

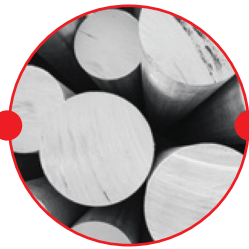
## A component journey

# Standing the test of time – Luxury watchmaking

A luxury watch is a highly engineered, precision work of art, often consisting of as many as 300 components. Chronographs, pilot's watches, diving watches, and mission timepieces are designed to perform both in demanding conditions but also in everyday life. While significance is placed on aesthetic design, the quality and longevity of components is equally important. Bodycote's S3P (Specialty Stainless Steel Processes) technology provides the ultimate long-lasting protection against surface scratches whilst preserving the metal's appearance.



The first step of the manufacturing journey involves a 3D virtual design of all the watch's parts, such as bezels, seals, crowns, cases, backs etc.\*



The watch case begins its journey as a steel billet. An austenitic stainless steel with high nickel and chromium content is selected for its non-magnetic properties and corrosion resistance. Quality and purity of the steel is critical to guarantee functionality and an optimal surface.



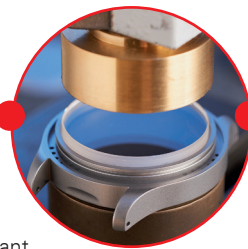
Grinding and polishing is used to achieve a smooth and uniform surface.\*



The case – a complex 3D shape – is machined from a disc or circular blank to tight tolerances, to meet the demands of specification and functionality.\*



**B** Bodycote's S3P technology is applied to bezels, cases and straps to provide an exceptionally wear and scratch resistant surface. The hardening process has no negative effect on the appearance or natural corrosion resistance of the steel.



The utmost precision is required when pressing the sapphire crystal glass into the hardened watch case.\*



End application, **a scratch resistant, high quality watch.**



The watch is tested for performance – a diving watch, for example, must withstand a 125 bar (nominal) pressure test.\*



The individual watch components – up to 300 parts – are manually assembled.\*

**B** Denotes the parts of the component journey undertaken by Bodycote  
\* Photos courtesy of Sinn Spezialuhren GmbH and SUG GmbH