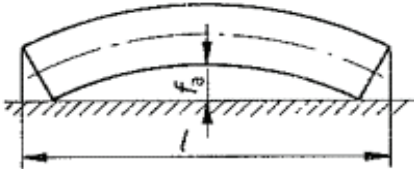


APPENDIX A

TOLERANCES FOR LENGTH AND DIAMETER FOR EXTRUDED PARTS ACCORDING TO DIN 40680 TOLERANCE ACCORDING TO THE PRINCIPLE OF INDEPENDENCE ISO 8015, ISO 14405-1

Nominal size \varnothing / Length in mm		Allowed tolerances in mm		Cover size	Accuracy level
>	\leq	coarse	medium		
	4	± 0.4	± 0.15	$\leq 30\text{mm}$	medium
4	6	± 0.6	± 0.20	$> 30\text{mm}$	coarse
6	8	± 0.7	± 0.25		
8	10	± 0.8	± 0.30	Definition of KYOCERA Fineceramics Europe Mannheim	
10	13	± 1.0	± 0.35		
13	16	± 1.2	± 0.40	Straightness: max. 0.5% of the length 	
16	20	± 1.2	± 0.45		
20	25	± 1.5	± 0.50		
25	30	± 1.5	± 0.55		
30	35	± 2.0	± 0.60		
35	40	± 2.0	± 0.65		
40	45	± 2.0	± 0.70		
45	50	± 2.5	± 0.80		
50	55	± 2.5	± 0.90		
55	60	± 2.5	± 1.00		
60	70	± 3.0	± 1.20	Ovality: 3% of the nominal size	
70	80	± 3.5	± 1.40	Twist: Maximum twist cannot be guaranteed	
80	90	± 4.0	± 1.60	Chipping: The edges are cut and not bevelled. Small edge chipping is possible	
90	100	± 4.5	± 1.80	Concentricity: A deviation up to 0.5mm from the centre point is allowed	
100	110	± 5.0	± 2.00	Hole Circle: The DIN 40680 medium column applies to the bolt circle of a capillary, based on the outside diameter	
110	125	± 5.5	± 2.20	Tighter tolerances on request	
125	140	± 6.0	± 2.50		
140	155	± 6.5	± 2.80		
155	170	± 7.0	± 3.00		
170	185	± 7.5	± 3.40		
185	200	± 8.0	± 3.80		
200	250	± 9.0	± 4.20		
250	300	± 10.0	± 4.60		
300	350	± 11.0	± 5.00		
350	400	± 12.0	± 5.50		
400	450	± 13.0	± 6.10		
450	500	± 14.0	± 6.80		
500	600	± 15.0	± 7.60		
600	700	± 16.0	± 8.30		
700	800	± 17.5	± 9.00		
800	900	± 19.0	± 9.50		
900	1000	± 20.0	± 10.00		
1000		$\pm 0.02 * d$	$\pm 0.01 * d$		

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