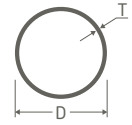


2 Range of diameters and shapes

Round tubes

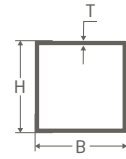
Flinsa Both factories Golvauto Asturias



Round tubes (mm.)													
ø	Outside diameter	Wall thickness T (mm)											
		0,8	0,9	1	1,2	1,5	2	2,5	3	3,5	4	5	6
8	± 0,12 mm.												
9,2													
9,4													
10													
11													
12													
12,7													
13													
14													
15													
16													
18													
19													
20	± 0,15 mm.												
21													
22													
23													
25													
25,4													
26													
27,2													
28													
30													
31	± 0,20 mm.												
31,75 / 31,8													
32													
34													
35													
38													
40	± 0,25 mm.												
42													
44,5													
45													
48													
48,3													
50	± 0,30 mm.												
50,8													
54													
55													
60													
60,3													
63	± 0,35 mm.												
65													
67													
68													
69													
70		± 0,40 mm.											
76,2													
78	± 0,45 mm.												
80													
82													
82													
90													
120													
124													
127													
130													

② Range of diameters and shapes

Square tubes



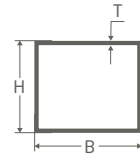
Flinsa Both factories

Square tubes (mm.)		Wall thickness T (mm)											
B x H	Outside diameter	0,8	0,9	1	1,2	1,5	2	2,5	3	3,5	4	5	6
8 x 8	± 0,20 mm.												
10 x 10													
12 x 12													
14 x 14													
16 x 16													
18 x 18													
20 x 20													
21 x 21													
22 x 22													
25 x 25	± 0,25 mm.												
27 x 27													
30 x 30													
35 x 35													
40 x 40	± 0,30 mm.												
50 x 50													
60 x 60													



② Range of diameters and shapes

Rectangular tubes



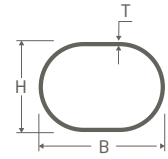
Flinsa Both factories Golvauto Asturias

Rectangular tubes (mm.)															
∅	Outside diameter	Wall thickness T (mm.)													
		0,8	0,9	1	1,2	1,5	2	2,5	3	3,5	4	5	6		
16 x 10	± 0,20 mm.														
20 x 10															
20 x 15															
25 x 10															
25 x 15															
25 x 20															
30 x 10															
30 x 15															
30 x 20															
30 x 25															
35 x 15															
35 x 20															
35 x 25															
40 x 10		± 0,25 mm.													
40 x 15															
40 x 20															
40 x 25															
40 x 30															
40 x 35															
45 x 20															
45 x 25															
45 x 30															
45 x 35															
50 x 10															
50 x 20															
50 x 25															
50 x 30															
50 x 40															
60 x 20	± 0,35 mm.														
62,3 x 25															
60 x 30															
60 x 40															
70 x 16,5	± 0,40 mm.														
70 x 20															
70 x 25															
70 x 30															
70 x 40															
80 x 30	± 0,50 mm.														
80 x 40															
80 x 50															
80 x 60															

② Range of diameters and shapes

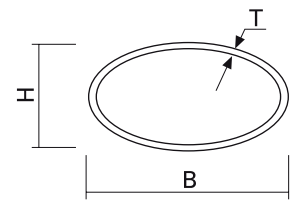
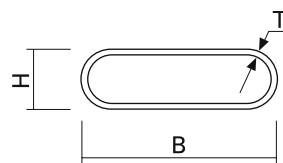
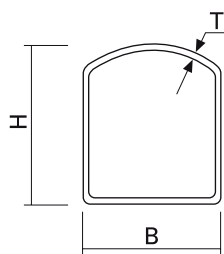
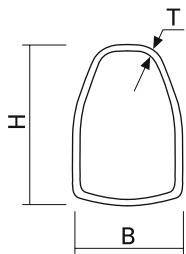
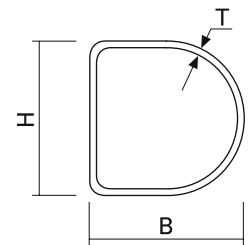
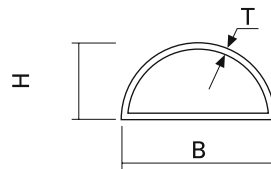
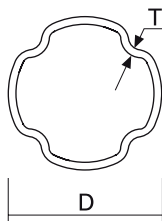
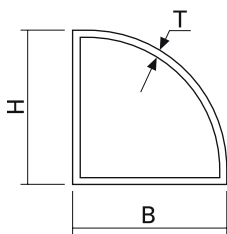
Flat sided oval tubes

Flinsa



Flat sided oval tubes (mm.)													
∅	Outside diameter	Wall thickness T (mm)											
		0,8	0,9	1	1,2	1,5	2	2,5	3	3,5	4	5	6
20 x 10	± 0,20 mm												
20 x 11													
25 x 14	± 0,25 mm												
25 x 15													
30 x 15	± 0,30 mm												
40 x 20													
40 x 25													
45 x 20													
45 x 25	± 0,35 mm												
54 x 24													
60 x 20													

Special-shaped tubes



② Range of diameters and shapes

Tolerances

EN 10305-3/-5

Dimensional Tolerances

THICKNESS: Thickness tolerance

Wall thickness T (mm.)	Tolerances
≤ 1,50 mm.	T = ± 0,15 mm.
> 1,50 mm.	T = ± 10 % of tube nominal wall thickness, not greater than ± 0,35 mm.

SHAPE: Straightness tolerance

D Tube	Tolerances
< 15 mm.	Agreement with customer
≥ 15 mm.	f < 0,20 % of the tube length shall not exceed 3 mm/m.

INNER WELDING SEAM: Maximum seam height (**)

Tube shape	Wall thickness T (mm.)	Height (mm.)
<i>Round</i>	1,50	0,8
	> 1,50	0,6 x thickness
Square Rectangular Normal Automotive	<i>All thicknesses</i>	<i>As per agreement</i>
	<i>All thicknesses</i>	0,6 x thickness

(*) The dimensions stated, even straightness, must be verified at a distance >100 mm to the ends of the tube.

(**) TUBE WITH SCARFED INNER WELDING SEAM: As per customer agreement.

