

# FUSED SILICA ROLLERS

for Tempering Flat Glass

  
**W. HALDENWANGER**  
Technische Keramik GmbH & Co. KG  
A member of the Morgan Crucible Company Plc



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Flat glass on vitreous fused silica rollers



Rollers with caps

Vitreous fused silica rollers are used specially as transport rollers for tempering flat glass. This method has been used for many years in the manufacture of tempered safety flat glass. The product is used mainly as architectural glass, e.g. for shop-window glass, curtain walls, glass doors, etc. Tempered safety glass is also used in automotive industry.

Vitreous fused silica rollers are used in both conventional (glass) annealing furnaces and furnaces with reversible material flow from various furnace manufacturers and operators. HALDENWANGER vitreous fused silica rollers are in successful use throughout the world in the flat glass industry.

## standard dimensions for vitreous fused silica rollers

outside-Ø mm	max. length mm	outside-Ø mm	max. length mm
15 – 25	1.300	61 – 65	3.200
26 – 30	1.400	66 – 70	3.400
31 – 35	1.700	71 – 75	3.400
36 – 40	1.700	76 – 80	3.400
41 – 45	2.200	81 – 85	3.400
46 – 50	3.000	86 – 90	3.400
51 – 55	3.000	91 – 95	3.500
56 – 60	3.000	96 – 100	3.500

Other diameters, lengths and designs (e.g. hollow rollers) available on request.

Diameter: +/- 0,05 mm  
TIR: ≤ 0,2 mm  
Roughness: Ra approx. 2 µm

## physical properties\*

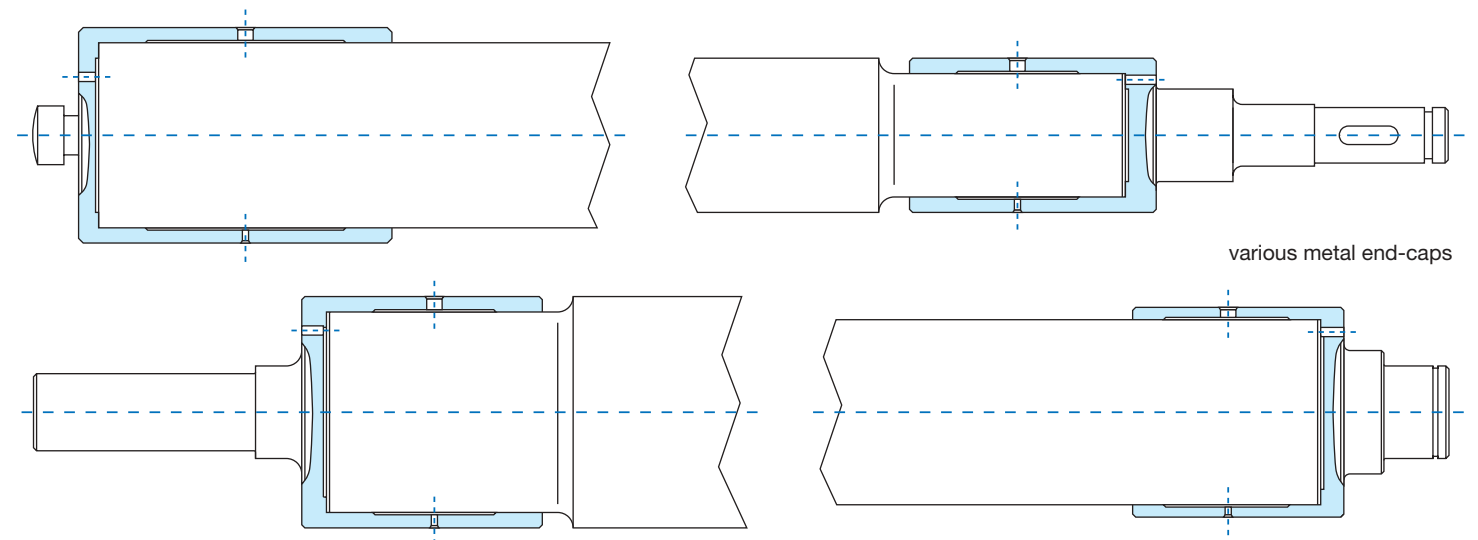
	dimension	values
SiO <sub>2</sub>	%	99,6
Density	g/cm <sup>3</sup>	1,92 – 2,00
Flexural strength	MPa 20°	30 – 40
	MPa 700°	45 – 60
Modulus of elasticity	GPa	30 – 40
Thermal expansion	10 <sup>-6</sup> x K <sup>-1</sup>	0,5 – 0,9
Water absorption	%	4,5 – 6,0
Porosity	% by volume	10 – 14
Mean pore radius	µm	≤ 0,4

\* The characteristics are valid only for test specimens. These values can only be conditionally transferred to other shapes and dimensions.



## Metal End-Caps

We can supply our vitreous fused silica rollers with fitted metal end-caps on request. The following illustrations show some designs that are used in the various types of furnaces in the glass industry.

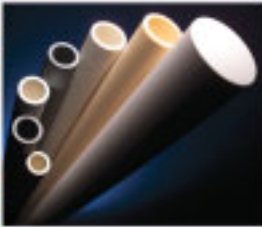


various metal end-caps

Variety  
TUBES

Excellent Surface Finish  
FUSED SILICA ROLLERS

Tradition  
LABORATORY PORCELAIN



Long Service-Life  
ROLLERS

High Performance  
HALSIC

Flexibility  
SPECIALITIES



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Haldenwanger forms part of the Morgan Advanced Ceramics group, which is a global business unit of the Morgan Crucible Company Plc.

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