



GOM ScanCobot

Flexible. Efficient. Automated.



Seeing beyond



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GOM ScanCobot is a mobile measuring station with a collaborative robot, a motorized rotation table and powerful software. Combined with the compact, high-precision ATOS sensor, the system is ideal for automated 3D measurements and, thanks to its small size, saves plenty on space. With a gross weight of under 200 kg, GOM ScanCobot can be moved directly to where the next measurement is needed.

The optical 3D sensor rapidly captures detailed information on the quality of small and medium-sized parts, which are placed on the motorized rotation table. To inspect the part completely, the ATOS sensor faces it from different directions. Measurement planning takes place in the virtual measuring room (VMR), a module of the inspection software GOM Inspect Pro.

The advantages of the mobile measuring station at a glance

Collaborative robot

- Automated measurements
- Reduced user interaction
- Increased repeatability

Mobile with low space requirement

- Easy and fast transfer to the next place of use
- Small footprint
- Reduced weight

ATOS Performance

- High-speed fringe projection
- Fast data processing and high data throughput
- Short exposure times, even with shiny and dark surfaces

Motorized rotation table

- For small and medium-sized parts up to max. 50 kg
- Max. part size 500 mm
- Interaction with collaborative robot

User-friendly inspection software

- Complete measurement process in the virtual measuring room (VMR)
- Automated measurement and inspection processes
- Automatic creation of scan positions through Smart Teach





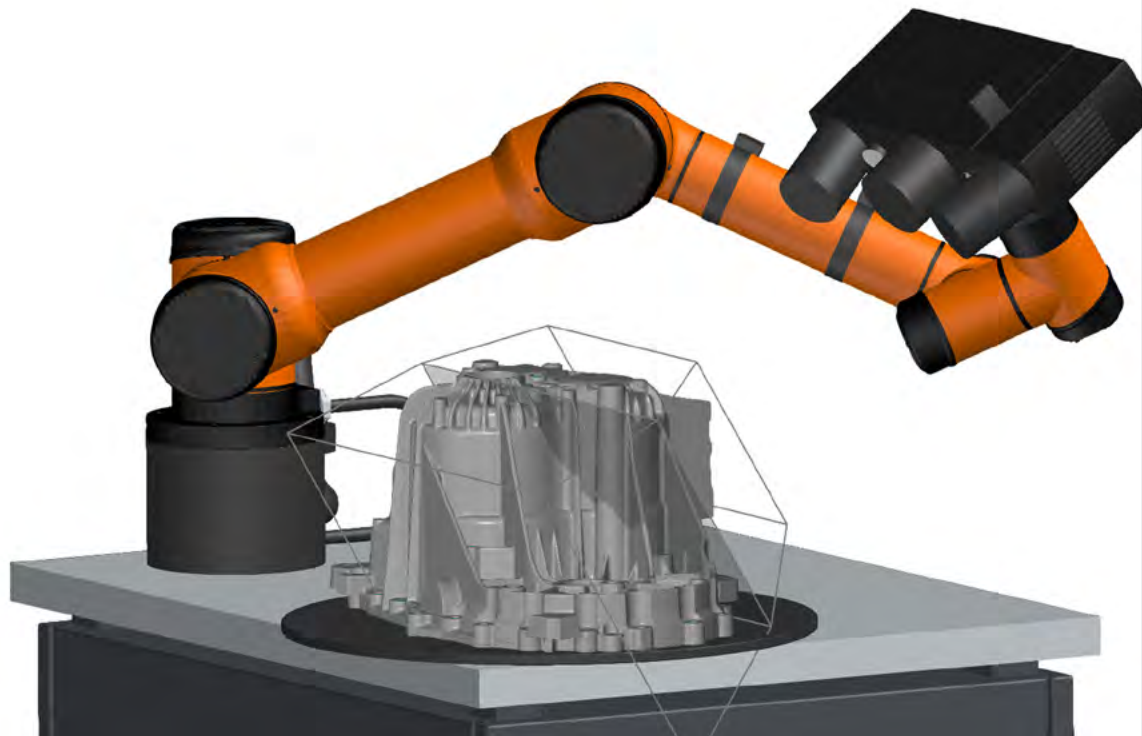
GOM ScanCobot speeds up product development processes

GOM ScanCobot makes prototyping quick and easy. It facilitates toolmaking and testing and speeds up preproduction. This, in turn, optimizes the quality control and assurance of the final product. Small and medium-sized parts can be measured efficiently to swiftly identify, analyze and correct quality issues.

User-friendly inspection software and easy robot programming in the virtual measuring room (VMR)

As the central control and measurement planning software, the VMR reproduces the entire measuring procedure: measurement planning, digitizing and inspection. The CAD data set for the part being inspected is imported into the GOM software together with the corresponding measurement plan. The software automatically computes the necessary sensor positions and robot paths.

If no CAD data is available, the software uses the part's geometry to generate evenly spaced measurement positions. This is followed by the measurement, inspection and analysis – fully automated. The user does not require any special robotics skills.



Advantages for the entire workflow

Process reliable and runtime-optimized

Smart Teach functionality in the virtual measuring room simplifies the process of robot programming. Measurement positions are updated automatically, if the CAD or individual elements change.

Burn-in process

The created measuring program is integrated through an automated process. For this, the robot moves to the measurement positions and determines individual measurement parameters on the real part.

Serial measurement

The finished measurement programs can be used for additional component testing. Changes to the CAD data sets and inspection plan can be updated with a click of the mouse thanks to the software's parameter-based design.

Reporting with one click

Once inspection is complete, the results can be compiled into a custom report with photos, tables, diagrams, text and graphics.

GOM ScanCobot

Created for a wide range of tasks

The GOM ScanCobot can be used in many industries for the efficient quality control of parts made of materials such as plastics, metal or cast iron.

Additive manufacturing

Speed up product development and product launch with high-resolution polygon meshes (STL files) for 3D printing, milling, additive manufacturing and dimensional inspection

Casting and forging

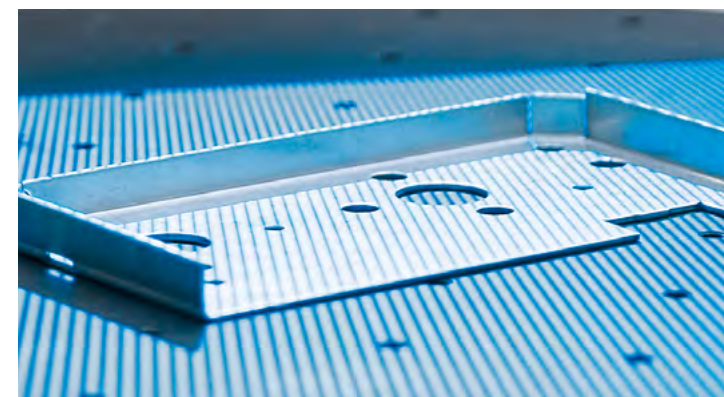
Shorter measurement and inspection times in sand casting, die casting and investment casting as well as in the forging industry

Injection molding

Optimization in all phases of injection molding, blow molding and thermoforming

Metal forming

Efficient quality control from toolmaking and testing, first article inspection and serial inspection to assembly





Technical data

Set-up area [mm]	975 × 775
Working height [mm]	1,000
Weight [kg]	<200
Power supply	Standard, 100 – 240 V (1-phase, 16 A)
Sensor compatibility	ATOS Q 8M, ATOS Q 12M
Safety housing dimensions* [mm]	1,650 × 1,650 × 2,340
Doorway dimensions [mm]	1,150
Safety housing material	Steel and transparent plastic panels

* The system can be equipped with a standardized safety housing to comply with market-specific safety regulations. The generous doorway allows the GOM ScanCobot to be easily placed inside the safety housing.



ATOS technology

The ATOS sensors are fully tailored to the metrological requirements of industrial users and provide absolute, accurate and traceable measuring data even under harsh conditions. The 3D scanners operate with structured blue light for contactless measurement.

Triple Scan Principle

The Triple Scan Principle ensures precise and complete measuring data, even with complex geometries and uncooperative surfaces. The sensor's two high-resolution cameras and projection unit deliver different views of an object in each individual measurement. To accomplish this, the projection unit projects a fine fringe pattern onto the part surface, which is captured by two cameras operating on the stereo camera principle and used by the software to generate the digital geometric twin. The stereo camera setup gives the system a built-in, sensor-controlled feature to monitor process reliability during measurement.

The software gives the user continuous feedback on the calibration status, the transformation accuracy of the individual measurements, changes in the environment and part movements.

High measuring speed

With each scan, ATOS sensors deliver full-field 3D coordinates within seconds. Each individual measurement consists of up to 12 million independent measuring points. This is made possible by the low noise level of the Blue Light Equalizer. This increases the brightness of the light source by a factor of 1.5, allowing for short exposure times.

ATOS Q

High-speed 3D scanner
with superior data quality

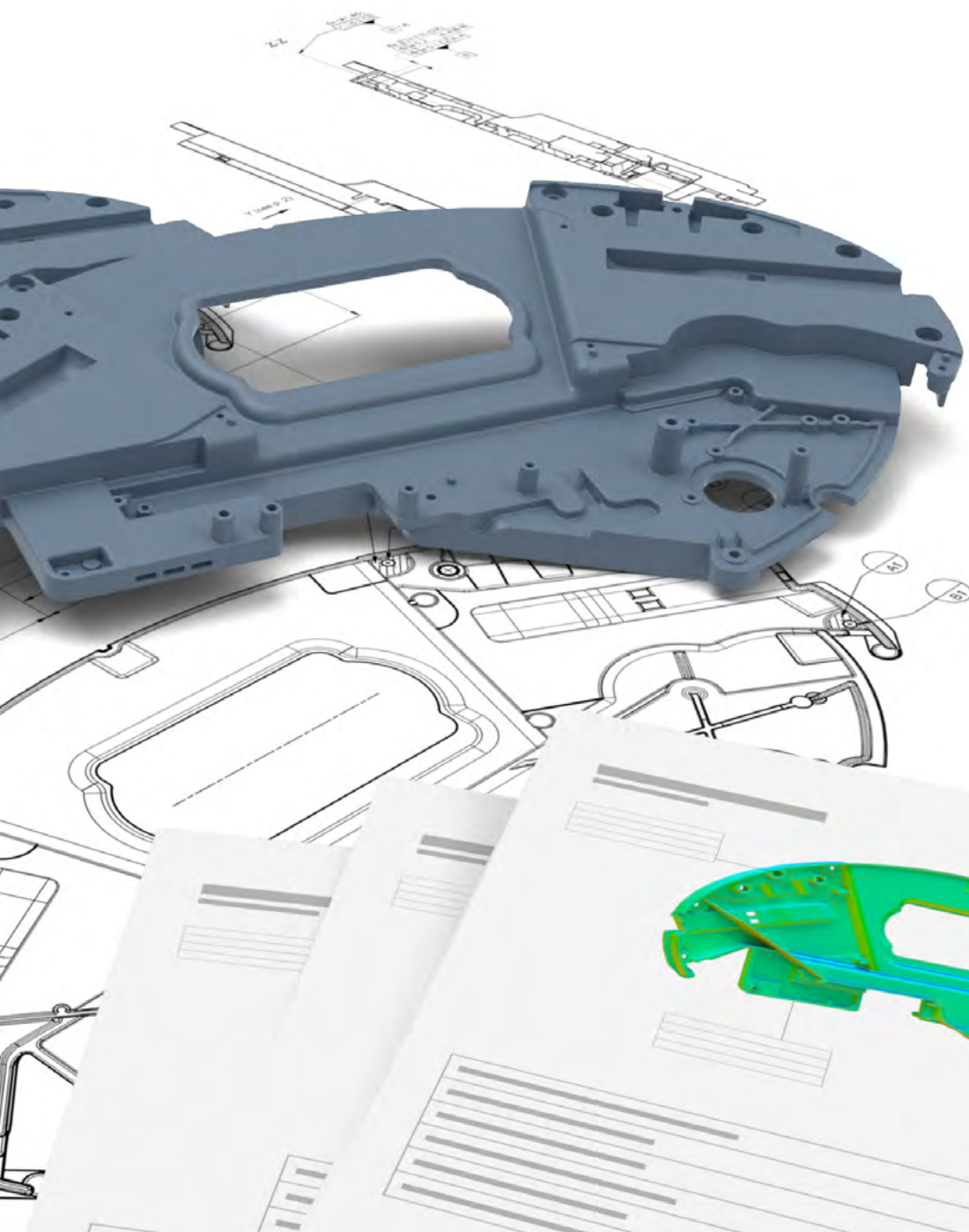
ATOS Q generates a complete measurement dataset in a short time from detailed full-field 3D coordinates. Instead of point-based or linear data, the system delivers full-field data about deviations between the actual 3D coordinates and the CAD data.





ATOS Q is available in two different camera resolutions, 12 M and 8 M. The 3D scanners capture up to 2 × 12 million or 2 × 8 million coordinate points during scanning. The accuracy, resolution and the measuring area can be defined as desired. Five precision lenses are available, which cover measuring fields of different sizes: 100, 170, 270, 350, 500.

	ATOS Q 8M	ATOS Q 12M
Light source	LED	LED
Measuring points per scan	8 million	12 million
Measuring area [mm²]	100 × 70 – 500 × 370	100 × 70 – 500 × 370
Point distance [mm]	0.04 – 0.15	0.03 – 0.12
Working distance [mm]	490	490
Weight	Approx. 4 kg	Approx. 4 kg
Dimensions	Approx. 340 mm × 240 mm × 83 mm	Approx. 340 mm × 240 mm × 83 mm
Cable length	10 m fiber optic cable	10 m fiber optic cable
Operating system	Windows 10	Windows 10
Measuring volumes	100, 170, 270, 350, 500	100, 170, 270, 350, 500



All-in-one-software

GOM Inspect Pro

Scanning, inspection and reporting from a single source: The GOM ScanCobot is equipped with GOM Inspect Pro software. CAD data can be imported, polygon meshes created from point clouds and 3D inspections can be performed.

Tested inspection software

The measuring accuracy of GOM software has been tested by NIST (National Institute of Standards and Technology) and PTB (National Metrology Institute of Germany). By comparing obtained results with reference results, the software achieves the category of lowest measurement deviations (Class 1).

Parametric inspection

The parameter-based design of the software allows every step of a process to be traced, repeated and edited. Trend analyses, statistical process control (SPC) and deformation analyses can be performed in one software. Even the full-field analysis of multiple identical parts in one project and statistical analytical values can be determined with ease.

Numerous CAD formats

Time can be saved by importing native CAD formats such as CATIA, NX, SOLIDWORKS and Pro/E into the software.

Teaching by Doing

Thanks to continuous buffering, the desired inspection steps can be transferred to subsequent parts without any programming effort.

Digital assembly

Digital and virtual assembly allows for alignment of parts to one other and the accuracy of fit, regardless of where the parts were manufactured.

Scripting

A command recorder saves all executed operations as a Python script, which can then be repeatedly applied or varied for other measurements.

GOM Inspect Pro supports the measuring and inspection process with detailed analytical and reporting functions. The results are easily and clearly compiled.



Free Trial Version

Experience the numerous advantages of GOM Inspect Pro – 14 days for free without any contractual obligation.



GOM Metrology

Your holistic technology partner

GOM Metrology, a company of the ZEISS Group, specializes in industrial 3D coordinate measuring technology, 3D computed tomography and 3D testing. GOM Metrology internationally sets standards in optical 3D metrology. The company helps customers worldwide to increase product quality, optimize processes and thus produce more efficiently.

From product development to production and distribution, GOM Metrology offers machines and systems for manual and automated 3D digitizing, evaluation software, training and professional support from a single source. Today, more than 17,000 system installations accelerate and improve product development and manufacturing processes for international companies in industries such as automotive, aerospace, energy and consumer goods, for their suppliers as well as for many research institutes and universities.

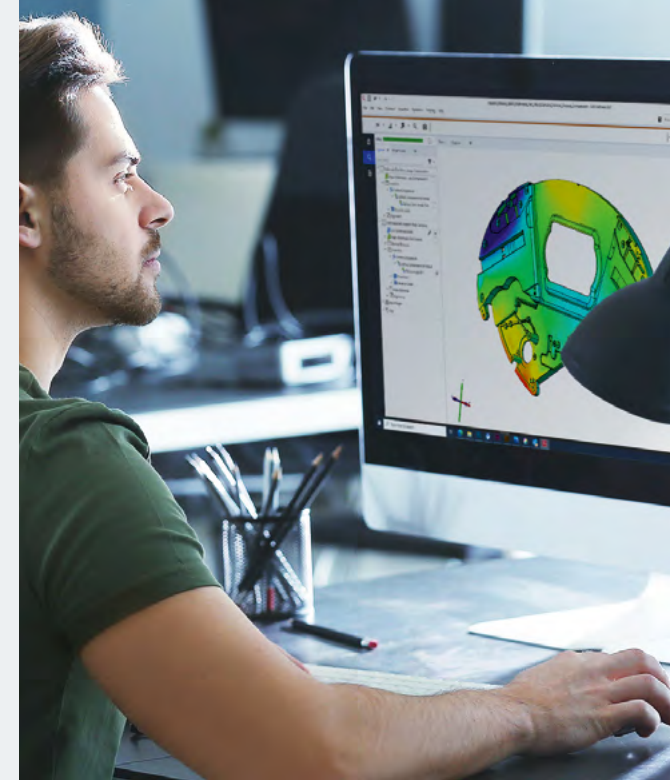
Numerous services and training courses support your daily work when using 3D metrology. In training courses and webinars, you can expand your knowledge on the software and dive into further application fields of the measuring systems.

The online platform myGOM provides instructions, tutorials and frequently asked questions and answers for you. Furthermore, there is an application forum for exchanging ideas and supporting each other.

At conferences and application-based workshops, GOM Metrology directly shares knowledge on processes and measurement technology. Furthermore support and services for 3D measuring systems are offered on a contractual basis.

Training

GOM Metrology training centers offer training and eLearning courses for all knowledge levels. The training concept follows a worldwide standard, which is implemented by our certified partners in the respective national language. In addition to online training and appointments at our training centers, customized on-site training courses are also feasible upon request.



Support and Service

GOM Metrology offers you fast and reliable customer support and services when necessary. They are based on three pillars: Remote Assistance, Services and Contract Plans.



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