

	<i>Material</i>	<i>Form deviation</i>	<i>Diameter tolerance</i>	<i>Hardness Vickers</i>	<i>Density g/cm³</i>	<i>Surface finish Ra</i>
Ball ruby	Synthetic ruby	< 0.2µm	± 0.2µm	1800	3.9	0.01µm
Ball ceramic	Alumina oxide	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
Cylinder ruby	Synthetic ruby	< 1µm	± 1µm	1800	3.9	0.05µm
Cylinder TC	WC+Co	< 1µm	± 1µm	1550	15.0	0.2µm
Cylinder steel	Stainless steel	< 2µm	± 2µm	250	7.9	0.4µm
Ball disc ceramic	Alumina oxide	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
Ball disc steel	Stainless steel	< 3µm	± 3µm	250	7.9	0.4µm
Disc styli hardened	Hardened steel	< 2µm	± 2µm	720	7.9	0.2µm
Styli shaft, Extension steel	Stainless steel	—	—	—	7.9	—
Styli shaft, Extension ceramic	Alumina oxide	—	—	—	3.9	—
Styli shaft, Extension carbon	Carbon fiber	—	—	—	1.5	—
Styli shaft TC	WC+Co	—	—	—	15.0	—
Extension Alu 7075	Special aluminium	Hard-coat anodized with PTFE			2.8	—

Used material for styli and accessories

<i>Material</i>	<i>Advantage</i>	<i>Disadvantage</i>
Stainless steel	<ul style="list-style-type: none"> • Standard material for most applications • Body and shaft in one piece • Cost-efficient 	<ul style="list-style-type: none"> • Small bending strength for very small shaft diameter
Tungsten carbide (TC)	<ul style="list-style-type: none"> • High bending strength even for very small shaft diameter • Optimal proportions between shaft and ball diameter 	<ul style="list-style-type: none"> • Higher weight for large styli
Ceramic	<ul style="list-style-type: none"> • High bending strength at very low weight • Can be used for long styli 	<ul style="list-style-type: none"> • Danger of breakage for small shaft diameter
Carbon fiber	<ul style="list-style-type: none"> • Extremely low weight • High bending strength for long components with large cross-section 	<ul style="list-style-type: none"> • Small bending strength for small cross-section
Alu 7075	<ul style="list-style-type: none"> • Low weight with very high strength • Wear-protected surface due to hard-coated anodizing with PTFE 	<ul style="list-style-type: none"> • Danger of breakage for very small cross-section.

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