

Tolerances for Capillaries

One end closed, one end funnel formed, made of Special Glass 10, Glass Number 50, and Quartz

<u>Length</u>	<u>Wall thickness</u>	<u>Diameter</u>
overall tolerance ± 5 mm	overall tolerance $\pm 0,01$ mm	
Point of measuring : total length measuring instrument : digital sliding caliper	Point of measuring : about 30-40 mm from the bottom to the end measuring instrument : Digital Mikroskop BMA 300 10x magnifi.	Point of measuring : about 30-40 mm from the bottom to the end measuring instrument : Laser Micrometer LS 7500

<u>Diameter</u>	<u>Tolerance</u>	<u>Minimum Diameter</u>	<u>Maximum diameter</u>	<u>Tube base size</u> (OD x Wall thickness)		
				<u>Special Glass 10 (soda lime glass)</u>	<u>Glass Number 50 (borosilicate)</u>	<u>Quartz</u>
0,1 mm	$\pm 0,05$ mm	0,05 mm	0,15 mm	3,0 \pm 0,15 x 0,171 \pm 0,10 mm	3,0 \pm 0,15 x 0,13 \pm 0,10 mm	3,0 \pm 0,20 x 0,20 \pm 0,15 mm
0,2 mm	$\pm 0,05$ mm	0,15 mm	0,25 mm			
0,3 mm	$\pm 0,05$ mm	0,25 mm	0,35 mm			
0,4 mm	$\pm 0,05$ mm	0,35 mm	0,45 mm			
0,5 mm	$\pm 0,05$ mm	0,45 mm	0,55 mm			
0,6 mm	$\pm 0,05$ mm	0,55 mm	0,65 mm			
0,7 mm	$\pm 0,05$ mm	0,65 mm	0,75 mm			
0,8 mm	$\pm 0,05$ mm	0,75 mm	0,85 mm			
0,9 mm	$\pm 0,05$ mm	0,85 mm	0,95 mm			
1,0 mm	- 0,05 / + 0,25 mm	0,95 mm	1,25 mm			
1,5 mm	$\pm 0,25$ mm	1,25 mm	1,75 mm			
2,0 mm	$\pm 0,25$ mm	1,75 mm	2,25 mm			
2,5 mm	$\pm 0,25$ mm	2,25 mm	2,75 mm			
3,0 mm	$\pm 0,25$ mm	2,75 mm	3,25 mm	About 3,75 x 0,1 mm	About 4,7 x 0,22 mm	About 4,4 x 0,25 mm
3,5 mm	$\pm 0,25$ mm	3,25 mm	3,75 mm	About 3,75 x 0,1 mm blown up to larger size !!!	About 4,7 x 0,22 mm blown up to larger size !!!	About 6,0 x 0,25 mm
4,0 mm	$\pm 0,25$ mm	3,75 mm	4,25 mm			
5,0 mm	$\pm 0,25$ mm	4,25 mm	5,25 mm			