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MicroGear Measurement Module Released

Alicona have released a measurement module aimed specifically for the measurement of micro gears up to 5mm diameter.

Using the FocusVariation technology developed by Alicona, and, in conjunction with the German gear and spline specialist Frenco this new measurement module provides optical non-contact measurement on gears that are typically difficult to measure. The process of measurement captures the full 3D form of a micro gear wheel and it is on this 3D model that measurements are made.



Micro gears present a challenge in terms of measurement as tactile systems can only provide data from a single line scan in each direction on the helix or spur. As the features are quite small then access is limited and the amount of data collected is also very limited.

The optical measuring process allows measurement of the full form of the gear teeth using area based measurement rather than a line based measurement, as a result the data is more robust and the effect is higher accuracy.

The benefits of this are clear, the measurement is robust and of the whole tooth rather than 2 line profiles, measurements are made to VDI/VDE standards. A complete measurement of every tooth is possible within a range of 0.1mm \emptyset to 5mm \emptyset with unlimited numbers of teeth measureable, the measurement process is fast producing high resolution and repeatable results.

CAD dataset comparison is also possible with the software able to show the differences between the actual produced products in relation to the design requirements with the capability to set up tolerance ranges.

A complete range of parameters are available and include profile angle deviation, profile form deviation, total profile deviation, helix angle deviation, helix form deviation, total helix deviation, individual pitch deviation, total pitch deviation, runout deviation and more.

This software is useable with the Alicona InfiniteFocus G5 with advanced real3D rotation unit <u>www.alicona.com</u>. Sales.uk@alicona.com

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