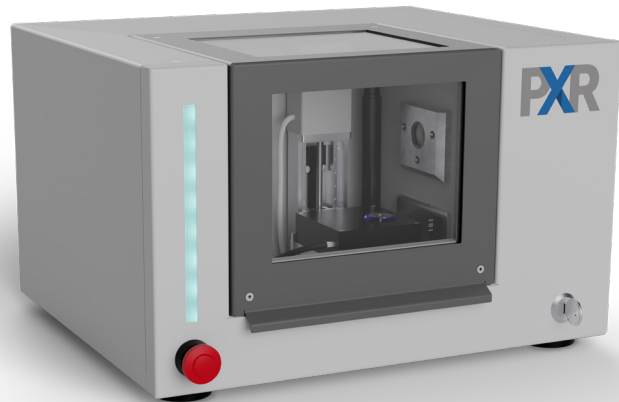


# | CT-PORTABLE



## Key Facts

**Groundbreaking:** Smallest CT system in the world.

Developed in collaboration with Fraunhofer EZRT and available exclusively from ProCon X-Ray.

**Flexible application:** Can be operated in a large variety of settings - from laboratories to workshops and factories.

**Application examples:** Electronic components, computer chips, all manner of plastics, textiles, biological and organic samples (examples: insects and bones), geological samples, small medical devices (example: hearing aids).

Most CT-Systems are huge, slow and bound to a specific location.

In order to solve these problems, PXR and the Fraunhofer EZRT developed the CT-PORTABLE, a mobile, compact benchtop system. This system is designed for the inspection of small objects made of plastics, textiles, ceramics, light metal, biological or other light materials.

It is the smallest mobile CT system in the world. With its dimensions of ~350 x 330 x 230 mm (L x W x H), the space requirement of the CT system is minimal, moreover the low weight of ~25 kg ensures maximum mobility. These features enable the user to apply the system flexibly at any location without

needing to transport samples or components to a laboratory.

The CT-PORTABLE is especially suitable for demonstration purposes as well as for mobile services or application in arbitrary laboratories.

The system can not only be utilised by universities or research institutions in the fields of, for example biology, geology and archaeology, but can also be applied in industrial settings. Here it is especially suited for nondestructive testing for quality assurance in the areas of electrics, plastics and 3D printed parts, textiles and ceramics. The range of applications also includes rapid prototyping.

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## Specifications

X-ray source	50 kV up to 50 W < 50 µm focal spot
Detector	1 Megapixel 49.5 µm pixel size 1152 x 1300 pixel
Highest spatial resolution	< 25 µm
Smallest voxel size	< 18 µm
Max. object size	Ø 100 x H 100 mm
Max. object weight	250 g
Max. scan size	Ø 45 x H 65 mm
FDD*	250 mm
FOD**	93 - 200 mm
System dimensions (L x W x H)	350 x 330 x 230 mm
System weight	~25 kg
Power supply	100 - 240 V AC, 50/60 Hz

\*FDD - Focus Detector Distance

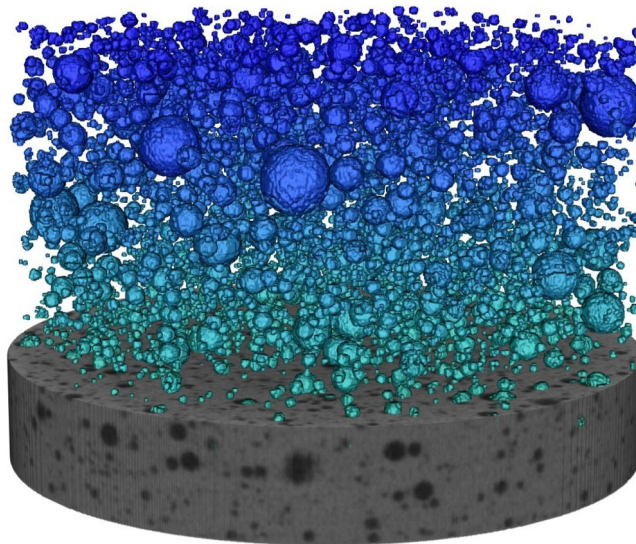
\*\*FOD - Focus Object Distance



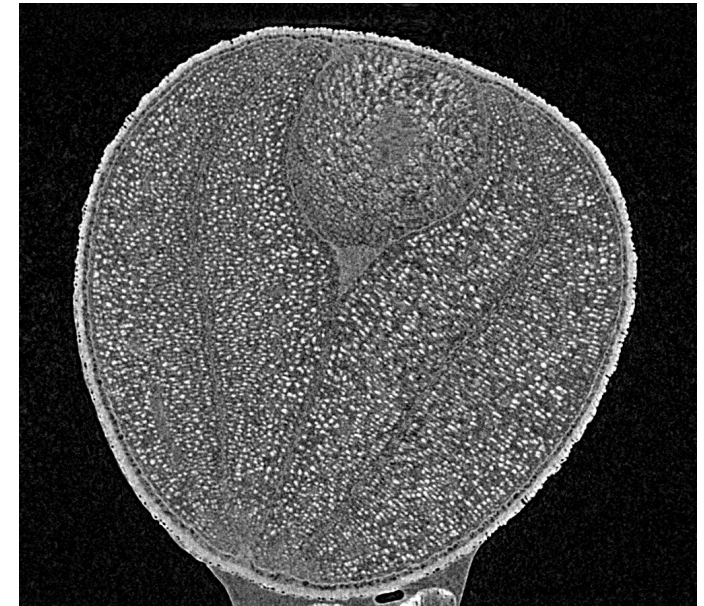
To read more about this system,  
scan the code to visit our website.

## 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



Pore analysis of gluten-free dough



Cell structure of rapeseed

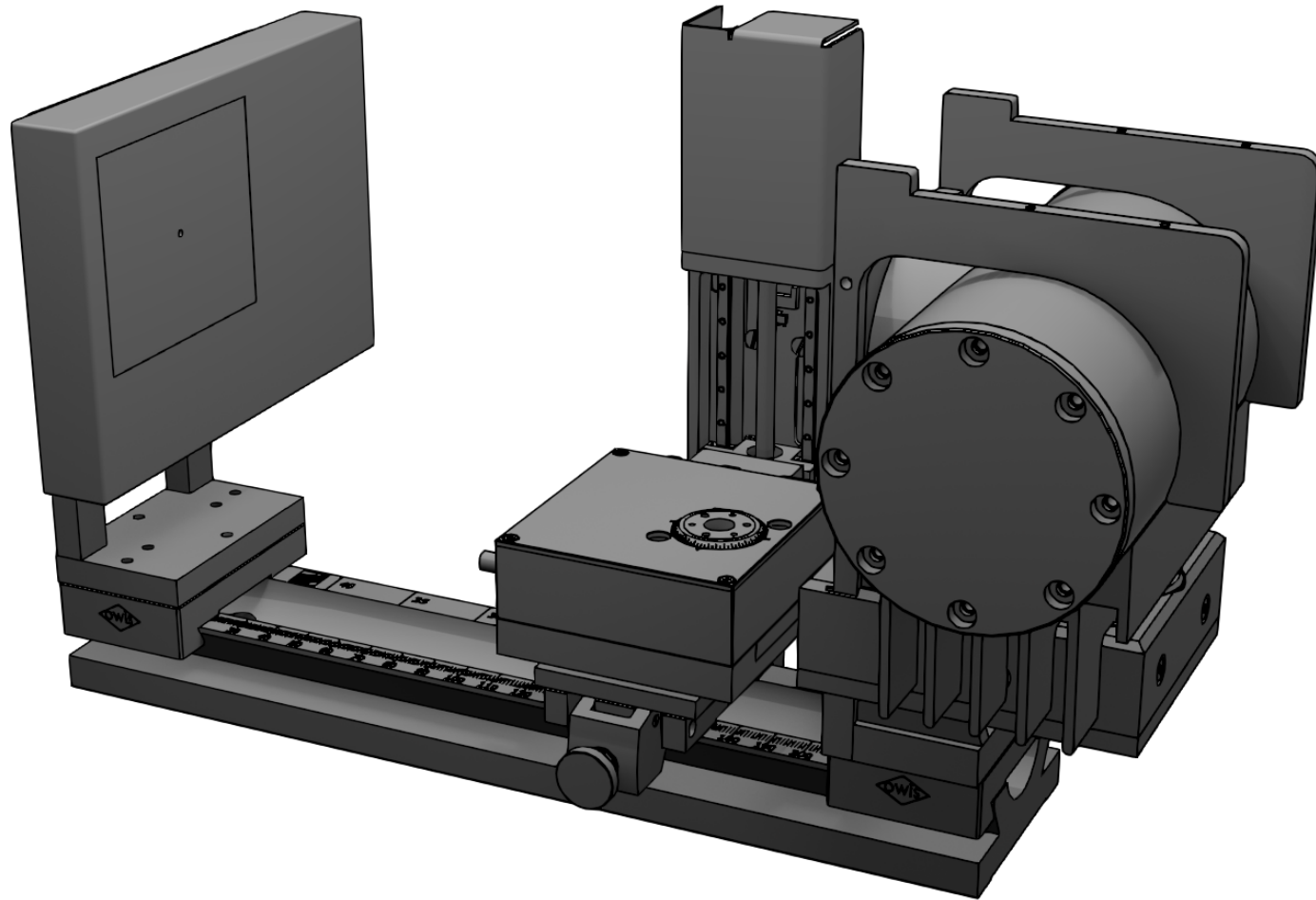
## Application Cases

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

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

Image credits: Fraunhofer Institute for Integrated Circuits IIS

## Drawing of CT-PORTABLE



Concept drawing showing the inside of the CT-PORTABLE. This system is extremely versatile due to its size and light weight.