

## PRODUCT PRESS RELEASE

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## Alicona Optical CMM now includes Vertical Probing for use in mould manufacture.

$\mu$ CMM is the most accurate purely optical micro-coordinate measuring system in its class. Users combine advantages from tactile coordinate measuring technology and optical surface measurement to measure dimensions, position, shape and roughness of components with just one sensor. The new  $\mu$ CMM offers high geometric accuracy of several optical 3D measurements in relation to each other, enabling the measurement of the smallest surface details including precise determination of the position in a very short time. Users measure both surface roughness and GD&T features with tolerances in the single-digit  $\mu\text{m}$  range with just one sensor. The spectrum of measurable surfaces includes all common industrial materials and composites such as plastic, PCD, CFRP, ceramics, chrome, silicon and so on, including matt and polished, reflective components. The simple operation is implemented by single-button solutions, automated measuring sequences and ergonomic operating panels such as a specially developed controller. Air-bearing axles with linear drive enable wear-free use and high-precision, fast measurement. This makes  $\mu$ CMM ideal for permanent use in production.

### Flexible, expandable and automatable

$\mu$ CMM is designed for easy, flexible, and expandable use by multiple operators. This is implemented by a series of options that extend the application range of the optical CMM and maximize fields of use in production measurement technology. The motorized "Real3D Rotation Unit", for example, turns the 3-axis system into a 5-axis system and enables users to measure components from several, arbitrary perspectives. This allows contactless measurement of surface features such as flank angle, chamfer angle, thread pitch or undercuts.

The automation of measurement series is implemented by the "AutomationManager" automation interface. Thus  $\mu$ CMM offers the fully automatic measurement and evaluation of surface roughness parameters and GD&T features. An administrator defines the corresponding measuring programs, which are started by a production operator at the push of a button. The programs to be measured are selected via drop-down menu or barcode scanner. The measurement result is then completely operator-

independent.  $\mu$ CMM is also ready to be used based on integrated production concepts following modern manufacturing concepts. In Smart Manufacturing, machines, production systems and measuring instruments connect and communicate with each other to enable adaptive and self controlling production.

## Vertical Focus Probing

This new extension to the  $\mu$ CMM allows the measurement of vertical walls and micro holes without movement of the sample being measured, making it ideal for use in micromould and mould making. Holes can be measured with a depth ratio 1:10 and diameters from 0.1mm to 2mm as well as vertical walls with a slope angle of 90° or more. This allows the measurement of surface finish and small radii both in holes and in the corners of moulds along with local geometry and GD&T. More details can be found at <https://www.alicon.com/en/vertical-focus-probing/>.

[www.alicon.com](http://www.alicon.com)