

Danfoss Press Release

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3D scanner robot investment means Danfoss Power Solutions can measure component dimensions to micron level

- *Latest 3D scanner robot now inspecting parts on joystick production lines*
- *Customers assured of component quality due to micron-level precision*
- *In-house technology eliminates need to outsource time-critical metrology requirements*

NORDBORG, Denmark – Danfoss Power Solutions, a leading global supplier of mobile and industrial hydraulics as well as electric powertrain systems, has invested in an advanced 3D scanner robot for its joystick manufacturing lines in Nordborg, Denmark. The new device is boosting inspection routines by measuring component dimensions to micron-level precision, providing customers with even higher product quality.

Danfoss Power Solutions' Nordborg facility manufactures thousands of joystick variants for off-highway vehicles, such as forestry machines, harvesters, cranes, tractors and more. With the new 3D scanner robot, operators can tell immediately if a joystick component is within specifications. This capability has eliminated the need to outsource time-critical metrology requirements to a third-party coordinate measuring machine technology provider. The investment is thus saving considerable time and providing greater in-house control over the manufacturing process.

Abel Dukai, mechanical engineer in the company's Connect & Controls Solutions business unit in Nordborg, is leading the 3D scanner project alongside his colleague, production technician Grzegorz Leonhard.

"The scanner is so fast and easy to use that we can literally verify component dimensions while we manufacture, which is not possible with CMM technology," states Dukai. "We now know immediately whether part dimensions are 100% identical to the computer-generated design files, so the 3D scanner has taken our quality testing capability to a new level."

Dukai adds that he was not dissatisfied with the third-party metrology specialist and will continue to use the company for tasks where speed is less critical.

The innovative GOM 3D scanner robot uses narrow-band blue light to measure up to 12 million points on the component surface within a few seconds, subsequently creating a 3D image. Colleagues at Danfoss Power Solutions then compare this image to the original CAD file.

According to Leonhard, the scanner offers micron-level precision, down to 0.007 millimeters.

"We are talking extreme accuracy," he says. "And it can even scan highly complex shapes and forms. It's incredible technology that's already gaining prevalence in the automotive industry. I'm glad we now have it on board, too."

Visit the [Danfoss joysticks](#) webpage to learn more about the products benefitting from 3D scanning technology.

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About Danfoss

Danfoss engineers solutions that increase machine productivity, reduce emissions, lower energy consumption and enable electrification. Our solutions are used in such areas as refrigeration, air conditioning, heating, power conversion, motor control, industrial machinery, automotive, marine, and off- and on-highway equipment. We also provide solutions for renewable energy, such as solar and wind power, as well as district-energy infrastructure for cities. Our innovative engineering dates back to 1933. Danfoss is family-owned, employing more than 40,000 people, and serving customers in more than 100 countries through a global footprint of 95 factories.

www.danfoss.com



Media contacts:

Lindsay Schleisman, Danfoss Power Solutions

Email: lindsay.schleisman@danfoss.com

Tel: +1 952 250 0604

Dawn White, Napier Partnership Limited

Email: dawn@napierb2b.com

Tel. : +44 (0) 1799 542858