smart*SCAN*3D-duo / smart*SCAN*3D-basic

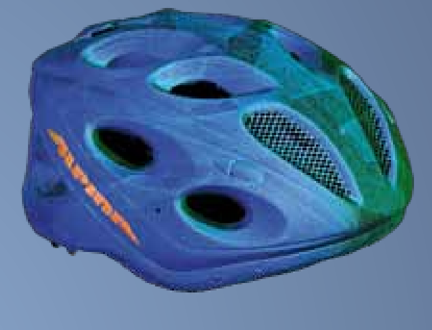
The ideal introduction systems into 3D metrology: In comparison to a high-end laser scanner, both the smart*SCAN*3D-basic and the smart*SCAN*3D-duo systems do not only generate data at a significantly higher level of quality and resolution, they also offer much easier handling – and all that at a very attractive price.

Digitisation of a sculpture

smart*SCAN*3D-duo / basic

Furthermore, the smart*SCAN*3D-basic grows in relation with your projects: to meet increasing requirements, it is easily upgraded to the smart*SCAN*3D-duo. Thanks to the asymmetrical design and use of two colour cameras, the smart*SCAN*3D-duo is able to work with three different triangulation angles.

smart*SCAN*3D-basic and smart*SCAN*3D-duo are the systems of choice when it comes to classical inspection tasks and quality assurance matters, precise data acquisition for reverse engineering and rapid prototyping, and also for the digital documentation of works of art and archaeological findings.



Deviations to CAD (false colour map)

3D model of the measuring object

*The new smart*SCAN*3D-duo with projection unit and colour cameras*

Technical data are subject to change without notice

smart*SCAN*3D 08-10-EN

smart*SCAN*3D

The flexible system series for precise 3D measuring technique

TECHNICAL SPECIFICATIONS

	smart*SCAN*3D-basic	smart*SCAN*3D-duo	smart*SCAN*3D-HE
Image Processing			
Host computer	Workstation		Professional Workstation
Computer interface	IEEE 1394A (FireWire®)		IEEE 1394B (FireWire®)
Operating system	Microsoft Windows 7 or Windows XP (64 or 32 Bit Edition)		
System software	OPTOCAT for Windows 64 Bit (optional OPTOCAT 32 Bit Edition) 3D alignment supports all essential navigation strategies (with and without index marks)		
Software module "Inspection"	optional		included
Data interface	ASC, BRE, STL, PLY, VRML		
Sensor			
Principle of operation	Miniaturised Projection Technique (MPT)		
Field of view (FOV)	M	M	S, M, L
Light source	100 W halogen	100 W halogen	100 / 250 W halogen
Sensor weight	< 3.0 kg	< 3.7 kg	< 4.0 kg
Imaging	1 high-resolution CCD colour camera	2 high-resolution CCD colour cameras	2 professional high-resolution digital CCD cameras, b/w or colour
Acquisition time	< 1 sec.		
Accessories			
Turntable	Manual turntable (included) Motorised turntable or turn / tilt table		
Tripod	Measuring tripod for industrial application or lightweight wooden tripod		
Calibration	Carbon fibre calibration tools		

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breuckmann
precision in 3D

smart*SCAN*3D

The flexible system series for precise 3D measuring technique

smart*SCAN*3D-HE
smart*SCAN*3D-duo
smart*SCAN*3D-basic

smart*SCAN*3D series

Precise optical 3D measurement technology for a broad user spectrum and a versatile range of applications – this is the **Breuckmann smart*SCAN*3D series.**

Miniaturised Projection Technique

smart*SCAN*3D series

The patented miniaturised projection technique (MPT) used in all Breuckmann systems allows for scan times of less than 1 second, capturing the entire surface instead of individual points. This way, even complex object geometries as well as fragile or easily deformed items are measured with speed and accuracy.

Because of their modular design and being equipped with either black and white or colour cameras in various resolutions and configurations, the smart*SCAN*3D systems can be easily adjusted to precisely meet your specific project requirements. Thanks to using carbon fibre components, all sensors are characterised by a high level of mechanical and thermal stability, ensuring reliable performance even in very demanding measuring conditions. The scanning results are generated in standard data formats such as STL, PLY, VRML, and are therefore available in a multiple range of compatible formats for further processing.

smart*SCAN*3D series

The application spectrum of three-dimensional object digitisation and measurement is highly versatile and in the industrial engineering field covers task areas such as digitisation, surface inspection, contour accuracy verification and shape deviation analysis. Sheet metal parts, serial production elements, design models or heavy duty die cast components are captured in their respective 3D data at high speed and with accuracy – these examples only reflect a small selection of the continuously growing application spectrum.

Complimenting the spectrum of industrial engineering applications, the 3D system solutions of the smart*SCAN*3D series have over the years also been increasingly used in the context of human body metrology as well as in various projects related to arts and cultural heritage. There are virtually no limits as for the dimensions of the objects to be scanned: the range of three-dimensional digitisation stretches from the tooth of a mouse all the way to several metres high buildings.

smart*SCAN*3D-HE

Breuckmann's high-end measuring system for ambitious and demanding 3D digitisation tasks: the smart*SCAN*3D-HE combines the highest standard of accuracy and resolution with maximum flexibility.

smart*SCAN*3D-HE

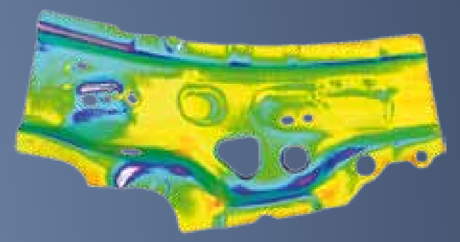
Using black and white or colour cameras at different resolution levels, the system is precisely adjusted to best meet your task requirements. Irrespective of size and complexity, any measuring objects are digitised within a matter of seconds, providing you with highly precise three-dimensional data for further processing.

With its compact design and low weight, this system is eminently suited for demanding inspection projects as well as high-definition mobile digitisation and measurement tasks. Application areas of the smart*SCAN*3D*-HE* are primarily found in the technical and engineering context as well as in the areas of design and documentation; besides, it is also successfully used in education and research as well as in the fields of arts and cultural heritage.

The smart*SCAN*3D-HE is easy to use both in the conventional measuring room as well as on-site in the workshop or industrial production environment. In order to automate the digitisation process, the system is easily mounted onto a robot and in addition is equipped with an automatic turn / tilt unit operated by the scanning software. For highest accuracy of measuring, this product can be certified according to the VDI/VDE guideline 2634/2.

The smart*SCAN*3D-HE is the ideal tool to provide you with valuable support for your projects: it will help you to optimise your production process and will discover potential for new developments. This allows your product to not only stand its ground in a very dynamic, international market environment – it can even be taken one step ahead of your competition.

3D Scan data



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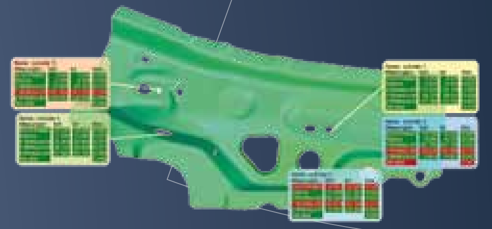

Orientation and location tolerance (elongated holes, circles, rectangles)