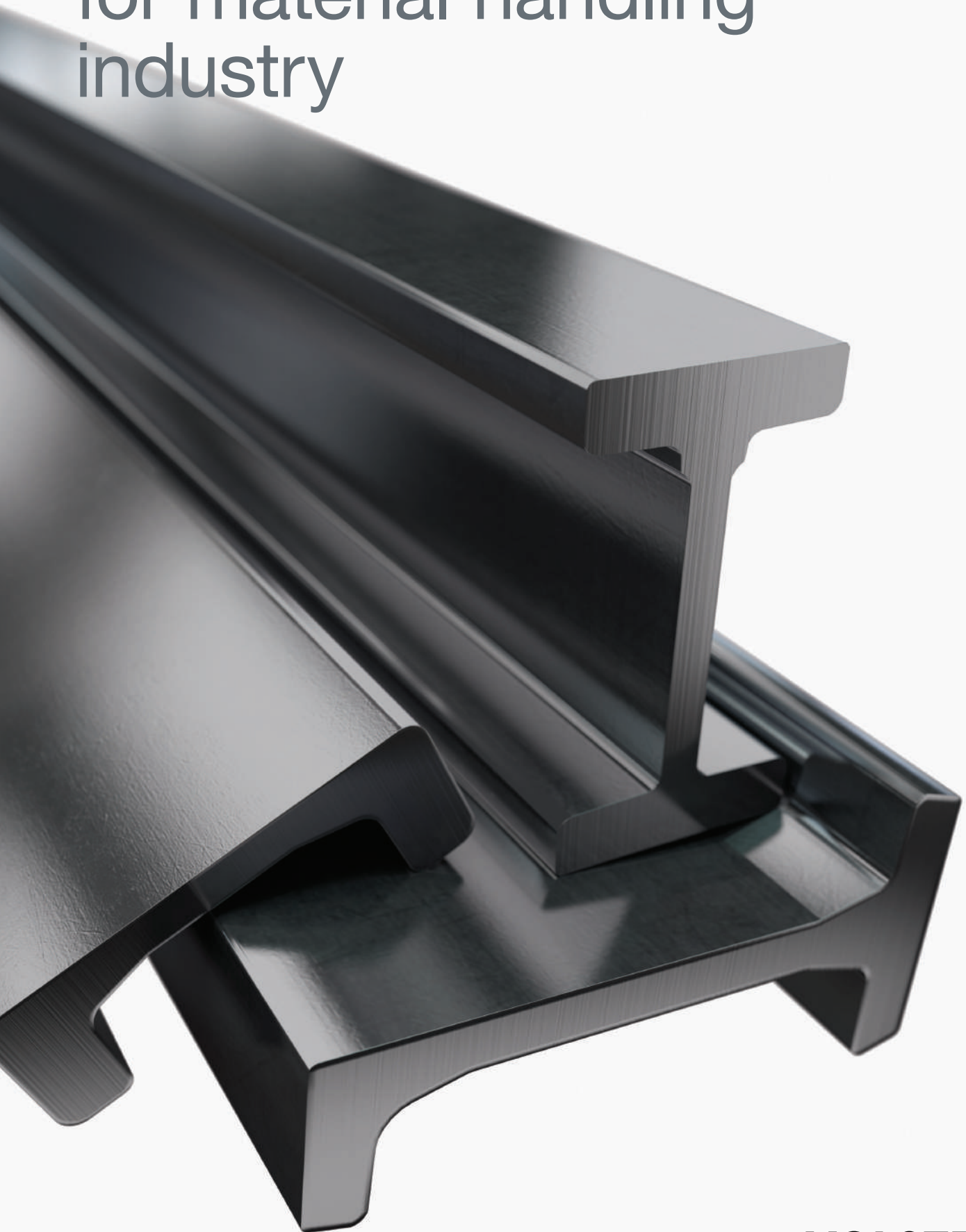


Standard profiles for material handling industry



VOLSTEEL

Company information

VOL Steel Middle East FZCO is official supplier of hot rolled and cold drawn special steel profiles with the production plant in Russia.

Our production site in Russia, is a complete steel mill with its own steel-making furnaces, rolling mills, cold drawing benches and milling machines. Modern production equipment and rich experience gathered through decades cover the production process on all stages of the value chain and provide a unique capability to control quality of manufactured products and adjust their properties, if required. Steel melting furnaces and modern rolling mills, in particular, represent our main competitive advantage, which enables us not only to

manufacture special profiles with high accuracy and defect free surface, but also to choose freely between wide range of steel grades and modify their chemical composition, in case if customer requires specific properties of material that are not delivered by standard grades.



Surface roughness: Ra < 2.5 μm



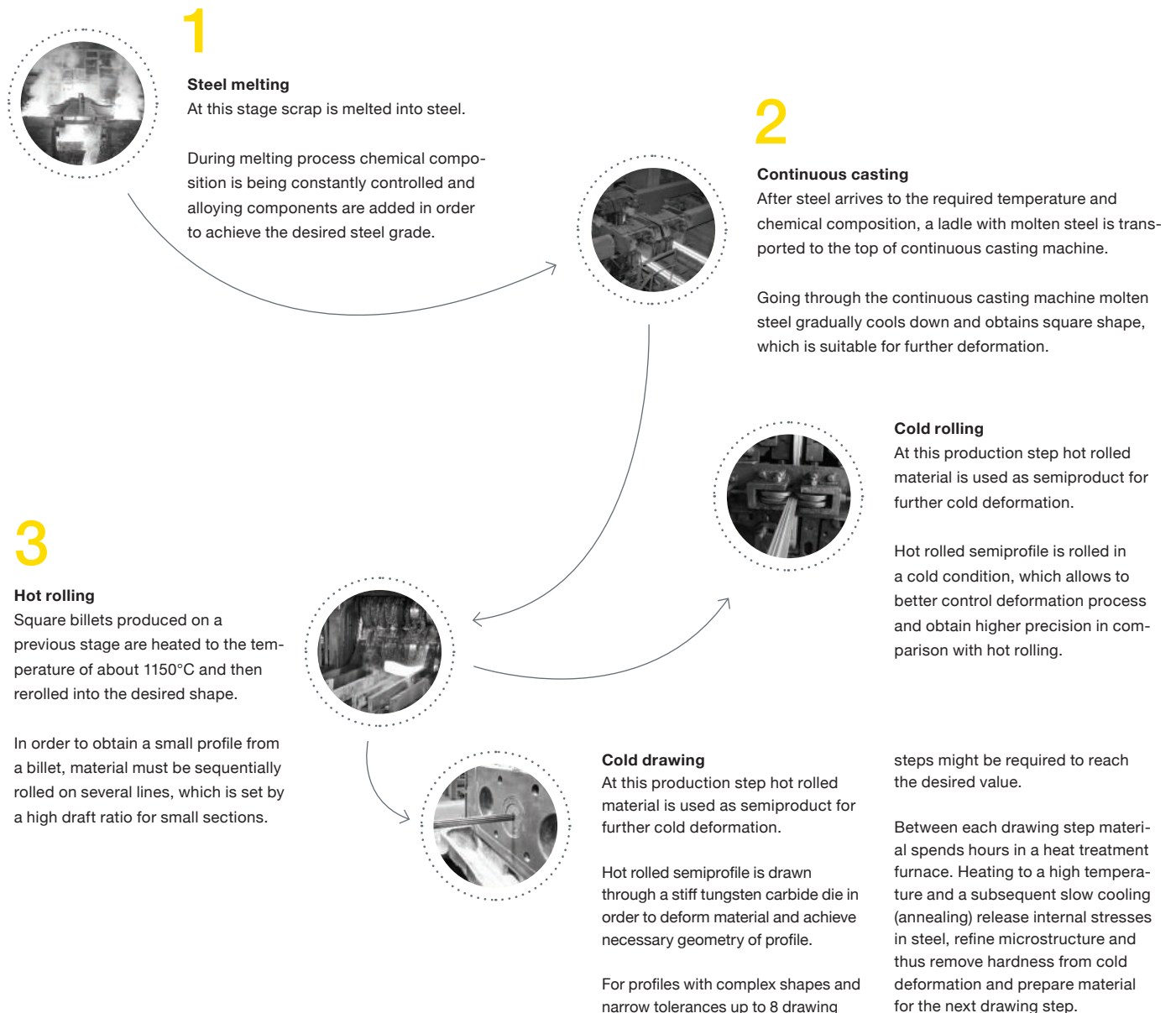
Precision: from h12 to h9



Cross section:
from 10 mm² – 6500 mm²



Length: from 2 m to 12 m,
or in 800 kg coils



Standard profiles for material handling industry

One of the main parts that determines quality level of the whole forklift truck is its mast, as it is responsible for how smooth and precise the material can be handled, at what height can the operator go on the commissioning platform, lifetime of the machine, and, last but not least, surface quality of the mast transmits customers a feeling of how premium the whole forklift truck is. In the current ever more competing environment producers of material handling equipment are confronted by the question of how to increase their market share without impacting the profitability of business, and the only answer to that question is to provide higher quality products, move to the premium segment, but at the same time keep costs at a low level. VOL Steel Middle East FZCO

can assist them in it. To its customers in material handling industry VOL Steel Middle East FZCO delivers high quality hot rolled profiles for mast rails and attachments. Thanks to the constant investments into the production equipment, we currently have one of the most modern rolling mills for the production of hot rolled special steel profiles in the world. Further production steps as straightening and cutting are done on the high precision laser-assisted straightening machines and automatic saws. This allows us to produce precise profiles with very smooth surface free of typical hot-rolling defects, as rolled-in scale, precise straightness and, if required, cut to specific length.

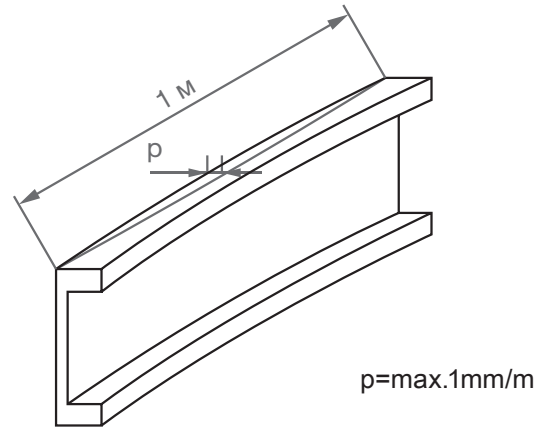
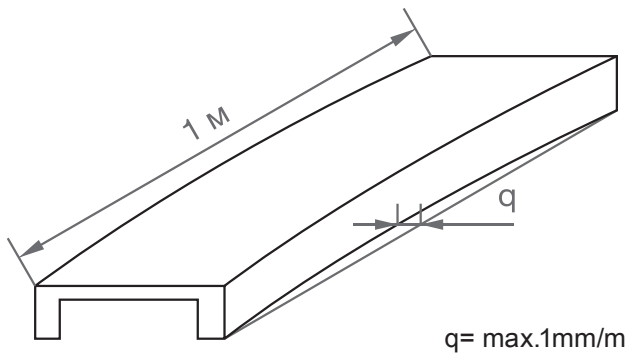
These are the main benefits that we offer to our customers:

- High quality of the profile surface improves the look of the mast and the whole forklift truck
- Straightness 1mm/m as standard, 0,3 mm/m upon request, allows to automatize further processing as machining, notching and welding
- Optimized materials offer improved mechanical properties
- Length up to 12 m helps to reduce scrap after cutting
- Profiles can be cut to fixed length, so that this step can be outsourced and thus the operating costs reduced
- All profiles can be cold drawn to achieve closer tolerances, smoother surface with increased hardness, which is crucial for commissioning trucks
- Individual design and shaping for your unique requirement

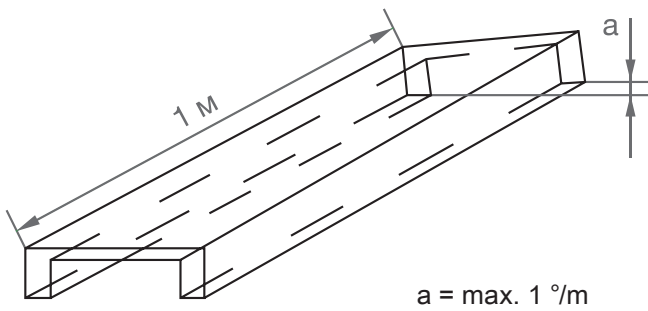


Straightness and twist tolerances

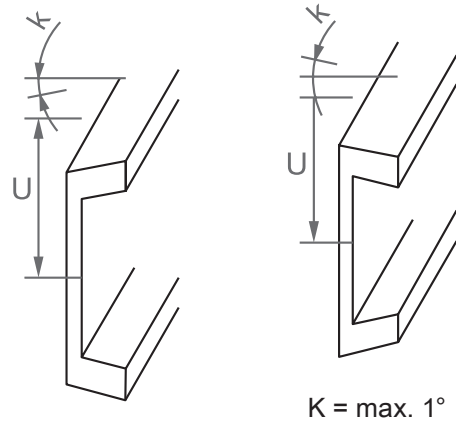
Straightness Tolerance



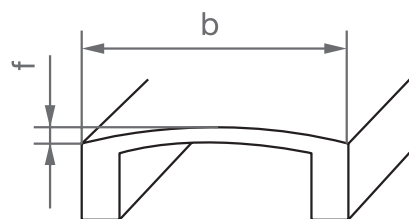
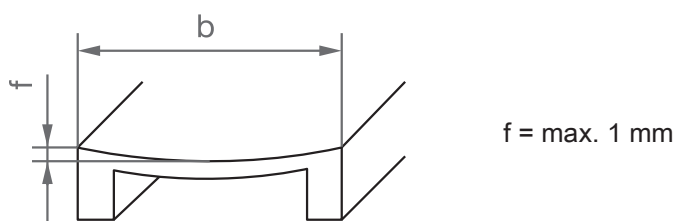
Twist



Difference on Flanges

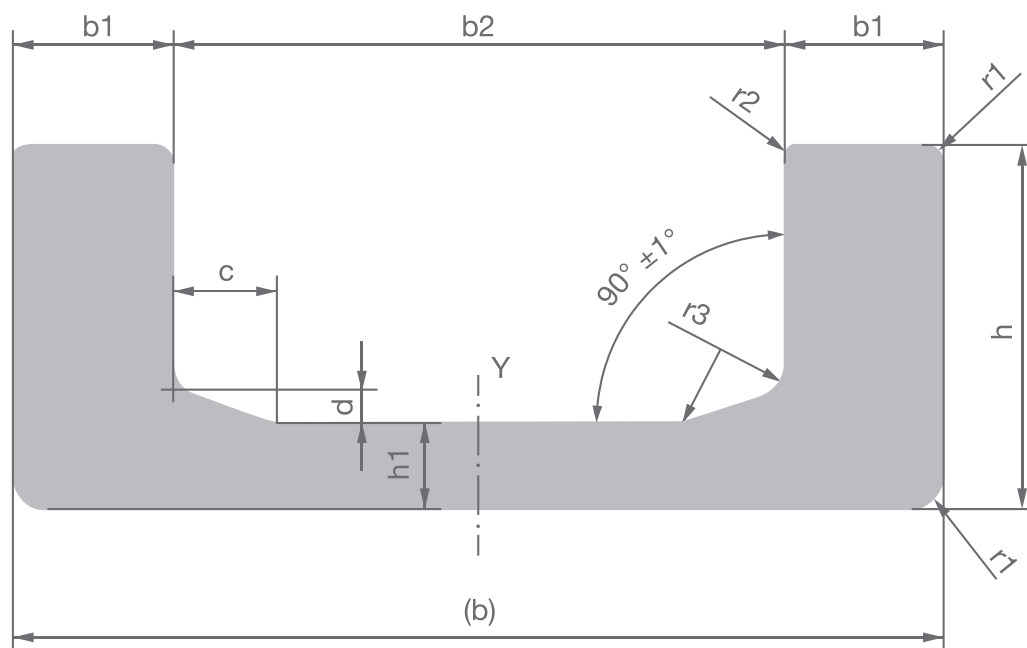


Difference on Web



Standard C-Channels

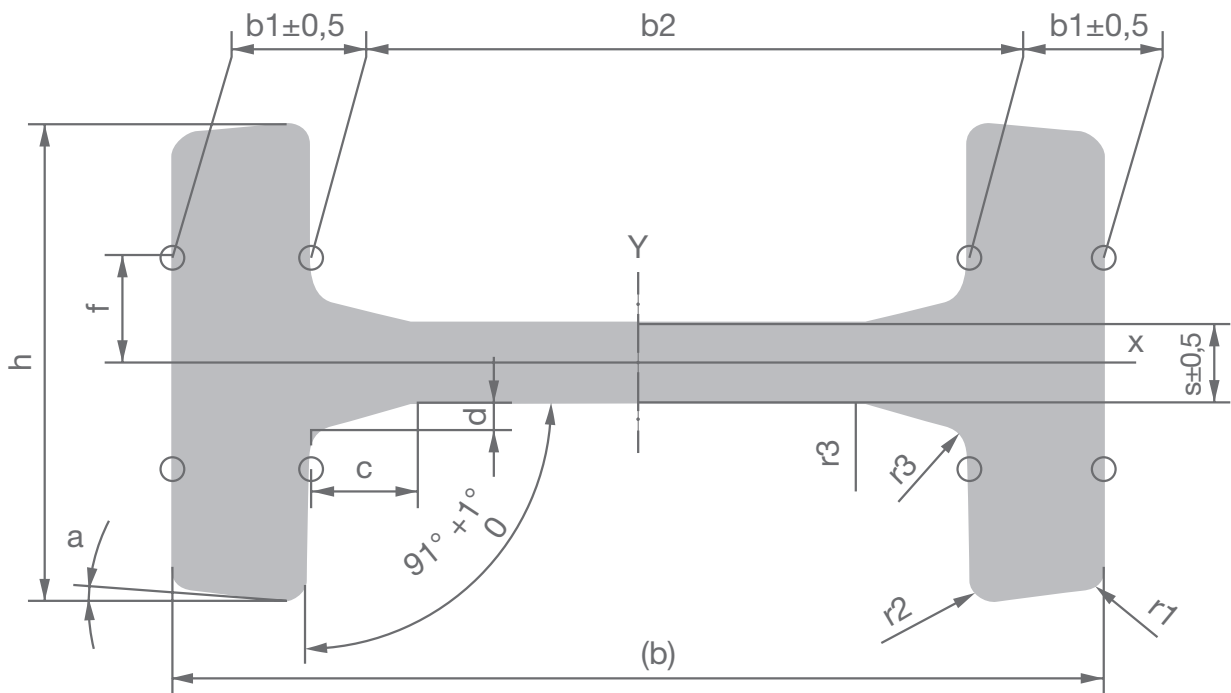
C-Channel



u-channel reference	dimensions														weight kg/m	wy (cm ³)
	(b)	b1	tol.	b2	tol.	h	tol.	h1	tol.	c	d	r1	r2	r3		
2890 standard 0	86,5	12	±0,5	62,5	+1	36	±0,8	7	±0,5	15	3	< 6	2-3	4	10,5	32
2867 standard 1	103,2	16,2	±0,5	70,8	±0,5	40	±0,8	7,7	±0,5	15	3	< 6	2-3	5	14,8	53
2810 standard 2	121,3	21,3	±0,5	78,7	±0,5	41	±0,8	10,8	±0,5	15	5	< 6	2-3	5	20,9	81
2811 standard 3	135,4	23	±0,5	89,4	±0,5	53	±0,8	12,7	±0,5	15	5	< 6	2-3	5	28,6	128
2862 standard 4	157,2	24,4	±0,5	108,4	±0,5	61,2	±0,8	14	±0,5	15	5	< 6	2-4	5	35,9	190

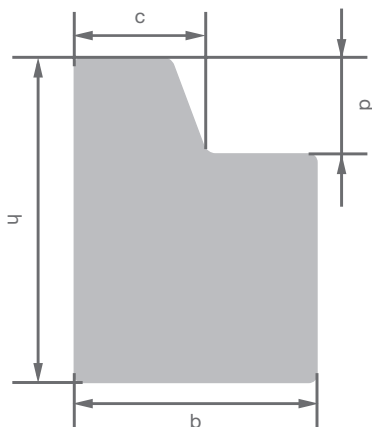
Standard I-Beams and Carriage bars

I-Beam



i-beam reference	dimensions														weight kg/m	wy (cm ³)
	(b)	b	b	tol.	h	tol.	s	t	a	c	d	r	r	r		
3018 standard 1	98	14	70	+1	65	±1	9	11,5	10°	15	3	≤ 6	2-4	4	19,4	70
3019 standard 2	113,9	18	77,9	+1	66	±1	11	14,5	10°	15	3	≤ 6	2-4	4	25,3	105
3020 standard 3	129,6	20,5	88,6	+1	81	±1	12	15	10°	15	3	≤ 6	2-4	4	34,1	160
3100 standard 4	152,4	22	108,4	±0,5	83	±1	14	15	12°	20	5	≤ 6	2-4	4	40,5	219

Carriage Bar



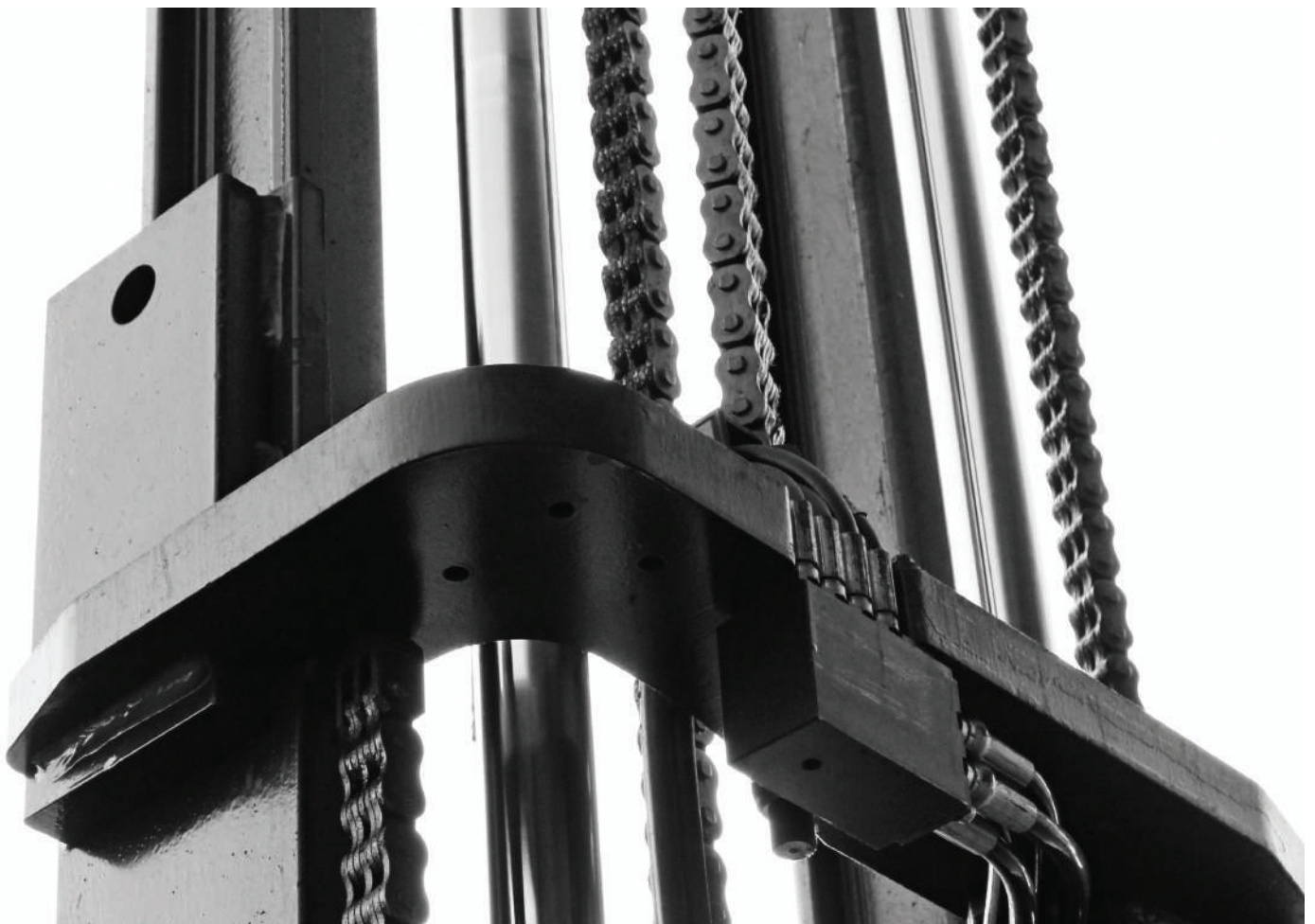
Reference	dimensions								t weight kg/m	wy (cm ³)	wx (cm ³)
	h	tol.	b	tol.	c	tol.	d	h			
3401	60	±1	39	±0,5	15	±0,5	13	+0-1	15,57	13	13
3402	60	±1	50	±0,5	15	±0,5	13	+0-1	19,63	21	17
3403	70	±1	50	±0,5	21	±0,5	15	+0-1	23,63	25	24

Steel grades

Depending on the individual requirements of the customers, we can offer various steel grades optimized for the specific needs.

Steel grade	Yield point	Hardness	Weldability	Spot load pressure
S440	+++	++	++	+++
25MnV5 mod	++++	+++	0	++++
S355J2	—	—	+++	+
18MnNb6 mod	0	0	++	++

Thanks to our own steel melting facility chemical composition of all steel grades can be adjusted in order to modify specific properties of the material, as, for example, weldability, wear resistance and lifetime of the machining tooling. Whenever our customers have demand in improving properties of the steel grade, our engineers are happy to propose appropriate solutions.





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