

Combined Transducer-Actuator System for Automatic Part Alignment



A prevalent challenge in manufacturing precision parts is the alignment of a part on a holding fixture. The Transducer-Actuator system combines component measurement and part realignment functions into a single unit that is capable of measuring the alignment or misalignment of machine elements and work pieces as well as automatically moving a part to the desired orientation. Automating the centering operation can reduce manual set-up activities and produce more accurate and repeatable positioning. The result is a significant cost savings and improved part accuracy.

TOOLING AND INSTRUMENTATION

Features

- Automatic measuring and aligning of parts in either open or closed machining environments
- Can function in a vertical or horizontal orientation

Benefits

- Enables automatic work piece alignment operations
- Reduces operator errors
- Increases personnel safety in activities involving hazardous materials

Applications

- Machine Shops
- Automotive Parts and Manufacturing
- Aircraft Parts and Manufacturing
- Screw, nut, and bolt manufacturing

Patents & Awards

- U.S. Patent No. 9,389,058

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Technology Readiness Level (1–9)



Prototype built and tested in laboratory environment.

Partnering Opportunities

Y-12 is seeking an industry partner to fully commercialize this technology.

If you would like more information, please contact the Office of Technology Commercialization and Partnerships:
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