









Rolls-Royce Deutschland Ltd & Co. KG
ETN Aviation GmbH
WZL – RWTH Aachen

Capabilities:

-  Adaptive assembly of compressor stages
-  Single-item / small-batch production
-  Part to part alignment
-  Maximum flexibility requested
-  Material is titanium Ti 6246
-  Part diameter from 250 to 500 mm
-  Weight from 40 to 60 Kg
-  Concentricity required below 0,05 mm

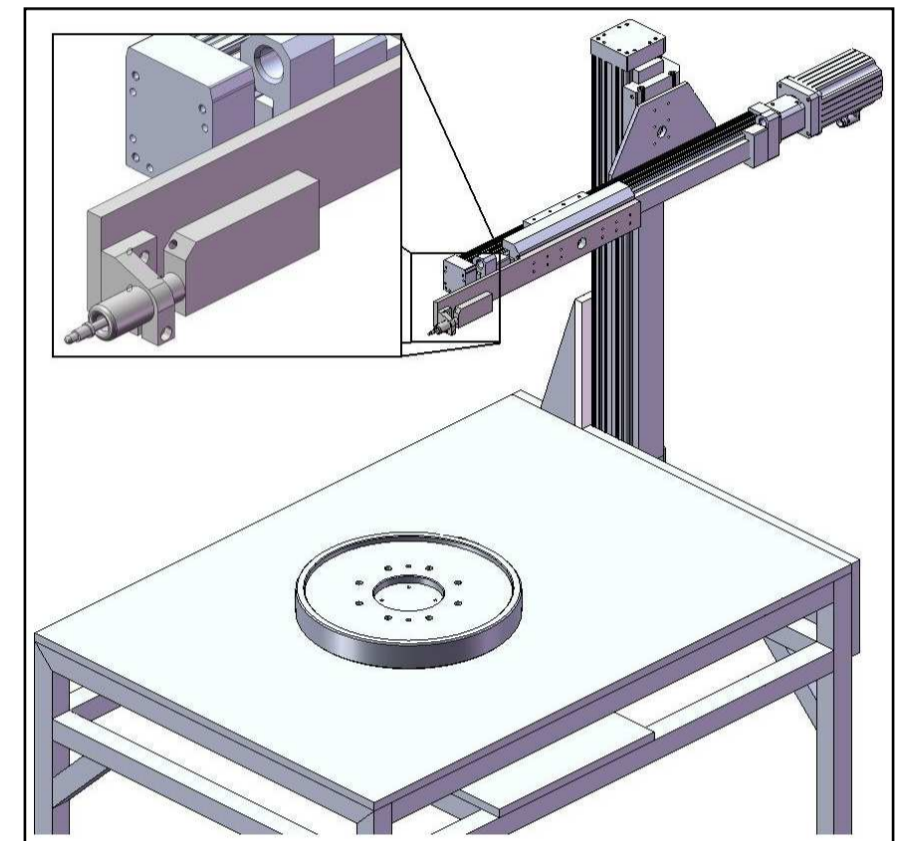


Figure 1: Concept of measuring and aligning system

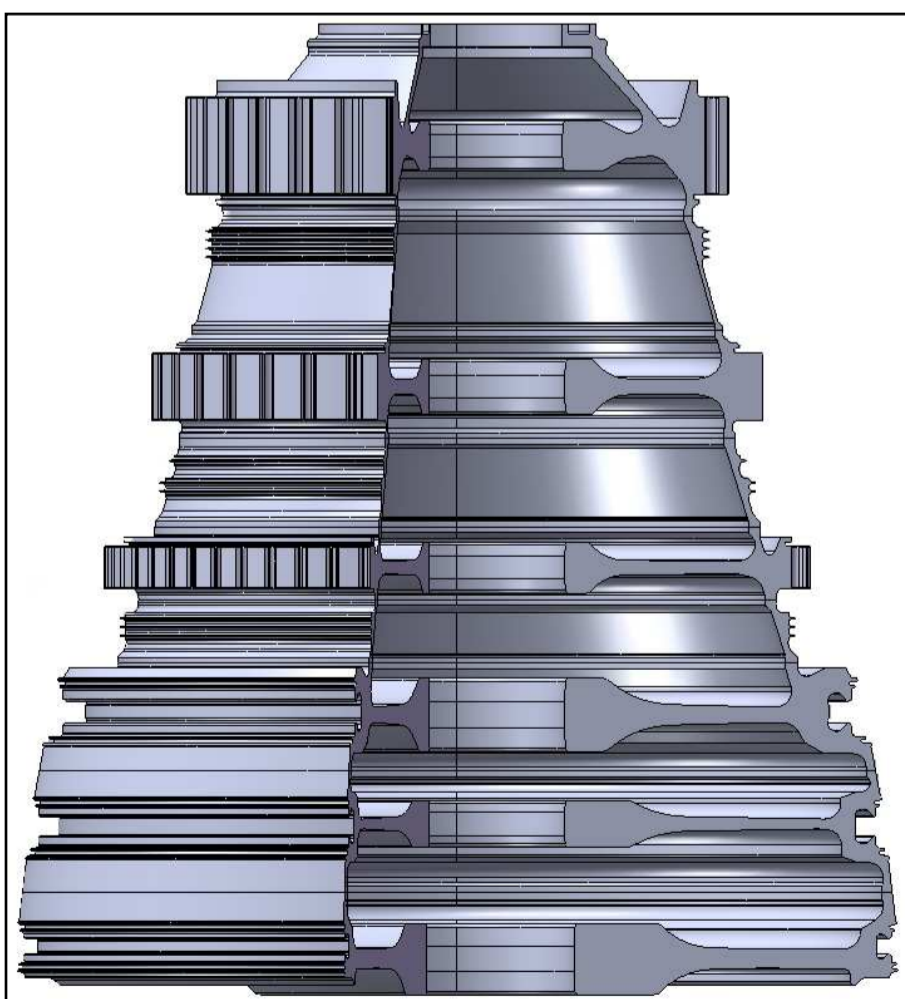





Figure 2: High Pressure Compressor front drum

Current Status

-  The part's identification is realised by a barcode system.
-  The acquisition of the part's position and orientation is implemented by using optical and mechanical measurement systems.
-  Existing deviations are adjusted manually or by the automated alignment system.

