



How SPRINT™ machine tool scanning technology can enhance production of blades, turbines and bladed disks

On-machine scanning

Impellers, propellers, rotors, and turbines propel fluids, liquids, and gases. With applications from aircraft engines to pump housings, thousands of these components are manufactured each year. In addition to new units, repair, refurbishment, and re-manufacturing operations are increasingly common as manufacturers look to improve their green credentials, restrict the use of new materials, and reduce overheads.

With performance reliant on the geometry of the blade features within these components, accuracy of manufacturing (and repair) is key, especially around highly curved leading and trailing edges.



How can investment in on-machine scanning technology help you?

SPRINT™ technology offers manufacturers and service providers a flexible and powerful solution for set-up, alignment and inspection of blades, turbines and bladed disk assemblies.

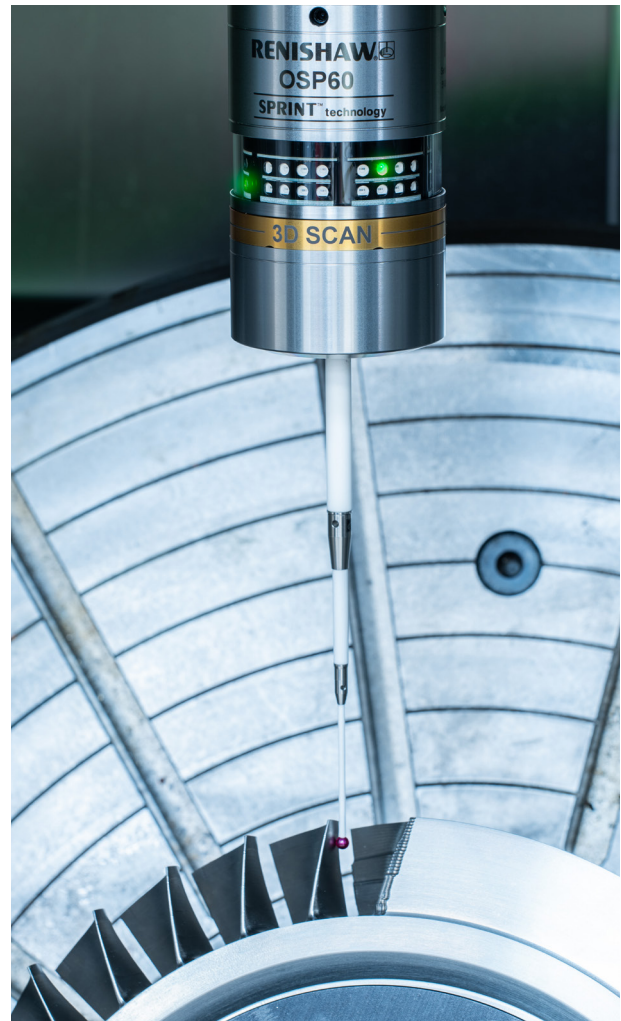
Data can also be used to accurately model part surfaces and generate an individually tailored cutting toolpath for adaptive machining and repair operations. *

Working with leading manufacturers in the aerospace and power generation sectors, Renishaw has proven the advantages of replacing touch-trigger probing programs with equivalent on-machine scanning routines.

In a forged blade vane application, on-machine scanning has reduced inspection cycle times by up to 75% per blade edge. Another application has seen the scanning of gas turbine blades for adaptive machining reduce labour costs by 50%.

Scanning provides a high-speed, accurate, and repeatable inspection process that can capture data from high-curvature components in a single iteration. It can reduce labour and energy costs, and increase the amount of productive, profitable machining time available from existing equipment.

* Toolpath generation may require additional third-party software and support.



Information in this document is based on an existing installation of a Renishaw OSP60 probe with SPRINT technology.

The Renishaw OSP60 probe with SPRINT™ technology provides:

- An on-machine solution for reduced reliance on offline inspection processes
- High-speed, data-dense metrology information
- Highly accurate results, reducing scrap and rework
- Increased machine capacity and profitability
- Application flexibility beyond part set-up and feature verification

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