

DIGITIZING ENGINEERING INSPECTION



3D Contactless Measuring Systems and Services Engineering consulting

Since 2002, QFP srl is a European leading company in the field of Engineering and of 3D Contactless Measurement Systems/Services.

The knowledge, the competence and the continuous effort of the staff are always direct to generate the highest quality and customer satisfaction.

In the field of 3D Contactless measurements QFP has available the largest range of contactless devices, providing measurement services worldwide. Thanks to the high skills of the digitizing and automation engineers QFP develops high end customized Automated 3D Contactless Systems that greatly reduce the inspection time and cost while increasing the product quality, the scrap reduction and the process control.

In the field of Engineering consulting QFP has a long aerospace experience in Cargo Door and Passenger Door design. The aerospace engineering team is used to work in international teams, provides innovative concepts, accurate 3D modeling and stress reports based on customer standards, up to the final certification documents.

Top Customers

AEROSPACE INDUSTRY: ALENIA, AGUSTA WESTLAND, KOREAN AIR LINES, AIRBUS HELICOPTERS.

MANUFACTURING INDUSTRY: FIAT AUTOMOBILES, HONDA ITALIA, IVECO, CONTINENTAL, ITALDESIGN-GIUGIARO, GE-NUOVO PIGNONE, DALLARA, SAECO-PHILIPS, TECHNOGYM, PERSHING, PERSICO MARINE, MAHLE, PZL, FERRETTI GROUP. VOLKSWAGEN.

RESEARCH INSTITUTES: UNIVERSITÀ POLITECNICA DELLE MARCHE, POLITECNICO DI MILANO, UNIVERSITÀ DEGLI STUDI DI PADOVA, UNIVERSITÀ DI PALERMO, UNIVERSITÀ DEL SALENTO, UNIVERSITÀ DI FIRENZE, CASPUR, INAF.

Services

3d Contactless Measurement

With the 3D digitalization system with optical and laser technology, we can transform 100% of a surface into a high definition 3D point cloud. Thanks to the system flexibility, we can scan objects from very small dimensions (few millimeters) up to very large dimensions (many meters), also when working at a client's premises.



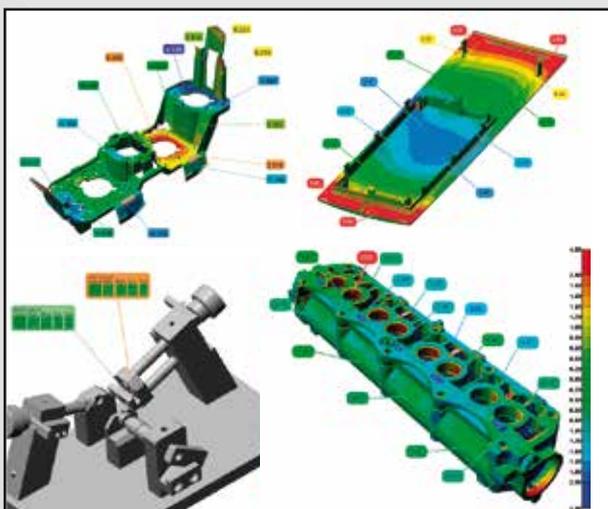
Reverse Engineering

In case of complex objects, a detailed point cloud is the starting point of the process in order to create a mathematical model of the object. This can be achieved by using different stages of data elaboration with CAD and Reverse Engineering software. The process ends in the engineering, defining interfaces and structural features.



Dimensional Controls

The certification of the 3D measurement contactless systems and its calibration tools guarantee the traceability of all the measurements. Using the analysis of the whole surface, detailed reports of dimensional control can be provided, reports that contain chromatic maps, control analysis of specific areas as requested by a client, examination of the tolerance of the shapes and the edges. The reports can also be provided in 3D files with free visualization.



Products



3D Contactless Measuring Systems with optical technology

DpaPro. Mobile certified photogrammetry system for the measurement of points and curves without dimensional limits.

TubelInspect. Unique system for 3D tube's measurement. The geometry is reported very easily within 30 seconds. TubelInspect may be directly linked to Computer Numerically Controlled (CNC) bending machines for the automatic correction of bending parameters.

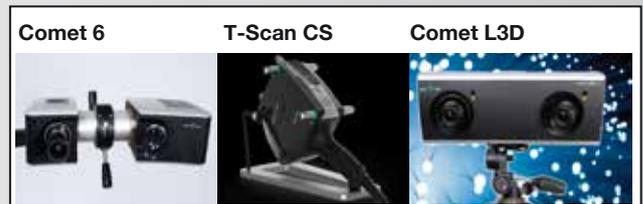
MovelInspect. High-performance modular system, based on a digital cameras for dynamic 3D measurements and deformation analysis. The MovelInspect software determines 3D coordinates of object points and 6-DOF data of solid bodies in every moment.



3D Contactless Measuring Systems with laser technology or fringe projection technology

T-Scan CS. 3D digitizing system with laser/optical technology. It does not need any surface preparation on the object of measurement, even if the surface is black or shiny. It offers a solution for the acquisition of 3D data (up to 20mc) in just one output.

Comet 6, Comet L3D. 3D optical measurement system based on fringe projection and BLUE LED technology, which feature the performance of digitizing tasks in various application areas, thus ensuring an exceptional level of accuracy and high-speed measurements.



3D Contactless Handheld Measuring Systems with laser technology

GapGun. Contactless handheld measuring systems with laser technology, that can be used in various industries such as automotive, defense and aerospace. The Gap Gun is a metrology product mainly for flush and gap measurement, which allows to measure even radius, joints and turbine blades.



Software for Dimensional Control and Reverse Engineering for the manufacturing industry

PolyWorks/Inspector. Certified software for the dimensional analysis of high density point clouds in the manufacturing industry.

PolyWorks/Modeler. "Class A" Polygonal Modeler and quick rebuilder of surfaces.



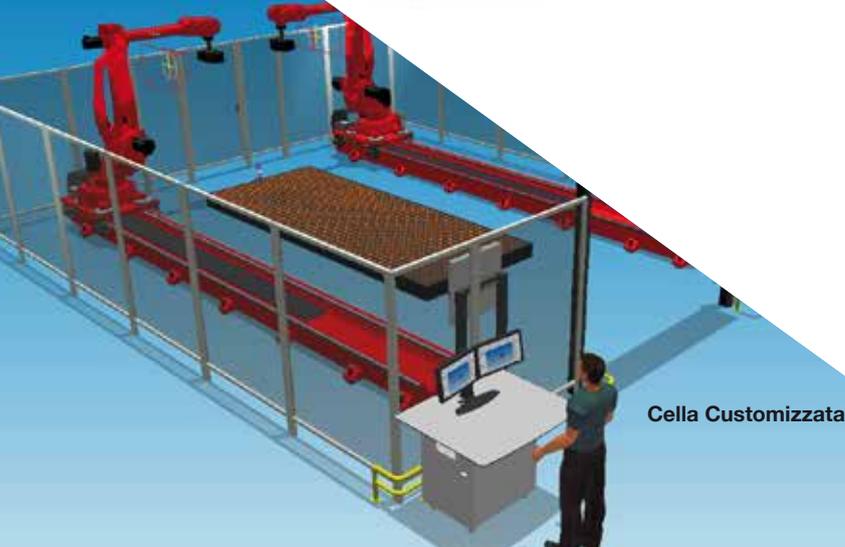
Automated 3D Contactless Measuring Systems

The Automated 3D contactless Measuring Systems with optical/laser technology, are advanced systems with a completely automatic measurement and inspection process.

All the automated processes are managed by software in a virtual environment that faithfully reproduces the reality. The operator does not need to know the program language of the robot because a virtual environment allows to create the program by a graphic interface only with some mouse clicking. The Automated 3D contactless Measuring Systems provide important advantages compared to traditional measurement methods thanks to a large amount of information resulting from 3D digitizing, time saving inspection and cost saving controls. For these reasons, the Automated 3D Digitizing Systems are increasingly used by Aerospace, Automotive and Energy companies, thanks to the huge advantages generated. The cells can be "Plug and Play" or completely "Customized" as per customer request.



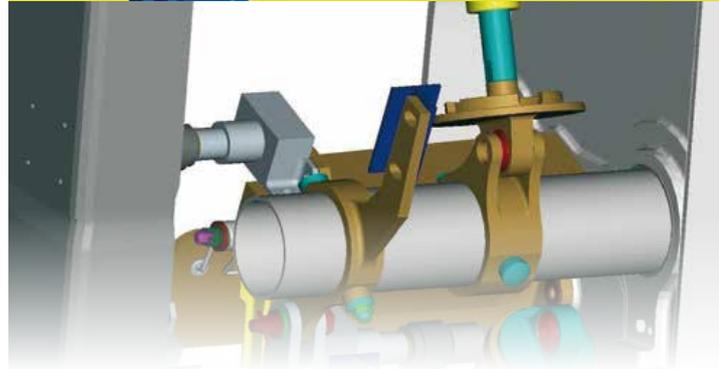
Plug&Play



Cella Customizzata

Engineering

Starting from the customer's technical request, QFP develops design, stress and certification activities for aerospace structures and mechanisms with CAD/CAE 3D software. Every project is strictly monitored to guarantee the high visibility of the program and the respect of the delivery time. The long and successful experiences in international projects make QFP the ideal partner for the most important aerospace projects. References: Boeing B737, B747 and Airbus A320 A330 A380 A350.



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