phoenix v\tome\x m
Powerful versatile X-ray microfocus CT system for 3D metrology and analysis with up to 300 kV / 500 W

Key features & benefits

- **scatter|correct**: Highly improved CT quality level compared to conventional microfocus cone beam CT
- **high-flux|target**: Maintain high image quality and scan much faster, or with improved accuracy
- **dynamic 41|100 detector**: Doubled CT resolution at same scanning time or doubled throughput at same quality level compared to state of the art 200 µm pitch DXR detectors
- **Unique dual|tube configuration for high power µCT as well as high resolution nanoCT®**
- **metrology|edition for precision measurements with up to 4+L/100 µm referring to VDI 2630 guideline**
- **Optional production|edition for fully automated high throughput CT inspection**
- **Max. sample size up to 500 mm Ø x 600 mm in height; 3D scanning area max. 420 mm Ø x 400 mm; up to 50 kg (110 lbs.)**
**phoenix v|tome|x m**

High-end tool for 3D industrial and scientific CT analysis tasks

The phoenix v|tome|x m combines an unique innovations bundle of proprietary GE technologies to dramatically increase inspection throughput and quality. As the first CT system worldwide, it is available with next generation dynamic 41 digital detectors, allowing 2-3x faster CT scans or doubled CT resolution. Beyond down to < 1 µm detail detectability, the click & measure|CT automatization functionality and optional robot loading/unloading make it an efficient 3D inspection and measurement tool. Due to its dual|tube configuration, detailed 3D information for an extremely wide sample range is provided: from high resolution nanoCT® of low absorbing samples up to high power µCT applications such as turbine blade inspection.

**Industrial non-destructive 3D testing**

Beyond high-resolution 3D analysis in R&D and failure analysis labs, the phoenix v|tome|x m allows even 3D production control due to its powerful 300 kV tube and high dynamic detector technology for fast CT acquisition, fast velo|CT volume reconstruction and its fully automated robot option. Applications are, e.g., in light metal casting, electronics assembly, plastics molding as well as in turbine blade inspection:

- Internal defect analysis / 3D quantitative porosity analysis
- Assembly control
- Materials structure analysis

**Reproducible precision 3D metrology with CT**

Especially if complex parts with hidden or difficult accessible surfaces have to be measured, 3D CT offers big advantages in comparison with conventional tactile or optical coordinate measuring machines (CMMs) e.g. for work piece qualification and fast first article inspection. Optimized for long term stability and equipped with its specific 3D metrology package and advanced scatter|correct technology, the phoenix v|tome|x m includes all essential features for CT with extremely high accuracy and reproducibility:

- Accuracy specification of 4+L/100 µm referring to VDI 2630 guideline*
- Nominal-actual CAD comparison
- Dimensional measurements / wall thickness analysis
- Reverse engineering / tool compensation

**Explore the 3rd dimension of science**

With it's high resolution 180 kV nanoCT® option, the phoenix v|tome|x m opens a non destructive third dimension for scientific research down to the submicron scale - with no required preparation, slicing, coating or vacuum treatment. Analyze biomedical, materials science, composite, electronics or geological samples with down to < 0.5 microns voxel size.

*Compact CT system with unique dual|tube combination*
phoenix datos|x CT software

Fully automated data acquisition and volume processing

With datos|x, the entire CT process chain can be fully automated. Once the appropriate setup is programmed, the whole loading, scan and reconstruction process as well as 3D failure analysis or metrology evaluations like generation of first article inspection reports can be executed automatically.

Precise, reliable and fast CT results

By using phoenix datos|x CT software, 3D metrology and failure analysis with phoenix|x-ray CT systems becomes as fast and easy as never before.

- Fully automated data acquisition and volume processing – insert sample and start CT scan or simply start robot, check results
- Reproducible high precision 3D metrology and failure analysis tasks performed with a minimum of operator training and significant reduction of required operator time - for the production edition, one operator can run several systems parallel
- Wide spectrum of modules for ease of use and accurate CT results

Exclusive leading GE technology

For GE’s industrial phoenix CT systems, all main hard- and software components such as tubes or generators are proprietary GE technology:

- The v|tome|x m is the only microCT system worldwide available with the breakthrough scatter|correct technology innovation. This technological advancement automatically removes scatter artifacts from the CT volume, allowing users to gain significant improved CT results compared to conventional cone beam microCT.
- The new GE high-flux|target makes CT scanning more efficient due to up to 2 times faster microCT scans or doubled resolution.
- The superior imaging dynamic 41 detector is based on latest GE Healthcare photodiode and szintillator technology optimized for longterm reliable industrial CT.

phoenix v|tome|x m - Your Advantages

- Reduced CT artifacts by up to 300 kV X-ray radiation with advanced, high quality scatter|correct option
- High precision 3D metrology referring to VDI standard 2630
- Increased 3D inspection throughput due to efficient high-flux|target, fast detector technology and a high grade of automation
- GE’s 16” superior image quality 200 µm pixelsize dynamic 41|200 detector for doubled throughput, optional 41|100 for doubled resolution
- All major hardware and CT software components of the system are proprietary GE technology optimally compatible with one another
- Significant reduction of required operator time by using the click & measure|CT functionality or fully automated robot based operation

CT - measure and control with insight
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* Measured as deviation of sphere distance in tomographic static mode SD(TS), method details referring to VDI 2630-1.3 guideline on request, valid only for phoenix v|tome|x m metrology edition

** phoenix v|tome|x m metrology edition only available in specific countries at present, more information on request

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