NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

Table 3 — Universal columns

Section designation	Mass per unit length kg/m	Depth h mm	Width b mm	Web s mm	Flange t mm	Root radius r mm
356 × 406 × 634	633.9	474.6	424.0	47.6	77.0	15.2
356 × 406 × 551	551.0	455.6	418.5	42.1	67.5	15.2
356 × 406 × 467	467.0	436.6	412.2	35.8	58.0	15.2
356 × 406 × 393	393.0	419.0	407.0	30.6	49.2	15.2
356 × 406 × 340	339.9	406.4	403.0	26.6	42.9	15.2
356 × 406 × 287	287.1	393.6	399.0	22.6	36.5	15.2
356 × 406 × 235	235.1	381.0	394.8	18.4	30.2	15.2
356 × 368 × 202	201.9	374.6	374.7	16.5	27.0	15.2
356 × 368 × 177	177.0	368.2	372.6	14.4	23.8	15.2
356 × 368 × 153	152.9	362.0	370.5	12.3	20.7	15.2
356 × 368 × 129	129.0	355.6	368.6	10.4	17.5	15.2
305 × 305 × 283	282.9	365.3	322.2	26.8	44.1	15.2
305 × 305 × 240	240.0	352.5	318.4	23.0	37.7	15.2
305 × 305 × 198	198.1	339.9	314.5	19.1	31.4	15.2
305 × 305 × 158	158.1	327.1	311.2	15.8	25.0	15.2
305 × 305 × 137	136.9	320.5	309.2	13.8	21.7	15.2
305 × 305 × 118	117.9	314.5	307.4	12.0	18.7	15.2
305 × 305 × 97	96.9	307.9	305.3	9.9	15.4	15.2
254 × 254 × 167	167.1	289.1	265.2	19.2	31.7	12.7
254 × 254 × 132	132.0	276.3	261.3	15.3	25.3	12.7
254 × 254 × 107	107.1	266.7	258.8	12.8	20.5	12.7
254 × 254 × 89	88.9	260.3	256.3	10.3	17.3	12.7
254 × 254 × 73	73.1	254.1	254.6	8.6	14.2	12.7

Table 3 — Universal columns (*continued*)

Section designation	Mass per unit length kg/m	Depth <i>h</i> mm	Width <i>b</i> mm	Web <i>s</i> mm	Flange <i>t</i> mm	Root radius <i>r</i> mm
203 × 203 × 86	86.1	222.2	209.1	12.7	20.5	10.2
203 × 203 × 71	71.0	215.8	206.4	10.0	17.3	10.2
203 × 203 × 60	60.0	209.6	205.8	9.4	14.2	10.2
203 × 203 × 52	52.0	206.2	204.3	7.9	12.5	10.2
203 × 203 × 46	46.1	203.2	203.6	7.2	11.0	10.2
152 × 152 × 37	37.0	161.8	154.4	8.0	11.5	7.6
152 × 152 × 30	30.0	157.6	152.9	6.5	9.4	7.6
152 × 152 × 23	23.0	152.4	152.2	5.8	6.8	7.6

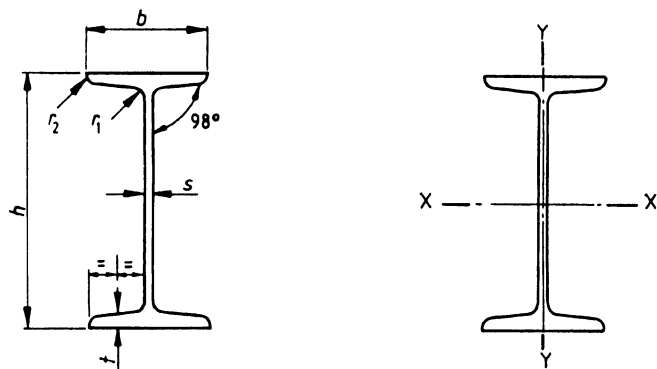
NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

Table 4 — Universal bearing piles

Section designation	Mass per unit length	Depth	Width	Web	Flange	Root radius
	kg/m	h mm	b mm	s mm	t mm	r mm
356 × 368 × 174	173.9	361.4	378.5	20.3	20.4	15.2
356 × 368 × 152	152.0	356.4	376.0	17.8	17.9	15.2
356 × 368 × 133	133.0	352.0	373.8	15.6	15.7	15.2
356 × 368 × 109	108.9	346.4	371.0	12.8	12.9	15.2
305 × 305 × 223	222.9	337.9	325.7	30.3	30.4	15.2
305 × 305 × 186	186.0	328.3	320.9	25.5	25.6	15.2
305 × 305 × 149	149.1	318.5	316.0	20.6	20.7	15.2
305 × 305 × 126	126.1	312.3	312.9	17.5	17.6	15.2
305 × 305 × 110	110.0	307.9	310.7	15.3	15.4	15.2
305 × 305 × 95	94.9	303.7	308.7	13.3	13.3	15.2
305 × 305 × 88	88.0	301.7	307.8	12.4	12.3	15.2
305 × 305 × 79	78.9	299.3	306.4	11.0	11.1	15.2
254 × 254 × 85	85.1	254.3	260.4	14.4	14.3	12.7
254 × 254 × 71	71.0	249.7	258.0	12.0	12.0	12.7
254 × 254 × 63	63.0	247.1	256.6	10.6	10.7	12.7
203 × 203 × 54	53.9	204.0	207.7	11.3	11.4	10.2
203 × 203 × 45	44.9	200.2	205.9	9.5	9.5	10.2

NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

Table 5 — Joists with taper flanges



Section designation	Mass per unit length kg/m	Depth of section h mm	Width of section b mm	Thickness		Radius	
				Web s mm	Flange t mm	Root r_1 mm	Toe r_2 mm
254 × 203 × 82	82.0	254.0	203.2	10.2	19.9	19.6	9.7
254 × 114 × 37	37.2	254.0	114.3	7.6	12.8	12.4	6.1
203 × 152 × 52	52.3	203.2	152.4	8.9	16.5	15.5	7.6
152 × 127 × 37	37.3	152.4	127.0	10.4	13.2	13.5	6.6
127 × 114 × 29	29.3	127.0	114.3	10.2	11.5	9.9	4.8
127 × 114 × 27	26.9	127.0	114.3	7.4	11.4	9.9	5.0
127 × 76 × 16	16.5	127.0	76.2	5.6	9.6	9.4	4.6
114 × 114 × 27	26.9	114.3	114.3	9.5	10.7	14.2	3.2
102 × 102 × 23	23.0	101.6	101.6	9.5	10.3	11.1	3.2
102 × 44 × 7	7.5	101.6	44.5	4.3	6.1	6.9	3.3
89 × 89 × 19	19.5	88.9	88.9	9.5	9.9	11.1	3.2
76 × 76 × 15	15.0	76.2	80.0	8.9	8.4	9.4	4.6
76 × 76 × 13	12.8	76.2	76.2	5.1	8.4	9.4	4.6

NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

Table 6 — Structural tees cut from universal beams

Section designation	Mass per unit length kg/m	Cut from universal beam (see Table 2) Section designation	Width of section b mm	Depth of section A mm	Thickness		Root radius r mm
					Web s mm	Flange t mm	
305 × 457 × 127	126.7	914 × 305 × 253	305.5	459.1	17.3	27.9	19.1
305 × 457 × 112	112.1	914 × 305 × 224	304.1	455.1	15.9	23.9	19.1
305 × 457 × 101	100.4	914 × 305 × 201	303.3	451.4	15.1	20.2	19.1
292 × 419 × 113	113.2	838 × 292 × 226	293.8	425.4	16.1	26.8	17.8
292 × 419 × 97	96.9	838 × 292 × 194	292.4	420.3	14.7	21.7	17.8
292 × 419 × 88	87.9	838 × 292 × 176	291.7	417.4	14.0	18.8	17.8
267 × 381 × 99	98.3	762 × 267 × 197	268.0	384.8	15.6	25.4	16.5
267 × 381 × 87	86.5	762 × 267 × 173	266.7	381.0	14.3	21.6	16.5
267 × 381 × 74	73.4	762 × 267 × 147	265.2	376.9	12.8	17.5	16.5
254 × 343 × 85	85.1	686 × 254 × 170	255.8	346.4	14.5	23.7	15.2
254 × 343 × 76	76.2	686 × 254 × 152	254.5	343.7	13.2	21.0	15.2
254 × 343 × 70	70.0	686 × 254 × 140	253.7	341.7	12.4	19.0	15.2
254 × 343 × 63	62.6	686 × 254 × 125	253.0	338.9	11.7	16.2	15.2
305 × 305 × 119	119.0	610 × 305 × 238	311.4	317.8	18.4	31.4	16.5
305 × 305 × 90	89.5	610 × 305 × 179	307.1	310.0	14.1	23.6	16.5
305 × 305 × 75	74.6	610 × 305 × 149	304.8	306.1	11.8	19.7	16.5
229 × 305 × 70	69.9	610 × 229 × 140	230.2	308.5	13.1	22.1	12.7
229 × 305 × 63	62.5	610 × 229 × 125	229.0	306.0	11.9	19.6	12.7
229 × 305 × 57	56.5	610 × 229 × 113	228.2	303.7	11.1	17.3	12.7
229 × 305 × 51	50.6	610 × 229 × 101	227.6	301.2	10.5	14.8	12.7
210 × 267 × 61	61.0	533 × 210 × 122	211.9	272.2	12.7	21.3	12.7
210 × 267 × 55	54.5	533 × 210 × 109	210.8	269.7	11.6	18.8	12.7
210 × 267 × 51	50.5	533 × 210 × 101	210.0	268.3	10.8	17.4	12.7
210 × 267 × 46	46.0	533 × 210 × 92	209.3	266.5	10.1	15.6	12.7
210 × 267 × 41	41.1	533 × 210 × 82	208.8	264.1	9.6	13.2	12.7

Table 6 — Structural tees cut from universal beams (*continued*)

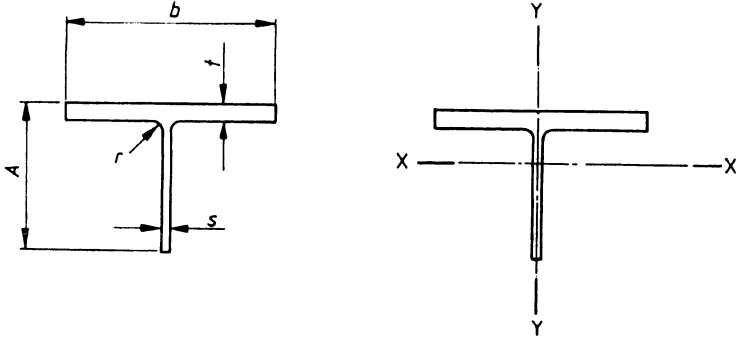
Section designation	Mass per unit length kg/m	Cut from universal beam (see Table 2)	Width of section <i>b</i> mm	Depth of section <i>A</i> mm	Thickness		Root radius <i>r</i> mm
		Section designation			Web <i>s</i> mm	Flange <i>t</i> mm	
191 × 229 × 49	49.1	457 × 191 × 98	192.8	233.5	11.4	19.6	10.2
191 × 229 × 45	44.6	457 × 191 × 89	191.9	231.6	10.5	17.7	10.2
191 × 229 × 41	41.0	457 × 191 × 82	191.3	229.9	9.9	16.0	10.2
191 × 229 × 37	37.1	457 × 191 × 74	190.4	228.4	9.0	14.5	10.2
191 × 229 × 34	33.5	457 × 191 × 67	189.9	226.6	8.5	12.7	10.2
152 × 229 × 41	41.0	457 × 152 × 82	155.3	232.8	10.5	18.9	10.2
152 × 229 × 37	37.1	457 × 152 × 74	154.4	230.9	9.6	17.0	10.2
152 × 229 × 34	33.6	457 × 152 × 67	153.8	228.9	9.0	15.0	10.2
152 × 229 × 30	29.9	457 × 152 × 60	152.9	227.2	8.1	13.3	10.2
152 × 229 × 26	26.1	457 × 152 × 52	152.4	224.8	7.6	10.9	10.2
178 × 203 × 37	37.1	406 × 178 × 74	179.5	206.3	9.5	16.0	10.2
178 × 203 × 34	33.5	406 × 178 × 67	178.8	204.6	8.8	14.3	10.2
178 × 203 × 30	30.0	406 × 178 × 60	177.9	203.1	7.9	12.8	10.2
178 × 203 × 27	27.0	406 × 178 × 54	177.7	201.2	7.7	10.9	10.2
140 × 203 × 23	23.0	406 × 140 × 46	142.2	201.5	6.8	11.2	10.2
140 × 203 × 20	19.5	406 × 140 × 39	141.8	198.9	6.4	8.6	10.2
171 × 178 × 34	33.5	356 × 171 × 67	173.2	181.6	9.1	15.7	10.2
171 × 178 × 29	28.5	356 × 171 × 57	172.2	178.9	8.1	13.0	10.2
171 × 178 × 26	25.5	356 × 171 × 51	171.5	177.4	7.4	11.5	10.2
171 × 178 × 23	22.5	356 × 171 × 45	171.1	175.6	7.0	9.7	10.2
127 × 178 × 20	19.5	356 × 127 × 39	126.0	176.6	6.6	10.7	10.2
127 × 178 × 17	16.5	356 × 127 × 33	125.4	174.4	6.0	8.5	10.2
165 × 152 × 27	27.0	305 × 165 × 54	166.9	155.1	7.9	13.7	8.9
165 × 152 × 23	23.0	305 × 165 × 46	165.7	153.2	6.7	11.8	8.9
165 × 152 × 20	20.1	305 × 165 × 40	165.0	151.6	6.0	10.2	8.9
127 × 152 × 24	24.0	305 × 127 × 48	125.3	155.4	9.0	14.0	8.9
127 × 152 × 21	20.9	305 × 127 × 42	124.3	153.5	8.0	12.1	8.9
127 × 152 × 19	18.5	305 × 127 × 37	123.4	152.1	7.1	10.7	8.9
102 × 152 × 17	16.4	305 × 102 × 33	102.4	156.3	6.6	10.8	7.6
102 × 152 × 14	14.1	305 × 102 × 28	101.8	154.3	6.0	8.8	7.6
102 × 152 × 13	12.4	305 × 102 × 25	101.6	152.5	5.8	7.0	7.6

Table 6 — Structural tees cut from universal beams (*continued*)

Section designation	Mass per unit length kg/m	Cut from universal beam (see Table 2) Section designation	Width of section <i>b</i> mm	Depth of section <i>A</i> mm	Thickness		Root radius <i>r</i> mm
					Web <i>s</i> mm	Flange <i>t</i> mm	
146 × 127 × 22	21.5	254 × 146 × 43	147.3	129.7	7.2	12.7	7.6
146 × 127 × 19	18.5	254 × 146 × 37	146.4	127.9	6.3	10.9	7.6
146 × 127 × 16	15.5	254 × 146 × 31	146.1	125.6	6.0	8.6	7.6
102 × 127 × 14	14.1	254 × 102 × 28	102.2	130.1	6.3	10.0	7.6
102 × 127 × 13	12.6	254 × 102 × 25	101.9	128.5	6.0	8.4	7.6
102 × 127 × 11	11.0	254 × 102 × 22	101.6	126.9	5.7	6.8	7.6
133 × 102 × 15	15.0	203 × 133 × 30	133.9	103.3	6.4	9.6	7.6
133 × 102 × 13	12.5	203 × 133 × 25	133.2	101.5	5.7	7.8	7.6

NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

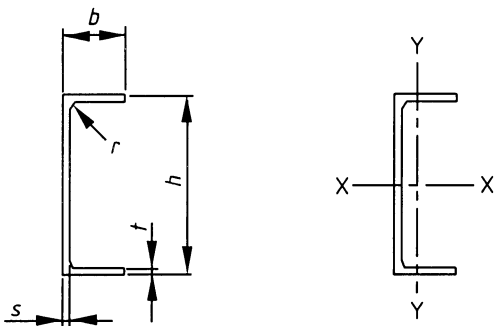
Table 7 — Structural tees cut from universal columns



Section designation	Mass per unit length kg/m	Cut from universal beam (see Table 2) Section designation	Width of section <i>b</i> mm	Depth of section <i>A</i> mm	Thickness		Root radius <i>r</i> mm
					Web <i>s</i> mm	Flange <i>t</i> mm	
406 × 178 × 118	117.5	356 × 406 × 235	394.8	190.4	18.4	30.2	15.2
368 × 178 × 101	100.9	356 × 368 × 202	374.7	187.2	16.5	27.0	15.2
368 × 178 × 89	88.5	356 × 368 × 177	372.6	184.0	14.4	23.8	15.2
368 × 178 × 77	76.4	356 × 368 × 153	370.5	180.9	12.3	20.7	15.2
368 × 178 × 65	64.5	356 × 368 × 129	368.6	177.7	10.4	17.5	15.2
305 × 152 × 79	79.0	305 × 305 × 158	311.2	163.5	15.8	25.0	15.2
305 × 152 × 69	68.4	305 × 305 × 137	309.2	160.2	13.8	21.7	15.2
305 × 152 × 59	58.9	305 × 305 × 118	307.4	157.2	12.0	18.7	15.2
305 × 152 × 49	48.4	305 × 305 × 97	305.3	153.9	9.9	15.4	15.2
254 × 127 × 66	66.0	254 × 254 × 132	261.3	138.1	15.3	25.3	12.7
254 × 127 × 54	53.5	254 × 254 × 107	258.8	133.3	12.8	20.5	12.7
254 × 127 × 45	44.4	254 × 254 × 89	256.3	130.1	10.3	17.3	12.7
254 × 127 × 37	36.5	254 × 254 × 73	254.6	127.0	8.6	14.2	12.7
203 × 102 × 43	43.0	203 × 203 × 86	209.1	111.0	12.7	20.5	10.2
203 × 102 × 36	35.5	203 × 203 × 71	206.4	107.8	10.0	17.3	10.2
203 × 102 × 30	30.0	203 × 203 × 60	205.8	104.7	9.4	14.2	10.2
203 × 102 × 26	26.0	203 × 203 × 52	204.3	103.0	7.9	12.5	10.2
203 × 102 × 23	23.0	203 × 203 × 46	203.6	101.5	7.2	11.0	10.2
152 × 76 × 19	18.5	152 × 152 × 37	154.4	80.8	8.0	11.5	7.6
152 × 76 × 15	15.0	152 × 152 × 30	152.9	78.7	6.5	9.4	7.6
152 × 76 × 12	11.5	152 × 152 × 23	152.2	76.1	5.8	6.8	7.6

NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

Table 8 — Parallel flange channels



Section designation	Mass per unit length kg/m	Depth <i>h</i> mm	Width <i>b</i> mm	Web <i>s</i> mm	Flange <i>t</i> mm	Root radius <i>r</i> mm
430 × 100 × 64	64.4	430	100	11.0	19.0	15
380 × 100 × 54	54.0	380	100	9.5	17.5	15
300 × 100 × 46	45.5	300	100	9.0	16.5	15
300 × 90 × 41	41.4	300	90	9.0	15.5	12
260 × 90 × 35	34.8	260	90	8.0	14.0	12
260 × 75 × 28	27.6	260	75	7.0	12.0	12
230 × 90 × 32	32.2	230	90	7.5	14.0	12
230 × 75 × 26	25.7	230	75	6.5	12.5	12
200 × 90 × 30	29.7	200	90	7.0	14.0	12
200 × 75 × 23	23.4	200	75	6.0	12.5	12
180 × 90 × 26	26.1	180	90	6.5	12.5	12
180 × 75 × 20	20.3	180	75	6.0	10.5	12
150 × 90 × 24	23.9	150	90	6.5	12.0	12
150 × 75 × 18	17.9	150	75	5.5	10.0	12
125 × 65 × 15	14.8	125	65	5.5	9.5	12
100 × 50 × 10	10.2	100	50	5.0	8.5	9

NOTE The masses per metre run are calculated from the cross-sectional area on the basis of 0.785 kg/cm² per metre run.

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