

## TECHNICAL SPECIFICATIONS AND TOLERANCES

### TOLERANCES

**OUTSIDE DIAMETER:** tolerance f7 according to EN ISO 286-2, see following dimensional table. Upon request it is possible to supply chromed tubes with outside diameter according to tolerance h7 EN ISO 286-2.

**INSIDE DIAMETER:** according to EN 10305-1.

**WALL THICKNESS:**  $\pm 10\%$  with a minimum of  $\pm 0.1$  mm.

**ECCENTRICITY:**  $\frac{\text{W.T. max.} - \text{W.T. min.}}{\text{W.T. max.} + \text{W.T. min.}} \times 100 \leq 10\%$

**STRAIGHTNESS:** maximum deviation 0.3 mm/m on the total length of the tube.

### TECHNICAL SPECIFICATION

**THICKNESS OF THE CHROMIUM LAYER:** for tubes with outside diameter from 8 to 16 mm,  $20 \pm 5 \mu\text{m}$   
for tubes with outside diameter from 18 to 200 mm,  $25 \pm 5 \mu\text{m}$   
**The coating is always Hexavalent Chromium free (CrVI free).**

**SURFACE MICROHARDNESS:**  $1000 \pm 100$  Vickers

**SURFACE ROUGHNESS:**  $Ra 0,15 \pm 0,05 \mu\text{m}$

**RESISTANCE TO CORROSION:** 72 h rating 9 according to ISO 9227 (tested by salt spray).

Nominal Value (mm)	Outside diameter		Wall thickness (mm)				
	Tolerance f7 (mm)	Tolerance h7 (mm)	3.0	4.0	5.0	7.5	10.0
			Mass (Kg/m)				
<b>18</b>	-0.016 / -0.034	+0 / -0.018	1.11				
<b>20</b>	-0.020 / -0.041	+0 / -0.021	1.26	1.58			
<b>22</b>			1.40	1.78			
<b>25</b>			1.63	2.47			
<b>30</b>			2.00	2.56	3.08	4.16	
<b>35</b>	-0.025 / -0.050	+0 / -0.025	2.37	3.06	3.70	4.09	
<b>40</b>					4.32	6.01	7.40
<b>45</b>					4.93	6.94	8.63
<b>50</b>					5.55	7.86	9.86
<b>55</b>					6.16	8.79	11.10
<b>60</b>	-0.030 / -0.060	+0 / -0.030			6.78	9.71	12.33
<b>65</b>					7.40	10.64	13.56
<b>70</b>					8.01	11.56	14.80
<b>75</b>					8.50	12.48	16.03
<b>80</b>					9.25	13.41	17.26
<b>85</b>					9.86	14.33	18.50
<b>90</b>	-0.036 / -0.071	+0 / -0.036			10.48	15.26	19.73
<b>100</b>					11.71	17.11	22.20
<b>110</b>					12.95	18.96	24.66
<b>120</b>					14.18	20.81	27.13