

GENERAL INFORMATION

Steel grades - chemical and mechanical properties

CHEMICAL COMPOSITION											
(% by mass, maximum values unless indicated otherwise)											
Austenitic											
Fulfills the standards A554 and ASTM A240/240M											
MT	C	Mn	P	S	Si	Cr	Ni	Mo	N	Others	PRE
304	0.07	2.00	0.045	0.030	0.75	18.0-19.5	8.0-10.5		0.10		18
304L	0.03	2.00	0.045	0.030	0.75	18.0-19.5	8.0-12.0		0.10		18
316L	0.03	2.00	0.045	0.030	0.75	16.0-18.0	10.0-14.0	2.00-3.00	0.10		24
316Ti ¹⁾	0.08	2.00	0.045	0.030	0.75	16.0-18.0	10.0-14.0	2.00-3.00	0.10	Min Ti 5x(C+N), max 0.70	24
Ferritic											
Fulfills the standard ASTM A240/240M											
UNS	C	Mn	P	S	Si	Cr	Ni	Mo	N	Others	PRE
S40977	0.03	1.50	0.040	0.015	1.00	10.5-12.5	0.3-1.0		0.03		12
Lean Duplex and Duplex											
Fulfills the standards A554 and ASTM A240/240M											
UNS	C	Mn	P	S	Si	Cr	Ni	Mo	N	Others	PRE
S32101	0.04	4.0-6.0	0.04	0.03	1.00	21.0-22.0	1.35-1.70	0.10-0.80	0.20-0.25	Cu 0.10-0.80	26
S32202	0.03	2.0	0.04	0.01	1.00	21.5-24.0	1.0-2.8	0.45	0.18-0.26		26
S32304	0.03	2,50	0.04	0.03	1.00	21.5-24.5	3.0-5.5	0.05-0.6	0.05-0.20	Cu 0.05-0.60	28
S32205	0.03	2,00	0.04	0.02	1.00	22.0-23.0	4.5-6.5	3.0-3.5	0.14-0.20		35

¹⁾ Not included in standard ASTM A554

MECHANICAL PROPERTIES				
(Measured from coil, minimum values) Fulfills the standard ASTM A240/240M				
Austenitic				
MT	0.2 % - proof strength Rp0.2 ksi (MPa)	Tensile strength Rm ksi (MPa)	Elongation A50 %	
304	30 (205)	75 (515)	40	
304L	25 (170)	70 (485)	40	
316L	25 (170)	70 (485)	40	
316Ti	30 (205)	75 (515)	40	
Ferritic				
UNS	0.2 % - proof strength Rp0.2 ksi (MPa)	Tensile strength Rm ksi (MPa)	Elongation A50 %	
S40977	41 (280)	65 (450)	18	
Lean Duplex and Duplex				
UNS		0.2 % - proof strength Rp0.2 ksi (MPa)	Tensile strength Rm ksi (MPa)	Elongation A50 %
S32101	T ≤ 0.187 in. (5 mm) T > 0.187 in. (5 mm)	77 (530) 65 (450)	101 (700) 94 (650)	30 30
S32202		65 (450)	94 (650)	30
S32304		58 (400)	87 (600)	25
S32205		65 (450)	95 (655)	25

We reserve the right to changes. Stalutube takes no responsibility for any error in numerical information that might appear in this brochure.

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Stalargo press brake hollow sections

STEEL GRADES
304, 304L, 316L, S32101, S32202, S32304, S32205
Press brake hollow sections in Duplex grades are available for dimensions with T= 0,25 -0,5" and H = 6 -20"

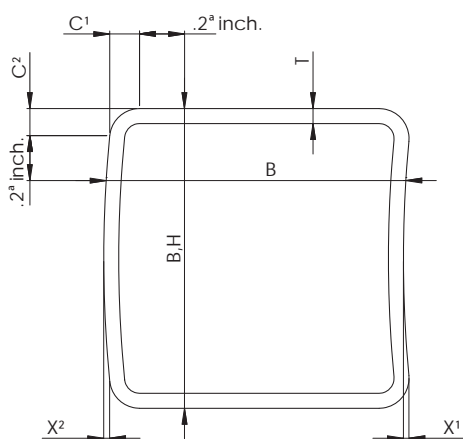
DELIVERY CONDITIONS	
Forming	Press braking, made of two U or J profiles
Welding process	Laser or MAG
Surface condition	As welded (unpol) and pickled

TUBE MARKING	
Marking on tube	Heat number
Bundle tag	Dimensions, steel grade, surface condition, bundle size, batch id, heat number, bundle number

SQUARE		Weight (lb/ft)						
H x B [inch]		.120	.180	.250	.312	.375	.500	.625
5	5	7.85	11.50	15.53				
6	6	9.50	13.97	18.96	23.17	27.24	35.73	
7	7	11.14	16.44	22.38	27.44	32.38	41.58	
8	8	12.78	18.90	25.81	31.71	37.52	48.43	58.54
10	10		23.83	32.66	40.26	47.79	62.13	75.67
12	12		28.77	39.51	48.81	58.06	75.83	92.79
14	14			46.36	57.36	68.34	89.53	109.92
16	16			53.21	65.91	78.61	103.23	127.04
20	20			66.90	83.00	99.16	130.62	161.29
24	24			80.60	100.10	119.71		
32	32				134.30	160.81		
39	39					196.77		

Tube weights (lb/ft) are calculated for grades 304 and 304L, for grades 316L and 316Ti the weight has to be multiplied by factor 8.0/7.9.

Intermediate dimensions within range are available by request f.ex. 8.5"x8.5"x .5"



^a This dimension is maximum when measuring B or H and minimum when measuring T

RECTANGULAR		Weight (lb/ft)						
H x B [inch]		.120	.180	.250	.312	.375	.500	.625
6	2	6.21	9.04	12.11				
6	3	7.03	10.27	13.82				
7	4	8.67	12.74	17.24	21.03	24.67		
8	4	9.50	13.97	18.96	23.17	27.24		
10	6	12.78	18.90	25.81	31.71	37.52	48.43	58.54
12	4	12.78	18.90	25.81	31.71	37.52		
12	8		23.83	32.66	40.26	47.79	62.13	75.67
14	6		23.83	32.66	40.26	47.79	62.13	75.67
14	10		28.77	39.51	48.81	58.06	75.83	9.79
16	4		23.83	32.66	40.26	47.79		
16	12			46.36	57.36	68.34	89.53	109.92
18	6			39.51	48.81	58.06	75.83	92.79
20	4			39.51	48.81	58.06		
20	8			46.36	57.36	68.34	89.53	109.92
20	12			53.21	65.91	78.61	103.23	127.04
20	16			60.06	74.46	88.89	116.93	144.17
24	8			53.21	65.91	78.61		
24	16			66.90	83.00	99.16		
28	8			60.06	74.46	88.89		
32	8			66.90	83.00	99.16		
32	16			80.60	100.10	119.71		
32	24				117.20	140.26		
35	12				97.96	117.14		
35	20				115.06	137.69		
35	28				132.16	158.24		
39	16				115.06	137.69		
39	24				132.16	158.24		

Tube weights (lb/ft) are calculated for grades 304 and 304L, for grades 316L and 316Ti the weight has to be multiplied by factor 8.0/7.9.

Intermediate dimensions within range are available by request f.ex. 35.5"x22.0"x .312"

TOLERANCES	
Characteristic	Tolerance
Outside dimensions, B and H	±1.0 %, min ± .08"
Concavity / Convexity X ¹ , X ²	Max. 0.8%
Wall thickness, T	± 10 %
Squareness of sides	90° ± 1°
Outside corner radius R	Max 3T
Length, L (Standard 20 ft)	-0 /+ .4"
Straightness	.04"/3 ft
Twist	.08" + .02"/3 ft
External weld bead	Width: Max 2T Height: Max .08"

BUNDLE PACKING:
Plastic bands
Corner protection

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