

Tolerances

TOLERANCES ON OUTSIDE DIAMETER ROUND RUBING

Nominal outside diameter		Tolerances	
Over	Until included	Applicable to the average diameter	Diameter applicable to any ovalization including ^{a,b}
5 ^c	10	± 0,05	± 0,08
10	20	± 0,06	± 0,10
20	30	± 0,08	± 0,15
30	50	± 0,10	± 0,20
50	80	± 0,15	± 0,30
80	120	± 0,20	± 0,40
120	150	± 0,30	± 0,60
^a The tolerances of this column are not applicable to tubes with a ratio of outer diameter and the wall thickness (OD/t) > 30, or annealing metallurgical state tubes (H035/R200); see table 2			
^b When the diameter is measured at a distance from the ends of the tube exceeding 100 mm or the equivalent to a nominal outer diameter (whichever is smaller), tolerance can be increased by a factor of 3, unless otherwise agreed.			
^c Including the value 5.			

DIMENSIONAL TOLERANCES BETWEEN FACES OF SQUARE AND RECTANGULAR TUBES

Nominal dimensions across flats		Tolerances ^{a,b}
Over	up to and inc.	
5 ^c	15	± 0,10
15	25	± 0,15
25	50	± 0,20
50	80	± 0,25
80	120	± 0,30
120	150	± 0,35
^a The tolerances in this column are not applicable to tubes with annealed metallurgical state (H035/R200);		
^b If all positive and negative tolerances are required, the values given must be multiplied by two.		
^c Including value 5.		

WALL THICKNESS TOLERANCES

Nominal outside diameter or largest dimensión across nominal		Tolerances on wall thickness ^{b,c} in % for wall thicknesses				
Over	up to and including	from 0.5 up to and inc. 1	greater than 1, up to and inc. 3	greater than 3, up to and inc. 6	greater than 6, up to and inc. 10	Over
5 ^d	15	± 12	± 10	± 10	–	–
15	25	± 12	± 10	± 10	± 9	–
25	50	± 13	± 11	± 10	± 9	± 8
50	100	–	± 12	± 11	± 10	± 9

Nominal outside diameter or largest dimensión across nominal		Tolerances on wall thickness ^{b,c} in % for wall thicknesses				
Over	up to and including	from 0.5 up to and inc. 1	greater than 1, up to and inc. 3	greater than 3, up to and inc. 6	greater than 6, up to and inc. 10	Over
100	150	–	± 13	± 12	± 11	± 10
^a In the case of a rectangular tube, the greater dimension between faces determines the applicable thickness tolerance for all wall thicknesses.						
^b Tolerances on wall thickness are defined as the maximum deviation of wall thickness at any point, expressed as a percentage of the nominal wall thickness						
^c If all positive and negative tolerances are required, the values given must be multiplied by two.						
^d Including value 5.						