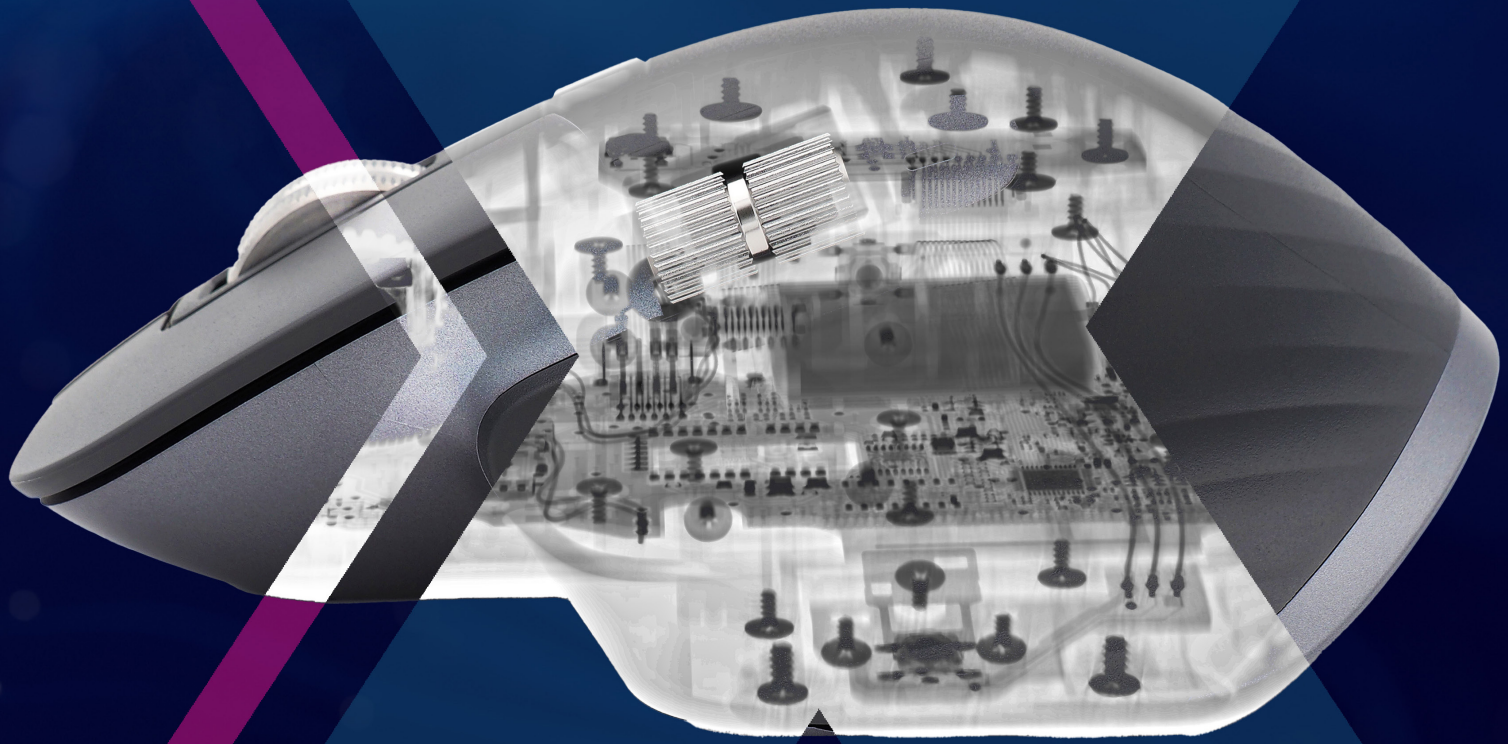
CT-SYSTEMS
OVERVIEW



ProCon X-Ray

Expertly crafted computed tomography systems

ProCon X-Ray

Quality with Perspective

ProCon X-Ray

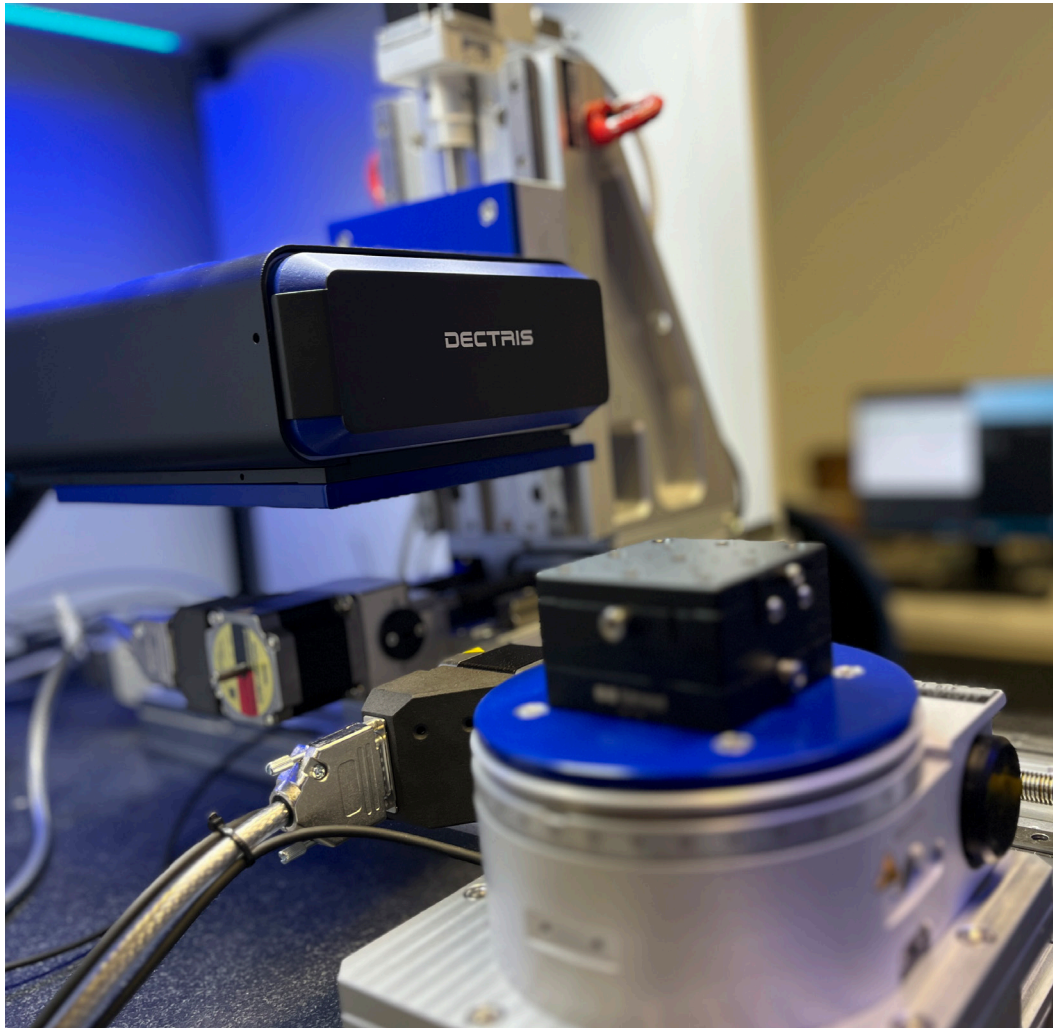
Over 20 years of experience

ProCon X-Ray GmbH has been developing X-ray inspection equipment for industrial applications and university research purposes since January 2004.

Our Systems come with high resolution Focus X-ray technology and are based on our years of experience in developing solutions on a high quality level to meet customer requirements.

With our systems, we place great value on user-friendly operability. Thus, we obtain a highly efficient implementation of our CT-Systems in our customers' workflow and a very short time for incorporation.

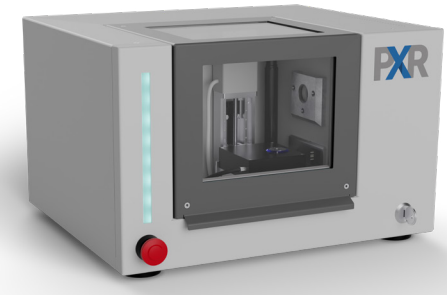
Our clients are our main partners when it comes to developing and designing new solutions for applications. All of our systems can be customised for special needs and applications.



CT System Construction

We create CT imaging hardware & software for industry and research. We work with a companies in diverse industries to create CT systems that help you to analyse, understand and visualise various material types, from the smallest computer chips to engine blocks.

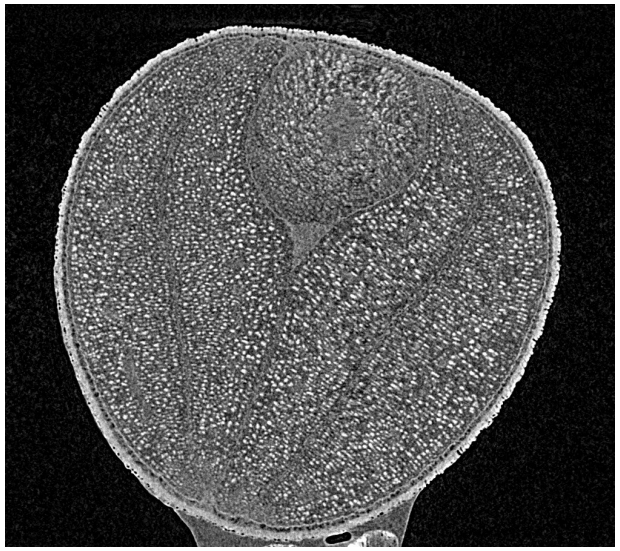
CT-PORTABLE



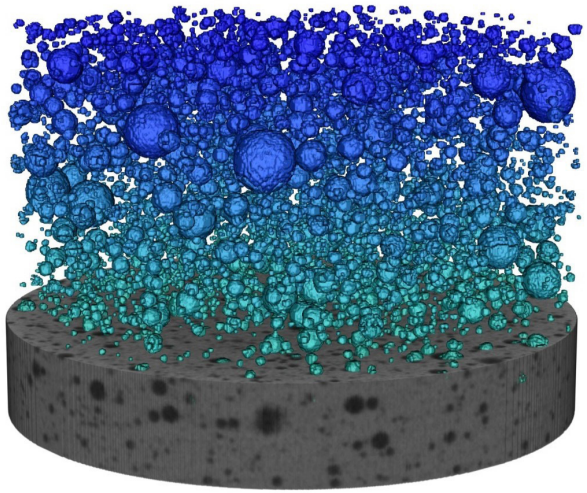
It is the smallest mobile CT system in the world and enables application in a wide range of laboratories and research facilities. The system can be connected to a laptop, thus enabling full portability.

Total weight: 25 kg
X-Ray voltage: up to 50 kV
Dimensions: ~350 x 330 x 230 mm (L x W x H)

To read more about this system, scan the code to visit our website.



Cell structure of rapeseed



Pore analysis of gluten-free dough

Application Cases

Above: high-resolution CT enables visualisation of cell structures in plants, seeds and other organic materials.

Below: gluten-free dough and other foodstuffs can be analysed for porosity and internal structure.

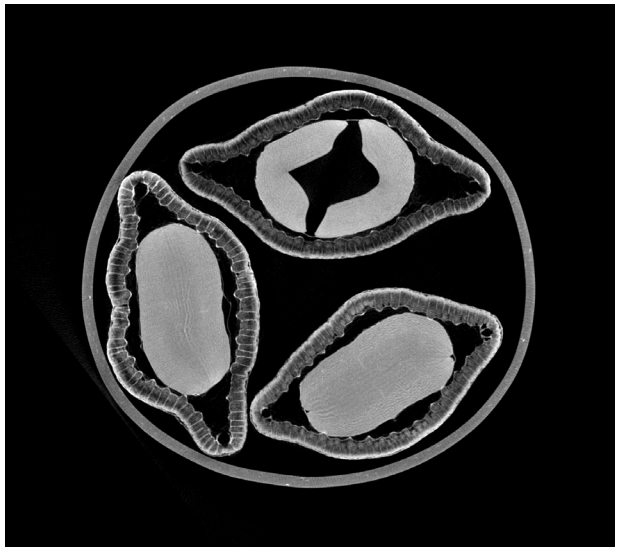
Image credits: Fraunhofer Institute for Integrated Circuits IIS

CT-MICRO

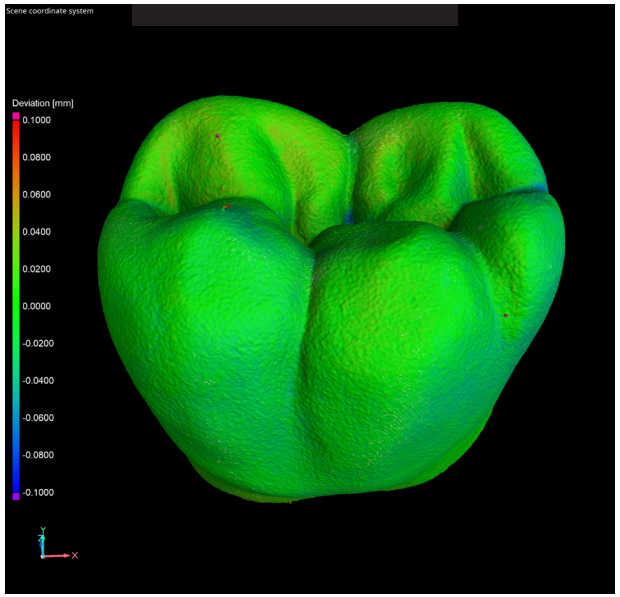
This is our smallest system that is customisable with either an 80 kV or 100 kV X-Ray source. The CT-MICRO offers scan modes like Axial Scans and Fast-CT with optional measurement field extension.

Total weight: ~250 kg
X-Ray voltage: up to 100 kV
Dimensions: 1090 x 500 x 450 mm (L x W x H)

To read more about this system, scan the code to visit our website.



Sunflower seeds and shells



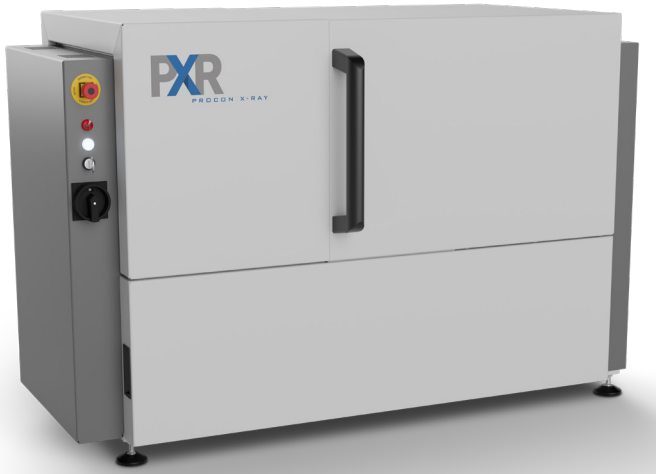
Quality assurance of dental products

Application Cases

Above: analysis of the shell structure of sunflower seeds for research purposes.

Below: actual nominal comparison of lab-made prosthetic teeth ensure a high quality product and guaranteed customer satisfaction.

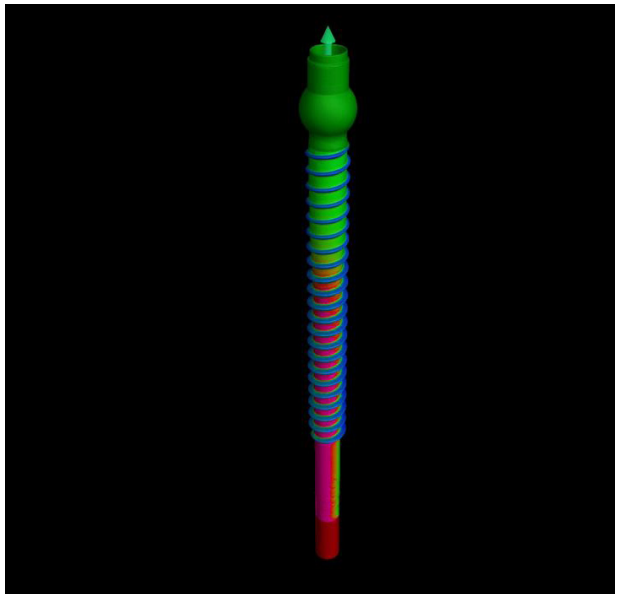
CT-MINI



The CT-MINI is our smallest system to offer adjustment of the focus detector distance. This system also offers a detector axis that can be used to enable measurement field extension for scanning larger samples.

X-Ray voltage: 20 - 100 kV / 20 - 130 kV
Spatial resolution: up to 3 µm
Max. sample size: Ø 360 x H 185 mm

To read more about this system, scan the code to visit our website.



Simulating tension on a screw

Application Case

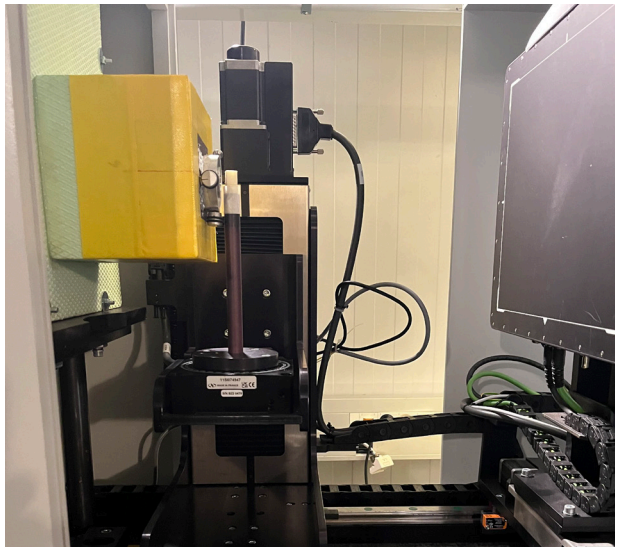
Tension simulation on a screw to determine where the part would be placed under stress when in use. The amount of stress can also be simulated and measured. This helps to determine whether the design of a part is adequate for its intended purpose.

CT-COMPACT plus

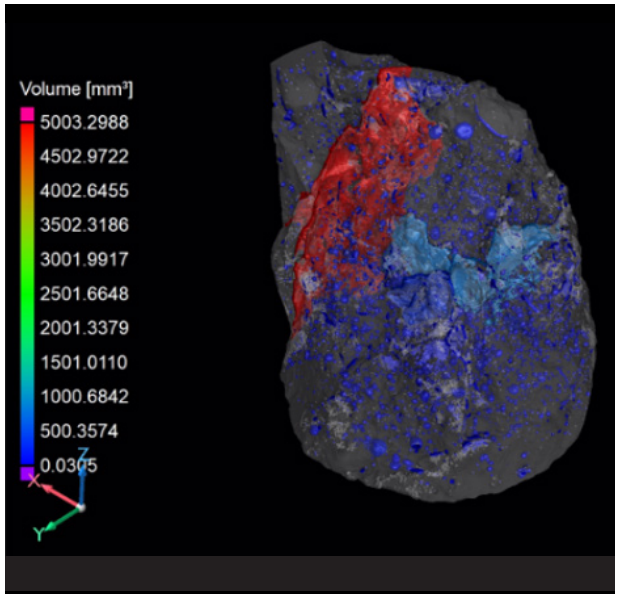
This system is designed for scanning larger specimens, and offers all options of the floorstanding models like Axial-Scans, Fast-CT, horizontal and vertical Measurement-Field-Extension, and Helix-CT.

Total weight: ~600 kg
X-Ray voltage: 20 - 130 kV
Max. sample size: Ø 360 x H 600 mm

To read more about this system, scan the code to visit our website.



Our systems can be adapted to operate in extreme conditions.



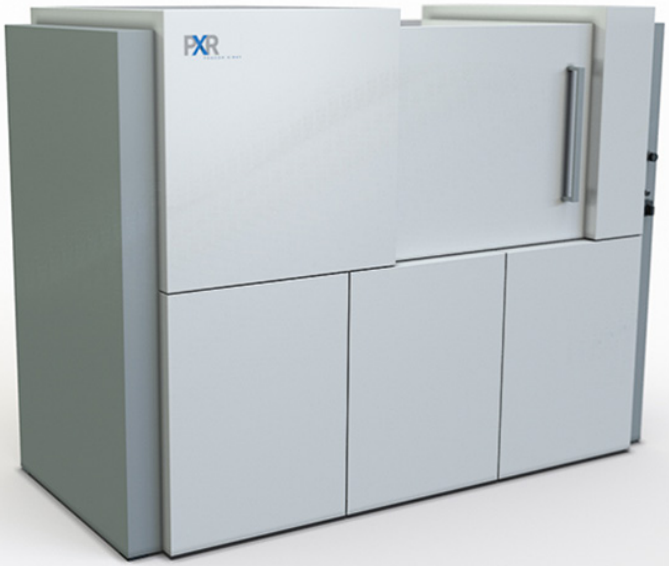
Porosity analysis conducted on a piece of concrete

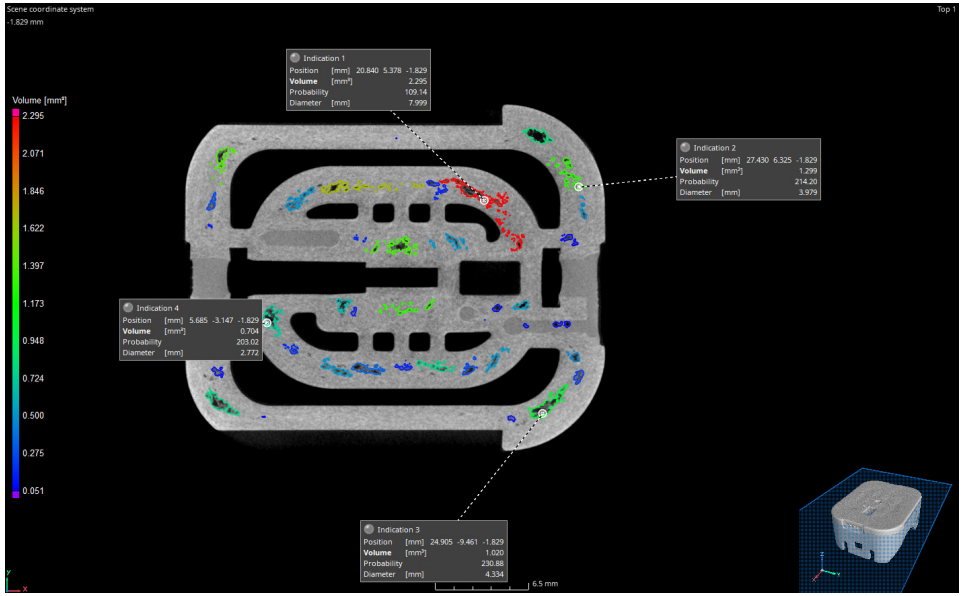
Application Cases

Above: Long-term analysis of snow cores at the Canadian High Arctic Research Station at temperatures of -40°C. This system was adapted to insulate the X-ray source, and create a custom solution to ensure operation at extreme temperatures.

Below: This sample of concrete has a diameter of 120 mm. A scan was conducted to analyse porosity, identifying cracks, holes, and air bubbles.

CT-ALPHA 160 KV

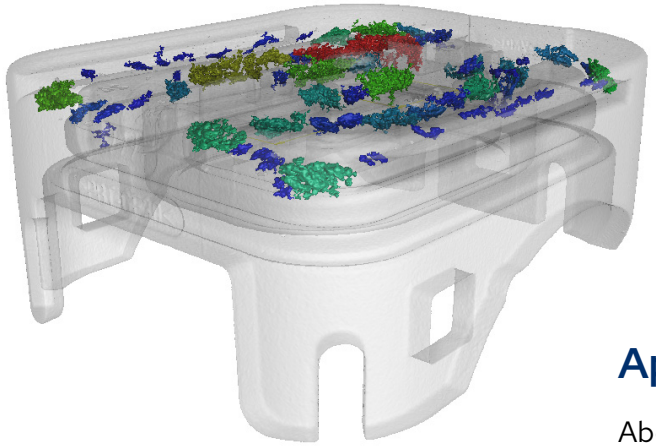




Section view

The CT-ALPHA 160 KV enables maximum performance with minimum space requirements. Due to its shallow depth, it can also be inserted through small laboratory doors.

Highest spatial resolution: 0.5 µm
Max. sample size: Ø 300 x H 400 mm
Max. 3D volume: Ø 232 x H 290 mm



3D view

Application Case

Above & Left: Porosity/ inclusion analysis of a plastic part (from the automotive field) with colour map for the volume of the pores.

To read more about this system, scan the code to visit our website.

CT-ALPHA 240 KV

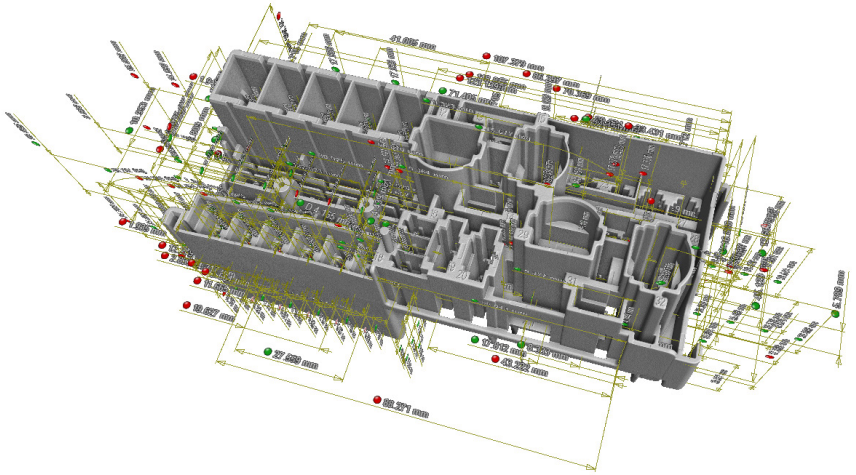
The CT-ALPHA 240 KV is ideal for scanning complex objects composed of various materials. The system provides options for dual-detector and dual-X-ray source configurations.

Highest spatial resolution: 0.5 µm
Max. sample size: Ø 400 x H 500 mm
Max. 3D volume: Ø 340 x 500 mm

To read more about this system,
scan the code to visit our website.

Application Cases

Below: high-power dimensional analysis of a plastic sample.



Below: a sintered aluminium (AlSI10MG) part to analyse the sintering process of the material and the presence of microporosity.

CT-ALPHA 450 KV

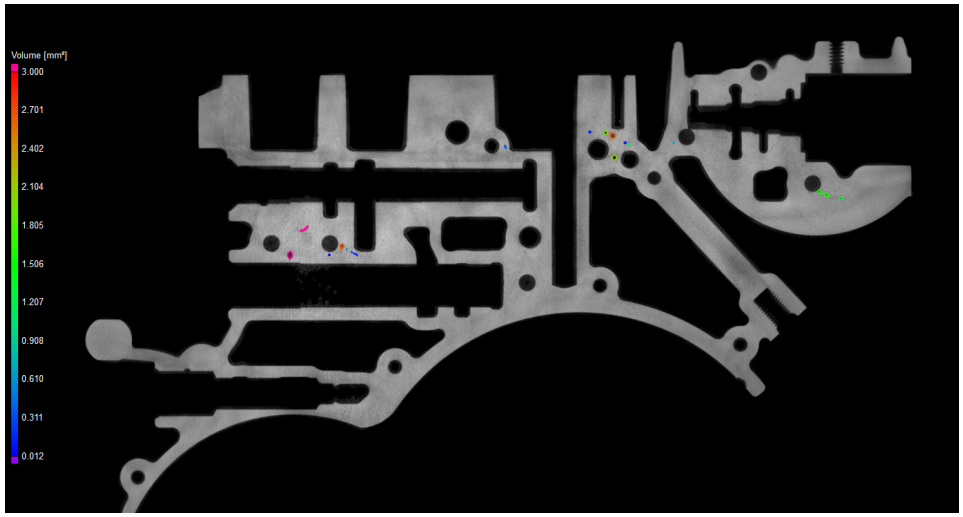
This is our state-of-the-art standalone CT system. This system is transported with everything one requires already included in the cabin, and thus requires minimal installation time.

Highest spatial resolution: 3 µm
X-Ray voltage: up to 450 kV (optional 600 kV)
Max. 3D volume: Ø 1 000 x H 1 000 mm

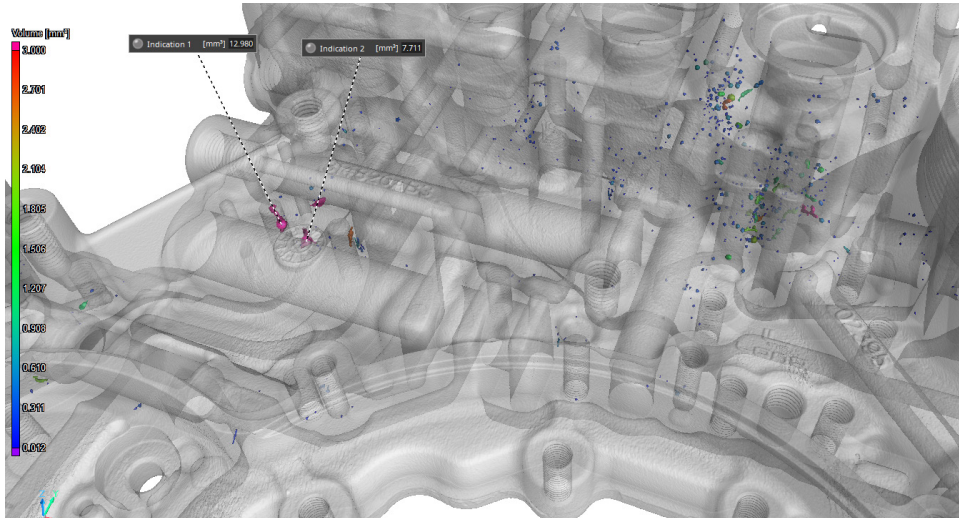
To read more about this system, scan the code to visit our website.

Application Case

Porosity/inclusion analysis of an aluminium die-cast part with colour map to indicate the volume of the pores.



Section view



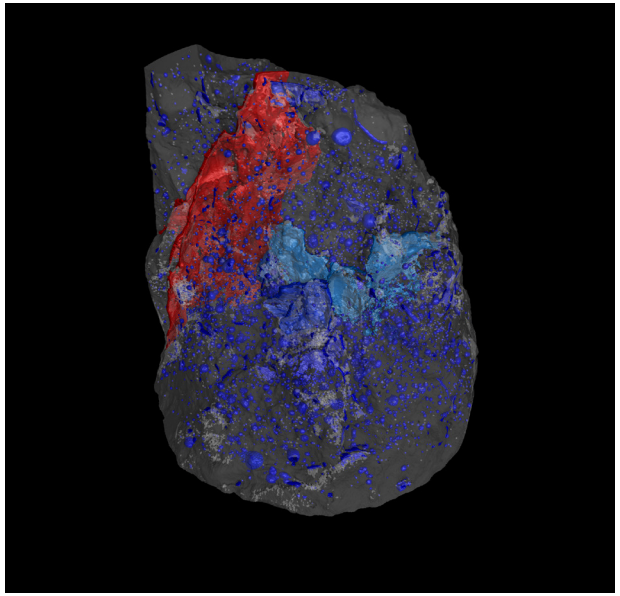
3D view

CT-ALPHA nanotube

The CT-ALPHA nanotube provides a unique solution for high-resolution measurements far ahead of established industrial micro CT scanners by applying the latest developments from X-ray research.

Spatial resolution: 150 nm
X-Ray voltage: 10 to 160 kV

To read more about this system, scan the code to visit our website.

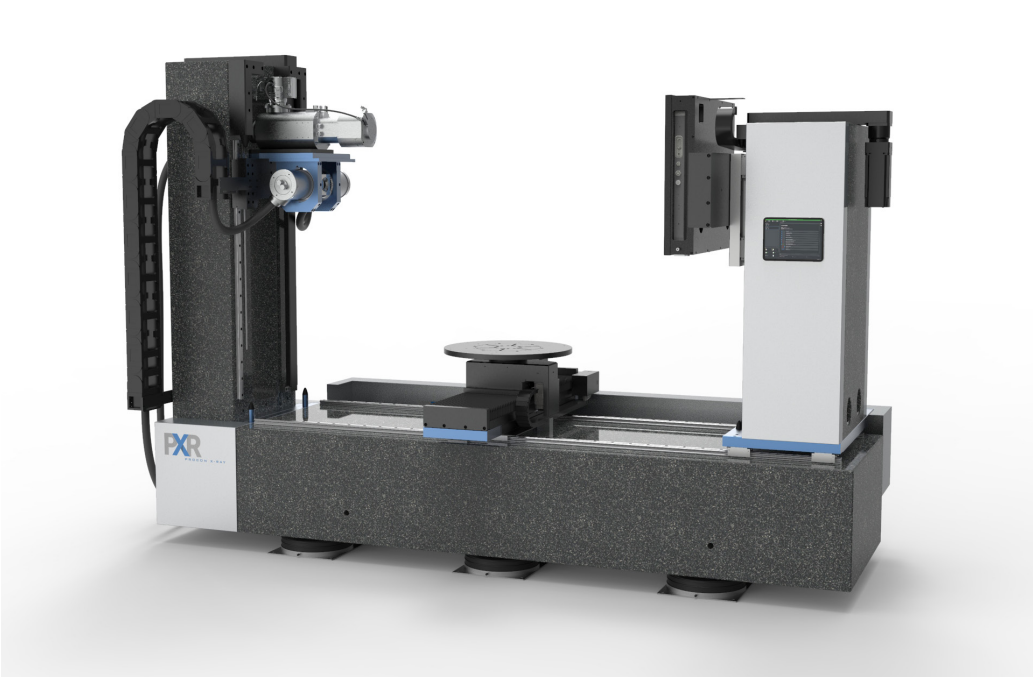


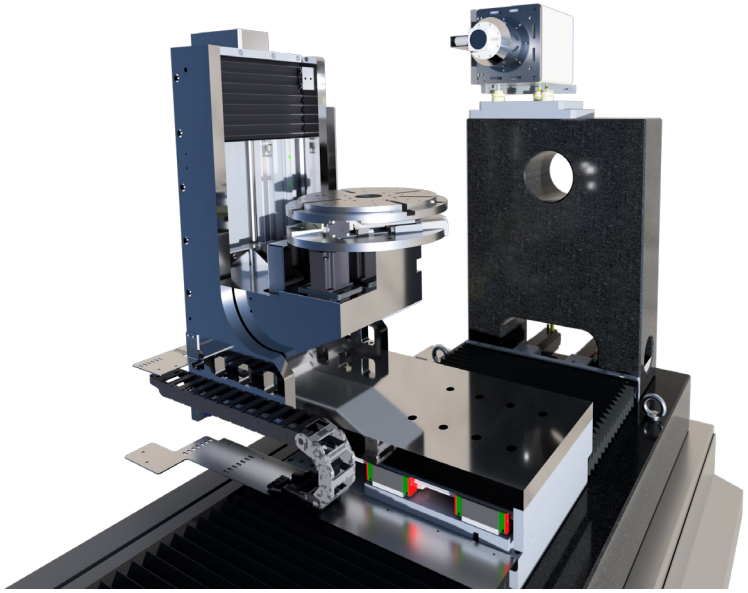
3D representation of cracks and pores in a rock sample

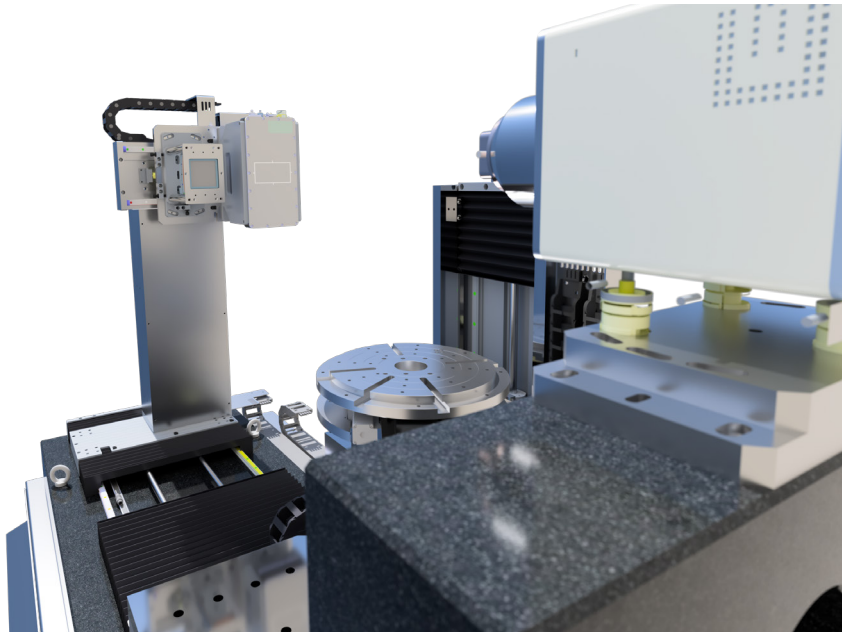
Application Case

This sample of concrete has a diameter of 120 mm. A scan was conducted to analyse porosity, identifying cracks, holes, and air bubbles.

CT-ALPHA choris







This is our most flexible system, and is designed to be placed in a radiation-proof bunker. It is possible to construct this system with multiple sources and multiple detectors to allow a large variety of samples to be scanned.

Highest spatial resolution: 0,5 µm
X-Ray voltage: up to 600 kV

To read more about this system,
scan the code to visit our website.

Service & Maintenance

Partners for the lifetime of the system

Rapid Response & Remote Support

In case of unexpected issues, our qualified service technicians are ready to respond quickly – either on-site or via remote diagnostics. Most software-related challenges can be resolved remotely, minimizing delays and production interruptions.

Training & Technical Support

Our service also includes comprehensive operator training and technical support to empower your team. From basic system handling to advanced diagnostics, we ensure your personnel are well-prepared to make the most of your CT system.

Service Contracts

Tailored service contracts offer predictable maintenance costs, priority response times, and maximum transparency. Choose from various service levels to match your production and budgetary requirements.

Reliable Support for Maximum System Uptime

Preventive Maintenance

Our scheduled preventive maintenance programs help identify and resolve potential issues before they lead to downtime. Regular inspections, calibration checks, and component replacements extend the life of your system and ensure consistent image quality.

Spare Parts & Upgrades

We offer original spare parts, wear part replacements, and hardware upgrades to keep your system up-to-date and running smoothly. Whether it's a high-voltage cable or a detector module, we ensure compatibility and performance.

CT Scan Services

Discover areas of improvement

Stress Test Before Mass Production

CT scans can be used to determine the quality and durability of parts before significant investments are made into large-scale manufacturing.

When parts are required to meet strict quality standards in order to be certified by a laboratory, it makes sense to perform tests and create accurate simulations to determine whether a part would pass costly certification processes.

Improve your Process and Product

Our CT scan service can assist in improving quality control and manufacturing processes. By evaluating and assessing a part while still in the design, development and prototype phases, the overall quality of the manufacturing process – as well as the end product – can be significantly improved.

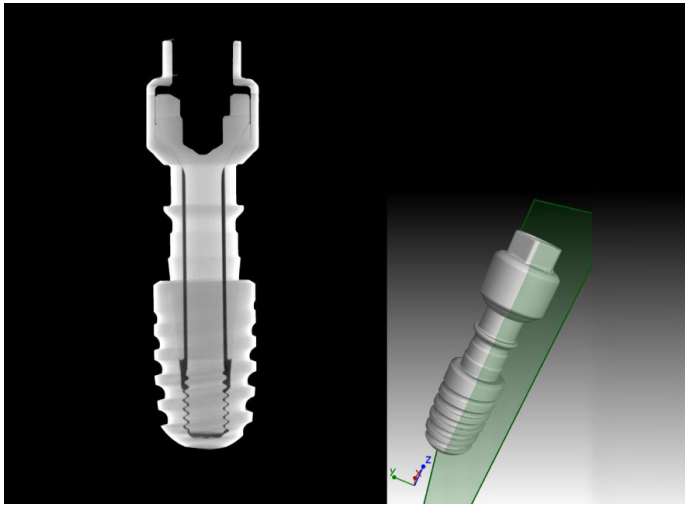
In industries where the safety of manufactured parts is critical in order to meet exacting quality standards, refining the design and prototype before large-scale manufacturing commences can save considerable time and money.

Dimensional 3D measurement technology

Dimensional 3D measurement technology offers the possibility of fast, single-point-based distance and angle analyses. This means that all shape and position tolerances can be evaluated.

Surface analyses
Target/actual comparison: Color-coded comparisons between all data types provide easy-to-understand, visual information about deviations.

Wall thickness analysis
Analysis of the wall thickness of a part can be performed. We have the ability to create a direction-based assessment for cubic components or a sphere-based assessment for complex, organic geometries.



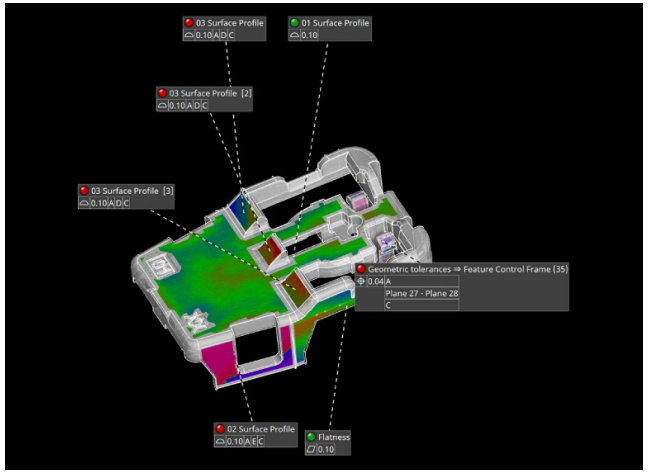
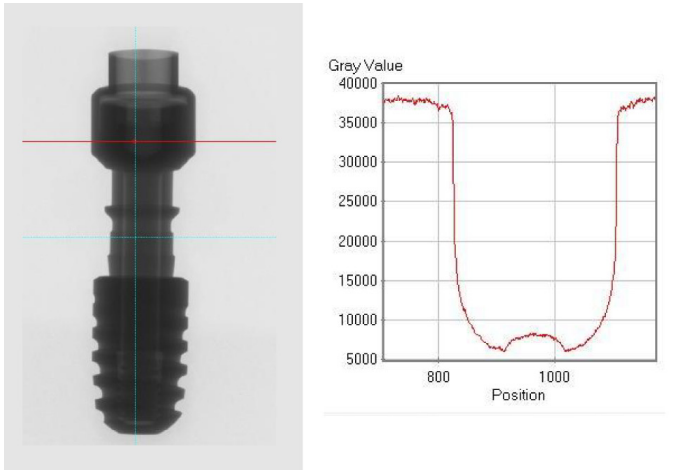


Image courtesy of Volume Graphics



Example scan images in different report compiled for various clients.

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