

PRECISION TUBES

TECHNICAL CHARACTERISTICS

Tubes for mechanical purposes are destined for those uses in which dimensional precision and a good superficial finish are required.

In function of the application, we manufacture with steel in different conditions.

· Cold rolled.	DC 01
· Hot roller pickled.	DD11, DD12, S235JR, S355JR
· Sendzimir galvanized.	DX51D
· Hot galvanized.	DD11, DD12, S235JR, S275JR, S355JR

MANUFACTURING STANDARDS

They are manufactured on the basis of the following standards:

Circular tube:	EN 10305-3
Square and rectangular tubes:	EN 10305-5

CONDICIONES DE SUDMINISTRO

BKM: conformación en frío, directa de línea, sin ningún tratamiento térmico.

THE STEEL NORMALLY USED IS

thickness	steel
$e < 1,5$	AP 01 (36086 - EN 10130)
$1,50 \leq e < 3$	S 235 JR - SAE 1008 - DD -11
$3 < e$	S 235 JR - S 275 JR



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FABRICACIÓN DE TUBOS Y PERFILES

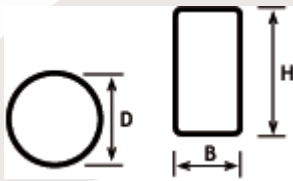
LENGTH OF MANUFACTURING

Largos comerciales	6.000 mm
Bajo pedido	hasta 12.000 mm
Longitudes exactas	consultar

TOLERANCES ON LENGTH

length	tolerances
from 500 mm to 2.000 mm	+/-1 mm
more than 2.000 mm to 4.000 mm	+/-1 mm
more than 4.000 mm to 6.000 mm	-0/+5 mm
more than 6.000 mm as agreed	-0/+15 mm

TOLERANCES. CHARACTERISTIC AND DIMENSIONS

Characteristics	Tolerances	
	Circular section tubes	Square and rectangular section tubes
OUTSIDE DIAMETER	Included in the corresponding table of dimensions and masses.	Included in the corresponding table of dimensions and masses
		For measurements not contemplated in the abovementioned table, the tolerance of the measurement immediately above it shall be adopted



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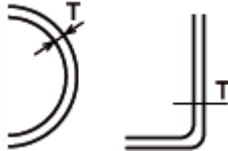
Characteristics

Tolerances


Circular section tubes

Square and rectangular section tubes

THICKNESS



FOR \varnothing D
More than 8 mm $\pm 10\%$


 $\pm 10\%$ with a max. of $\pm 0,35$ mm

OUT-OF-ROUNDNESS



Included in the tolerances established for the \varnothing

CONCAVITY/ CONVEXITY



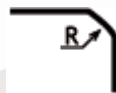
Within the tolerances established for B y H

SQUARENESS OF SIDE



$\hat{\alpha} = 90^\circ \pm 1^\circ$

EXTERNAL CORNER PROFILE



$R \leq 3 T$

TWIST




$\hat{\beta} \leq 1^\circ/m$



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FABRICACIÓN DE TUBOS Y PERFILES

Characteristics	Tolerances	
	Circular section tubes	Square and rectangular section tubes
STRAIGHTNESS	0,20% of total length	0,20% of total length



- 1) This tolerance is not applicable in the areas of the edges and the weld bead.
- 2) Subject to agreement and being indicated in the order, other tolerance values may be fixed.
- 3) For diameters ≥ 16 mm.
- 4) For hot-dip galvanized tubes, the tolerance will be taken as double that which is specified.