

Seamless/Welded steel tubes for welding and threading are manufactured according to standard UNE-EN 10255 (DIN 2440)

The specified steel in this standard is classified as non-alloy steel being its designation symbolic S195T and its number designation 1.0026.

The mechanical characteristics of the tubes manufactured under this standard, must agree with the mentions below in the following table:

Steel grade	Yield Strength R_{eH} for thickness in mm N/mm^2 min.	Tensile strength R_m N/mm^2 min.	Elongation at breakage A % min.
S195T	195	320 to 520	20

The chemical composition must be according to the following requirements:

Steel grade	Heat Analysis			
	Max C %	Max P %	Max S %	Max Mn %
S195T	0,20	0,035	0,030	1,40

Below we present a table with the dimensions and mass per unit of length of the series M tubes of the standard, which will be the one we will use in our production process:

Outside Diameter (mm.)	Tolerances on the outside diameter (mm.)		Wall Thickness (mm.)	Mass per unit of length (Kg/m)
	Max.	Min.		
33,7	34,2	33,3	3,20	2,43
42,4	42,9	42,0	3,20	3,13
48,3	48,8	47,9	3,20	3,60
60,3	60,8	59,7	3,60	5,10
76,1	76,6	75,3	3,60	6,54
88,9	89,5	88,0	4,00	8,53
114,3	115,0	113,1	4,50	12,50
139,7	140,8	138,5	5,00	17,10
165,1	166,5	163,9	5,00	20,40

For the welded tubes of series M of the standard, the tolerance of the wall thickness is of $\pm 10\%$, while for the seamless tube of this series M of the standard, the tolerance is of $\pm 12,5\%$.

In the case of welded tubes, the seam of the longitudinal welding must be devasted until getting a smooth superficial finish. The altitude of this seam must not exceed the 60% of the wall thickness of the specified tube.

The tubes are supplied in a normalized length, except when the buyer requests another length. The normalized length must be of 6 meters or of 6,40 meters.

Sort of Length (L)	Length (L) (m.)	Tolerance	
		With welding	Seamless
Normalized	6 or 6,4	+150 mm. -50	± 500 mm.
Random	$4 \leq L \leq 16$ With a range of 2 m. per line of order	Up to 10% of the tubes supplied can have an inferior length to the one solicited, but they cannot be shorter than 75% of the minimum range of length.	
Exact	$L \leq 6$	+15 mm. 0	
	$6 < L \leq 12$	+10 mm. 0	
	$L > 12$	+ By agreement 0	

For tubes in which the diameter is equal or superior to 33,7 mm., the deviation of the straightness (shaft) respecting any length of the tube L, being L the length supplied by the manufacturer, it must not exceed 0,002 L.

The tolerance for the oval defect is included in the diameter tolerance.