

**BS EN 10365:2017**

*Incorporating corrigendum February 2017*



**BSI Standards Publication**

# **Hot rolled steel channels, I and H sections — Dimensions and masses**

**National foreword**

This British Standard is the UK implementation of EN 10365:2017. It supersedes BS 4-1:2005 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/103, Structural Steels Other Than Reinforcements.

A list of organizations represented on this committee can be obtained on request to its secretary.

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EUROPEAN STANDARD  
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**EN 10365**

January 2017

ICS 77.140.70

English Version

**Hot rolled steel channels, I and H sections - Dimensions  
and masses**

Profilés en U en aciers laminés à chaud, poutrelles I et  
H - Dimensions et masses

Warmgewalzter U-Profilstahl, I- und H-Träger - Maße  
und Masse

This European Standard was approved by CEN on 14 November 2016.

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

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## European foreword

This document (EN 10365:2017) has been prepared by Technical Committee ECISS/TC 103 “Structural steels other than reinforcements”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

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.

This project was submitted to the Enquiry under reference prEN 16828.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

## 1 Scope

This European standard specifies the nominal dimensions and masses of the hot rolled steel channels, I and H sections.

The following shapes are covered by this standard:

Sections:

- Parallel flange I sections IPE;
- Wide flange beams HE;
- Extra wide flange beams HL and HLZ;
- Wide flange columns HD;
- Wide flange bearing piles HP and UBP;
- Universal beams UB;
- Universal columns UC;
- Taper flange I sections IPN and J.

Channels:

- Parallel flange channels UPE and PFC;
- Taper flange channels UPN, U and CH.

These requirements do not apply to hot rolled steel channels, I and H sections from stainless steel.

## 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 10024, *Hot rolled taper flange I sections - Tolerances on shape and dimensions*

EN 10025-1, *Hot rolled products of structural steels - Part 1: General technical delivery conditions*

EN 10025-2, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10025-3, *Hot rolled products of structural steels - Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels*

EN 10025-4, *Hot rolled products of structural steels - Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels*

EN 10025-5, *Hot rolled products of structural steels - Part 5: Technical delivery conditions for structural steels with improved atmospheric corrosion resistance*

EN 10034, *Structural steel I and H sections - Tolerances on shape and dimensions*

EN 10079, *Definition of steel products*

EN 10279, *Hot rolled steel channels - Tolerances on shape, dimensions and mass*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10079 apply.

### 4 Designation

A section shall be designated according to Tables 1 to 15.

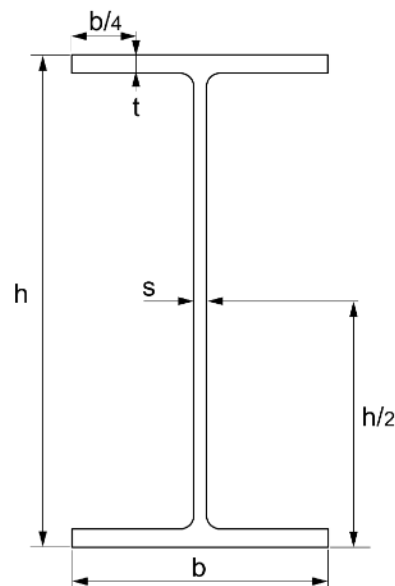
This form of designation shall be used in any enquiry and order.

### 5 Dimensions and masses

Hot rolled steel channels, I and H sections complying with this European Standard shall be manufactured with the specified dimensions given in the Table 1 to 15 and according to Figures 1 to 4 below.

Radii of fillets and toes of shape profiles vary with individual manufacturers and therefore are not specified.

The masses per unit length specified in Tables 1 to 15 were calculated on the basis of a density of  $7850 \text{ kg/m}^3$ .



**Figure 1 — IPE, HE, HL, HD, HP, UBP, UB and UC parallel flange sections**

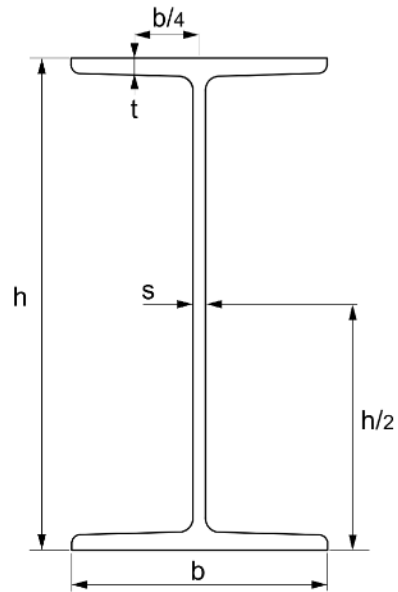


Figure 2 — Taper flange I sections IPN, J and extra wide flange beams HLZ

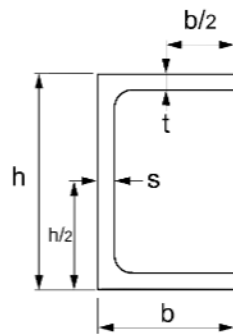


Figure 3 — Parallel flange channels UPE and PFC

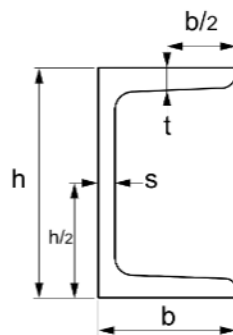


Figure 4 — Taper flange channels UPN, U and CH

## **6 Tolerances on dimensions, shape and mass**

Tolerances on dimensions, shape and mass shall be as given in EN 10034 for I (parallel flanges) and H sections.

Tolerances on dimensions, shape and mass shall be as given in EN 10024 for taper flange I sections.

Tolerances on dimensions, shape and mass shall be as given in EN 10279 for channels.

Tolerances for shapes not included in the mentioned standards shall be as agreed upon between the manufacturer and the purchaser.

## **7 Material**

Sections and channels shall preferably be made from steel of a grade as specified in EN 10025-1, EN 10025-2, EN 10025-3, EN 10025-4 and EN 10025-5. Other steel grades as specified in EN 10225, EN 10028-2 and EN 10273 may also be used for specific applications.

The desired steel grade shall be specified at the time of ordering.

**Table 1 — Parallel flange I sections IPE**

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| IPE AA 80   | 4,9              | 78,0           | 46,0           | 3,2            | 4,2            | 6,3                         |
| IPE A 80    | 5,0              | 78,0           | 46,0           | 3,3            | 4,2            | 6,4                         |
| IPE 80      | 6,0              | 80,0           | 46,0           | 3,8            | 5,2            | 7,6                         |
| IPE AA 100  | 6,7              | 97,6           | 55,0           | 3,6            | 4,5            | 8,6                         |
| IPE A 100   | 6,9              | 98,0           | 55,0           | 3,6            | 4,7            | 8,8                         |
| IPE 100     | 8,1              | 100,0          | 55,0           | 4,1            | 5,7            | 10,3                        |
| IPE AA 120  | 8,4              | 117,0          | 64,0           | 3,8            | 4,8            | 10,7                        |
| IPE A 120   | 8,7              | 117,6          | 64,0           | 3,8            | 5,1            | 11,0                        |
| IPE 120     | 10,4             | 120,0          | 64,0           | 4,4            | 6,3            | 13,2                        |
| IPE AA 140  | 10,1             | 136,6          | 73,0           | 3,8            | 5,2            | 12,8                        |
| IPE A 140   | 10,5             | 137,4          | 73,0           | 3,8            | 5,6            | 13,4                        |
| IPE 140     | 12,9             | 140,0          | 73,0           | 4,7            | 6,9            | 16,4                        |
| IPE AA 160  | 12,3             | 156,4          | 82,0           | 4,0            | 5,6            | 15,7                        |
| IPE A 160   | 12,7             | 157,0          | 82,0           | 4,0            | 5,9            | 16,2                        |
| IPE 160     | 15,8             | 160,0          | 82,0           | 5,0            | 7,4            | 20,1                        |
| IPE AA 180  | 14,9             | 176,4          | 91,0           | 4,3            | 6,2            | 19,0                        |
| IPE A 180   | 15,4             | 177,0          | 91,0           | 4,3            | 6,5            | 19,6                        |
| IPE 180     | 18,8             | 180,0          | 91,0           | 5,3            | 8,0            | 23,9                        |
| IPE O 180   | 21,3             | 182,0          | 92,0           | 6,0            | 9,0            | 27,1                        |
| IPE AA 200  | 18,0             | 196,4          | 100,0          | 4,5            | 6,7            | 22,9                        |
| IPE A 200   | 18,4             | 197,0          | 100,0          | 4,5            | 7,0            | 23,5                        |
| IPE 200     | 22,4             | 200,0          | 100,0          | 5,6            | 8,5            | 28,5                        |
| IPE O 200   | 25,1             | 202,0          | 102,0          | 6,2            | 9,5            | 32,0                        |
| IPE AA 220  | 21,2             | 216,4          | 110,0          | 4,7            | 7,4            | 27,0                        |
| IPE A 220   | 22,2             | 217,0          | 110,0          | 5,0            | 7,7            | 28,3                        |
| IPE 220     | 26,2             | 220,0          | 110,0          | 5,9            | 9,2            | 33,4                        |
| IPE O 220   | 29,4             | 222,0          | 112,0          | 6,6            | 10,2           | 37,4                        |
| IPE AA 240  | 24,9             | 236,4          | 120,0          | 4,8            | 8,0            | 31,7                        |
| IPE A 240   | 26,2             | 237,0          | 120,0          | 5,2            | 8,3            | 33,3                        |
| IPE 240     | 30,7             | 240,0          | 120,0          | 6,2            | 9,8            | 39,1                        |
| IPE O 240   | 34,3             | 242,0          | 122,0          | 7,0            | 10,8           | 43,7                        |

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| IPE A 270   | 30,7             | 267,0          | 135,0          | 5,5            | 8,7            | 39,2                        |
| IPE 270     | 36,1             | 270,0          | 135,0          | 6,6            | 10,2           | 45,9                        |
| IPE O 270   | 42,3             | 274,0          | 136,0          | 7,5            | 12,2           | 53,8                        |
| IPE A 300   | 36,5             | 297,0          | 150,0          | 6,1            | 9,2            | 46,5                        |
| IPE 300     | 42,2             | 300,0          | 150,0          | 7,1            | 10,7           | 53,8                        |
| IPE O 300   | 49,3             | 304,0          | 152,0          | 8,0            | 12,7           | 62,8                        |
| IPE A 330   | 43,0             | 327,0          | 160,0          | 6,5            | 10,0           | 54,7                        |
| IPE 330     | 49,1             | 330,0          | 160,0          | 7,5            | 11,5           | 62,6                        |
| IPE O 330   | 57,0             | 334,0          | 162,0          | 8,5            | 13,5           | 72,6                        |
| IPE A 360   | 50,2             | 357,6          | 170,0          | 6,6            | 11,5           | 64,0                        |
| IPE 360     | 57,1             | 360,0          | 170,0          | 8,0            | 12,7           | 72,7                        |
| IPE O 360   | 66,0             | 364,0          | 172,0          | 9,2            | 14,7           | 84,1                        |
| IPE A 400   | 57,4             | 397,0          | 180,0          | 7,0            | 12,0           | 73,1                        |
| IPE 400     | 66,3             | 400,0          | 180,0          | 8,6            | 13,5           | 84,5                        |
| IPE O 400   | 75,7             | 404,0          | 182,0          | 9,7            | 15,5           | 96,4                        |
| IPE V 400   | 84,0             | 408,0          | 182,0          | 10,6           | 17,5           | 107,0                       |
| IPE A 450   | 67,2             | 447,0          | 190,0          | 7,6            | 13,1           | 85,6                        |
| IPE 450     | 77,6             | 450,0          | 190,0          | 9,4            | 14,6           | 98,8                        |
| IPE O 450   | 92,4             | 456,0          | 192,0          | 11,0           | 17,6           | 117,7                       |
| IPE V 450   | 107              | 460,0          | 194,0          | 12,4           | 19,6           | 132,0                       |
| IPE A 500   | 79,4             | 497,0          | 200,0          | 8,4            | 14,5           | 101,1                       |
| IPE 500     | 90,7             | 500,0          | 200,0          | 10,2           | 16,0           | 115,5                       |
| IPE O 500   | 107              | 506,0          | 202,0          | 12,0           | 19,0           | 136,7                       |
| IPE V 500   | 129              | 514,0          | 204,0          | 14,2           | 23,0           | 164,1                       |
| IPE A 550   | 92,1             | 547,0          | 210,0          | 9,0            | 15,7           | 117,3                       |
| IPE 550     | 106              | 550,0          | 210,0          | 11,1           | 17,2           | 134,4                       |
| IPE O 550   | 123              | 556,0          | 212,0          | 12,7           | 20,2           | 156,1                       |
| IPE V 550   | 159              | 566,0          | 216,0          | 17,1           | 25,2           | 202,0                       |
| IPE A 600   | 108              | 597,0          | 220,0          | 9,8            | 17,5           | 137,0                       |
| IPE 600     | 122              | 600,0          | 220,0          | 12,0           | 19,0           | 156,0                       |
| IPE O 600   | 154              | 610,0          | 224,0          | 15,0           | 24,0           | 196,8                       |
| IPE V 600   | 184              | 618,0          | 228,0          | 18,0           | 28,0           | 233,8                       |

| Designation   | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|               |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| IPE 750 × 134 | 134              | 750,0          | 264,0          | 12,0           | 15,5           | 170,6                       |
| IPE 750 × 147 | 147              | 753,0          | 265,0          | 13,2           | 17,0           | 187,5                       |
| IPE 750 × 173 | 173              | 762,0          | 267,0          | 14,4           | 21,6           | 221,3                       |
| IPE 750 × 196 | 196              | 770,0          | 268,0          | 15,6           | 25,4           | 250,8                       |

Table 2 — Wide flange beams HE

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HE 100 AA   | 12,2             | 91,0           | 100,0          | 4,2            | 5,5            | 15,6                        |
| HE 100 A    | 16,7             | 96,0           | 100,0          | 5,0            | 8,0            | 21,2                        |
| HE 100 B    | 20,4             | 100,0          | 100,0          | 6,0            | 10,0           | 26,0                        |
| HE 100 C    | 30,9             | 110,0          | 103,0          | 9,0            | 15,0           | 39,3                        |
| HE 100 M    | 41,8             | 120,0          | 106,0          | 12,0           | 20,0           | 53,2                        |
| HE 120 AA   | 14,6             | 109,0          | 120,0          | 4,2            | 5,5            | 18,6                        |
| HE 120 A    | 19,9             | 114,0          | 120,0          | 5,0            | 8,0            | 25,3                        |
| HE 120 B    | 26,7             | 120,0          | 120,0          | 6,5            | 11,0           | 34,0                        |
| HE 120 C    | 39,2             | 130,0          | 123,0          | 9,5            | 16,0           | 49,9                        |
| HE 120 M    | 52,1             | 140,0          | 126,0          | 12,5           | 21,0           | 66,4                        |
| HE 140 AA   | 18,1             | 128,0          | 140,0          | 4,3            | 6,0            | 23,0                        |
| HE 140 A    | 24,7             | 133,0          | 140,0          | 5,5            | 8,5            | 31,4                        |
| HE 140 B    | 33,7             | 140,0          | 140,0          | 7,0            | 12,0           | 43,0                        |
| HE 140 C    | 48,2             | 150,0          | 143,0          | 10,0           | 17,0           | 61,5                        |
| HE 140 M    | 63,2             | 160,0          | 146,0          | 13,0           | 22,0           | 80,6                        |
| HE 160 AA   | 23,8             | 148,0          | 160,0          | 4,5            | 7,0            | 30,4                        |
| HE 160 A    | 30,4             | 152,0          | 160,0          | 6,0            | 9,0            | 38,8                        |
| HE 160 B    | 42,6             | 160,0          | 160,0          | 8,0            | 13,0           | 54,3                        |
| HE 160 C    | 59,2             | 170,0          | 163,0          | 11,0           | 18,0           | 75,4                        |
| HE 160 M    | 76,2             | 180,0          | 166,0          | 14,0           | 23,0           | 97,1                        |
| HE 180 AA   | 28,7             | 167,0          | 180,0          | 5,0            | 7,5            | 36,5                        |
| HE 180 A    | 35,5             | 171,0          | 180,0          | 6,0            | 9,5            | 45,3                        |
| HE 180 B    | 51,2             | 180,0          | 180,0          | 8,5            | 14,0           | 65,3                        |
| HE 180 C    | 69,8             | 190,0          | 183,0          | 11,5           | 19,0           | 89,0                        |
| HE 180 M    | 88,9             | 200,0          | 186,0          | 14,5           | 24,0           | 113,3                       |
| HE 200 AA   | 34,6             | 186,0          | 200,0          | 5,5            | 8,0            | 44,1                        |
| HE 200 A    | 42,3             | 190,0          | 200,0          | 6,5            | 10,0           | 53,8                        |
| HE 200 B    | 61,3             | 200,0          | 200,0          | 9,0            | 15,0           | 78,1                        |
| HE 200 C    | 81,9             | 210,0          | 203,0          | 12,0           | 20,0           | 104,4                       |
| HE 200 M    | 103              | 220,0          | 206,0          | 15,0           | 25,0           | 131,3                       |
| HE 220 AA   | 40,4             | 205,0          | 220,0          | 6,0            | 8,5            | 51,5                        |

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HE 220 A    | 50,5             | 210,0          | 220,0          | 7,0            | 11,0           | 64,3                        |
| HE 220 B    | 71,5             | 220,0          | 220,0          | 9,5            | 16,0           | 91,0                        |
| HE 220 C    | 94,1             | 230,0          | 223,0          | 12,5           | 21,0           | 119,9                       |
| HE 220 M    | 117              | 240,0          | 226,0          | 15,5           | 26,0           | 149,4                       |

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HE 240 AA   | 47,4             | 224,0          | 240,0          | 6,5            | 9,0            | 60,4                        |
| HE 240 A    | 60,3             | 230,0          | 240,0          | 7,5            | 12,0           | 76,8                        |
| HE 240 B    | 83,2             | 240,0          | 240,0          | 10,0           | 17,0           | 106,0                       |
| HE 240 C    | 119              | 255,0          | 244,0          | 14,0           | 24,5           | 152,2                       |
| HE 240 M    | 157              | 270,0          | 248,0          | 18,0           | 32,0           | 199,6                       |
| HE 260 AA   | 54,1             | 244,0          | 260,0          | 6,5            | 9,5            | 69,0                        |
| HE 260 A    | 68,2             | 250,0          | 260,0          | 7,5            | 12,5           | 86,8                        |
| HE 260 B    | 93,0             | 260,0          | 260,0          | 10,0           | 17,5           | 118,4                       |
| HE 260 C    | 132              | 275,0          | 264,0          | 14,0           | 25,0           | 168,4                       |
| HE 260 M    | 172              | 290,0          | 268,0          | 18,0           | 32,5           | 219,6                       |
| HE 280 AA   | 61,2             | 264,0          | 280,0          | 7,0            | 10,0           | 78,0                        |
| HE 280 A    | 76,4             | 270,0          | 280,0          | 8,0            | 13,0           | 97,3                        |
| HE 280 B    | 103              | 280,0          | 280,0          | 10,5           | 18,0           | 131,4                       |
| HE 280 C    | 145              | 295,0          | 284,0          | 14,5           | 25,5           | 185,2                       |
| HE 280 M    | 189              | 310,0          | 288,0          | 18,5           | 33,0           | 240,2                       |
| HE 300 AA   | 69,8             | 283,0          | 300,0          | 7,5            | 10,5           | 88,9                        |
| HE 300 A    | 88,3             | 290,0          | 300,0          | 8,5            | 14,0           | 112,5                       |
| HE 300 B    | 117              | 300,0          | 300,0          | 11,0           | 19,0           | 149,1                       |
| HE 300 C    | 177              | 320,0          | 305,0          | 16,0           | 29,0           | 225,1                       |
| HE 300 M    | 238              | 340,0          | 310,0          | 21,0           | 39,0           | 303,1                       |
| HE 320 AA   | 74,2             | 301,0          | 300,0          | 8,0            | 11,0           | 94,6                        |
| HE 320 A    | 97,6             | 310,0          | 300,0          | 9,0            | 15,5           | 124,4                       |
| HE 320 B    | 127              | 320,0          | 300,0          | 11,5           | 20,5           | 161,3                       |
| HE 320 C    | 186              | 340,0          | 305,0          | 16,0           | 30,5           | 236,9                       |
| HE 320 M    | 245              | 359,0          | 309,0          | 21,0           | 40,0           | 312,0                       |
| HE 340 AA   | 78,9             | 320,0          | 300,0          | 8,5            | 11,5           | 100,5                       |
| HE 340 A    | 105              | 330,0          | 300,0          | 9,5            | 16,5           | 133,5                       |
| HE 340 B    | 134              | 340,0          | 300,0          | 12,0           | 21,5           | 170,9                       |
| HE 340 M    | 248              | 377,0          | 309,0          | 21,0           | 40,0           | 315,8                       |
| HE 360 AA   | 83,7             | 339,0          | 300,0          | 9,0            | 12,0           | 106,6                       |
| HE 360 A    | 112              | 350,0          | 300,0          | 10,0           | 17,5           | 142,8                       |
| HE 360 B    | 142              | 360,0          | 300,0          | 12,5           | 22,5           | 180,6                       |
| HE 360 M    | 250              | 395,0          | 308,0          | 21,0           | 40,0           | 318,8                       |

| Designation  | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|--------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|              |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HE 400 AA    | 92,4             | 378,0          | 300,0          | 9,5            | 13,0           | 117,7                       |
| HE 400 A     | 125              | 390,0          | 300,0          | 11,0           | 19,0           | 159,0                       |
| HE 400 B     | 155              | 400,0          | 300,0          | 13,5           | 24,0           | 197,8                       |
| HE 400 M     | 256              | 432,0          | 307,0          | 21,0           | 40,0           | 325,8                       |
| HE 450 AA    | 99,7             | 425,0          | 300,0          | 10,0           | 13,5           | 127,1                       |
| HE 450 A     | 140              | 440,0          | 300,0          | 11,5           | 21,0           | 178,0                       |
| HE 450 B     | 171              | 450,0          | 300,0          | 14,0           | 26,0           | 218,0                       |
| HE 450 M     | 263              | 478,0          | 307,0          | 21,0           | 40,0           | 335,4                       |
| HE 500 AA    | 107              | 472,0          | 300,0          | 10,5           | 14,0           | 136,9                       |
| HE 500 A     | 155              | 490,0          | 300,0          | 12,0           | 23,0           | 197,5                       |
| HE 500 B     | 187              | 500,0          | 300,0          | 14,5           | 28,0           | 238,6                       |
| HE 500 M     | 270              | 524,0          | 306,0          | 21,0           | 40,0           | 344,3                       |
| HE 550 AA    | 120              | 522,0          | 300,0          | 11,5           | 15,0           | 152,8                       |
| HE 550 A     | 166              | 540,0          | 300,0          | 12,5           | 24,0           | 211,8                       |
| HE 550 B     | 199              | 550,0          | 300,0          | 15,0           | 29,0           | 254,1                       |
| HE 550 M     | 278              | 572,0          | 306,0          | 21,0           | 40,0           | 354,4                       |
| HE 600 AA    | 129              | 571,0          | 300,0          | 12,0           | 15,5           | 164,1                       |
| HE 600 A     | 178              | 590,0          | 300,0          | 13,0           | 25,0           | 226,5                       |
| HE 600 B     | 212              | 600,0          | 300,0          | 15,5           | 30,0           | 270,0                       |
| HE 600 M     | 285              | 620,0          | 305,0          | 21,0           | 40,0           | 363,7                       |
| HE 600 × 337 | 337              | 632,0          | 310,0          | 25,5           | 46,0           | 429,2                       |
| HE 600 × 399 | 399              | 648,0          | 315,0          | 30,0           | 54,0           | 508,5                       |
| HE 650 AA    | 138              | 620,0          | 300,0          | 12,5           | 16,0           | 175,8                       |
| HE 650 A     | 190              | 640,0          | 300,0          | 13,5           | 26,0           | 241,6                       |
| HE 650 B     | 225              | 650,0          | 300,0          | 16,0           | 31,0           | 286,3                       |
| HE 650 M     | 293              | 668,0          | 305,0          | 21,0           | 40,0           | 373,7                       |
| HE 650 × 343 | 343              | 680,0          | 309,0          | 25,0           | 46,0           | 437,5                       |
| HE 650 × 407 | 407              | 696,0          | 314,0          | 29,5           | 54,0           | 518,8                       |
| HE 700 AA    | 150              | 670,0          | 300,0          | 13,0           | 17,0           | 190,9                       |
| HE 700 A     | 204              | 690,0          | 300,0          | 14,5           | 27,0           | 260,5                       |
| HE 700 B     | 241              | 700,0          | 300,0          | 17,0           | 32,0           | 306,4                       |
| HE 700 M     | 301              | 716,0          | 304,0          | 21,0           | 40,0           | 383,0                       |
| HE 700 × 352 | 352              | 728,0          | 308,0          | 25,0           | 46,0           | 448,6                       |

| Designation   | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|               |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HE 700 × 418  | 418              | 744,0          | 313,0          | 29,5           | 54,0           | 531,9                       |
| HE 800 AA     | 172              | 770,0          | 300,0          | 14,0           | 18,0           | 218,5                       |
| HE 800 A      | 224              | 790,0          | 300,0          | 15,0           | 28,0           | 285,8                       |
| HE 800 B      | 262              | 800,0          | 300,0          | 17,5           | 33,0           | 334,2                       |
| HE 800 M      | 317              | 814,0          | 303,0          | 21,0           | 40,0           | 404,3                       |
| HE 800 × 373  | 373              | 826,0          | 308,0          | 25,0           | 46,0           | 474,6                       |
| HE 800 × 444  | 444              | 842,0          | 313,0          | 30,0           | 54,0           | 566,0                       |
| HE 900 AA     | 198              | 870,0          | 300,0          | 15,0           | 20,0           | 252,2                       |
| HE 900 A      | 252              | 890,0          | 300,0          | 16,0           | 30,0           | 320,5                       |
| HE 900 B      | 291              | 900,0          | 300,0          | 18,5           | 35,0           | 371,3                       |
| HE 900 M      | 333              | 910,0          | 302,0          | 21,0           | 40,0           | 423,6                       |
| HE 900 × 391  | 391              | 922,0          | 307,0          | 25,0           | 46,0           | 497,7                       |
| HE 900 × 466  | 466              | 938,0          | 312,0          | 30,0           | 54,0           | 593,7                       |
| HE 1000 AA    | 222              | 970,0          | 300,0          | 16,0           | 21,0           | 282,2                       |
| HE 1000 × 249 | 249              | 980,0          | 300,0          | 16,5           | 26,0           | 316,8                       |
| HE 1000 A     | 272              | 990,0          | 300,0          | 16,5           | 31,0           | 346,8                       |
| HE 1000 B     | 314              | 1000,0         | 300,0          | 19,0           | 36,0           | 400,0                       |
| HE 1000 M     | 349              | 1008,0         | 302,0          | 21,0           | 40,0           | 444,2                       |
| HE 1000 × 393 | 393              | 1016,0         | 303,0          | 24,4           | 43,9           | 500,2                       |
| HE 1000 × 415 | 415              | 1020,0         | 304,0          | 26,0           | 46,0           | 528,7                       |
| HE 1000 × 438 | 438              | 1026,0         | 305,0          | 26,9           | 49,0           | 556,0                       |
| HE 1000 × 494 | 494              | 1036,0         | 309,0          | 31,0           | 54,0           | 629,1                       |
| HE 1000 × 584 | 584              | 1056,0         | 314,0          | 36,0           | 64,0           | 743,7                       |

Table 3 — Extra wide flange beams HL and HLZ

| Designation   | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|               |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HL 920 × 344  | 344              | 927,0          | 418,0          | 19,3           | 32,0           | 437,2                       |
| HL 920 × 368  | 368              | 931,0          | 419,0          | 20,3           | 34,3           | 465,6                       |
| HL 920 × 390  | 390              | 936,0          | 420,0          | 21,3           | 36,6           | 494,3                       |
| HL 920 × 420  | 420              | 943,0          | 422,0          | 22,5           | 39,9           | 534,1                       |
| HL 920 × 449  | 449              | 948,0          | 423,0          | 24,0           | 42,7           | 571,4                       |
| HL 920 × 491  | 491              | 957,0          | 422,0          | 25,9           | 47,0           | 623,3                       |
| HL 920 × 537  | 537              | 965,0          | 425,0          | 28,4           | 51,1           | 682,5                       |
| HL 920 × 588  | 588              | 975,0          | 427,0          | 31,0           | 55,9           | 748,1                       |
| HL 920 × 656  | 656              | 987,0          | 431,0          | 34,5           | 62,0           | 835,3                       |
| HL 920 × 725  | 725              | 999,0          | 434,0          | 38,1           | 68,1           | 922,9                       |
| HL 920 × 787  | 787              | 1011,0         | 437,0          | 40,9           | 73,9           | 1002,0                      |
| HL 920 × 970  | 970              | 1043,0         | 446,0          | 50,0           | 89,9           | 1236,6                      |
| HL 920 × 1077 | 1077             | 1061,0         | 451,0          | 55,0           | 99,1           | 1371,5                      |
| HL 920 × 1194 | 1194             | 1081,0         | 457,0          | 60,5           | 109,0          | 1521,5                      |
| HL 920 × 1269 | 1269             | 1093,0         | 461,0          | 64,0           | 115,1          | 1616,5                      |
| HL 920 × 1377 | 1377             | 1093,0         | 473,0          | 76,7           | 115,1          | 1753,7                      |
| HL 1000 AA    | 296              | 982,0          | 400,0          | 16,5           | 27,1           | 377,6                       |
| HL 1000 A     | 321              | 990,0          | 400,0          | 16,5           | 31,0           | 408,8                       |
| HL 1000 B     | 371              | 1000,0         | 400,0          | 19,0           | 36,1           | 472,8                       |
| HL 1000 M     | 412              | 1008,0         | 402,0          | 21,1           | 40,0           | 525,1                       |
| HL 1000 × 443 | 443              | 1012,0         | 402,0          | 23,6           | 41,9           | 563,7                       |
| HL 1000 × 483 | 483              | 1020,0         | 404,0          | 25,4           | 46,0           | 615,1                       |
| HL 1000 × 539 | 539              | 1030,0         | 407,0          | 28,4           | 51,1           | 687,2                       |
| HL 1000 × 554 | 554              | 1032,0         | 408,0          | 29,5           | 52,0           | 705,8                       |
| HL 1000 × 591 | 591              | 1040,0         | 409,0          | 31,0           | 55,9           | 752,7                       |
| HL 1000 × 642 | 642              | 1048,0         | 412,0          | 34,0           | 60,0           | 817,6                       |
| HL 1000 × 748 | 748              | 1068,0         | 417,0          | 39,0           | 70,0           | 953,4                       |
| HL 1000 × 883 | 883              | 1092,0         | 424,0          | 45,5           | 82,0           | 1125,3                      |
| HL 1000 × 976 | 976              | 1108,0         | 428,0          | 50,0           | 89,9           | 1241,4                      |
| HL 1100 A     | 343              | 1090,0         | 400,0          | 18,0           | 31,0           | 436,5                       |
| HL 1100 B     | 390              | 1100,0         | 400,0          | 20,0           | 36,0           | 497,0                       |
| HL 1100 M     | 433              | 1108,0         | 402,0          | 22,0           | 40,0           | 551,2                       |
| HL 1100 R     | 499              | 1118,0         | 405,0          | 26,0           | 45,0           | 635,2                       |

| Designation   | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|               |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HL 1100 × 548 | 548              | 1128,0         | 407,0          | 28,0           | 50,0           | 698,3                       |
| HL 1100 × 607 | 607              | 1138,0         | 410,0          | 31,0           | 55,0           | 773,1                       |
| HLZ 1100 A    | 393              | 1075,4         | 458,0          | 20,0           | 31,0           | 500,8                       |
| HLZ 1100 B    | 408              | 1079,4         | 458,0          | 20,0           | 33,0           | 519,1                       |
| HLZ 1100 C    | 430              | 1083,4         | 459,0          | 21,0           | 35,0           | 548,3                       |
| HLZ 1100 D    | 453              | 1087,4         | 460,0          | 22,0           | 37,0           | 577,5                       |

Table 4 — Wide flange columns HD

| Designation   | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|               |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HD 260 × 54,1 | 54,1             | 244,0          | 260,0          | 6,5            | 9,5            | 69,0                        |
| HD 260 × 68,2 | 68,2             | 250,0          | 260,0          | 7,5            | 12,5           | 86,8                        |
| HD 260 × 93,0 | 93,0             | 260,0          | 260,0          | 10,0           | 17,5           | 118,4                       |
| HD 260 × 114  | 114              | 268,0          | 262,0          | 12,5           | 21,5           | 145,7                       |
| HD 260 × 142  | 142              | 278,0          | 265,0          | 15,5           | 26,5           | 180,3                       |
| HD 260 × 172  | 172              | 290,0          | 268,0          | 18,0           | 32,5           | 219,6                       |
| HD 260 × 225  | 225              | 309,0          | 271,0          | 24,0           | 42,0           | 286,6                       |
| HD 260 × 299  | 299              | 335,0          | 278,0          | 31,0           | 55,0           | 380,5                       |
| HD 320 × 74,2 | 74,2             | 301,0          | 300,0          | 8,0            | 11,0           | 94,6                        |
| HD 320 × 97,6 | 97,6             | 310,0          | 300,0          | 9,0            | 15,5           | 124,4                       |
| HD 320 × 127  | 127              | 320,0          | 300,0          | 11,5           | 20,5           | 161,3                       |
| HD 320 × 158  | 158              | 330,0          | 303,0          | 14,5           | 25,5           | 201,2                       |
| HD 320 × 198  | 198              | 343,0          | 306,0          | 18,0           | 32,0           | 252,3                       |
| HD 320 × 245  | 245              | 359,0          | 309,0          | 21,0           | 40,0           | 312,0                       |
| HD 320 × 300  | 300              | 375,0          | 313,0          | 27,0           | 48,0           | 382,1                       |
| HD 360 × 134  | 134              | 356,0          | 369,0          | 11,2           | 18,0           | 170,6                       |
| HD 360 × 147  | 147              | 360,0          | 370,0          | 12,3           | 19,8           | 187,9                       |
| HD 360 × 162  | 162              | 364,0          | 371,0          | 13,3           | 21,8           | 206,3                       |
| HD 360 × 179  | 179              | 368,0          | 373,0          | 15,0           | 23,9           | 228,3                       |
| HD 360 × 196  | 196              | 372,0          | 374,0          | 16,4           | 26,2           | 250,3                       |
| HD 400 × 187  | 187              | 368,0          | 391,0          | 15,0           | 24,0           | 237,6                       |
| HD 400 × 216  | 216              | 375,0          | 394,0          | 17,3           | 27,7           | 275,5                       |
| HD 400 × 237  | 237              | 380,0          | 395,0          | 18,9           | 30,2           | 300,9                       |
| HD 400 × 262  | 262              | 387,0          | 398,0          | 21,1           | 33,3           | 334,6                       |
| HD 400 × 287  | 287              | 393,0          | 399,0          | 22,6           | 36,6           | 366,3                       |
| HD 400 × 314  | 314              | 399,0          | 401,0          | 24,9           | 39,6           | 399,2                       |
| HD 400 × 347  | 347              | 407,0          | 404,0          | 27,2           | 43,7           | 442,0                       |
| HD 400 × 382  | 382              | 416,0          | 406,0          | 29,8           | 48,0           | 487,1                       |
| HD 400 × 421  | 421              | 425,0          | 409,0          | 32,8           | 52,6           | 537,1                       |
| HD 400 × 463  | 463              | 435,0          | 412,0          | 35,8           | 57,4           | 589,5                       |
| HD 400 × 509  | 509              | 446,0          | 416,0          | 39,1           | 62,7           | 649,0                       |
| HD 400 × 551  | 551              | 455,0          | 418,0          | 42,0           | 67,6           | 701,4                       |
| HD 400 × 592  | 592              | 465,0          | 421,0          | 45,0           | 72,3           | 754,9                       |
| HD 400 × 634  | 634              | 474,0          | 424,0          | 47,6           | 77,1           | 808,0                       |
| HD 400 × 677  | 677              | 483,0          | 428,0          | 51,2           | 81,5           | 863,4                       |
| HD 400 × 744  | 744              | 498,0          | 432,0          | 55,6           | 88,9           | 948,1                       |

|               |      |       |       |       |       |        |
|---------------|------|-------|-------|-------|-------|--------|
| HD 400 × 818  | 818  | 514,0 | 437,0 | 60,5  | 97,0  | 1043,3 |
| HD 400 × 900  | 900  | 531,0 | 442,0 | 65,9  | 106,0 | 1149,2 |
| HD 400 × 990  | 990  | 550,0 | 448,0 | 71,9  | 115,0 | 1262,4 |
| HD 400 × 1086 | 1086 | 569,0 | 454,0 | 78,0  | 125,0 | 1385,8 |
| HD 400 × 1202 | 1202 | 580,0 | 471,0 | 95,0  | 130,0 | 1530,5 |
| HD 400 × 1299 | 1299 | 600,0 | 476,0 | 100,0 | 140,0 | 1654,7 |

Table 5 — Wide flange bearing piles HP

| Designation  | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|--------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|              |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| HP 200 × 43  | 42,5             | 200,0          | 205,0          | 9,0            | 9,0            | 54,1                        |
| HP 200 × 53  | 53,5             | 204,0          | 207,0          | 11,3           | 11,3           | 68,4                        |
| HP 220 × 57  | 57,2             | 210,0          | 224,5          | 11,0           | 11,0           | 72,9                        |
| HP 260 × 75  | 75,0             | 249,0          | 265,0          | 12,0           | 12,0           | 95,5                        |
| HP 260 × 87  | 87,3             | 253,0          | 267,0          | 14,0           | 14,0           | 111,0                       |
| HP 305 × 79  | 78,9             | 299,3          | 306,4          | 11,0           | 11,1           | 100,5                       |
| HP 305 × 88  | 88,5             | 301,7          | 307,8          | 12,4           | 12,3           | 112,1                       |
| HP 305 × 95  | 94,9             | 303,7          | 308,7          | 13,3           | 13,3           | 121,0                       |
| HP 305 × 110 | 110              | 307,9          | 310,7          | 15,3           | 15,4           | 140,1                       |
| HP 305 × 126 | 126              | 312,3          | 312,9          | 17,5           | 17,6           | 160,6                       |
| HP 305 × 149 | 149              | 318,5          | 316,0          | 20,6           | 20,7           | 189,9                       |
| HP 305 × 180 | 180              | 326,7          | 319,7          | 24,8           | 24,8           | 229,3                       |
| HP 305 × 186 | 186              | 328,3          | 320,9          | 25,5           | 25,6           | 236,9                       |
| HP 305 × 223 | 223              | 337,9          | 325,7          | 30,3           | 30,4           | 284,0                       |
| HP 320 × 88  | 88,5             | 303,0          | 304,0          | 12,0           | 12,0           | 112,7                       |
| HP 320 × 103 | 103              | 307,0          | 306,0          | 14,0           | 14,0           | 131,0                       |
| HP 320 × 117 | 117              | 311,0          | 308,0          | 16,0           | 16,0           | 149,5                       |
| HP 320 × 147 | 147              | 319,0          | 312,0          | 20,0           | 20,0           | 186,9                       |
| HP 320 × 184 | 184              | 329,0          | 317,0          | 25,0           | 25,0           | 234,5                       |
| HP 360 × 109 | 109              | 346,4          | 371,0          | 12,8           | 12,9           | 138,7                       |
| HP 360 × 133 | 133              | 352,0          | 373,8          | 15,6           | 15,7           | 169,4                       |
| HP 360 × 152 | 152              | 356,4          | 376,0          | 17,8           | 17,9           | 193,7                       |
| HP 360 × 174 | 174              | 361,4          | 378,5          | 20,3           | 20,4           | 221,5                       |
| HP 360 × 180 | 180              | 362,9          | 378,8          | 21,1           | 21,1           | 229,5                       |
| HP 400 × 122 | 122              | 348,0          | 390,0          | 14,0           | 14,0           | 155,9                       |

|              |     |       |       |      |      |       |
|--------------|-----|-------|-------|------|------|-------|
| HP 400 × 140 | 140 | 352,0 | 392,0 | 16,0 | 16,0 | 178,6 |
| HP 400 × 158 | 158 | 356,0 | 394,0 | 18,0 | 18,0 | 201,4 |
| HP 400 × 176 | 176 | 360,0 | 396,0 | 20,0 | 20,0 | 224,3 |
| HP 400 × 194 | 194 | 364,0 | 398,0 | 22,0 | 22,0 | 247,5 |
| HP 400 × 213 | 213 | 368,0 | 400,0 | 24,0 | 24,0 | 270,7 |
| HP 400 × 231 | 231 | 372,0 | 402,0 | 26,0 | 26,0 | 294,2 |

Table 6 — Wide flange bearing piles UBP

| Designation         | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                     |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UBP 203 × 203 × 45  | 44,9             | 200,2          | 205,9          | 9,5            | 9,5            | 57,2                        |
| UBP 203 × 203 × 54  | 53,9             | 204,0          | 207,7          | 11,3           | 11,4           | 68,7                        |
| UBP 254 × 254 × 63  | 63,0             | 247,1          | 256,6          | 10,6           | 10,7           | 80,2                        |
| UBP 254 × 254 × 71  | 71,0             | 249,7          | 258,0          | 12,0           | 12,0           | 90,4                        |
| UBP 254 × 254 × 85  | 85,1             | 254,3          | 260,4          | 14,4           | 14,3           | 108,4                       |
| UBP 305 × 305 × 79  | 78,9             | 299,3          | 306,4          | 11,0           | 11,1           | 100,5                       |
| UBP 305 × 305 × 88  | 88,0             | 301,7          | 307,8          | 12,4           | 12,3           | 112,1                       |
| UBP 305 × 305 × 95  | 94,9             | 303,7          | 308,7          | 13,3           | 13,3           | 120,9                       |
| UBP 305 × 305 × 110 | 110              | 307,9          | 310,7          | 15,3           | 15,4           | 140,1                       |
| UBP 305 × 305 × 126 | 126              | 312,3          | 312,9          | 17,5           | 17,6           | 160,6                       |
| UBP 305 × 305 × 149 | 149              | 318,5          | 316,0          | 20,6           | 20,7           | 189,9                       |
| UBP 305 × 305 × 186 | 186              | 328,3          | 320,9          | 25,5           | 25,6           | 236,9                       |
| UBP 305 × 305 × 223 | 223              | 337,9          | 325,7          | 30,3           | 30,4           | 284,0                       |
| UBP 356 × 368 × 109 | 109              | 346,4          | 371,0          | 12,8           | 12,9           | 138,7                       |
| UBP 356 × 368 × 133 | 133              | 352,0          | 373,8          | 15,6           | 15,7           | 169,4                       |
| UBP 356 × 368 × 152 | 152              | 356,4          | 376,0          | 17,8           | 17,9           | 193,7                       |
| UBP 356 × 368 × 174 | 174              | 361,4          | 378,5          | 20,3           | 20,4           | 221,5                       |

Table 7 — Universal beams UB

| Designation       | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                   |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UB 127 × 76 × 13  | 13,0             | 127,0          | 76,0           | 4,0            | 7,6            | 16,5                        |
| UB 152 × 89 × 16  | 16,0             | 152,4          | 88,7           | 4,5            | 7,7            | 20,3                        |
| UB 178 × 102 × 19 | 19,0             | 177,8          | 101,2          | 4,8            | 7,9            | 24,3                        |
| UB 203 × 102 × 23 | 23,1             | 203,2          | 101,8          | 5,4            | 9,3            | 29,4                        |
| UB 203 × 133 × 25 | 25,1             | 203,2          | 133,2          | 5,7            | 7,8            | 32,0                        |
| UB 203 × 133 × 30 | 30,0             | 206,8          | 133,9          | 6,4            | 9,6            | 38,2                        |
| UB 254 × 102 × 22 | 22,0             | 254,0          | 101,6          | 5,7            | 6,8            | 28,0                        |
| UB 254 × 102 × 25 | 25,2             | 257,2          | 101,9          | 6,0            | 8,4            | 32,0                        |
| UB 254 × 102 × 28 | 28,3             | 260,4          | 102,2          | 6,3            | 10,0           | 36,1                        |
| UB 254 × 146 × 31 | 31,1             | 251,4          | 146,1          | 6,0            | 8,6            | 39,7                        |
| UB 254 × 146 × 37 | 37,0             | 256,0          | 146,4          | 6,3            | 10,9           | 47,2                        |
| UB 254 × 146 × 43 | 43,0             | 259,6          | 147,3          | 7,2            | 12,7           | 54,8                        |
| UB 305 × 102 × 25 | 24,8             | 305,1          | 101,6          | 5,8            | 7,0            | 31,6                        |
| UB 305 × 102 × 28 | 28,2             | 308,7          | 101,8          | 6,0            | 8,8            | 35,9                        |
| UB 305 × 102 × 33 | 32,8             | 312,7          | 102,4          | 6,6            | 10,8           | 41,8                        |
| UB 305 × 127 × 37 | 37,0             | 304,4          | 123,4          | 7,1            | 10,7           | 47,2                        |
| UB 305 × 127 × 42 | 41,9             | 307,2          | 124,3          | 8,0            | 12,1           | 53,4                        |
| UB 305 × 127 × 48 | 48,1             | 311,0          | 125,3          | 9,0            | 14,0           | 61,2                        |
| UB 305 × 165 × 40 | 40,3             | 303,4          | 165,0          | 6,0            | 10,2           | 51,3                        |
| UB 305 × 165 × 46 | 46,1             | 306,6          | 165,7          | 6,7            | 11,8           | 58,7                        |
| UB 305 × 165 × 54 | 54,0             | 310,4          | 166,9          | 7,9            | 13,7           | 68,8                        |
| UB 356 × 127 × 33 | 33,1             | 349,0          | 125,4          | 6,0            | 8,5            | 42,1                        |
| UB 356 × 127 × 39 | 39,1             | 353,4          | 126,0          | 6,6            | 10,7           | 49,8                        |
| UB 356 × 171 × 45 | 45,0             | 351,4          | 171,1          | 7,0            | 9,7            | 57,3                        |
| UB 356 × 171 × 51 | 51,0             | 355,0          | 171,5          | 7,4            | 11,5           | 64,9                        |
| UB 356 × 171 × 57 | 57,0             | 358,0          | 172,2          | 8,1            | 13,0           | 72,6                        |
| UB 356 × 171 × 67 | 67,1             | 363,4          | 173,2          | 9,1            | 15,7           | 85,5                        |
| UB 406 × 140 × 39 | 39,0             | 398,0          | 141,8          | 6,4            | 8,6            | 49,7                        |
| UB 406 × 140 × 46 | 46,0             | 403,2          | 142,2          | 6,8            | 11,2           | 58,6                        |
| UB 406 × 178 × 54 | 54,1             | 402,6          | 177,7          | 7,7            | 10,9           | 69,0                        |
| UB 406 × 178 × 60 | 60,1             | 406,4          | 177,9          | 7,9            | 12,8           | 76,5                        |

| Designation        | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|--------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                    |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UB 406 × 178 × 67  | 67,1             | 409,4          | 178,8          | 8,8            | 14,3           | 85,5                        |
| UB 406 × 178 × 74  | 74,2             | 412,8          | 179,5          | 9,5            | 16,0           | 94,5                        |
| UB 457 × 152 × 52  | 52,3             | 449,8          | 152,4          | 7,6            | 10,9           | 66,6                        |
| UB 457 × 152 × 60  | 59,8             | 454,6          | 152,9          | 8,1            | 13,3           | 76,2                        |
| UB 457 × 152 × 67  | 67,2             | 458,0          | 153,8          | 9,0            | 15,0           | 85,6                        |
| UB 457 × 152 × 74  | 74,2             | 462,0          | 154,4          | 9,6            | 17,0           | 94,5                        |
| UB 457 × 152 × 82  | 82,1             | 465,8          | 155,3          | 10,5           | 18,9           | 104,5                       |
| UB 457 × 191 × 67  | 67,1             | 453,4          | 189,9          | 8,5            | 12,7           | 85,5                        |
| UB 457 × 191 × 74  | 74,3             | 457,0          | 190,4          | 9,0            | 14,5           | 94,6                        |
| UB 457 × 191 × 82  | 82,0             | 460,0          | 191,3          | 9,9            | 16,0           | 104,5                       |
| UB 457 × 191 × 89  | 89,3             | 463,4          | 191,9          | 10,5           | 17,7           | 113,8                       |
| UB 457 × 191 × 98  | 98,3             | 467,2          | 192,8          | 11,4           | 19,6           | 125,3                       |
| UB 533 × 210 × 82  | 82,2             | 528,3          | 208,8          | 9,6            | 13,2           | 104,7                       |
| UB 533 × 210 × 92  | 92,1             | 533,1          | 209,3          | 10,1           | 15,6           | 117,4                       |
| UB 533 × 210 × 101 | 101              | 536,7          | 210,0          | 10,8           | 17,4           | 128,7                       |
| UB 533 × 210 × 109 | 109              | 539,5          | 210,8          | 11,6           | 18,8           | 138,9                       |
| UB 533 × 210 × 122 | 122              | 544,5          | 211,9          | 12,7           | 21,3           | 155,4                       |
| UB 610 × 229 × 101 | 101              | 602,6          | 227,6          | 10,5           | 14,8           | 128,9                       |
| UB 610 × 229 × 113 | 113              | 607,6          | 228,2          | 11,1           | 17,3           | 143,9                       |
| UB 610 × 229 × 125 | 125              | 612,2          | 229,0          | 11,9           | 19,6           | 159,3                       |
| UB 610 × 229 × 140 | 140              | 617,2          | 230,2          | 13,1           | 22,1           | 178,2                       |
| UB 610 × 305 × 149 | 149              | 612,4          | 304,8          | 11,8           | 19,7           | 190,0                       |
| UB 610 × 305 × 179 | 179              | 620,2          | 307,1          | 14,1           | 23,6           | 228,1                       |
| UB 610 × 305 × 238 | 238              | 635,8          | 311,4          | 18,4           | 31,4           | 303,3                       |
| UB 686 × 254 × 125 | 125              | 677,9          | 253,0          | 11,7           | 16,2           | 159,5                       |
| UB 686 × 254 × 140 | 140              | 683,5          | 253,7          | 12,4           | 19,0           | 178,4                       |
| UB 686 × 254 × 152 | 152              | 687,5          | 254,5          | 13,2           | 21,0           | 194,1                       |
| UB 686 × 254 × 170 | 170              | 692,9          | 255,8          | 14,5           | 23,7           | 216,8                       |
| UB 762 × 267 × 134 | 134              | 750,0          | 264,4          | 12,0           | 15,5           | 170,6                       |
| UB 762 × 267 × 147 | 147              | 754,0          | 265,2          | 12,8           | 17,5           | 187,2                       |
| UB 762 × 267 × 173 | 173              | 762,2          | 266,7          | 14,3           | 21,6           | 220,4                       |
| UB 762 × 267 × 197 | 197              | 769,8          | 268,0          | 15,6           | 25,4           | 250,6                       |
| UB 838 × 292 × 176 | 176              | 834,9          | 291,7          | 14,0           | 18,8           | 224,0                       |

| Designation         | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|---------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                     |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UB 838 × 292 × 194  | 194              | 840,7          | 292,4          | 14,7           | 21,7           | 246,8                       |
| UB 838 × 292 × 226  | 226              | 850,9          | 293,8          | 16,1           | 26,8           | 288,6                       |
| UB 914 × 305 × 201  | 201              | 903,0          | 303,3          | 15,1           | 20,2           | 255,9                       |
| UB 914 × 305 × 224  | 224              | 910,4          | 304,1          | 15,9           | 23,9           | 285,6                       |
| UB 914 × 305 × 238  | 238              | 915,0          | 305,0          | 16,5           | 25,9           | 303,5                       |
| UB 914 × 305 × 253  | 253              | 918,4          | 305,5          | 17,3           | 27,9           | 322,8                       |
| UB 914 × 305 × 271  | 271              | 923,0          | 307,0          | 18,4           | 30,0           | 346,1                       |
| UB 914 × 305 × 289  | 289              | 926,6          | 307,7          | 19,5           | 32,0           | 368,3                       |
| UB 914 × 305 × 313  | 313              | 932,0          | 309,0          | 21,1           | 34,5           | 398,4                       |
| UB 914 × 305 × 345  | 345              | 943,0          | 308,0          | 22,1           | 39,9           | 439,7                       |
| UB 914 × 305 × 381  | 381              | 951,0          | 310,0          | 24,4           | 43,9           | 485,9                       |
| UB 914 × 305 × 425  | 425              | 961,0          | 313,0          | 26,9           | 49,0           | 542,0                       |
| UB 914 × 305 × 474  | 474              | 971,0          | 316,0          | 30,0           | 54,1           | 603,9                       |
| UB 914 × 305 × 521  | 521              | 981,0          | 319,0          | 33,0           | 58,9           | 663,7                       |
| UB 914 × 305 × 576  | 576              | 993,0          | 322,0          | 36,1           | 65,0           | 733,2                       |
| UB 914 × 419 × 343  | 343              | 911,8          | 418,5          | 19,4           | 32,0           | 437,3                       |
| UB 914 × 419 × 388  | 388              | 921,0          | 420,5          | 21,4           | 36,6           | 494,2                       |
| UB 1016 × 305 × 222 | 222              | 970,0          | 300,0          | 16,0           | 21,1           | 282,8                       |
| UB 1016 × 305 × 249 | 249              | 980,0          | 300,0          | 16,5           | 26,0           | 316,8                       |
| UB 1016 × 305 × 272 | 272              | 990,0          | 300,0          | 16,5           | 31,0           | 346,8                       |
| UB 1016 × 305 × 314 | 314              | 1000,0         | 300,0          | 19,1           | 35,9           | 400,4                       |
| UB 1016 × 305 × 350 | 350              | 1008,0         | 302,0          | 21,1           | 40,0           | 445,1                       |
| UB 1016 × 305 × 393 | 393              | 1016,0         | 303,0          | 24,4           | 43,9           | 500,2                       |
| UB 1016 × 305 × 415 | 415              | 1020,0         | 304,0          | 26,0           | 46,0           | 528,7                       |
| UB 1016 × 305 × 438 | 438              | 1026,0         | 305,0          | 26,9           | 49,0           | 556,3                       |
| UB 1016 × 305 × 494 | 494              | 1036,0         | 309,0          | 31,0           | 54,0           | 629,1                       |
| UB 1016 × 305 × 584 | 584              | 1056,0         | 314,0          | 36,0           | 64,0           | 743,7                       |

Table 8 — Universal columns UC

| Designation        | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|--------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                    |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UC 152 × 152 × 23  | 23,0             | 152,4          | 152,2          | 5,8            | 6,8            | 29,2                        |
| UC 152 × 152 × 30  | 30,0             | 157,6          | 152,9          | 6,5            | 9,4            | 38,3                        |
| UC 152 × 152 × 37  | 37,0             | 161,8          | 154,4          | 8,0            | 11,5           | 47,1                        |
| UC 203 × 203 × 46  | 46,1             | 203,2          | 203,6          | 7,2            | 11,0           | 58,7                        |
| UC 203 × 203 × 52  | 52,0             | 206,2          | 204,3          | 7,9            | 12,5           | 66,3                        |
| UC 203 × 203 × 60  | 60,0             | 209,6          | 205,8          | 9,4            | 14,2           | 76,4                        |
| UC 203 × 203 × 71  | 71,0             | 215,8          | 206,4          | 10,0           | 17,3           | 90,4                        |
| UC 203 × 203 × 86  | 86,1             | 222,2          | 209,1          | 12,7           | 20,5           | 109,6                       |
| UC 254 × 254 × 73  | 73,1             | 254,1          | 254,6          | 8,6            | 14,2           | 93,1                        |
| UC 254 × 254 × 89  | 88,9             | 260,3          | 256,3          | 10,3           | 17,3           | 113,3                       |
| UC 254 × 254 × 107 | 107              | 266,7          | 258,8          | 12,8           | 20,5           | 136,4                       |
| UC 254 × 254 × 132 | 132              | 276,3          | 261,3          | 15,3           | 25,3           | 168,1                       |
| UC 254 × 254 × 167 | 167              | 289,1          | 265,2          | 19,2           | 31,7           | 212,9                       |
| UC 305 × 305 × 97  | 96,9             | 307,9          | 305,3          | 9,9            | 15,4           | 123,4                       |
| UC 305 × 305 × 118 | 118              | 314,5          | 307,4          | 12,0           | 18,7           | 150,2                       |
| UC 305 × 305 × 137 | 137              | 320,5          | 309,2          | 13,8           | 21,7           | 174,4                       |
| UC 305 × 305 × 158 | 158              | 327,1          | 311,2          | 15,8           | 25,0           | 201,4                       |
| UC 305 × 305 × 198 | 198              | 339,9          | 314,5          | 19,1           | 31,4           | 252,4                       |
| UC 305 × 305 × 240 | 240              | 352,5          | 318,4          | 23,0           | 37,7           | 305,8                       |
| UC 305 × 305 × 283 | 283              | 365,3          | 322,2          | 26,8           | 44,1           | 360,4                       |
| UC 356 × 368 × 129 | 129              | 355,6          | 368,6          | 10,4           | 17,5           | 164,3                       |
| UC 356 × 368 × 153 | 153              | 362,0          | 370,5          | 12,3           | 20,7           | 194,8                       |
| UC 356 × 368 × 177 | 177              | 368,2          | 372,6          | 14,4           | 23,8           | 225,5                       |
| UC 356 × 368 × 202 | 202              | 374,6          | 374,7          | 16,5           | 27,0           | 257,2                       |
| UC 356 × 406 × 235 | 235              | 381,0          | 394,8          | 18,4           | 30,2           | 299,0                       |
| UC 356 × 406 × 287 | 287              | 393,6          | 399,0          | 22,6           | 36,5           | 365,7                       |
| UC 356 × 406 × 340 | 340              | 406,4          | 403,0          | 26,6           | 42,9           | 433,0                       |
| UC 356 × 406 × 393 | 393              | 419,0          | 407,0          | 30,6           | 49,2           | 500,6                       |
| UC 356 × 406 × 467 | 467              | 436,6          | 412,2          | 35,8           | 58,0           | 594,9                       |
| UC 356 × 406 × 509 | 509              | 446,0          | 416,0          | 39,1           | 62,7           | 649,0                       |
| UC 356 × 406 × 551 | 551              | 455,6          | 418,5          | 42,1           | 67,5           | 701,9                       |
| UC 356 × 406 × 592 | 592              | 465,0          | 421,0          | 45,0           | 72,3           | 754,9                       |
| UC 356 × 406 × 634 | 634              | 474,6          | 424,0          | 47,6           | 77,0           | 807,5                       |
| UC 356 × 406 × 677 | 677              | 483,0          | 428,0          | 51,2           | 81,5           | 863,4                       |
| UC 356 × 406 × 744 | 744              | 498,0          | 432,0          | 55,6           | 88,9           | 948,1                       |
| UC 356 × 406 × 818 | 818              | 514,0          | 437,0          | 60,5           | 97,0           | 1043,3                      |

|                     |      |       |       |       |       |        |
|---------------------|------|-------|-------|-------|-------|--------|
| UC 356 × 406 × 900  | 900  | 531,0 | 442,0 | 65,9  | 106,0 | 1149,2 |
| UC 356 × 406 × 990  | 990  | 550,0 | 448,0 | 71,9  | 115,0 | 1262,4 |
| UC 356 × 406 × 1086 | 1086 | 569,0 | 454,0 | 78,0  | 125,0 | 1385,8 |
| UC 356 × 406 × 1202 | 1202 | 580,0 | 471,0 | 95,0  | 130,0 | 1530,6 |
| UC 356 × 406 × 1299 | 1299 | 600,0 | 476,0 | 100,0 | 140,0 | 1654,8 |

Table 9 — Taper flange I sections IPN

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| IPN 80      | 5,9              | 80,0           | 42,0           | 3,9            | 5,9            | 7,6                         |
| IPN 100     | 8,3              | 100,0          | 50,0           | 4,5            | 6,8            | 10,6                        |
| IPN 120     | 11,1             | 120,0          | 58,0           | 5,1            | 7,7            | 14,2                        |
| IPN 140     | 14,3             | 140,0          | 66,0           | 5,7            | 8,6            | 18,2                        |
| IPN 160     | 17,9             | 160,0          | 74,0           | 6,3            | 9,5            | 22,8                        |
| IPN 180     | 21,9             | 180,0          | 82,0           | 6,9            | 10,4           | 27,9                        |
| IPN 200     | 26,2             | 200,0          | 90,0           | 7,5            | 11,3           | 33,4                        |
| IPN 220     | 31,1             | 220,0          | 98,0           | 8,1            | 12,2           | 39,5                        |
| IPN 240     | 36,2             | 240,0          | 106,0          | 8,7            | 13,1           | 46,1                        |
| IPN 260     | 41,9             | 260,0          | 113,0          | 9,4            | 14,1           | 53,3                        |
| IPN 280     | 47,9             | 280,0          | 119,0          | 10,1           | 15,2           | 61,0                        |
| IPN 300     | 54,2             | 300,0          | 125,0          | 10,8           | 16,2           | 69,0                        |
| IPN 320     | 61,0             | 320,0          | 131,0          | 11,5           | 17,3           | 77,7                        |
| IPN 340     | 68,0             | 340,0          | 137,0          | 12,2           | 18,3           | 86,7                        |
| IPN 360     | 76,1             | 360,0          | 143,0          | 13,0           | 19,5           | 97,0                        |
| IPN 380     | 84,0             | 380,0          | 149,0          | 13,7           | 20,5           | 107,0                       |
| IPN 400     | 92,4             | 400,0          | 155,0          | 14,4           | 21,6           | 117,7                       |
| IPN 450     | 115              | 450,0          | 170,0          | 16,2           | 24,3           | 146,9                       |
| IPN 500     | 141              | 500,0          | 185,0          | 18,0           | 27,0           | 179,4                       |
| IPN 550     | 166              | 550,0          | 200,0          | 19,0           | 30,0           | 212,0                       |
| IPN 600     | 199              | 600,0          | 215,0          | 21,6           | 32,4           | 253,7                       |

Table 10 — Taper flange I sections J

| Designation      | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                  |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| J 76 × 76 × 13   | 12,8             | 76,2           | 76,2           | 5,1            | 8,4            | 16,1                        |
| J 76 × 76 × 15   | 15,0             | 76,2           | 80,0           | 8,9            | 8,4            | 18,8                        |
| J 89 × 89 × 19   | 19,5             | 88,9           | 88,9           | 9,5            | 9,9            | 24,4                        |
| J 102 × 44 × 7   | 7,5              | 101,6          | 44,5           | 4,3            | 6,1            | 9,4                         |
| J 102 × 102 × 23 | 23,0             | 101,6          | 101,6          | 9,5            | 10,3           | 28,8                        |
| J 114 × 114 × 27 | 26,9             | 114,3          | 114,3          | 9,5            | 10,7           | 33,9                        |
| J 127 × 76 × 16  | 16,5             | 127,0          | 76,2           | 5,6            | 9,6            | 20,9                        |
| J 127 × 114 × 27 | 26,9             | 127,0          | 114,3          | 7,4            | 11,4           | 33,8                        |
| J 127 × 114 × 29 | 29,3             | 127,0          | 114,3          | 10,2           | 11,5           | 36,8                        |
| J 152 × 127 × 37 | 37,3             | 152,4          | 127,0          | 10,4           | 13,2           | 46,9                        |
| J 203 × 152 × 52 | 52,3             | 203,2          | 152,4          | 8,9            | 16,5           | 65,9                        |
| J 254 × 114 × 37 | 37,2             | 254,0          | 114,3          | 7,6            | 12,8           | 46,9                        |
| J 254 × 203 × 82 | 82,0             | 254,0          | 203,2          | 10,2           | 19,9           | 103,9                       |

Table 11 — Parallel flange channels UPE

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UPE 80      | 7,9              | 80,0           | 50,0           | 4,0            | 7,0            | 10,1                        |
| UPE 100     | 9,8              | 100,0          | 55,0           | 4,5            | 7,5            | 12,5                        |
| UPE 120     | 12,1             | 120,0          | 60,0           | 5,0            | 8,0            | 15,4                        |
| UPE 140     | 14,5             | 140,0          | 65,0           | 5,0            | 9,0            | 18,4                        |
| UPE 160     | 17,0             | 160,0          | 70,0           | 5,5            | 9,5            | 21,7                        |
| UPE 180     | 19,7             | 180,0          | 75,0           | 5,5            | 10,5           | 25,1                        |
| UPE 200     | 22,8             | 200,0          | 80,0           | 6,0            | 11,0           | 29,0                        |
| UPE 220     | 26,6             | 220,0          | 85,0           | 6,5            | 12,0           | 33,9                        |
| UPE 240     | 30,2             | 240,0          | 90,0           | 7,0            | 12,5           | 38,5                        |
| UPE 270     | 35,2             | 270,0          | 95,0           | 7,5            | 13,5           | 44,8                        |
| UPE 300     | 44,4             | 300,0          | 100,0          | 9,5            | 15,0           | 56,6                        |
| UPE 330     | 53,2             | 330,0          | 105,0          | 11,0           | 16,0           | 67,8                        |
| UPE 360     | 61,2             | 360,0          | 110,0          | 12,0           | 17,0           | 77,9                        |
| UPE 400     | 72,2             | 400,0          | 115,0          | 13,5           | 18,0           | 91,9                        |

Table 12 — Parallel flange channels PFC

| Designation        | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|--------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                    |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| PFC 100 × 50 × 10  | 10,2             | 100,0          | 50,0           | 5,0            | 8,5            | 13,0                        |
| PFC 125 × 65 × 15  | 14,8             | 125,0          | 65,0           | 5,5            | 9,5            | 18,8                        |
| PFC 150 × 75 × 18  | 17,9             | 150,0          | 75,0           | 5,5            | 10,0           | 22,8                        |
| PFC 150 × 90 × 24  | 23,9             | 150,0          | 90,0           | 6,5            | 12,0           | 30,4                        |
| PFC 180 × 75 × 20  | 20,3             | 180,0          | 75,0           | 6,0            | 10,5           | 25,9                        |
| PFC 180 × 90 × 26  | 26,1             | 180,0          | 90,0           | 6,5            | 12,5           | 33,2                        |
| PFC 200 × 75 × 23  | 23,4             | 200,0          | 75,0           | 6,0            | 12,5           | 29,9                        |
| PFC 200 × 90 × 30  | 29,7             | 200,0          | 90,0           | 7,0            | 14,0           | 37,9                        |
| PFC 230 × 75 × 26  | 25,7             | 230,0          | 75,0           | 6,5            | 12,5           | 32,7                        |
| PFC 230 × 90 × 32  | 32,2             | 230,0          | 90,0           | 7,5            | 14,0           | 41,0                        |
| PFC 260 × 75 × 28  | 27,6             | 260,0          | 75,0           | 7,0            | 12,0           | 35,1                        |
| PFC 260 × 90 × 35  | 34,8             | 260,0          | 90,0           | 8,0            | 14,0           | 44,4                        |
| PFC 300 × 90 × 41  | 41,4             | 300,0          | 90,0           | 9,0            | 15,5           | 52,7                        |
| PFC 300 × 100 × 46 | 45,5             | 300,0          | 100,0          | 9,0            | 16,5           | 58,0                        |
| PFC 380 × 100 × 54 | 54,0             | 380,0          | 100,0          | 9,5            | 17,5           | 68,7                        |
| PFC 430 × 100 × 64 | 64,4             | 430,0          | 100,0          | 11,0           | 19,0           | 82,1                        |

**Table 13 — Taper flange channels UPN**

| Designation | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|             |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| UPN 50      | 5,6              | 50,0           | 38,0           | 5,0            | 7,0            | 7,1                         |
| UPN 65      | 7,1              | 65,0           | 42,0           | 5,5            | 7,5            | 9,0                         |
| UPN 80      | 8,6              | 80,0           | 45,0           | 6,0            | 8,0            | 11,0                        |
| UPN 100     | 10,6             | 100,0          | 50,0           | 6,0            | 8,5            | 13,5                        |
| UPN 120     | 13,4             | 120,0          | 55,0           | 7,0            | 9,0            | 17,0                        |
| UPN 140     | 16,0             | 140,0          | 60,0           | 7,0            | 10,0           | 20,4                        |
| UPN 160     | 18,8             | 160,0          | 65,0           | 7,5            | 10,5           | 24,0                        |
| UPN 180     | 22,0             | 180,0          | 70,0           | 8,0            | 11,0           | 28,0                        |
| UPN 200     | 25,3             | 200,0          | 75,0           | 8,5            | 11,5           | 32,2                        |
| UPN 220     | 29,4             | 220,0          | 80,0           | 9,0            | 12,5           | 37,4                        |
| UPN 240     | 33,2             | 240,0          | 85,0           | 9,5            | 13,0           | 42,3                        |
| UPN 260     | 37,9             | 260,0          | 90,0           | 10,0           | 14,0           | 48,3                        |
| UPN 280     | 41,8             | 280,0          | 95,0           | 10,0           | 15,0           | 53,3                        |
| UPN 300     | 46,2             | 300,0          | 100,0          | 10,0           | 16,0           | 58,8                        |
| UPN 320     | 59,5             | 320,0          | 100,0          | 14,0           | 17,5           | 75,8                        |
| UPN 350     | 60,6             | 350,0          | 100,0          | 14,0           | 16,0           | 77,3                        |
| UPN 380     | 63,1             | 380,0          | 102,0          | 13,5           | 16,0           | 80,4                        |
| UPN 400     | 71,8             | 400,0          | 110,0          | 14,0           | 18,0           | 91,5                        |

Table 14 — Taper flange channels U

| Designation     | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-----------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                 |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| U 40 × 20 × 4   | 2,6              | 40,0           | 20,0           | 4,0            | 5,5            | 3,4                         |
| U 40 × 20 × 5   | 2,9              | 40,0           | 20,0           | 5,0            | 5,5            | 3,7                         |
| U 50 × 25 × 5   | 3,9              | 50,0           | 25,0           | 5,0            | 6,0            | 4,9                         |
| U 60 × 30 × 6   | 5,1              | 60,0           | 30,0           | 6,0            | 6,0            | 6,5                         |
| U 65 × 42 × 5,5 | 7,1              | 65,0           | 42,0           | 5,5            | 7,5            | 9,0                         |

Table 15 — Taper flange channels CH

| Designation       | <i>G</i><br>kg/m | Dimensions     |                |                |                | <i>A</i><br>cm <sup>2</sup> |
|-------------------|------------------|----------------|----------------|----------------|----------------|-----------------------------|
|                   |                  | <i>h</i><br>mm | <i>b</i><br>mm | <i>s</i><br>mm | <i>t</i><br>mm |                             |
| CH 76 × 38 × 7    | 6,7              | 76,2           | 38,1           | 5,1            | 6,8            | 8,6                         |
| CH 102 × 51 × 10  | 10,4             | 101,6          | 50,8           | 6,1            | 7,6            | 13,1                        |
| CH 127 × 64 × 15  | 14,9             | 127,0          | 63,5           | 6,4            | 9,2            | 18,8                        |
| CH 152 × 76 × 18  | 17,9             | 152,4          | 76,2           | 6,4            | 9,0            | 22,5                        |
| CH 152 × 89 × 24  | 23,9             | 152,4          | 88,9           | 7,1            | 11,6           | 30,0                        |
| CH 178 × 76 × 21  | 20,8             | 177,8          | 76,2           | 6,6            | 10,3           | 26,4                        |
| CH 178 × 89 × 27  | 26,8             | 177,8          | 88,9           | 7,6            | 12,3           | 33,8                        |
| CH 203 × 76 × 24  | 23,9             | 203,2          | 76,2           | 7,1            | 11,2           | 30,3                        |
| CH 203 × 89 × 30  | 29,8             | 203,2          | 88,9           | 8,1            | 12,9           | 37,6                        |
| CH 229 × 76 × 26  | 26,1             | 228,6          | 76,2           | 7,6            | 11,2           | 33,1                        |
| CH 229 × 89 × 33  | 32,7             | 228,6          | 88,9           | 8,6            | 13,3           | 41,4                        |
| CH 254 × 76 × 28  | 28,2             | 254,0          | 76,2           | 8,1            | 10,9           | 35,9                        |
| CH 254 × 89 × 36  | 35,7             | 254,0          | 88,9           | 9,1            | 13,6           | 45,3                        |
| CH 305 × 89 × 42  | 41,8             | 304,8          | 88,9           | 10,2           | 13,7           | 53,0                        |
| CH 305 × 102 × 46 | 46,2             | 304,8          | 101,6          | 10,2           | 14,8           | 58,1                        |
| CH 381 × 102 × 55 | 55,0             | 381,0          | 101,6          | 10,4           | 16,3           | 69,6                        |
| CH 432 × 102 × 65 | 65,5             | 431,8          | 101,6          | 12,2           | 16,8           | 82,4                        |

## Annex A (informative)

### Comparison of symbols used in this document with those in EN 1993-1-1

The symbols used in this standard are in accordance with the tolerance standards EN 10024, EN 10034 and EN 10279. The comparison with the relevant symbols used in the Eurocode 3 standard EN 1993-1-1 are indicated in Table A.1.

**Table A.1 — Comparison with the symbols used in EN 1993-1-1**

|                  | EN 10365<br>EN 10024<br>EN 10034<br>EN 10279 | EN 1993-1-1 |
|------------------|----------------------------------------------|-------------|
| Depth            | $h$                                          | $h$         |
| Flange width     | $b$                                          | $b$         |
| Web thickness    | $s$                                          | $t_w$       |
| Flange thickness | $t$                                          | $t_f$       |

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EN 1993-1-1, *Eurocode 3: Design of steel structures - Part 1-1: General rules and rules for buildings*

EN 10225, *Weldable structural steels for fixed offshore structures - Technical delivery conditions*

EN 10028-2, *Flat products made of steels for pressure purposes - Part 2: Non-alloy and alloy steels with specified elevated temperature properties*

EN 10273, *Hot rolled weldable steel bars for pressure purposes with specified elevated temperature properties*





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