



3D X-RAY TOMOGRAPHY SYSTEMS



www.rx-solutions.com

Performance Made Easy

INDUSTRIAL COMPUTED TOMOGRAPHY HIGH PERFORMANCE X-RAY SYSTEMS

RX Solutions is 100% focused on X-ray imaging solutions. The aim at RX Solutions has always been to provide customers with the best X-ray and CT solutions, for inspecting and analyzing both external and internal features of parts.

RX Solutions designs, manufactures and supports one of the broadest range of high performance CT systems, from micro to nano scale analysis.

Innovative technology

to reveal hidden structures of your parts

Innovation is at the core of our mission, whether it is for quality control, examination of a component or solving design issues. With an important investment in R&D, our team of experts and engineers are committed to serving different industrial & academic sectors and working in close collaboration with our customers to ensure highest levels of performance.



An expert by your side

With a continuous improvement approach, we aim to increase our customers' industrial productivity & development without compromising quality, reliability & safety.

Customer proximity means we integrate in our offer: training, maintenance, support and all the services that optimize the performance of our equipment within its applications. By closely cooperating with our global distribution partners, we give you easy access to our high-grade expertise and support.



Team of experts



Worldwide distribution



ISO 9001
quality
management



What's best with CT ?

X-Ray Computed Tomography
The most advanced technology for 3D Inspection

Virtual sample cut

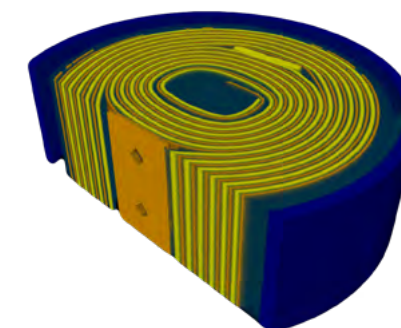
X-ray CT allows to virtually cut the scanned sample in any orientation for high resolution visualization and analysis of thin slices at any depth

One single scan - multiple data

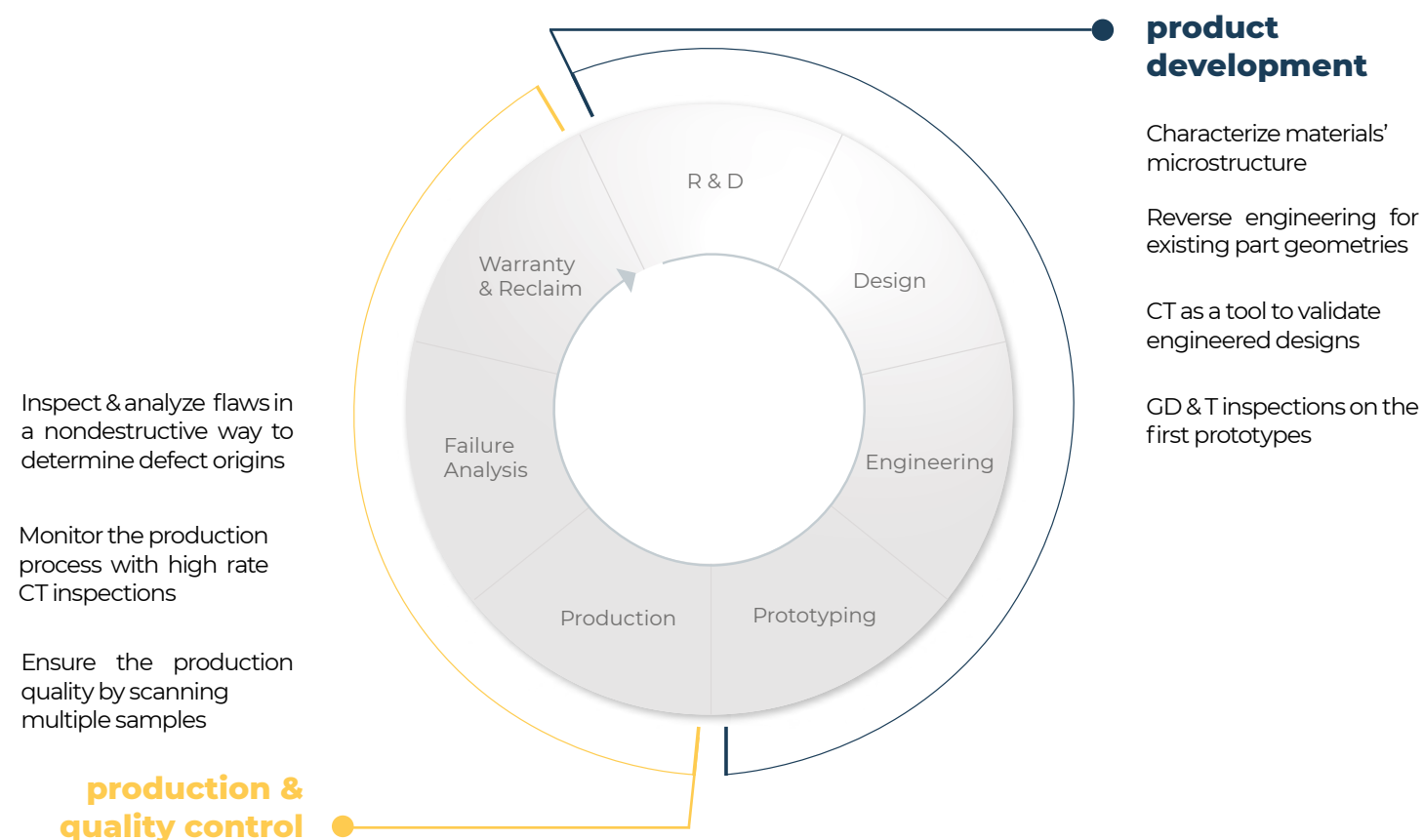
One scan allows multiple analyses to be performed: dimensional measurements, material characterization, defects analysis and inspections of inner structures in a non-destructive way

Inspect and reproduce any assembly

X-ray CT provides a detailed rendering of all the internal and external features. Point clouds representing the surfaces can be extracted allowing parts to be easily reproduced even when CAD models are no longer available



Computed Tomography at all stages of product life cycle



OUR EXPERTISE

REVEAL ALL DETAILS OF YOUR PARTS

Computed Tomography offers a significant advantage for various industries because of its ability to reveal hidden details of your parts. Getting a perfect insight of the invisible features of your parts allows you to capture, investigate, measure & analyze internal and external structures of your components in a nondestructive way.

RX Solutions offers complete and powerful X-ray CT systems with the finest level of detail: resolution down to sub-micron level, covering both industrial and academic applications.

CT systems portfolio covers a large scale of analysis, from Micro focus (4 μm) to Nano focus (0.4 μm) to satisfy a broad spectrum of applications.



High resolution



Low cost of ownership



High availability



Artefacts corrections



Scanning strategies



User friendly

Highly configurable CT systems

There is no need to compromise, RX Solutions has a solution for every application. The broad portfolio covers all sample sizes, and every application allowing multiple configurations with the most appropriate components:



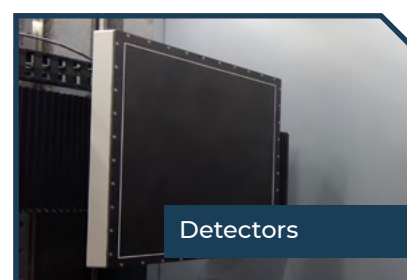
Multi axis mechanics

Micro and Nano mechanics with high grade honeycomb optical breadboards or granite base.



X-ray tube configuration

Variety of micro and nano focus tubes available. Dual-tube configuration available, to combine high power and high resolution.



Detectors

Large choice of flat panels and high resolution cameras.

EasyTom S



Compact. Medium size samples. Maximized uptime.

EasyTom



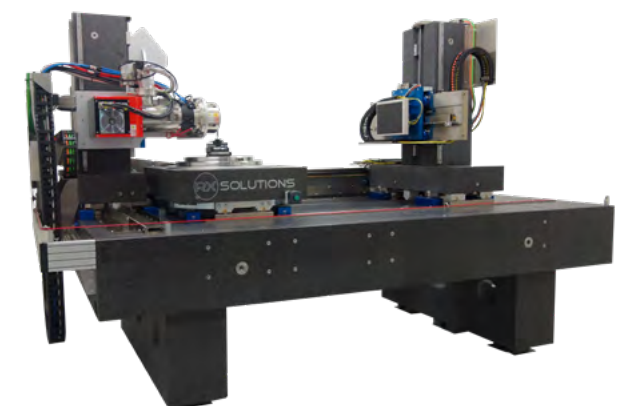
Flexible. Micro & Nano focus. Medium size samples.

EasyTom XL



Powerful. Step-in cabinet. Large size samples.

UltraTom



Lab CT system. Multi tubes & detectors configurations.

KEY FEATURES // HIGHLIGHTS

Extremely High Resolution

Outstanding CT resolution down to 0,4 μm
First class mechanics

Flexible solutions

Wide range of applications
Easy to use & maintain
Small footprint & easy integration

Automatic Object Positioning

High-grade manipulators
Up to 9-axes kinematics & live view

One scan, multiple inspections

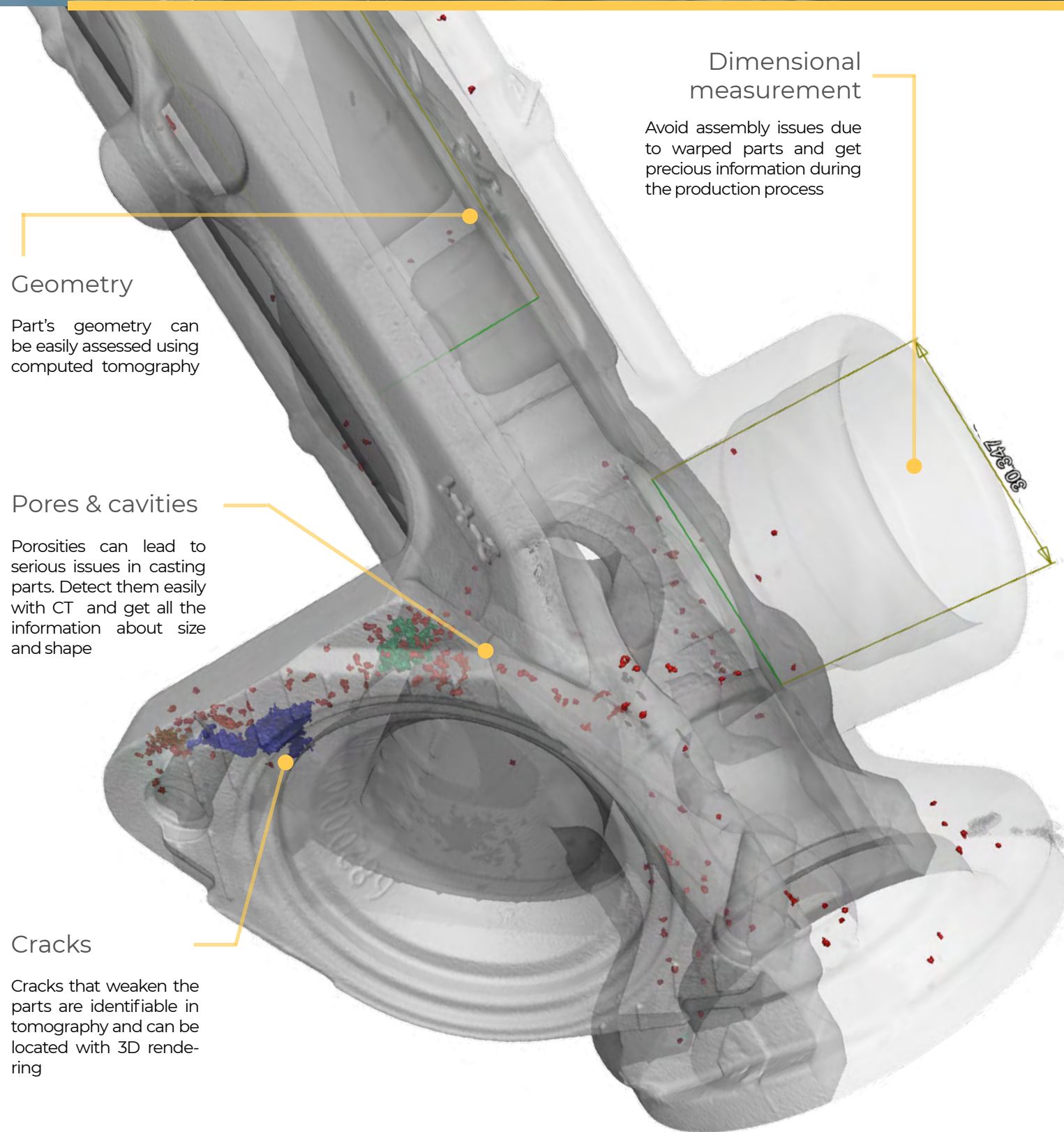
Material analysis
Geometry and Metrology

Lasting investment

Upgradable CT solutions
Reliable and proven CT equipment

Powerful & advanced software

Intuitive Acquisition & Reconstruction
Multiple scanning strategies



Material analysis

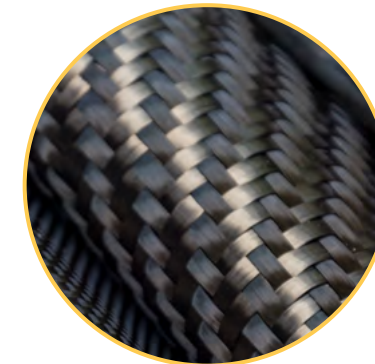
Micro structure analysis
Fiber Analysis
Welding characterization
Assembly inspection
Failure analysis

Geometry & Metrology

Wall - thickness analysis
Comparison
Reverse engineering

NANO technology

Explore beyond the limits
Ultimate CT performance in your lab

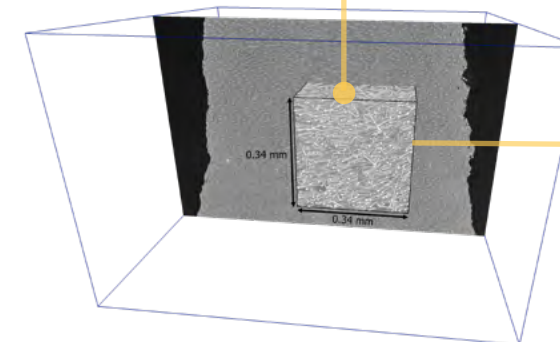


Nano-CT is a high resolution technology for 3D imaging at sub-micron resolution. The technical concept is based on a further development of micro-CT technology. By improving the spatial resolution, structures at a cellular level become visible.

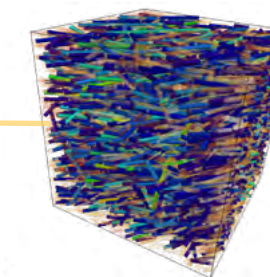


Nano-CT on a composite sample as follows :

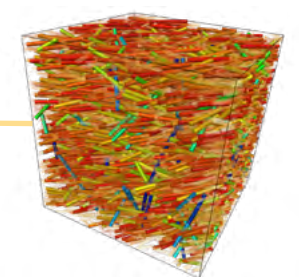
- resolution of 0.7 μm
- sub volume extraction also called ROI (Region of Interest)



Fibers scale extraction



Fiber length
color coding



Fiber orientation
color coding

Our focus industries



Additive
manufacturing



Aerospace



Automotive



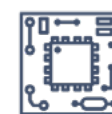
Arts & jewels



Composite



Defence



Electronics



Medical
& Dental



Injection
molding



Oil & gas



Plastics



Research
& Science

High performance & compact CT system

The most compact equipment for small to medium sized parts

RX Solutions EasyTom S is a compact and powerful CT System designed to address the most challenging 3D applications ranging from material research to industrial applications in R&D, quality assurance and production. Ideal for metrology.

With this new compact equipment, it is now possible to visualize, measure and analyze with high resolution large components or assemblies, up to 230 mm in diameter and 380 mm in height.



Long lasting investment

Scalable CT solutions.
Reliable and easy to maintain.

High performance

Outstanding resolution down to 2 µm.
First class mechanics: 4 high precision granite mechanical axes.

Flexible solution

Large inspection volume (ø 230 x H 380 mm).
Easy integration with compact footprint: H.1870mm – W.1430mm – D.890mm.

Automation meets accuracy



Filter changer

Automatic filter selection to perform batch CT scans of multiple samples of diverse materials.



Sample loader

Scan multiple parts without operator intervention needed. Automatic scan overnight for 24/7 operation mode.



High resolution camera

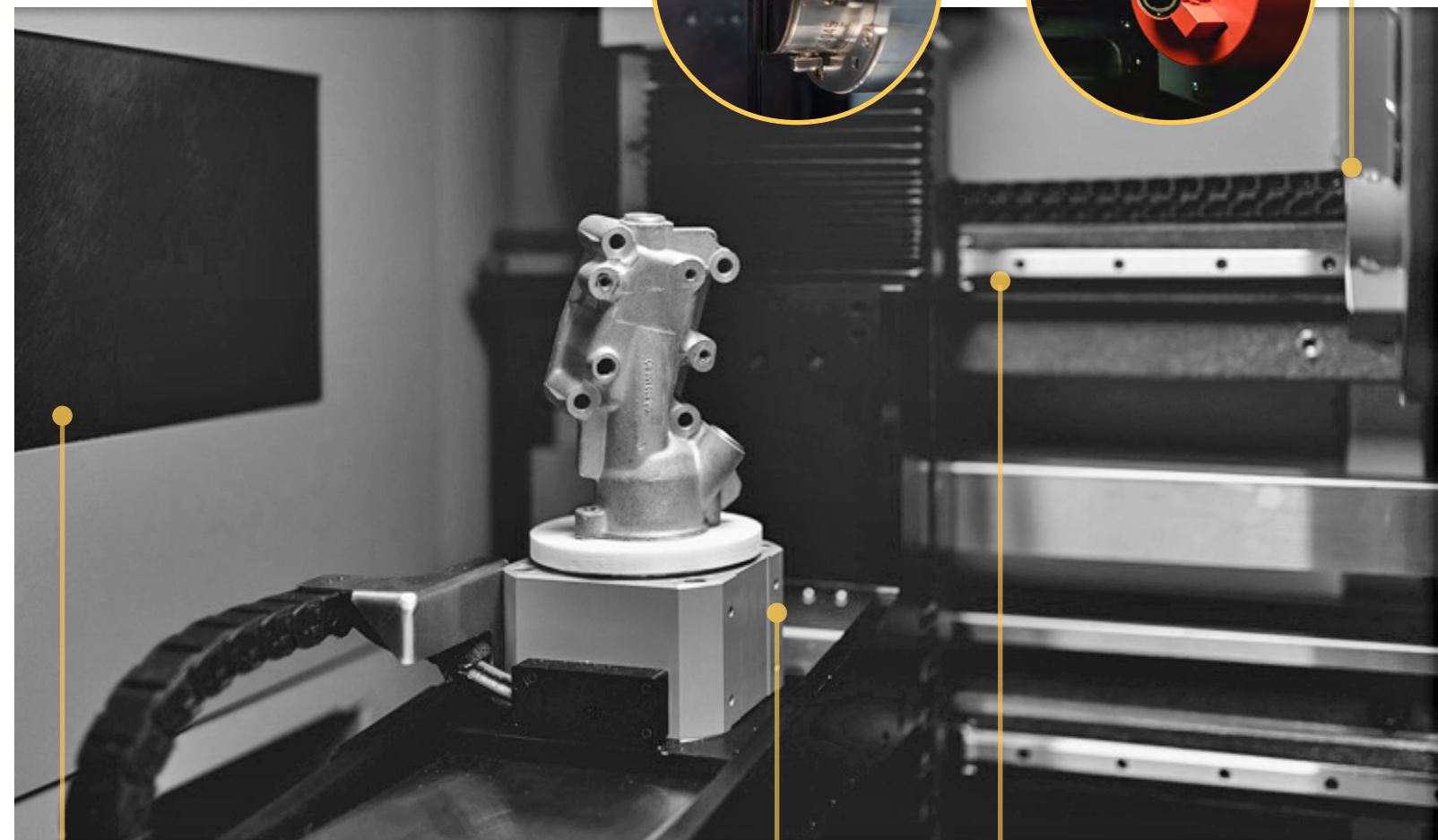
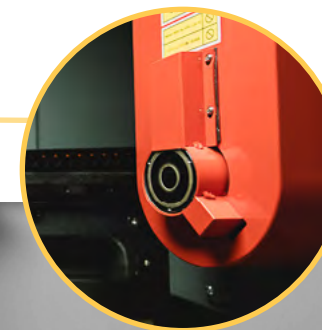
Optional high resolution camera. Improves resolution on large samples for nano-CT.

No compromise, a solution for every application

EasyTom S can be configured and upgraded with numerous optional features to perfectly meet your specific applications.

X-ray tubes

High power microfocus X-ray generators: 110 to 150 kV.



X-ray detector

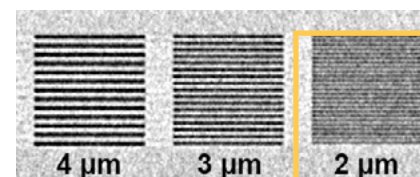
High-grade detectors with multiple choice: Flat panel and high resolution camera.

Rotation stage

High-precision rotation stage.

Multi axes mechanics

First-class mechanic with granite axes for long-term stability, 4 axes manipulator.

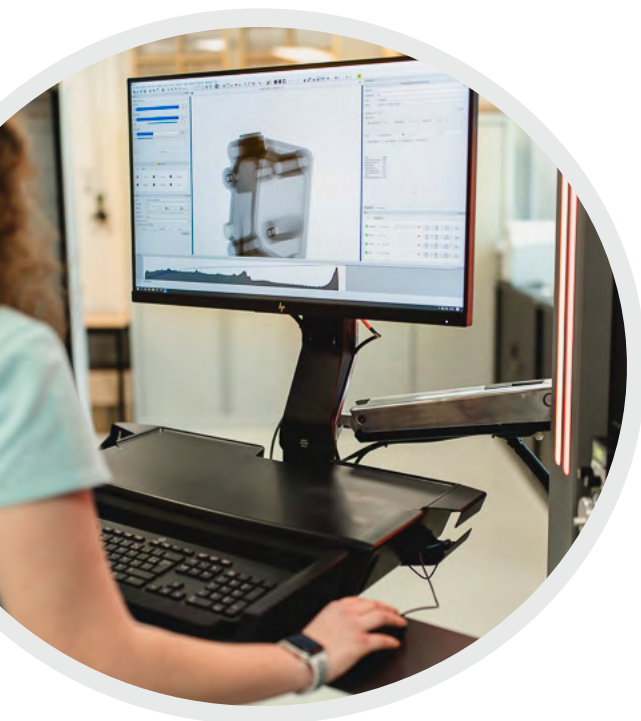


QRM microchart 3D resolution of 2 µm

Compact and powerful equipment

High grade resolution gives sharp details as well as the balanced contrast and brightness.

Inspection volume : Ø 230 mm & H 380 mm



Powerful, advanced & intuitive software

Everything is combined in a single X-ray software from the setup to the CT scan's 3D rendering

X-Act software integrates a complete interface to accurately inspect your samples.

This is an acquisition and reconstruction software that, as an advanced solution, integrates a large number of functionalities enabling optimized results for any sample.

Radiography

Live inspection

Radiography is quick and easy with X-Act. Software filters are included to improve sharpness and contrast. 3D measurements can be taken directly on the radio.

Acquisition

Data acquisition

The workpiece previously positioned in the equipment rotates through 360°. During this rotation, a set of radio projections are acquired at different angles.

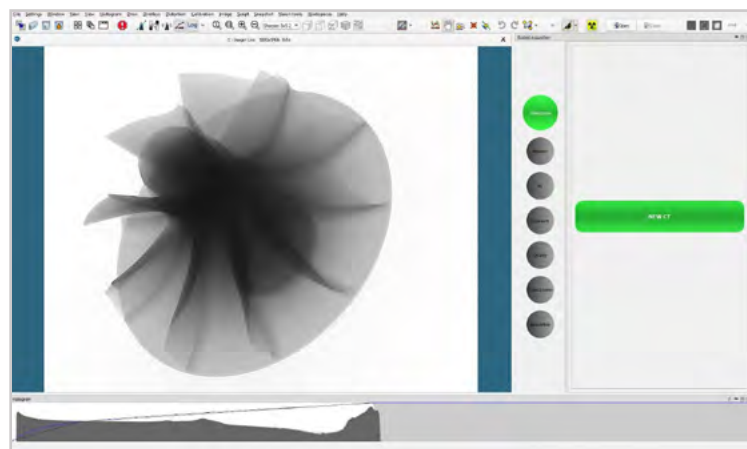
Reconstruction

Data processing

All the projections made during the acquisition step are reconstructed in a 3D volume. This will serve as the basis for the optional step: quantitative analysis.

Ease of use

thanks to X-Act guided acquisition & wizard modes



Guided acquisition mode is designed to configure the acquisition parameters step by step with the user and suggest the preferable settings values at each step.

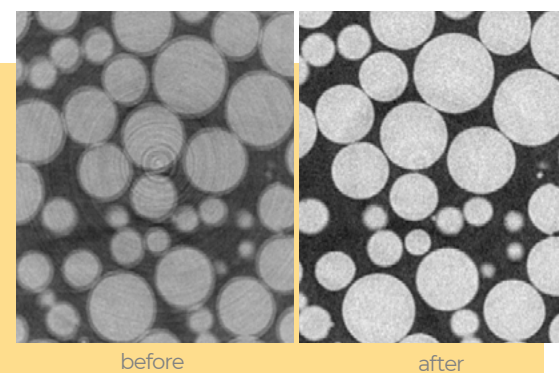
Wizard mode is a fully automatic acquisition tool. The user acts as supervisor and the complete acquisition process is defined and executed by the system.

Regardless of your expertise, you will obtain results of highest quality.

Multiple Scanning Strategies & Great Flexibility

X-Act is a powerful software with an easy and intuitive user interface. Delivered with an incredible number of functionalities, X-Act enables you to set the perfect parameters for the scanning process, for any kind of sample.

X-Act allows multiple scanning strategies, from conventional CT scan mode to multiple advanced acquisitions capabilities, such as helical, stack, shift, laminography, limited angles, Region of interest zooming, Dynamic 4D CT...



Advanced Artefact Corrections

X-Act software suite by RX Solutions includes multiple artefacts compensations plugins that enhance CT scans:

Geometry, focal spot movement, phase contrast, ring artefact, beam hardening, metal artefacts and more

Automation, Macro & Scripting

These functions allow the programming of automatic scans when carrying out inspections of large series of samples.

They can drastically increase the throughput of your CT system and the overall productivity. Unique scripting capabilities allow you to extend or custom fit the system to your needs.



Continuous Improvement Strategy

Our team is continuously working to provide customers with the best X-Act experience by focusing on high-level image processing and tomographic reconstruction. X-Act is improved with innovations, especially developed to enhance capabilities, increase speed or release features the industry has never seen before.

Since the beginning, the flexible spirit behind X-Act has been kept, making this software a perfect CT tool for every application.

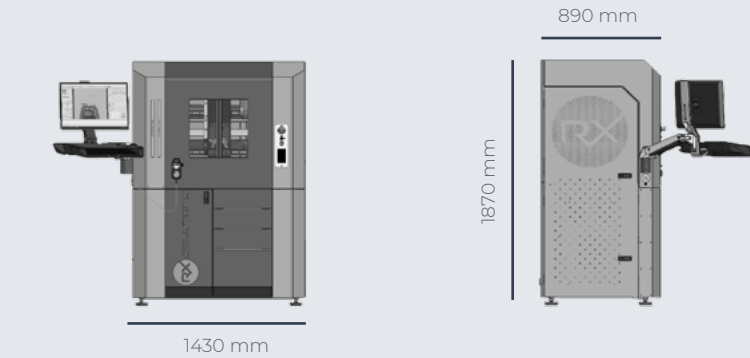
TECHNICAL SPECIFICATIONS

OUR PRODUCT PORTFOLIO FEATURES

	Max kV	Max power	Types	Max resolution ¹	EasyTom S	EasyTom	EasyTom XL	UltraTom
X-ray tubes	Micro 110	16 W	Sealed	2 µm	●			
	Micro 130	39 W	Sealed	5 µm	●	●	●	●
	Micro 150	75 W	Sealed	5 µm	●	●	●	●
	Micro 230	200 W	Open	2 µm / 4 µm		●	●	●
	Micro 300	300 W	Open	4 µm				●
	Nano 160	16 W	Open	0.4 µm		●	●	●
	Dual tube configuration					●	●	●
¹ JIMA chart resolution								
	Type	Pixel matrix	Pixel pitch	Sizes	EasyTom S	EasyTom	EasyTom XL	UltraTom
Detectors ²	Flat Panel	1920x1536	127 µm	25 x 20 cm	●	●	●	●
	Flat Panel	2048x2560	124 µm	32 x 25 cm	●	●	●	●
	Flat Panel	3072x3072	139 µm	43 x 43 cm		●	●	●
	Camera	4008x2672	9 µm	36 x 24 mm	●	●	●	●
² other detectors available on request								
Mechanic	High-grade optical honeycomb breadboard table that ensures stability for micro-CT scans					●	●	
	Granite-base that ensures temperature stability and good damping properties				●	●	●	●
	EasyTom S		EasyTom		EasyTom XL			UltraTom
Mechanic			Micro	Nano	Micro	Nano	Ultra	
N° of axes	4	7	9		7	9	9	9
Max SDD ³	610 mm	910 mm	780 mm		1470 mm	780 mm	1100 mm	1640 mm
Scan volume	Ø 180 x 380 mm (with 2520) Ø 230 x 380 mm (with 2532)	Ø 420 x 520 mm	Ø 220 x 350 mm		Ø 600 x 720 mm	Ø 220 x 350 mm	Ø 520 x 650 mm	Ø 520 x 650 mm
Max sample weight	5 kg	30 kg	20 kg		100 kg	20 kg	80 kg	100 kg
General								
Weight	1020 kg	3300 kg	2500 kg		7000 kg	5000 kg	7400 kg	7000 kg
External dim	1345(W)x900(D) x1870(H) mm	2200 (W) x 1100 (D) x 2000 (H) mm			2800 (W) x 1850 (D) x 2400 (H) mm			3230(W)x1420(D) x2520(H) mm
Radiation safety	High grade X-ray shielded cabinet (< 0.5 µSv / h at any place of the instrument surface) for integral protection							Placed in a shielded operation room
Software	All systems are controlled by RX Solutions X-Act software							
³ Source to Detector Distance								

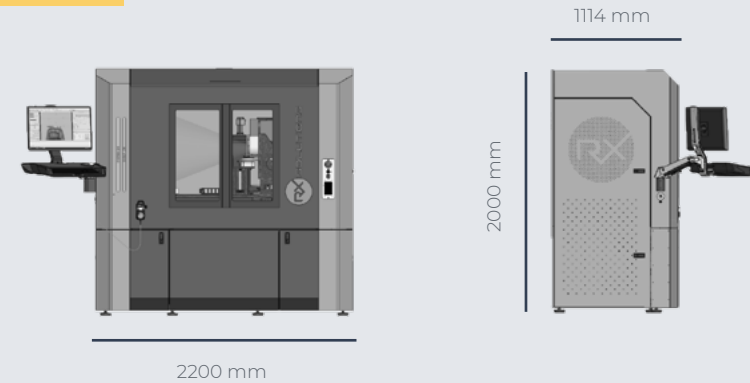
// EasyTom S

High Resolution Industrial CT System for Small / Medium Size Parts



// EasyTom

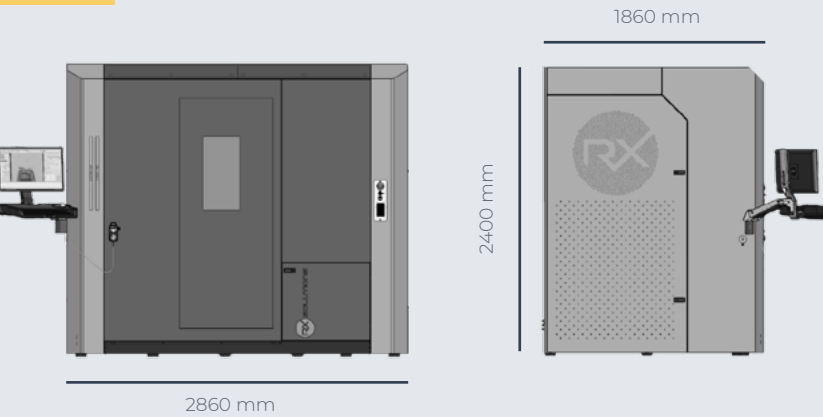
High Resolution Micro & Nano CT System for Medium Size Parts



// EasyTom XL

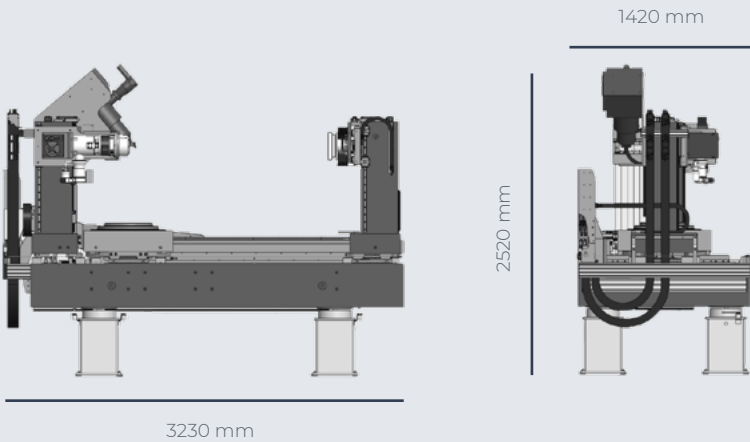
High Resolution Micro & Nano CT System for Large Size Parts

Very Large step-in cabinet



// UltraTom

Modular Design for a Highly Versatile X-ray Micro & Nano CT System





sales@rx-solutions.com
www.rx-solutions.com

24 Bis, rue Uranus, ZAC Altaïs
F-74650 Chavanod FRANCE
Tél. +33 (0)4 50 67 39 52



© 2022 RX Solutions. All rights reserved.