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Innovation for Success

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* Probing error according DIN ISO 10360-2 (MPEP)
The Revolution in Optical Measurement

With the new PHOENIX, WENZEL has performed pioneering development work in optical measurement technology. The new optical, non-contact 3D sensor captures point clouds and geometry elements on different materials in one working cycle.

It can be used in automatic probe changers alongside tactile sensors, so that multiple applications can be performed with a single measuring system. These multiple and flexible applications and many other highlights make the PHOENIX the ideal tool for quality assurance, production monitoring and analysis.

Typical application areas of the PHOENIX are in the automotive industry, but also in plastic and sheet metal processing. Previously time-consuming inspections can be done quickly and reliably especially in mass productions, such as in car body, sheet metal or plastic part production. For small, lightweight design allows the sensor to be fitted to standard 3D coordinate measuring machines in production lines and metrology rooms.

At a glance

PHOENIX measuring process

Accurate results for different materials, colours and finishes

- The sensor enables the detection and measurement of mixed materials such as carbon fiber reinforced plastics combined with aluminum and sheet metal.
- The sensor parameters can be adjusted to suit the material.
- The PHOENIX has the ability to recognize different textured surfaces, to diagnose defects such as scratches and even to collect barcodes for process control.
- The sensor is relatively insensitive to extraneous light and delivers reliable results almost independently of the ambient lighting conditions.
- The PHOENIX can record data from work pieces with different colors and with different surface textures.
- Multi-colored components and small, rough and flexible work pieces can be easily measured.

High measuring productivity

- Information from grey scale images and 3D point clouds are determined, saved and analyzed in one common coordinate system with high resolution.
- Within a very short time all the necessary data of the measurement object can be recorded.
- The new PHOENIX is fully integrated into WENZEL software packages. Due to its light weight it can be fitted to the PH10 motorized indexing head and the PHS servo positioning head from Renishaw.
- All system components integrate perfectly because CMM, sensor and software are developed, produced and maintained by WENZEL.

Multi-sensor operation and automatic exchange

- In multi-sensor operation, the advantages of the optical sensor PHOENIX can be combined with the advantages of tactile measuring systems. Both technologies can be used independently or together. With Renishaw ACR1, ACR2 and ACR3 probe changers the sensors can be automatically exchanged. Existing CMM systems can easily be retrofitted with PHOENIX.
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**NEW STRUCTURED LIGHT PROJECTION AND IMAGE PROCESSING SENSOR**

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**UNIQUE FUNCTIONALITY**

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