

**Renishaw reduces machining time for aerospace impeller manufacturer**

[Global engineering technologies company](http://www.renishaw.com/en/1030.aspx) Renishaw has supplied [commercial and consumer engineering conglomerate Honeywell](https://www.honeywell.com/) with a [high-precision compact touch probe](http://www.renishaw.com/en/cmm-probes-software-and-retrofits--6329) and PC-based inspection software. The technology allows Honeywell to take measurements prior to the machining of its impellers to detect any misalignment in the axial displacement before the part is machined.

Honeywell conducts its impeller machining process at its manufacturing plant in Chihuahua, Mexico. Grinding, milling, turning and drilling processes are all carried out regularly and the facility is equipped with the latest machinery.

Impellers produced in the factory come in various sizes from 14 inches to 17 inches in diameter. The majority are made of titanium, except for one, which is manufactured in aluminium. The Chihuahua plant is a provider for the Honeywell assembly plant in Phoenix, Arizona, where aircraft turbines are assembled and tested.

Before investing in Renishaw’s technology, Honeywell found that the workpiece datum was not being maintained during the impeller machining process. This drastically increased the time taken to finish a part, because of its negative impact on machining accuracy.

At the end of the first cycle of Honeywell’s impeller production process, the company turned to Renishaw to purchase an RMP600 high-accuracy touch probe with radio signal transmission. This offers all the benefits of automated job set-up and had the capacity to measure the geometry of complex 3D parts, such as Honeywell’s impellers.

“As well as investing in a probe, Honeywell also opted for [PC-based inspection software, Productivity+](http://www.renishaw.com/en/productivity-pc-based-probe-software-for-machining-centres--6252), for its machining centres,” explained Raúl Barriga, Sales Director at Renishaw Mexico. This provided Honeywell with an easy-to-use programming environment for incorporating inspection probe routines and in-process decision making into machining cycles.

“Since we started using the RMP600 and Productivity+, we have had no discrepancies, scrap or faults in production,” commented Luis Adrian Gallegos, Manufacturing Engineer at Honeywell. “The software helps perform control tasks during the machining process, such as monitoring the status of the tool, updating the tool measurement or altering the adaptive machining, depending on the results gathered by the probe.”

Renishaw’s precision measurement and process control tools provide solutions for tool setting, broken tool detection, component set-up, in-cycle gauging and first-off component inspection.

For a full case study on the project visit [www.renishaw.com/honeywell](http://www.renishaw.com/honeywell)

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UK-based Renishaw is a world leading engineering technologies company, supplying products used for applications as diverse as jet engine and wind turbine manufacture, through to dentistry and brain surgery. It has over 4,000 employees located in the 35 countries where it has wholly owned subsidiary operations.

For the year ended June 2017 Renishaw recorded sales of £536.8 million of which 95% was due to exports. The company’s largest markets are China, the USA, Japan and Germany.

Throughout its history Renishaw has made a significant commitment to research and development, with historically between 14 and 18% of annual sales invested in R&D and engineering. The majority of this R&D and manufacturing of the company’s products is carried out in the UK.

The Company’s success has been recognised with numerous international awards, including eighteen Queen’s Awards recognising achievements in technology, export and innovation.

Further information at [www.renishaw.com](http://www.renishaw.com)