
ENGINEERED TO LAST

Structural steel and rolled sections.

Rolled beams, custom welded beams (WB), merchant bars and heavy plates. Supplied mill finish, or shot-blasted Sa 2½ and pre-primed.

01

STRUCTURAL STEEL AND ROLLED SECTIONS

Structural steel and rolled sections.

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IN THIS SECTION

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FINISHES

All families in this section are supplied mill finish, or shot-blasted Sa 2½ and pre-primed with a 20 µm weldable primer.

Below 3 mm thickness: mill finish only.

THE WORKSHOP CRITERION

Mill finish or pre-primed?

Surface preparation determines the quality of the final paint system. All families in this section, from plates to welded beams, can be supplied in either condition.

Mill finish

EN 10025 · as-rolled condition

CRITERION	CONDITION
Surface condition	mill scale
Before painting	pickling required
Storage protection	limited
Workshop load	preparation at your premises
Use	embedded, concealed parts

Shot-blasted and pre-primed

Sa 2½ + weldable primer · ready to paint

CRITERION	CONDITION
Descaling	Sa 2½ · ISO 8501-1
Primer	SigmaWeld PPG · 20 µm
Weldability	weldable primer
Paint substrate	prepared Sa 2½
Storage protection	temporary, up to one year

WHICH SURFACE CONDITION FOR WHICH NEED

PROJECT REQUIREMENT	RECOMMENDED CONDITION	WHY
Embedded or concealed parts	Mill finish	no finishing requirement
Shop-painted steelwork	Shot-blasted + pre-primed	uniform substrate, ready for the paint system
Fast erection, tight deadlines	Shot-blasted + pre-primed	no pickling required at the fabricator
Extended storage before installation	Shot-blasted + pre-primed	immediate 20 µm protection

The 20 µm weldable primer is temporary protection for transport and storage. The final paint system must still be applied according to the site environment, in line with ISO 12944. Compatibility of the primer with the final paint system must be checked against the manufacturer's data sheet.

Sa 2½ shot blasting and weldable primer apply only from 3 mm thickness. Below 3 mm (thin tubes, angles, plates and sections), supplied in mill finish only.

THE LINE, IN FOUR LINKED OPERATIONS

01

Receipt and inspection

Steels certified to EN 10025, inspected batch by batch. EN 10204 type 3.1 mill certificate available as required by the order.

02

Shot blasting Sa 2½

Mill scale and oxides removed over the whole surface, controlled roughness for primer adhesion.

03

Weldable primer 20 µm

Applied in-line: weldability is retained, and protection starts as soon as the material leaves the line.

04

Inspection and shipping

Film thickness and adhesion checked, packages identified, material certificate supplied with delivery.

ISO 8501-1 DESCALING
Sa 2½

WELDABLE PRIMER
20 µm

SHOT BLASTING
from 3 mm

STORAGE PROTECTION
up to one year

PARALLEL-FLANGE I BEAMS

IPE

I sections with parallel flanges, the reference for building structures: high strength, optimised weight and high geometric accuracy, from 80 to 600 mm.

Light section, excellent weight / strength ratio · weldable, durable S275JR steel.


SECTION PROPERTIES EN 10365 · dimensions in mm · kg/m · A in cm² · I in cm⁴ · W in cm³

RÉF.	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
IPE 80	6.0	80	46	3.8	5.2	7.6	80	8	20	4
IPE 100	8.1	100	55	4.1	5.7	10.3	171	16	34	6
IPE 120	10.4	120	64	4.4	6.3	13.2	318	28	53	9
IPE 140	12.9	140	73	4.7	6.9	16.4	541	45	77	12
IPE 160	15.8	160	82	5.0	7.4	20.1	869	68	109	17
IPE 180	18.8	180	91	5.3	8.0	23.9	1320	101	146	22
IPE 200	22.4	200	100	5.6	8.5	28.5	1940	142	194	29
IPE 220	26.2	220	110	5.9	9.2	33.4	2770	205	252	37
IPE 240	30.7	240	120	6.2	9.8	39.1	3890	284	324	47
IPE 270	36.1	270	135	6.6	10.2	45.9	5790	420	429	62
IPE 300	42.2	300	150	7.1	10.7	53.8	8360	604	557	81
IPE 330	49.1	330	160	7.5	11.5	62.6	11770	788	713	99
IPE 360	57.1	360	170	8.0	12.7	72.7	16270	1040	904	123
IPE 400	66.3	400	180	8.6	13.5	84.5	23130	1320	1160	146
IPE 450	77.6	450	190	9.4	14.6	98.8	33740	1680	1500	176
IPE 500	90.7	500	200	10.2	16.0	116.0	48200	2140	1930	214
IPE 550	106.0	550	210	11.1	17.2	134.0	67120	2670	2440	254
IPE 600	122.0	600	220	12.0	19.0	156.0	92080	3390	3070	308

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

12 100 mm

FINISHES

Mill finish or pre-primed

SECTION STANDARD

EN 10365

TAPER-FLANGE I BEAMS

IPN

I sections with taper flanges for load-bearing structures, steelwork, beams and steel floors. High mechanical strength and dimensional stability, from 80 to 400 mm.



High strength and geometric accuracy.

SECTION PROPERTIES EN 10365 · dimensions in mm · kg/m · A in cm² · I in cm⁴ · W in cm³

RÉF.	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
IPN 80	5.9	80	42	3.9	5.9	7.6	78	6	19	3
IPN 100	8.3	100	50	4.5	6.8	10.6	171	12	34	5
IPN 120	11.1	120	58	5.1	7.7	14.2	328	22	55	7
IPN 140	14.3	140	66	5.7	8.6	18.3	573	35	82	11
IPN 160	17.9	160	74	6.3	9.5	22.8	935	55	117	15
IPN 180	21.9	180	82	6.9	10.4	27.9	1450	81	161	20
IPN 200	26.2	200	90	7.5	11.3	33.4	2140	117	214	26
IPN 220	31.1	220	98	8.1	12.2	39.5	3060	162	278	33
IPN 240	36.2	240	106	8.7	13.1	46.1	4250	221	354	42
IPN 260	41.9	260	113	9.4	14.1	53.3	5740	288	442	51
IPN 280	47.9	280	119	10.1	15.2	61.0	7590	364	542	61
IPN 300	54.2	300	125	10.8	16.2	69.0	9800	451	653	72
IPN 320	61.0	320	131	11.5	17.3	77.7	12510	555	782	85
IPN 340	68.0	340	137	12.2	18.3	86.7	15700	674	923	98
IPN 360	76.1	360	143	13.0	19.5	97.0	19610	818	1090	114
IPN 380	84.0	380	149	13.7	20.5	107.0	24010	975	1260	131
IPN 400	92.4	400	155	14.4	21.6	118.0	29210	1160	1460	149

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

12 000 mm

FINISHES

Mill finish or pre-primed

SECTION STANDARD

EN 10365

TAPER-FLANGE U SECTIONS

UPN

Hot-rolled U sections with taper flanges, used in load-bearing structures, steelwork and welded fabrications. Heights from 80 to 400 mm.

High strength and dimensional accuracy · weldable, durable S275JR steel.


SECTION PROPERTIES EN 10365 · dimensions in mm · kg/m · A in cm² · I in cm⁴ · W in cm³

RÉF.	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
UPN 80	8.6	80	45	6.0	8.0	11.0	106	19	27	6
UPN 100	10.6	100	50	6.0	8.5	13.5	206	29	41	8
UPN 120	13.4	120	55	7.0	9.0	17.0	364	43	61	11
UPN 140	16.0	140	60	7.0	10.0	20.4	605	63	86	15
UPN 160	18.8	160	65	7.5	10.5	24.0	925	85	116	18
UPN 180	22.0	180	70	8.0	11.0	28.0	1 350	114	150	22
UPN 200	25.3	200	75	8.5	11.5	32.2	1 910	148	191	27
UPN 220	29.4	220	80	9.0	12.5	37.4	2 690	197	245	34
UPN 240	33.2	240	85	9.5	13.0	42.3	3 600	248	300	40
UPN 260	37.9	260	90	10.0	14.0	48.3	4 820	317	371	48
UPN 280	41.8	280	95	10.0	15.0	53.3	6 280	399	448	57
UPN 300	46.2	300	100	10.0	16.0	58.8	8 030	495	535	68
UPN 320	59.5	320	100	14.0	17.5	75.8	10 870	597	679	81
UPN 350	60.6	350	100	14.0	16.0	77.3	12 840	570	734	75
UPN 380	63.1	380	102	13.5	16.0	80.4	15 760	615	829	79
UPN 400	71.8	400	110	14.0	18.0	91.5	20 350	846	1 020	102

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

12 000 mm

FINISHES

Mill finish or pre-primed

SECTION STANDARD

EN 10365

WIDE-FLANGE H BEAMS

HEA

H sections with wide parallel flanges: the best compromise between low weight and high strength, widely used in modern steel structures.

Optimised section: strength and lightness · easily weldable S275JR steel.


SECTION PROPERTIES EN 10365 · dimensions in mm · kg/m · A in cm² · I in cm⁴ · W in cm³

RÉF.	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
HEA 100	16.7	96	100	5.0	8.0	21.2	349	134	73	27
HEA 120	19.9	114	120	5.0	8.0	25.3	606	231	106	38
HEA 140	24.7	133	140	5.5	8.5	31.4	1 030	389	155	56
HEA 160	30.4	152	160	6.0	9.0	38.8	1 670	616	220	77
HEA 180	35.5	171	180	6.0	9.5	45.3	2 510	925	294	103
HEA 200	42.3	190	200	6.5	10.0	53.8	3 690	1 340	389	134
HEA 220	50.5	210	220	7.0	11.0	64.3	5 410	1 950	515	178
HEA 240	60.3	230	240	7.5	12.0	76.8	7 760	2 770	675	231
HEA 260	68.2	250	260	7.5	12.5	86.8	10 450	3 670	836	282
HEA 280	76.4	270	280	8.0	13.0	97.3	13 670	4 760	1 010	340
HEA 300	88.3	290	300	8.5	14.0	112.5	18 260	6 310	1 260	421
HEA 320	97.6	310	300	9.0	15.5	124.4	22 930	6 990	1 480	466
HEA 340	105.0	330	300	9.5	16.5	133.5	27 690	7 440	1 680	496
HEA 360	112.0	350	300	10.0	17.5	142.8	33 090	7 890	1 890	526
HEA 400	125.0	390	300	11.0	19.0	159.0	45 070	8 560	2 310	571
HEA 450	140.0	440	300	11.5	21.0	178.0	63 720	9 470	2 900	631
HEA 500	155.0	490	300	12.0	23.0	197.5	86 970	10 370	3 550	691
HEA 550	166.0	540	300	12.5	24.0	211.8	111 900	10 820	4 150	721
HEA 600	178.0	590	300	13.0	25.0	226.5	141 200	11 270	4 790	751

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

12 100 mm

FINISHES

Mill finish or pre-primed

SECTION STANDARD

EN 10365

H BEAMS, HEAVY SERIES

HEB

H sections with reinforced wide flanges, designed for structures requiring high bending and compression resistance: balanced geometry, maximum stiffness.

High load-bearing capacity and increased stiffness · weldable, durable S275JR steel.


SECTION PROPERTIES EN 10365 · dimensions in mm · kg/m · A in cm² · I in cm⁴ · W in cm³

RÉF.	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
HEB 100	20.4	100	100	6.0	10.0	26.0	450	167	90	34
HEB 120	26.7	120	120	6.5	11.0	34.0	864	318	144	53
HEB 140	33.7	140	140	7.0	12.0	43.0	1510	550	216	79
HEB 160	42.6	160	160	8.0	13.0	54.3	2490	889	311	111
HEB 180	51.2	180	180	8.5	14.0	65.3	3830	1360	426	151
HEB 200	61.3	200	200	9.0	15.0	78.1	5700	2000	570	200
HEB 220	71.5	220	220	9.5	16.0	91.0	8090	2840	736	258
HEB 240	83.2	240	240	10.0	17.0	106.0	11260	3920	938	327
HEB 260	93.0	260	260	10.0	17.5	118.4	14920	5130	1150	395
HEB 280	103.0	280	280	10.5	18.0	131.4	19270	6590	1380	471
HEB 300	117.0	300	300	11.0	19.0	149.1	25170	8560	1680	571
HEB 320	127.0	320	300	11.5	20.5	161.3	30820	9240	1930	616
HEB 340	134.0	340	300	12.0	21.5	170.9	36660	9690	2160	646
HEB 360	142.0	360	300	12.5	22.5	180.6	43190	10140	2400	676
HEB 400	155.0	400	300	13.5	24.0	197.8	57680	10820	2880	721
HEB 450	171.0	450	300	14.0	26.0	218.0	79890	11720	3550	781
HEB 500	187.0	500	300	14.5	28.0	238.6	107200	12620	4290	842
HEB 550	199.0	550	300	15.0	29.0	254.1	136700	13080	4970	872
HEB 600	212.0	600	300	15.5	30.0	270.0	171000	13530	5700	902

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

12 100 mm

FINISHES

Mill finish or pre-primed

SECTION STANDARD

EN 10365

CUSTOM SECTION

Welded beams (WB)

Web and flanges cut to exact dimensions then submerged-arc welded: the section is designed for the actual forces of the project. Long spans beyond 30 m, heavy loads, crane runway beams: where rolled sections reach their limit.


STANDARD SECTIONS · COLUMNS AND TRUSSES mm · kg/m · A in cm² · I in cm · W in cm³

DESIGNATION	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
WB 333×6 - 8×180	38.3	349	180	6	8	48.8	10220	778	586	86
WB 333×6 - 10×200	47.1	353	200	6	10	60.0	13615	1334	771	133
WB 400×6 - 10×200	50.2	420	200	6	10	64.0	20013	1334	953	133
WB 500×6 - 10×200	55.0	520	200	6	10	70.0	32263	1334	1241	133
WB 500×6 - 12×220	65.0	524	220	6	12	82.8	40859	2130	1560	194
WB 500×6 - 12×300	80.1	524	300	6	12	102.0	53445	5401	2040	360
WB 500×8 - 15×300	102.0	530	300	8	15	130.0	68026	6752	2567	450
WB 600×8 - 12×220	79.1	624	220	8	12	100.8	63846	2132	2046	194
WB 600×8 - 15×250	96.6	630	250	8	15	123.0	85331	3909	2709	313
WB 600×8 - 15×300	108.3	630	300	8	15	138.0	99518	6753	3159	450
WB 750×8 - 15×300	117.8	780	300	8	15	150.0	159818	6753	4098	450
WB 750×8 - 20×300	141.3	790	300	8	20	180.0	206035	9003	5216	600

Designation WB $h_{web} \times t_w - t_f \times b_f$: the number after WB is the web depth; h is the overall depth, $s = t_w$ the web thickness, $t = t_f$ and $b = b_f$ the flange thickness and width. Section class to be checked, EN 1993-1-1 table 5.2.

CRANE RUNWAYS · PORTAL FRAME SPACING UP TO 8 M crane capacity shown after the designation

DESIGNATION	KG/ML	H	B	S	T	A	IY	IZ	WY	WZ
WB 600×8 - 12×250/10×200 5 t	76.9	622	250/200	8	12/10	98.0	60133	2232	1761	179
WB 750×8 - 15×300/12×200 10 t	101.3	777	300/200	8	15/12	129.0	123766	4178	2753	279
WB 750×8 - 20×300/20×220 15 t	128.7	790	300/220	8	20/20	164.0	180000	6278	4161	419
WB 1000×10 - 15×350/12×250 20 t	143.3	1027	350/250	10	15/12	182.5	288174	6930	5013	396

Asymmetric sections: top flange / bottom flange. Bending, deflection $e/750$ and fatigue EN 1993-6.

Line capacities: web depth from 200 to 2 500 mm; flange width up to 1 250 mm; thicknesses up to 50 mm; length up to 15 m in a single piece, beyond that a bolted splice plate; camber 100 mm maximum. S355JR steel as standard, S275JR as an option. Tapered beams and box girders to drawing. Order by number of pieces and length. Indicative values, to be confirmed by the design office.

STEEL GRADE

S355JR · S275JR

MAXIMUM LENGTH

15 000 mm

FINISHES

Mill finish or pre-primed

DESIGN

EN 1993-1-1



MERCHANT

BARS

SUBSECTION · 01 STRUCTURAL STEEL AND ROLLED SECTIONS

Merchant bars.

Hot-rolled flat, square and round bars and equal-leg angles: the simple sections used in metalwork, frames and welded fabrications. Steel grade by product and section: S235JR or S275JR (angles S235JR below L 50 × 50 × 5, S275JR from L 50 × 50 × 5). Flat bars in 6 000 mm, square and round bars in 12 000 mm, angles in 6 000 or 12 000 mm depending on section.

FLAT BARS

128 sections

From 10 × 3 to 200 × 40 mm.

SQUARE AND ROUND BARS

17 sizes · 31 Ø

Square bars from 8 to 80 mm, round bars from Ø 6 to Ø 60.

ANGLES

25 items

Equal legs from 20 to 150 mm.

IN THIS SUB-SECTION

Flat bars	11
Square and round bars	12
Equal-leg angles	13

FINISHES

Mill finish, or shot-blasted Sa 2½ and pre-primed with 20 µm weldable primer from 3 mm thickness.
Other sections on request.

MERCHANT BARS

Flat bars

The versatile solution for steel construction, metalwork and industrial fabrication:
128 sections from 10 × 3 to 200 × 40 mm.

Hot-rolled flat bars, sharp edges, tolerances EN 10058.



MASS IN KG/M width in rows, thickness in columns, in mm

WIDTH	3	4	5	6	8	10	12	15	20	25	30	40
10	0.24	0.31	0.39	0.47	-	-	-	-	-	-	-	-
12	0.28	0.38	0.47	0.57	-	-	-	-	-	-	-	-
15	0.35	0.47	0.59	0.71	-	-	-	-	-	-	-	-
16	0.38	0.50	0.63	0.75	-	-	-	-	-	-	-	-
20	0.47	0.63	0.78	0.94	1.26	-	-	-	-	-	-	-
25	0.59	0.78	0.98	1.18	1.57	-	-	-	-	-	-	-
30	0.71	0.94	1.18	1.41	1.88	2.35	-	-	-	-	-	-
35	0.82	1.10	1.37	1.65	2.20	2.75	-	-	-	-	-	-
40	0.94	1.26	1.57	1.88	2.51	3.14	-	-	-	-	-	-
45	-	1.41	1.77	2.12	2.83	3.53	4.24	5.30	-	-	-	-
50	-	1.57	1.96	2.35	3.14	3.92	4.71	5.89	-	-	-	-
55	-	1.73	2.16	2.59	3.45	4.32	5.18	6.48	-	-	-	-
60	-	1.88	2.35	2.83	3.77	4.71	5.65	7.06	-	-	-	-
65	-	-	2.55	3.06	4.08	5.10	6.12	7.65	10.20	-	-	-
70	-	-	2.75	3.30	4.40	5.49	6.59	8.24	10.99	-	-	-
80	-	-	3.14	3.77	5.02	6.28	7.54	9.42	12.56	-	-	-
90	-	-	-	4.24	5.65	7.06	8.48	10.60	14.13	17.66	-	-
100	-	-	-	4.71	6.28	7.85	9.42	11.77	15.70	19.62	-	-
120	-	-	-	-	7.54	9.42	11.30	14.13	18.84	23.55	28.26	-
150	-	-	-	-	9.42	11.77	14.13	17.66	23.55	29.44	35.32	-
200	-	-	-	-	-	15.70	18.84	23.55	31.40	39.25	47.10	62.80

128 sections from 10 × 3 to 200 × 40 mm. Section A (cm²) = mass (kg/ml) / 0.785. Developed surface (m²/ml) = 2 × (width + thickness) / 1 000, dimensions in mm. Other sections on request.

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

6 000 mm

FINISHES

Mill finish or pre-primed

SECTION STANDARD

EN 10058

MERCHANT BARS

Square and round bars

Hot-rolled solid bars of square or round section: pins, rods, ironwork and welded fabrications. Steel grade S275JR, standard length 12 000 mm.



SQUARE BARS



ROUND BARS

SQUARE BARS · EN 10059 kg/m · A in cm²

A × A	KG/ML	A
8 × 8	0.50	0.64
10 × 10	0.78	1.00
12 × 12	1.13	1.44
14 × 14	1.54	1.96
15 × 15	1.77	2.25
16 × 16	2.01	2.56
18 × 18	2.54	3.24
20 × 20	3.14	4.00
22 × 22	3.80	4.84
25 × 25	4.91	6.25
30 × 30	7.06	9.00
35 × 35	9.62	12.25
40 × 40	12.56	16.00
45 × 45	15.90	20.25
50 × 50	19.62	25.00
60 × 60	28.26	36.00
80 × 80	50.24	64.00

ROUND BARS · EN 10060 kg/m · A in cm²

Ø	KG/ML	A	Ø	KG/ML	A
Ø 6	0.22	0.28	Ø 26	4.17	5.31
Ø 7	0.30	0.38	Ø 28	4.83	6.16
Ø 8	0.39	0.50	Ø 30	5.55	7.07
Ø 9	0.50	0.64	Ø 32	6.31	8.04
Ø 10	0.62	0.79	Ø 34	7.13	9.08
Ø 11	0.75	0.95	Ø 35	7.55	9.62
Ø 12	0.89	1.13	Ø 36	7.99	10.18
Ø 13	1.04	1.33	Ø 38	8.90	11.34
Ø 14	1.21	1.54	Ø 40	9.86	12.57
Ø 15	1.39	1.77	Ø 42	10.88	13.85
Ø 16	1.58	2.01	Ø 45	12.48	15.90
Ø 18	2.00	2.54	Ø 50	15.41	19.63
Ø 20	2.47	3.14	Ø 55	18.65	23.76
Ø 22	2.98	3.80	Ø 58	20.74	26.42
Ø 24	3.55	4.52	Ø 60	22.20	28.27
Ø 25	3.85	4.91			

STANDARD STEEL GRADE

S275JR

STANDARD LENGTH

12 000 mm

FINISHES

Mill finish or pre-primed

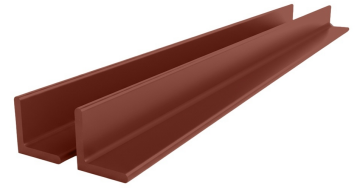
SECTION STANDARD

EN 10059 · EN 10060

EQUAL-LEG ANGLES

Equal-leg angles

Light structures, frames, bracing and welded fabrications: the angle offers excellent mechanical strength for minimal footprint, from 20 to 150 mm leg. Twenty-five stock references, several thicknesses per section.



SECTION PROPERTIES EN 10056-1 · mm · kg/m · A in cm² · e in cm · I in cm⁴ · i in cm

DESIGNATION L a × a × t	KG/ML	A	E	IY = IZ	IV	IV	STEEL GRADE · LENGTH
L 20 × 20 × 2	0.61	0.77	0.56	0.28	0.12	0.39	S235JR · 6 m
L 20 × 20 × 3	0.88	1.12	0.60	0.39	0.17	0.38	S235JR · 6 m
L 25 × 25 × 2	0.76	0.97	0.68	0.56	0.23	0.49	S235JR · 6 m
L 25 × 25 × 3	1.12	1.43	0.72	0.80	0.33	0.48	S235JR · 6 m
L 30 × 30 × 2	0.93	1.19	0.78	0.97	0.41	0.59	S235JR · 6 m
L 30 × 30 × 3	1.36	1.73	0.84	1.40	0.59	0.58	S235JR · 6 m
L 35 × 35 × 3	1.60	2.04	0.96	2.29	0.95	0.68	S235JR · 6 m
L 40 × 40 × 3	1.84	2.35	1.07	3.45	1.44	0.78	S235JR · 6 m
L 40 × 40 × 4	2.42	3.08	1.12	4.47	1.86	0.78	S235JR · 6 m
L 45 × 45 × 3	2.09	2.66	1.18	4.93	2.07	0.88	S235JR · 6 m
L 45 × 45 × 4	2.74	3.49	1.23	6.43	2.68	0.88	S235JR · 6 m
L 50 × 50 × 3	2.33	2.96	1.31	6.86	2.88	0.99	S235JR · 6 m
L 50 × 50 × 4	3.06	3.89	1.36	8.97	3.73	0.98	S235JR · 6 m
L 50 × 50 × 5	3.77	4.80	1.40	11.0	4.55	0.97	S275JR · 6 ou 12 m
L 60 × 60 × 4	3.70	4.71	1.60	15.8	6.58	1.18	S275JR · 12 m
L 60 × 60 × 5	4.57	5.82	1.64	19.4	8.03	1.17	S275JR · 12 m
L 60 × 60 × 6	5.42	6.90	1.69	22.8	9.44	1.17	S275JR · 12 m
L 70 × 70 × 5	5.37	6.84	1.88	31.2	13.0	1.38	S275JR · 12 m
L 70 × 70 × 6	6.38	8.13	1.93	36.9	15.3	1.37	S275JR · 12 m
L 70 × 70 × 7	7.38	9.40	1.97	42.3	17.5	1.36	S275JR · 12 m
L 80 × 80 × 8	9.63	12.27	2.26	72.2	29.8	1.56	S275JR · 12 m
L 90 × 90 × 9	12.20	15.54	2.54	116	47.9	1.76	S275JR · 12 m
L 100 × 100 × 10	15.00	19.11	2.82	177	72.9	1.95	S275JR · 12 m
L 120 × 120 × 12	21.60	27.52	3.40	368	152	2.35	S275JR · 12 m
L 150 × 150 × 15	33.80	43.06	4.25	898	370	2.93	S275JR · 12 m

S235JR in 6 m below L 50 × 50 × 5, S275JR from L 50 × 50 × 5 (in 6 or 12 m), then in 12 m. e: centre of gravity to back of leg; Iv, iv: weak axis at 45°. outside EN 10056-1. Thickness 2 mm: mill finish only (shot blasting and primer from 3 mm).

STEEL GRADES

S235JR · S275JR

LENGTHS

6 m · 12 m

FINISHES

Mill finish or pre-primed

STANDARD

EN 10056-1

HEAVY PLATES · 3 TO 50 MM

Hot-rolled plates

An essential element of any steel structure, hot-rolled plate combines mechanical strength, dimensional stability and durability. Thicknesses from 3 to 50 mm, in seven stock formats.



Shot-blasted Sa 2½ finish: better coating adhesion · 20 µm weldable primer: immediate protection · steel grades certified EN 10025 and EN 10028.

STOCK SIZES · AVAILABILITY BY THICKNESS sizes in mm

THICKNESS	1 000 × 2 000	1 250 × 2 500	1 500 × 3 000	1 500 × 6 000	2 000 × 6 000	2 000 × 12 000	2 500 × 6 000
3 mm	●	●	●	●	–	–	–
4 mm	●	●	●	●	–	–	–
5 mm	●	●	●	●	–	–	–
6 mm	●	●	●	●	●	●	●
8 mm	●	●	●	●	●	●	●
10 mm	●	●	●	●	●	●	●
12 mm	●	●	●	●	●	●	●
15 mm	–	–	●	●	●	●	●
20 mm	–	–	●	●	●	●	●
25 mm	–	–	●	●	●	●	●
30 mm	–	–	●	●	●	●	●
40 mm	–	–	●	●	●	●	●
50 mm	–	–	●	●	●	–	–

1 000 × 2 000 and 1 250 × 2 500 from 3 to 12 mm; 1 500 × 3 000 and 1 500 × 6 000 from 3 to 50 mm; 2 000 × 6 000 from 6 to 50 mm; 2 000 × 12 000 and 2 500 × 6 000 from 6 to 40 mm. Any other size cut to order.

Available mill finish, or shot-blasted and pre-primed according to site requirements. Availability confirmed in the quotation.

CONSTRUCTION

S235JR · S275JR ·
S355JR

PRESSURE EQUIPMENT

P265GH · P275GH
· P355GH

FINISHES

Mill finish or pre-
primed

DENSITY

7.85 kg/dm³

PATTERNED PLATES · 3/5 TO 6/8

Tear plates

Pattern rolled into the body of the plate, not applied or bonded: it does not wear or peel off. Teardrop pattern, four designations available in the four stock formats, in S235JR.



Slip resistance provided by the pattern itself, with no added treatment · steel grade certified to EN 10025 · dimensional and shape tolerances to EN 10363 for continuously rolled patterned plates (cut from wide strip).

STOCK SIZES · AVAILABILITY BY DESIGNATION sizes in mm

DESIGNATION	KG/M ²	1 000 × 2 000	1 250 × 2 500	1 500 × 3 000	1 500 × 6 000
3/5	26	●	●	●	●
4/6	34	●	●	●	●
5/7	42	●	●	●	●
6/8	49	●	●	●	●

The designation gives the web thickness then the height including the raised pattern: 5/7 means a 5 mm web for 7 mm overall.

STEEL GRADE

S235JR

STANDARDS

EN 10025 · EN
10363

FINISHES

Mill finish or pre-
primed

DENSITY

7.85 kg/dm³

PATTERNED PLATES · 3/5 TO 6/8

Chequer plates

Pattern rolled into the body of the plate, not applied or bonded: it does not wear or peel off. Chequer pattern, four designations available in the four stock formats, in S235JR.



Slip resistance provided by the pattern itself, with no added treatment · steel grade certified to EN 10025 · dimensional and shape tolerances to EN 10363 for continuously rolled patterned plates (cut from wide strip).

STOCK SIZES · AVAILABILITY BY DESIGNATION sizes in mm

DESIGNATION	KG/M ²	1 000 × 2 000	1 250 × 2 500	1 500 × 3 000	1 500 × 6 000
3/5	28	●	●	●	●
4/6	36	●	●	●	●
5/7	44	●	●	●	●
6/8	51	●	●	●	●

The designation gives the web thickness then the height including the raised pattern: 5/7 means a 5 mm web for 7 mm overall.

STEEL GRADE

S235JR

STANDARDS

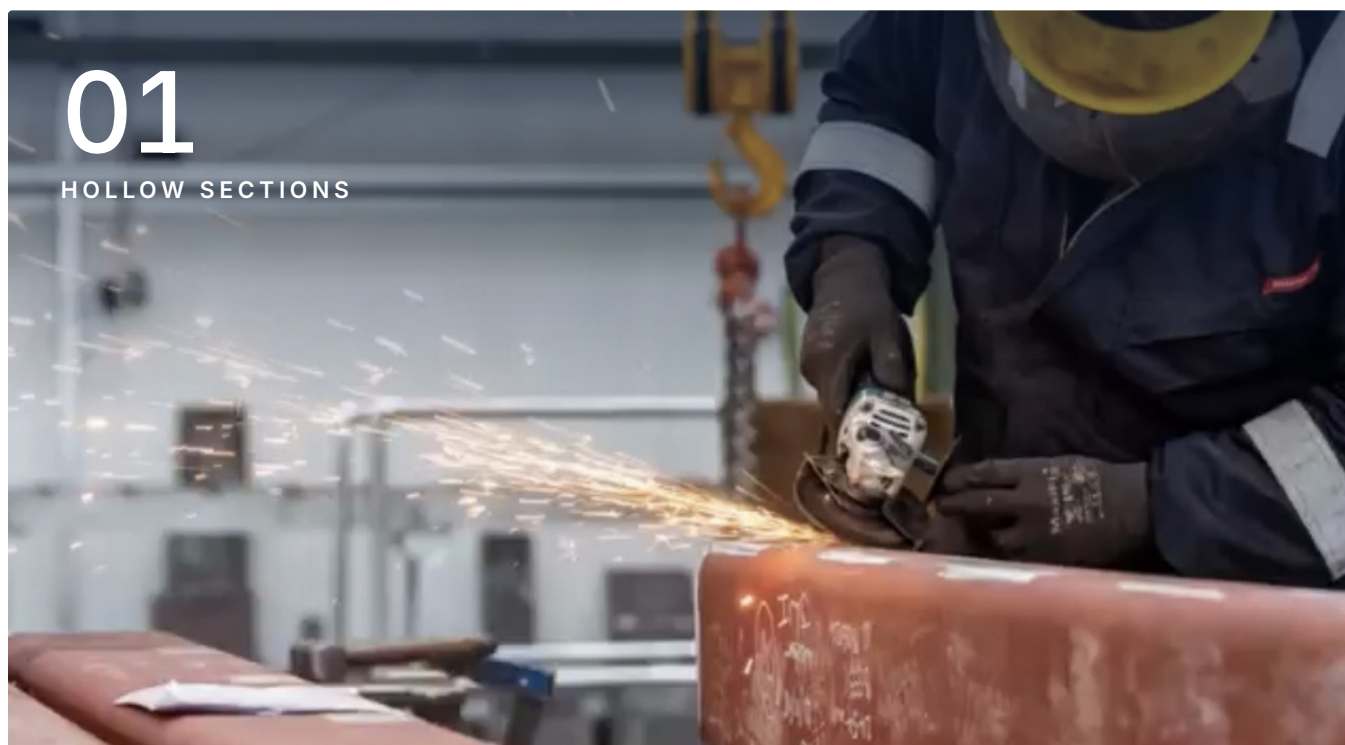
EN 10025 · EN
10363

FINISHES

Mill finish or pre-
primed

DENSITY

7.85 kg/dm³



01

HOLLOW SECTIONS

STRUCTURAL HOLLOW SECTIONS

Round, square and rectangular tubes.

Structural hollow sections in S235JRH or S275J0H. The choice depends on how the load is applied: centred, along one axis, or distributed. Standard length 6 000 mm, or cut to length; thickness from 1.5 to 12 mm depending on the section.

ROUND TUBES

36 diameters

From Ø 16 to Ø 219, thickness from 1.5 to 6 mm.

SQUARE TUBES

23 sizes

From 16 × 16 to 250 × 250, thickness from 1.5 to 12 mm.

RECTANGULAR TUBES

19 sections

From 30 × 20 to 150 × 100, thickness from 1.5 to 6 mm.

IN THIS PART

Round tubes	18
Round tubes (cont.)	19
Square tubes	20
Rectangular tubes	21
Tube selection guide	22
Guide & ordering	23

SPECIFICATIONS

Cold-formed welded hollow sections to EN 10219; steel grade S235JRH as standard, S275J0H on request.

Mill finish, or shot-blasted Sa 2½ and pre-primed with a 20 µm weldable primer from 3 mm thickness.

CIRCULAR HOLLOW SECTIONS

Round tubes

The circular hollow section, used for greenhouses, guardrails and tubular structures. Thirty-six diameters from Ø 16 to Ø 219, in standard 6 000 mm lengths or cut to length, with thickness from 1.5 to 6 mm depending on the section.



Cold-formed and longitudinally welded by high-frequency induction · external weld bead trimmed · steel grade certified EN 10219-1.

MASS PER METRE IN KG/M wall thickness t in mm · EN 10219

SECTION Ø	1.5	2	2.5	3	3.5	4	5	6
Ø 16	0.54	0.69	-	-	-	-	-	-
Ø 20	0.68	0.89	1.08	-	-	-	-	-
Ø 21.3	0.73	0.95	1.16	-	-	-	-	-
Ø 22	0.76	0.99	-	-	-	-	-	-
Ø 25	0.87	1.13	1.39	1.63	-	-	-	-
Ø 26.9	0.94	1.23	1.50	1.77	-	-	-	-
Ø 28	0.98	1.28	-	-	-	-	-	-
Ø 30	1.05	1.38	1.70	2.00	2.29	2.56	-	-
Ø 32	1.13	1.48	1.82	2.15	2.46	2.76	-	-
Ø 33	1.17	1.53	1.88	2.22	-	-	-	-
Ø 33.7	1.19	1.56	1.92	2.27	2.61	2.93	-	-
Ø 35	1.24	1.63	2.00	2.37	2.72	3.06	-	-
Ø 38	1.35	1.78	2.19	2.59	2.98	3.35	-	-
Ø 40	1.42	1.87	2.31	2.74	-	-	-	-
Ø 42	1.50	1.97	2.44	2.89	-	-	-	-
Ø 42.4	1.51	1.99	2.46	2.91	3.36	3.79	-	-
Ø 45	1.61	2.12	2.62	3.11	-	-	-	-
Ø 48	1.72	2.27	2.81	3.33	-	-	-	-

Empty combinations are not manufactured. Further diameters on page 19.

Finishes. Mill finish in all thicknesses; shot-blasted Sa 2½ and pre-primed (20 µm weldable primer) from 3 mm.

STANDARD STEEL GRADE
S235JRH

STANDARD
EN 10219

STANDARD LENGTH
6 000 mm
or any required length

FINISHES
Mill finish or pre-primed
pre-primed from 3 mm

CIRCULAR HOLLOW SECTIONS

Round tubes (continued)

Large diameters, from Ø 48.3 to Ø 219, for the longest spans and heaviest loads.

Cold-formed and longitudinally welded by high-frequency induction · external weld bead trimmed · steel grade certified EN 10219-1.



MASS PER METRE IN KG/M wall thickness t in mm · EN 10219

SECTION Ø	1.5	2	2.5	3	3.5	4	5	6
Ø 48.3	1.73	2.28	2.82	3.35	3.87	4.37	-	-
Ø 50	1.79	2.37	2.93	3.48	-	-	-	-
Ø 50.3	1.81	2.38	2.95	3.50	4.04	4.57	-	-
Ø 60	2.16	2.86	3.55	4.22	-	-	-	-
Ø 60.3	2.18	2.88	3.56	4.24	4.90	5.55	6.82	8.03
Ø 63.5	2.29	3.03	3.76	4.48	5.18	5.87	7.21	8.51
Ø 70	2.53	3.35	4.16	4.96	5.74	6.51	8.01	9.47
Ø 76	2.76	3.65	4.53	5.40	-	-	-	-
Ø 76.1	2.76	3.65	4.54	5.41	6.27	7.11	8.77	10.37
Ø 88.9	3.23	4.29	5.33	6.36	7.37	8.38	10.35	12.27
Ø 101.6	3.70	4.91	6.11	7.29	8.47	9.63	11.91	14.15
Ø 114.3	-	5.54	6.89	8.23	9.56	10.88	13.48	16.03
Ø 127	-	6.17	7.68	9.17	10.66	12.13	15.04	17.90
Ø 133	-	6.46	8.05	9.62	11.18	12.73	15.78	18.79
Ø 139.7	-	6.79	8.46	10.11	11.76	13.39	16.61	19.78
Ø 159	-	7.74	9.65	11.54	13.42	15.29	18.99	22.64
Ø 168.3	-	-	10.22	12.23	14.22	16.21	20.14	24.02
Ø 219	-	-	13.35	15.98	18.60	21.21	26.39	31.52

Empty combinations are not manufactured. Other diameter or thickness: on request.

Finishes. Mill finish in all thicknesses; shot-blasted Sa 2½ and pre-primed (20 µm weldable primer) from 3 mm.

STANDARD STEEL GRADE

S235JRH

STANDARD

EN 10219

STANDARD LENGTH

6 000 mm

or any required length

FINISHES

Mill finish or pre-primed

pre-primed from 3 mm

SQUARE HOLLOW SECTIONS

Square tubes

Twenty-three sizes, from 16 × 16 to 250 × 250. The square section resists bending about both axes, making it the profile for columns and secondary framing. Heavy thicknesses, up to 12 mm, start at 150 × 150.



External corner radius to EN 10219-2: 1.6 to 2.4 t up to 6 mm, 2.0 to 3.0 t from 6 to 10 mm, 2.4 to 3.6 t above · squareness 90° ± 1° · steel grade certified EN 10219-1.

MASS PER METRE IN KG/M wall thickness t in mm · EN 10219

SECTION b × b	1.5	2	2.5	3	3.5	4	5	6	8	10	12
16 × 16	0.64	0.80	-	-	-	-	-	-	-	-	-
20 × 20	0.83	1.05	-	-	-	-	-	-	-	-	-
25 × 25	1.06	1.36	1.64	1.89	-	-	-	-	-	-	-
30 × 30	1.30	1.68	2.03	2.36	2.66	2.94	-	-	-	-	-
35 × 35	1.53	1.99	2.42	2.83	3.21	3.57	-	-	-	-	-
40 × 40	1.77	2.31	2.82	3.30	3.76	4.20	-	-	-	-	-
45 × 45	2.00	2.62	3.21	3.77	4.31	4.83	-	-	-	-	-
50 × 50	2.24	2.93	3.60	4.25	4.86	5.45	-	-	-	-	-
60 × 60	2.71	3.56	4.39	5.19	5.96	6.71	8.13	9.45	-	-	-
70 × 70	3.18	4.19	5.17	6.13	7.06	7.97	9.70	11.33	-	-	-
80 × 80	3.65	4.82	5.96	7.07	8.16	9.22	11.27	13.21	16.36	-	-
90 × 90	4.12	5.45	6.74	8.01	9.26	10.48	12.84	15.10	-	-	-
100 × 100	-	6.07	7.53	8.96	10.36	11.73	14.41	16.98	21.39	25.56	-
120 × 120	-	-	9.10	10.84	12.56	14.25	17.55	20.75	26.41	31.84	-
130 × 130	-	-	9.88	11.78	13.65	15.50	19.12	22.63	-	-	-
140 × 140	-	-	-	-	-	16.76	20.69	24.52	31.43	38.12	-
150 × 150	-	-	-	13.67	15.85	18.01	22.26	26.40	33.95	41.26	47.15
160 × 160	-	-	-	-	-	-	23.83	28.29	36.46	44.40	-
180 × 180	-	-	-	-	-	-	26.97	32.05	41.48	50.68	-
200 × 200	-	-	-	-	-	-	30.11	35.82	46.51	56.96	65.99
220 × 220	-	-	-	-	-	-	33.25	39.59	51.53	-	-
230 × 230	-	-	-	-	-	-	-	-	54.04	-	-
250 × 250	-	-	-	-	-	-	-	45.24	59.07	72.66	-

Empty combinations are not manufactured. Other size or thickness: on request.

Finishes. Mill finish in all thicknesses; shot-blasted Sa 2½ and pre-primed (20 µm weldable primer) from 3 mm.

STANDARD STEEL GRADE

S235JRH

STANDARD

EN 10219

STANDARD LENGTH

6 000 mm

or any required length

FINISHES

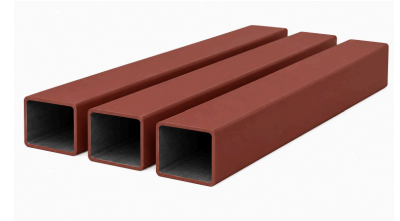
Mill finish or pre-primed

pre-primed from 3 mm

RECTANGULAR HOLLOW SECTIONS

Rectangular tubes

Nineteen sections, from 30 × 20 to 150 × 100. The rectangle carries in the direction of its larger dimension: it is the profile for light purlins, trimmers and cladding frames.



Cold-formed from hot-rolled strip · shape and dimensional tolerances EN 10219-2 · steel grade certified EN 10219-1.

MASS PER METRE IN KG/M wall thickness t in mm · EN 10219

SECTION h × b	1.5	2	2.5	3	3.5	4	5	6
30 × 20	1.06	1.36	1.64	1.89	-	-	-	-
35 × 20	1.18	1.52	1.84	-	-	-	-	-
40 × 20	1.30	1.68	2.03	2.36	-	-	-	-
40 × 27	1.46	1.90	2.31	2.69	-	-	-	-
40 × 30	1.53	1.99	-	-	-	-	-	-
50 × 30	1.77	2.31	2.82	3.30	-	-	-	-
60 × 30	2.00	2.62	3.21	3.77	-	-	-	-
60 × 40	2.24	2.93	3.60	4.25	4.86	5.45	-	-
70 × 40	2.47	3.25	3.99	4.72	5.41	6.08	-	-
80 × 40	2.71	3.56	4.39	5.19	5.96	6.71	8.13	-
80 × 60	-	4.19	5.17	6.13	-	-	-	-
100 × 40	-	-	5.17	6.13	7.06	7.97	9.70	11.33
100 × 50	-	-	5.56	6.60	7.61	8.59	10.48	12.27
100 × 60	-	-	5.96	7.07	8.16	9.22	11.27	13.21
100 × 80	-	-	6.74	8.01	9.26	10.48	12.84	15.10
120 × 50	-	-	-	7.54	8.71	9.85	12.05	14.16
120 × 80	-	-	7.53	8.96	10.36	11.73	14.41	16.98
120 × 100	-	-	8.31	9.90	11.46	12.99	15.98	18.87
150 × 100	-	-	9.49	11.31	13.11	14.87	18.33	21.69

Empty combinations are not manufactured. Other section or thickness: on request.

Finishes. Mill finish in all thicknesses; shot-blasted Sa 2½ and pre-primed (20 µm weldable primer) from 3 mm.

STANDARD STEEL GRADE
S235JRH

STANDARD
EN 10219

STANDARD LENGTH
6 000 mm
or any required length

FINISHES
Mill finish or pre-primed
pre-primed from 3 mm

TUBES · SELECTION GUIDE

Which hollow section?

Three families, one steel, one standard. The choice depends on how the load is applied and what the section has to resist: centred compression, bending about one axis, or bending about both.

CHOOSING BETWEEN ROUND, SQUARE AND RECTANGULAR

FAMILY	WHAT IT HANDLES BEST	TYPICAL USES	RANGE	PAGES
Round tube	Axial compression and torsion	Greenhouses, guardrails, tubular structures	36 diameters	18 · 19
Square tube	Biaxial bending	Columns, secondary framing	23 sizes	20
Rectangular tube	Major-axis bending	Light purlins, trimmers, cladding	19 sections	21

INSTALLATION GUIDELINES

POINT	WHAT YOU NEED TO KNOW
Steel grade	S235JRH as standard; S275J0H on request when the structure requires it
Length	6 000 mm as standard; tubes available in any required length
Thicknesses	From 1.5 to 6 mm in round and rectangular, from 1.5 to 12 mm in square
Angles	External radius to EN 10219-2: 1.6 to 2.4 times the thickness t up to 6 mm, 2.0 to 3.0 t from 6 to 10 mm, 2.4 to 3.6 t above
Assembly	The closed hollow section is welded at the end or onto a plate; allow for access
Finishes	Mill finish, or shot-blasted Sa 2½ and pre-primed with 20 µm weldable primer from 3 mm; below that, mill finish only
Outside range	Other section or thickness: on request

The masses in the tables on pages 21 to 18 are calculated on the mean wall perimeter, for a density of 7.85 kg/dm³. For square and rectangular tubes, they allow for rounded corners according to EN 10219-2 (external radius 2 t up to 6 mm, 2.5 t up to 10 mm, 3 t above). They are used for the project steel take-off.

Ordering a tube

State family, section, thickness, length, finish and quantity. Example: square tube 100 × 100 × 4 × 6 000 · shot-blasted pre-primed · 30 pcs.

STANDARD STEEL GRADE

S235JRH

STANDARD

EN 10219

STANDARD LENGTH

6 000 mm

or any required length

FINISHES

Mill finish or pre-primed

pre-primed from 3 mm

DECISION AID

Guide & ordering

The right profile for each structural function, welded beam (WB) capacities and how to write an order.

CHOOSING THE FAMILY

PROJECT REQUIREMENT	SOLUTION	REFERENCE	STANDARD LENGTH
Main structure, portal frames	IPE · HEA · HEB	S275JR · EN 10365	12 100 mm
Beams, lintels, cross members	UPN · IPN	S275JR · 80 to 400	12 000 mm
Long spans and crane runways	Custom welded beams (WB)	S355JR · web 2 500	up to 15 m in one piece
Plates, flanges, gussets	Flat bars · plates	EN 10058 / EN 10025	6 000 mm · plate sizes
Bracing, frames	Angles	EN 10056-1	6 m < L 50 × 50 × 5 · 6 or 12 m from L 50 × 50 × 5
Pins, rods, ironwork	Round bars · square bars	EN 10059 / EN 10060	12 000 mm
Light columns, framing, guardrails	Round · square · rectangular tubes	S235JRH · EN 10219	6 000 mm or cut to length

All families can be supplied mill finish, or shot-blasted Sa 2½ and pre-primed with a 20 µm weldable primer from 3 mm thickness. Angles: S235JR below L 50 × 50 × 5, S275JR from L 50 × 50 × 5.

WB · FABRICATION CAPABILITIES

PROPERTY	CAPACITY
Steel grade	S355JR standard, S275JR optional
Web depth	up to 2 500 mm
Flange width	up to 1 250 mm
Thickness	up to 50 mm
Length	up to 15 m in a single piece
Camber	100 mm maximum
Designation	WB $h_{web} \times t_w - t_f \times b_f$

Example: WB 500×6 - 10×200 = web 500 × 6 mm, flanges 10 × 200 mm. "WB" designates the family.

SERVICES AND DOCUMENTS

SERVICE OR DOCUMENT	AVAILABILITY
Standard stock · rolled sections, tubes and plates	confirmed in the offer
Rolled sections in standard-length bars	supplied uncut
Shot blasting Sa 2½ + 20 µm primer, from 3 mm	depending on finish and workshop load
Custom welded beams · fabrication, drilling, plates	on request
EN 10204 type 3.1 material certificate	according to order requirements
Eurocode 3 calculation note · steelwork and WB	on request

Order format

[Section] × [Length mm] · [Finish] · [Quantity]. Welded beams are ordered by number of pieces and length.

Examples: IPE 300 × 12 100 · shot-blasted pre-primed · 46 pcs · UPN 200 × 12 000 · mill finish · 20 pcs · plate 10 × 2 000 × 6 000 · shot-blasted pre-primed · 12 pcs · WB 500×6 - 10×200 × 12 000 · shot-blasted pre-primed · 8 pcs.

Let's talk about your project.

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Calculation notes, installation drawings, non-standard designs: contact the sales department.