



## Stainless hollow sections – technical information

### Lean Duplex (1.4162)

#### Cost effectiveness for demanding applications:

- High strength
- Good corrosion resistance
- Possibilities to reduce weight and costs

#### PHYSICAL PROPERTIES, TYPICAL VALUES, 20 °C

Density	kg/dm <sup>3</sup>	7.8
Modulus of Elasticity	GPa	200
Thermal Conductivity	W/mK	15
Coefficient of Thermal Expansion	10 <sup>-6</sup> / K	14
Electrical Resistivity	μΩm	0.80

#### DELIVERY CONDITION

Forming	Cold formed (roll formed)
Welding	TIG/Plasma or Laser
Weld condition	Grinded, when tube dimension ≤ 100x100x6 mm Brushed, when tube dimension > 100x100x6 mm

#### SURFACE CONDITION

Standard	Brushed, when tube dimension ≤ 100x100x6 mm As welded, when tube dimension > 100x100x6 mm
Optional	Pickled, glass beat blasting, polished

#### PROCESSING SERVICE

Length	4-18 m, standard length 6 m, tolerance 0/+20 mm
Precise cutting	20-9000 mm, tolerance ± 1 mm
Angle cutting	30-90°, tolerance ± 1°
Laser cutting	Perforating
Tailored components	Components ready for installation

#### CORROSION RESISTANCE COMPARISON OF STALATUBE STEEL GRADES (PRE, Cr% + 3,3Mo% + 16N%)

1.4003	11
1.4301, 1.4307 and 1.4541	19
1.4401, 1.4404 and 1.4571	23
<b>1.4162</b>	<b>26</b>

#### TUBE MARKING

Ink-jet marking on tube	Stalalube Oy made in Finland, steel grade, dimensions, coil number, production date, welding operator
Bundle tag	Dimensions, steel grade, surface, bundle size (pcs), length (m), bundle weight (kg), batch id, coil No., bundle No.

## RECTANGULAR LEAN DUPLEX HOLLOW SECTIONS (1.4162)

Outside dimensions H x B [mm]	Weight [kg/m]						
	1,5	2,0	2,5	3,0	4,0	5,0	6,0
30 x 20	1,111						
40 x 20	1,345	1,768					
40 x 30	1,578	2,079					
50 x 20	1,578	2,079					
50 x 25	1,694	2,235					
50 x 30	1,811	2,390					
50 x 40	2,044	2,701	3,346				
60 x 20	1,811	2,390					
60 x 30	2,044	2,701					
60 x 40	2,278	3,012	3,735				
70 x 50	2,744	3,634	4,513	5,378	7,074		
80 x 40	2,744	3,634	4,513	5,378	7,074		
80 x 60		4,256	5,290	6,311	8,318		
100 x 40		4,256	5,290	6,311	8,318		
100 x 50		4,567	5,679	6,778	8,940		
100 x 60		4,878	6,068	7,244	9,562		
120 x 40		4,878	6,068	7,244	9,562		
150 x 100				11,443	15,160	18,828	
200 x 100				13,776	18,270	22,715	27,112
250 x 150				18,441	24,490	30,490	36,442
300 x 100				18,441	24,490	30,490	36,442
300 x 200					30,710	38,265	45,772
400 x 200					36,930	46,041	55,102

Also other dimensions may be possible on request.

## CHEMICAL COMPOSITION

	C %	Si %	Mn %	P %	S %	Cr %	Ni %	N %	Mo %	Cu %
min			4,00			21	1,35	0,2	0,1	0,1
max	0,040	1,00	6,00	0,040	0,030	22	1,70			

Also other Duplex grades may be possible on request

## MECHANICAL PROPERTIES MEASURED FROM COIL

T mm	Yield strength $R_{p0.2}$ min N/mm <sup>2</sup>	Tensile strength $R_m$ min N/mm <sup>2</sup>	Elongation $A_5$ min %
< 5	530	700	30
≥ 5	450	650	30

## SQUARE LEAN DUPLEX HOLLOW SECTIONS (1.4162)

Outside dimensions H x B [mm]	Weight [kg/m]						
	1,5	2,0	2,5	3,0	4,0	5,0	6,0
25 x 25	1,140						
30 x 30	1,379	1,814					
32 x 32	1,475	1,941					
35 x 35	1,618	2,133					
38 x 38	1,762	2,324					
40 x 40	1,858	2,452	2,957				
50 x 50	2,336	3,090	3,735	4,445			
60 x 60	2,814	3,728	4,513	5,378	7,074		
70 x 70		4,256	5,290	6,311	8,318		
75 x 75		4,567	5,679	6,778	8,940		
80 x 80		4,878	6,068	7,244	9,562		
100 x 100			7,623	9,110	12,050		
120 x 120				10,977	14,538	18,050	
150 x 150				13,776	18,270	22,715	27,112
200 x 200					24,490	30,490	36,442
250 x 250					30,710	38,265	45,772
300 x 300					36,930	46,041	55,102

## TOLERANCES (EN 10219-2)

Characteristic	Tolerance
Outside dimensions, B and H	± 1 %, with a minimum of ± 0,5 mm, when B, H < 100 mm ± 0,8 %, when 100 mm ≤ B, H ≤ 200 mm ± 0,6 %, when B, H > 200 mm
Concavity/convexity	Max. 0,8 % with a minimum of 0,5 mm
Wall thickness, T	± 10%, when T ≤ 5 mm ± 0,5 mm, when T > 5 mm
Squareness of side	90° ± 1°
External corner profile (C1, C2 or R)	1,6 T - 2,4 T
Length, L <sup>1)</sup>	0 / + 20 mm
Straightness	0,15% of total length
Twist	2 mm + 0,5 mm/m
Weld position	Narrow side

<sup>1)</sup> Better than standard tolerance 0 / +50 mm

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

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