

Digital 3D measurement of complex parts and shapes

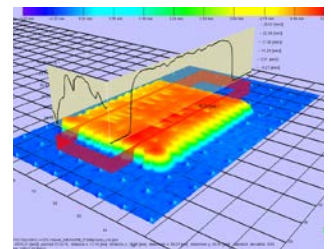
Mabotic develops and manufactures various designs of digital scanning units. scanCONTROL laser scanners are often used for digitisation of parts. The scanner projects a laser line onto the object being measured and records the profile of the line. When the scanner is mounted on a linear axis and the scanner traverses over the measurement target, a 3D image of the target can be generated.

A scanCONTROL 2700-100 profile scanner is used in the unit shown. In this way, a distance of up to 600mm between the scanner and the target is achieved. Larger objects can also be digitally scanned very quickly using this method. The sensor provides high levels of resolution and linearity. Due to the use of a global shutter, detailed distortion-free images can be generated even when recording at high speeds.

The system is characterised by rapid realisation of images, ease of handling and an excellent price/performance ratio. Typical applications include quality assurance, component optimisation, R&D, manufacturing and repair technology.

Basically, the system makes it easy to digitally scan objects, such as the connecting rod in the above example.

Intelligent software also makes it possible to determine volumes. For example, the sensor has been used in the food processing industry to measure the volume of a cookie. Here, the task involved identifying why certain cookies remained stuck in the packaging.



Advantages

- Rapid, easy digitising of parts
- Modular system with customised options
- Robust sensor design
- Integration into software via free DLL

Sensor design

- scanCONTROL various models