

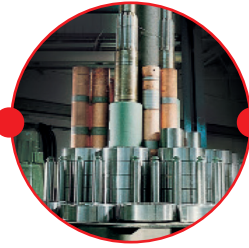
A component journey

High roller – Aerospace bearings

Ball and roller bearings are essential to high-precision rotary components in aircraft, and need to deliver exceptional durability and consistent performance despite changes in temperature and air pressure. Materials used are customised based on the end application, including high temperature and lightweight titanium and aluminium alloys.



Bearings are shaped and machined from rods of metal plates and wires.



B The surface area to be heat treated is prepared – areas which are not to be heat treated are selectively masked with copper plating.



B After heat treatment, the masking is removed and the surface cleaned before inspection to ensure the part meets strict aerospace quality specifications.



B The surface is hardened via the diffusion of nitrogen during the malcomizing process, which is used to increase resistance to in-service stress and fatigue.



For the perfect shape and smooth finish, bearings are put through final lapping and polishing processes.



End applications, **include landing gear, engine, flight control system, aero structure, and other parts or components.**

B Denotes the parts of the component journey undertaken by Bodycote