

## stereoSCAN<sup>3D</sup>

### THE MEASURING SYSTEM FOR HIGHEST DEMANDS

#### The stereoSCAN<sup>3D</sup> – a Maximum on Flexibility and Precision

To meet the ever growing demands of our customers, we developed the new system stereoSCAN<sup>3D</sup>.

The stereoSCAN<sup>3D</sup> consists of 2 high resolution digital cameras and our patented MPT – projection unit. The cameras are positioned asymmetrically left and right of the projector. This configuration enables a maximum of flexibility and precision.

#### Flexibility

- ❑ Due to the asymmetrical setup, three different triangulation angles of 10°, 20° and 30° are realized in one system at once. Thus data which are difficult to access can be captured reliably.
- ❑ Different measurement ranges can be easily and fast realized by changing the lenses.
- ❑ In addition the camera modules can be easily fixed on the sensor. Therefore, very different fields of view can be realized without changing the sensor base.

#### Precision

- ❑ Two digital cameras with 1.4 million pixels each guarantee highest resolution and accuracy (optional cameras with 6.6 mega pixel are available).
- ❑ The carbon fiber base structure ensures an optimum of mechanical and thermal stability of the sensors.



- ❑ The intelligent data management according to quality criteria ensures highest data safety.
- ❑ The very fast acquisition of 1 second prevents largely undesirable influences from the environment.
- ❑ The precision calibration can be done from the user within minutes. This ensures always the highest precision of the system.
- ❑ Check of the calibration at every index marks measurement
- ❑ Certification of the system according to the guidelines VDI/VDE 2634

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#### Technical Data

##### Image Processing

Host computer	Intel Pentium IV, $\geq 3$ GHz, $\geq 1$ GB RAM, $\geq 60$ GB HD, Open-GL- Graphic adapter, CD-writer
Image data interface	IEEE 1394 (FireWire <sup>®</sup> )
Operating system	Windows 2000, XP
Measurement-Software	OPTOCAT for Windows, 3D-Alignment supports all important navigation strategies 3D-PostProcessing to generate polygonal meshes
Data interface	ASCII, BRE, STL*, PLY*, VRML*

\* detailed specification on request

##### Sensor

Principle of operation	Miniaturized Projection Technique
Light source	100 W halogen
Sensor weight	6 kg
Imaging	2 high resolution digital cameras
Digitization	1384 x 1036 pixel per camera
Operating distance	380mm / 880mm
Resolution limit (Z)	2 $\mu$ m
Acquisition time	< 1 s

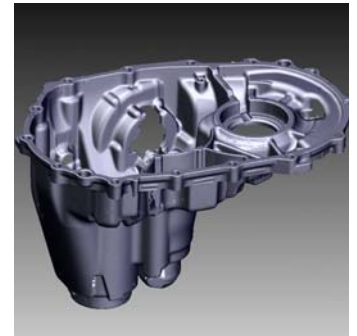
##### Options

High resolution cameras	2 cameras with 6.6 Mpixel (3000 x 2208 pixel)
Host computer	Notebook or Laptop
Software-Options	3D-EdgeDetection, 3D-Inspect

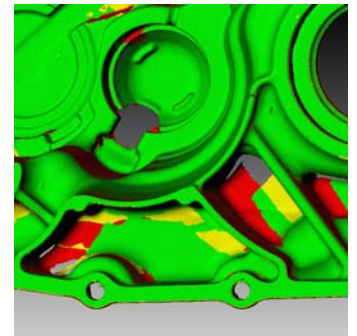
##### The measurement ranges – 75mm to 750mm

For the stereoSCAN<sup>3D</sup> system we offer an extreme large range of fields of view, from 75mm up to 750mm

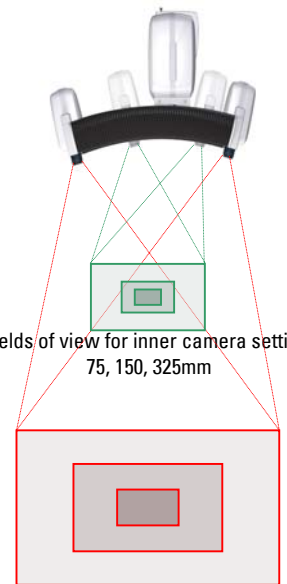
This is possible due to the exchange of the lenses and an easy repositioning of the camera modules to an inner or outer position. An easy calibration procedure as well as laser pointers facilitate the alteration. Now 6 standard fields of view can be realized on one basis. Detailed information about all fields of view can be found in the corresponding data sheet.



Example of a gear cover



Data with three triangulation angles



Fields of view for inner camera setting:  
75, 150, 325mm

Fields of view for outer camera setting:  
175, 425, 750mm

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