CT-COMPACT plus

Key Facts

Fit for industry: Most versatile and flexible benchtop system in the product range.

Light and spacious: Ideal for sophisticated laboratory applications.

High resolution: Micro-focus and micro-meter resolution.

Future-proof: Our Python API paves the way for your automation applications.

Application examples: AI battery inspection with automatic sample feeder; long-term examination of snow-cores at -40°C.

When it is important to have a full CT-System in a limited space, PXR's benchtop-systems are the right choice. Our systems are custom built to suit your requirements. This optimisation offers the best cost-to-performance ratio.

The CT-COMPACT is equipped with a 130 kV X-Ray-Source and a 14 x 12 cm Flat-Panel-Detector in portrait-orientation. It is able to scan large samples up to 300 mm in diameter and 210 mm in height. With the usage of light materials we made it to reduce its weight to ~600 kg, which allows the usage in every laboratory without the need of heavy load floors.

The CT-COMPACT can be customised in any detail, e.g. to pick up larger specimens or give room for different detectors with a higher number of pixels.

The CT-COMPACT offers all options of the larger floorstand-models like Axial-Scans, Fast-CT, horizontal Measurement-Field-Extension, vertical Measurement-Field-Extension, Helix-CT, or many more.

The 130 kV X-Ray-Source has a maximum power of 39 Watt and the minimum focal spot can be less than 5 µm, which allows to resolve features smaller than 3 µm. The combination with a large Flat-Panel-Detector allows to scan large object in a very short time.

Like all benchtop systems, the CT-COMPACT is ideal for non-destructive testing, materials analysis, metrology, rapid prototyping and many more.

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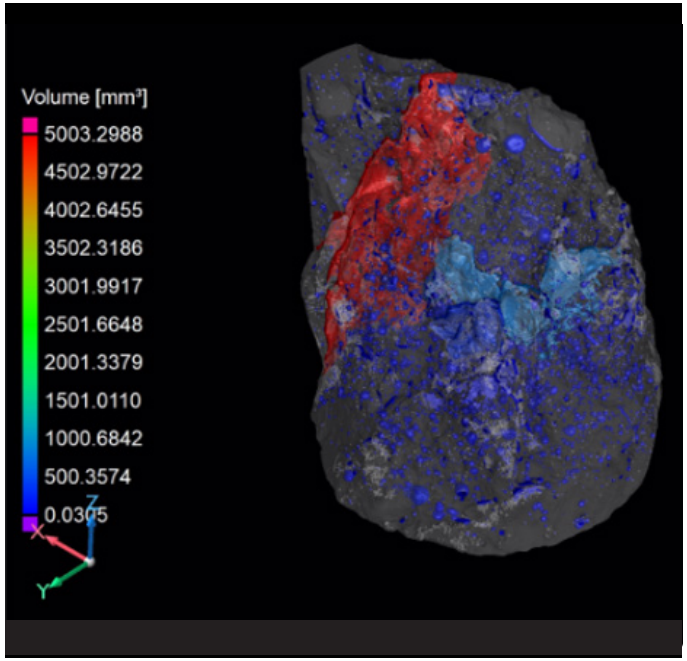
Specifications

X-ray source	40 - 130 kV up to 39 W 5 µm min. focal spot
Detector	7.5 Megapixel 100 µm pixel size 3008 x 4802 pixel
Highest spatial resolution	< 5 µm
Smallest voxel size	< 1,2 µm
Max. object size	Ø 360 x H 600 mm
Max. object weight	10 kg
Max. scan size	Ø 300 x H 330 mm
FDD	520 mm
FOD	13 - 420 mm
Number of axes	5
System dimensions (L x W x H)	1300 x 800 x 900 mm
System weight	~600 kg
Power supply	100 - 240 V AC, 50/60 Hz

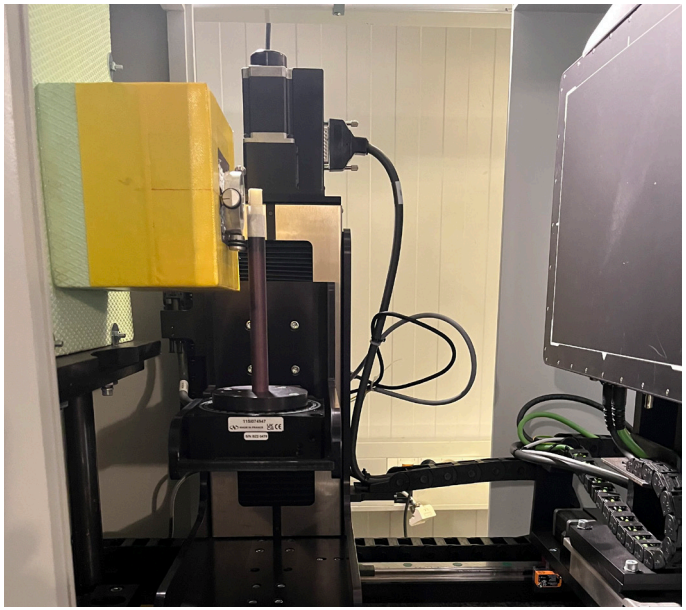
To read more about this system, scan the code to visit our website.

Features

- Industrial X-ray Computed Tomography (CT)
- 3D volume CT
- Non-destructive testing (NDT) – 2D and 3D
- Quality control independent of material
- Defect recognition (voids, cracks, etc.)
- Contactless metrology
- Fast CT reconstruction
- Artefact reduction
- Easy operation & low maintenance needs
- Radiation safety better than 1 µSv/h



Porosity analysis conducted on a piece of concrete



Our systems can be adapted to operate in extreme conditions.

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.

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