

bodySCAN^{3D}

3D DIGITISATION OF THE HUMAN BODY



APPLICATION AREAS

Allowing the digital acquisition of the complete body geometry, the generated data can be used in a variety of application areas:

- Custom made sports clothing
- Computer animation, computer games
- Sculptures and sub-surface-engravings in glass
- Medical technology and prosthetics
- Customised fitted seats (i.e. in the automotive and aerospace industry)
- Made to measure clothing (i.e. fashion and design)

Fast and accurate digitisation

Based on our long standing experience in the areas of non-contact 3D skin and face measurements, the **bodySCAN^{3D}** is the logical enhancement of our existing in-vivo metrology series.

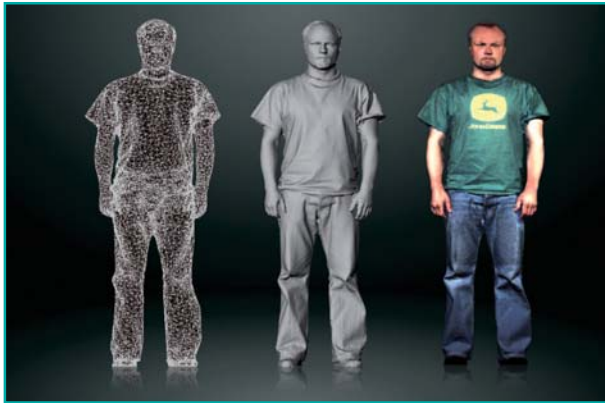
This even more powerful and comprehensive system is able to perform the fast and accurate digitisation of the entire human body. Compared to traditional anthropometrical procedures, the **bodySCAN^{3D}** provides a maximum of accuracy and data quality at a scanning time of the entire body in only 5.5 seconds.

For 3D posture studies and the visualisation of kinetic body situations, a special fast scanning modus has been developed, allowing the entire body to be captured within only 2.5 seconds.

The sensor system of the **bodySCAN^{3D}** consists of four measurement columns, each of which equipped with two high resolution CCD cameras and one projector. The eight single high resolution data sets generated by each scan are aligned according to the body contour by the sophisticated and powerful **OPTOCAT** software and are finally merged into a joint triangulated mesh data set.

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Performance features

- ▶ Digitisation sequence can be completed within max. 5.5 seconds and 2.5 seconds in the fast mode
- ▶ Very high resolution by using eight single cameras able to capture up to 11 million image points
- ▶ Automatic orientation of the 8 individual data sets through 3D alignment function
- ▶ Calculation of one joint triangulation mesh based on maximum quality and texture information
- ▶ Final data export in standard formats such as ASCII, STL, PLY or VRML

TECHNICAL SPECIFICATION

Sensor	
Projection technology	Miniature Projection Technique
Light source	100 W Halogen
Sensor setup	4 columns, each equipped with one projector unit and 2 digital cameras
Data acquisition	High resolution digital CCD cameras
Digitising	1392 x 1040 Pixel per camera
Acquisition time	5,5 s (2,5 s in fast mode)
Measuring cabin floor space	2 x 3 m
Measuring volume	W 1200 x D 800 x H 2000 mm
Point spacing	1,2 mm
Feature accuracy	+/- 0,3 mm

Image Processing	
Host PC	Dell Highend Workstation (system configuration on request)
Image data interface	IEEE 1384 (FireWire [®])
Operating system	Microsoft Windows XP Professional (optional x64 Bit Edition)
Measuring software	OPTOCAT for Windows, module bodySCAN ^{3D}
Data interface	ASCII, BRE, STL, PLY, VRML

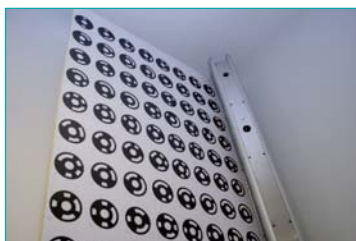
Optional Accessories	
Colour option	High resolution 1384 x 1036 pixel colour CCD cameras
Additional sensors	Optional extension by additional sensor units for the acquisition of specific body areas and positions
Partition walls	Flexible partition walls between the four sensor columns

November 2008, technical data subject to change without notice

For more information contact:

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