



METRIC

**TECHNICAL DATA SHEET**

# Stainless I-beams and Profiles

| I-beams

| U-profiles

| L-profiles

# Chemical and mechanical properties

## CHEMICAL COMPOSITION (EN 10088-2 AND EN 10088-4)

(% by mass, maximum values unless indicated otherwise)

### Austenitic

EN	C	Si	Mn	P	S	N	Cr	Mo	Ni	Others	PRE
1.4301	0.070	1.00	2.00	0.045	0.015	0.10	17.5-19.5		8.0-10.5		18
1.4307	0.030	1.00	2.00	0.045	0.015	0.10	17.5-19.5		8.0-10.5		18
1.4404	0.030	1.00	2.00	0.045	0.015	0.10	16.5-18.5	2.00-2.50	10.0-13.0		24
1.4571	0.080	1.00	2.00	0.045	0.015		16.5-18.5	2.00-2.50	10.5-13.5	Ti 5xC - 0.70	24

### Lean Duplex and Duplex

EN	C	Si	Mn	P	S	N	Cr	Mo	Ni	Others	PRE
1.4062 <sup>1)</sup>	0.030	1.00	2.00	0.040	0.010	0.16-0.28	21.5-24.0	0.45	1.00-2.90		26
1.4162	0.040	1.00	4.0-6.0	0.040	0.015	0.20-0.25	21.0-22.0	0.10-0.80	1.35-1.70	Cu 0.10-0.80	26
1.4362	0.030	1.00	2.00	0.035	0.015	0.05-0.20	22.0-24.0	0.10-0.60	3.5-5.5	Cu 0.10-0.60	28
1.4462	0.030	1.00	2.00	0.035	0.015	0.10-0.22	21.0-23.0	2.50-3.50	4.5-6.5		35

## MECHANICAL PROPERTIES

### EN 10088-2 AND EN 10088-4

Measured from coil or plate, minimum values unless indicated otherwise

### Austenitic

EN	0.2 % - proof strength Rp0.2 MPa	Tensile strength Rm MPa	Elongation A5 %
1.4301	210	520-720	45
1.4307	200	500-700	45
1.4404	220	520-680	40
1.4571	220	520-690	40

### Lean Duplex and Duplex

EN	0.2 % - proof strength Rp0.2 MPa	Tensile strength Rm MPa	Elongation A5 %
1.4062	450	650-900	30
1.4162	450	650-900	30
1.4362	420	630	25
1.4462	460	640-950	25

1) Fulfills the standard EN 10088-2

2) EDX2304

# Services

## Technical consultation

Our experienced staff have extensive know-how on all matters concerning stainless steel. If you have any doubts or questions about stainless steel materials, processing or welding, we are always willing to assist. Not only in theory, but also in practice, hands-on at your plant. Don't hesitate to contact us!



## Testing and certification

Get precise documentation, certifications, test reports or other statements for needed purpose. The traceability of our products is always accurate.



## Surface enhancement

Surface finish is an essential part of the outlook, durability and functionality of a stainless steel structure. It is even possible to make surfaces hygienic where necessary.



## Tailoring



### Stalafit

Our Stalafit service allows you to order I-beams and profiles with tailored outer dimensions up to one millimeter accuracy. Possible sizes can be checked with our sales personnel or with Stalafit PRO (I-beams).



### Stalafit PRO

To professionally design stainless structures we have created the design application Stalafit PRO, which can be found from [stalafit.stalutube.com](http://stalafit.stalutube.com) or from mobile markets.



## Smart logistics

We guarantee short delivery times and accurate deliveries. Products are delivered in prime condition and ready for installation with each package clearly identified by specification and certification.



### OTHER OPTIONAL SERVICES

Marking with stickers available by request.

# Stainless welded I-beams

**EN 1.4301, 1.4307, 1.4404, 1.4571, 1.4062, 1.4162, 1.4362, 1.4462**

Welded I-beams with outside dimensions according IPE - HEA - HEB designation. Flange and web thickness according to coil or plate standard.

## FLANGE AND WEB DIMENSIONS ACCORDING TO DIN 1025-5

IPE	H	B	TW	TF	kg/m
200	200	100	6	8	21.36
220	220	110	6	10	26.86
240	240	120	6	10	29.39
270	270	135	8	10	37.13
300	300	150	8	10	41.40
330	330	160	8	12	49.68
360	360	170	8	12	53.47
400	400	180	8	15	66.04
450	450	190	10	15	78.21
500	500	200	10	15	84.53
550	550	210	12	16	102.19
600	600	220	12	20	122.61

## FLANGE AND WEB DIMENSIONS ACCORDING TO DIN 1025-2

HEB	H	B	TW	TF	kg/m
100	100	100	6	10	19.59
120	120	120	8	10	25.28
140	140	140	8	12	33.88
160	160	160	8	12	38.93
180	180	180	8	15	52.14
200	200	200	10	15	60.83
220	220	220	10	15	67.15
240	240	240	10	16	77.10
260	260	260	10	20	99.54
280	280	280	10	20	107.44
300	300	300	10	20	115.34

## FLANGE AND WEB DIMENSIONS ACCORDING TO DIN 1025-3

HEA	H	B	TW	TF	kg/m
120	114	120	5	8	19.04
140	133	140	6	8	23.24
160	152	160	6	10	31.54
180	171	180	6	10	35.60
200	190	200	8	10	42.34
220	210	220	8	10	46.77
240	230	240	8	12	58.52
260	250	260	8	12	63.58
280	270	280	8	12	68.64
300	290	300	8	15	87.53
320	310	300	10	15	93.22
340	330	300	10	16	99.38
360	350	300	10	20	119.29
400	390	300	10	20	122.45

## MARKING ON PRODUCTS

Laser marked or engraved	Stalalube Oy, made in EU, steel grade, dimensions, plate number
Bundle tag	Dimensions, steel grade, surface condition, bundle size, plate number, bundle number

## BUNDLE PACKING

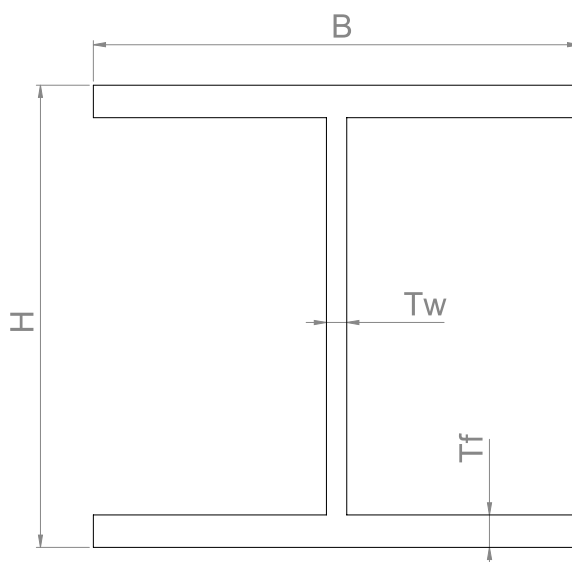
Plastic bands

## DELIVERY CONDITIONS

Manufacturing	Welded
Surface condition	Pickled

## AVAILABILITY

The availability of dimension and steel grade should be checked before ordering.



## Dimension range

Height H: 100 - 600 mm  
 Flange width B: 100 - 300 mm  
 Web thickness Tw: 5 - 12 mm  
 Flange thickness Tf: 6 - 20 mm <sup>1)</sup>  
 Standard length 6 m

<sup>1)</sup>Duplex max 15 mm

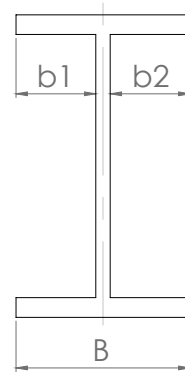
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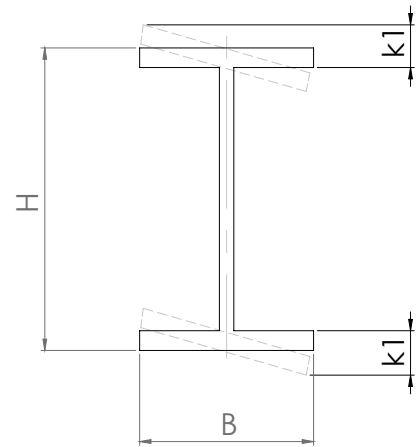
See more information on page 3

# Tolerances of I-beams

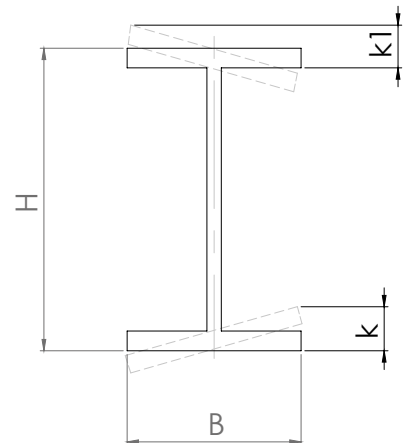
CHARACTERISTIC		
Section height H	Height mm	Tolerance mm
	$H \leq 180$	-2.0 / +3.0
	$180 < H \leq 400$	-2.0 / +4.0
Flange width B	Width mm	Tolerance mm
	$B \leq 110$	-1.0 / +4.0
	$110 < B \leq 210$	-2.0 / +4.0
	$210 < B \leq 300$	-4.0 / +4.0



CHARACTERISTIC		
Web thickness Tw	Thickness mm	Tolerance mm
	$Tw = 5.0$	$\pm 0.36$
	$5.0 < Tw \leq 6.0$	$\pm 0.38$
	$6.0 < Tw \leq 8.0$	$\pm 0.40$
	$8.0 < Tw \leq 10.0$	$\pm 0.44$
Flange thickness Tf	Thickness mm	Tolerance mm
	$Tf = 6.0$	$\pm 0.38$
	$6.0 < Tf \leq 8.0$	$\pm 0.40$
	$8.0 < Tf \leq 10.0$	$\pm 0.44$
	$10.0 < Tf \leq 12.0$	$\pm 0.48$ *)
	$12.0 < Tf < 20.0$	-0.30/+1.40
	$Tf = 20.0$	-0.30/+1.55
*) For Duplex -0.30/+1.40		



CHARACTERISTIC		
Length L		Tolerance mm
		$\pm 5$ mm
Out of square $k+k_1$	Flange width B mm	Tolerance mm
	$B \leq 110$	1.5
	$B > 110$	$0.02 \times B$
Web off-centre e $e = (b_1 - b_2) / 2$	Flange width B mm	Tolerance mm
	$B \leq 110$	2.5
	$110 < B \leq 300$	3.5
Straightness qxx and qyy	Section height H mm	Tolerance mm
	$100 \leq H \leq 180$	$0.30 \% \times L$
	$180 < H \leq 360$	$0.15 \% \times L$
	$H > 360$	$0.10 \% \times L$



Thickness tolerances:  
 EN ISO 9444-2 up to 12 mm (Duplex up to 10 mm)  
 EN ISO 18286 over 12 mm (Duplex over 10 mm)  
 Other tolerances: EN 10034

# Stainless U-profiles

**EN 1.4301, 1.4307, 1.4404, 1.4571, 1.4062, 1.4162, 1.4362, 1.4462**

### DELIVERY CONDITIONS

Manufacturing	Press braked
Surface condition	Pickled

### MARKING ON PRODUCTS

Laser marked or engraved	Stalutube Oy, made in EU, steel grade, dimensions, plate number
Bundle tag	Dimensions, steel grade, surface condition, bundle size, plate number, bundle number

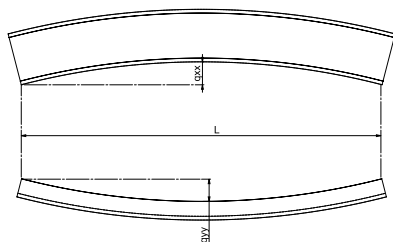
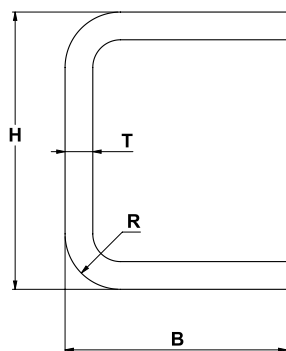
### BUNDLE PACKING

Plastic bands
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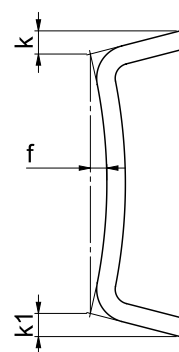
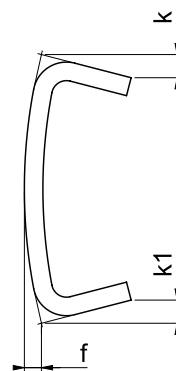
### U-PROFILE STANDARD DIMENSIONS

H	B	T	kg/m
80	50	3	4.00
100	55	4	6.17
120	60	5	8.75
140	65	6	11.74
160	70	6	13.16
180	75	8	18.98
200	80	8	20.87
220	85	8	22.77
240	90	10	30.24
270	95	10	33.40
300	100	10	36.56
330	105	10	39.72
360	110	12	50.76
400	115	12	55.50
500	125	12	66.87
600	150	15	100.04
800	200	20	177.85
1000	250	20	225.25

Dimensions up to 400 x 115 according DIN 1026-2 (outer dimensions)



\*) Exception from standard



### TOLERANCES ACCORDING EN 10279

Characteristic	Tolerance	Tolerance, mm	
Height, H	Height, mm		
	H ≤ 65	± 1.50	
	65 < H ≤ 200	± 2.00	
	200 < H ≤ 400	± 3.00	
	H > 400	± 4.00	
Flange width, B	Width, mm		
	B ≤ 50	± 1.50	
	50 < B ≤ 100	± 2.00	
	100 < B ≤ 125	± 2.50	
Thickness, T *)	Thickness, mm		
	T = 3.0	± 0.31	
	3.0 < T ≤ 4.0	± 0.34	
	4.0 < T ≤ 5.0	± 0.36	
	5.0 < T ≤ 6.0	± 0.38	
	6.0 < T ≤ 8.0	± 0.40	
	8.0 < T ≤ 10.0	± 0.44	
Squareness, k+k1	Flange width, mm		
	B ≤ 160	4.00 *)	
	B > 160	2.5% x B *)	
	Web flatness, f	Height, mm	
		H ≤ 200	± 1.0 *)
	Straightness, qxx	Height, mm	
H ≤ 150		± 0.3% of L	
150 < H ≤ 300		± 0.2% of L	
Straightness, qyy	Height, mm		
	H > 300	± 0.15% of L	
	H ≤ 150	± 0.5% of L	
Characteristic	Tolerance, mm		
	150 < H ≤ 300	± 0.3% of L	
	H > 300	± 0.2% of L	
Outside corner radius, R	Max 3xT *)		
Length, L	± 5 *)		

**Dimension range:**  
 Height H: 50-1000 mm  
 Width B: 50-500 mm  
 Thickness T: 3-20 mm <sup>1)</sup>  
 Length L: 3-6 m,  
 standard length 6 m

<sup>1)</sup> Duplex max 15 mm

Also available as



**STALAFIT**  
 INFINITE POSSIBILITIES

See more information on page 3

# Stainless L-profiles

## EN 1.4301, 1.4307, 1.4404, 1.4571, 1.4062, 1.4162, 1.4362, 1.4462

### DELIVERY CONDITIONS

Manufacturing	Press braked
Surface condition	Pickled

### MARKING ON PRODUCTS

Laser marked or engraved	Stalatube Oy, made in EU, steel grade, dimensions, plate number
Bundle tag	Dimensions, steel grade, surface condition, bundle size, plate number, bundle number

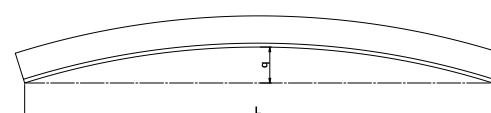
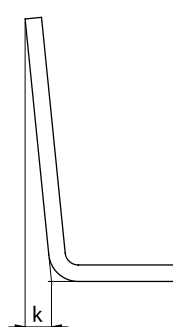
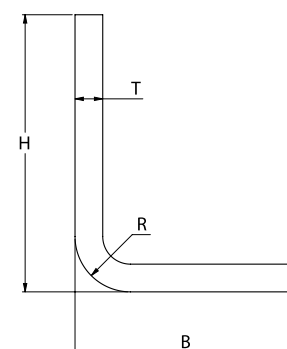
### BUNDLE PACKING

Plastic bands

### L-PROFILE STANDARD DIMENSIONS

H	B	T	kg/m
50	50	5	3.58
60	60	6	5.16
80	80	8	9.17
100	100	10	14.33
120	120	12	20.64
150	150	15	32.25
200	200	20	57.33
250	250	20	73.13
300	300	20	88.93
400	400	20	120.53
500	500	20	152.13

Dimensions up to 200 x 200 x 20 according to EN 10056-1



### TOLERANCES ACCORDING EN 10056-2

Characteristic	Tolerance	Tolerance, mm	
Leg length, B and H	Leg length, mm	Tolerance, mm	
	H ≤ 50	± 1.0	
	50 < H ≤ 100	± 2.0	
	100 < H ≤ 150	± 3.0	
	150 < H ≤ 200	± 4.0	
	H > 200	-4.0 / +6.0	
Thickness, T *)	Thickness, mm	Tolerance, mm	
	T=3.0	± 0.31	
	3.0 < T ≤ 4.0	± 0.34	
	4.0 < T ≤ 5.0	± 0.36	
	5.0 < T ≤ 6.0	± 0.38	
	6.0 < T ≤ 8.0	± 0.40	
	8.0 < T ≤ 10.0	± 0.44	
	10.0 < T ≤ 12.0	± 0.48 (Duplex -0.30/+1.40)	
	12.0 < T < 20.0	-0.30/1.40	
	T = 20.0	-0.30/1.55	
Squareness, k	Leg length, mm	Tolerance, mm	
	H ≤ 200	2 *)	
	H > 200	3.0	
Straightness over full length, q	Leg length, mm	Tolerance, mm	
	H ≤ 150	0.4% x L	
	150 < H ≤ 200	0.2% x L	
	H > 200	0.1% x L	
Straightness over any part	Length considered, mm	Tolerance, mm	
	H ≤ 150	1500	6
	150 < H ≤ 200	2000	3
	H > 200	3000	3
	Characteristic	Tolerance, mm	
Outside corner radius, R	Max 3xT *)		
Length, L	± 5 *)		

\*) Exception from standard

**Dimension range:**  
 Height H: 50-500 mm  
 Width B: 50-500 mm  
 Thickness T: 3-20 mm <sup>1)</sup>  
 Length L: 3-6 m,  
 standard length 6 m

<sup>1)</sup>Duplex max 15 mm

Also available as



See more information  
on page 3

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