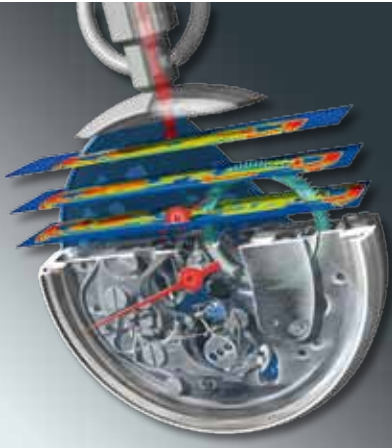


# Y.CT

## The Tool for Development and Production



- First article inspection
- Metrology incl. geometric dimensioning and tolerancing
- Reverse engineering: Interior and exterior in one data set
- Reliable 3D component analysis
- 100% safety with Y.Inline CT

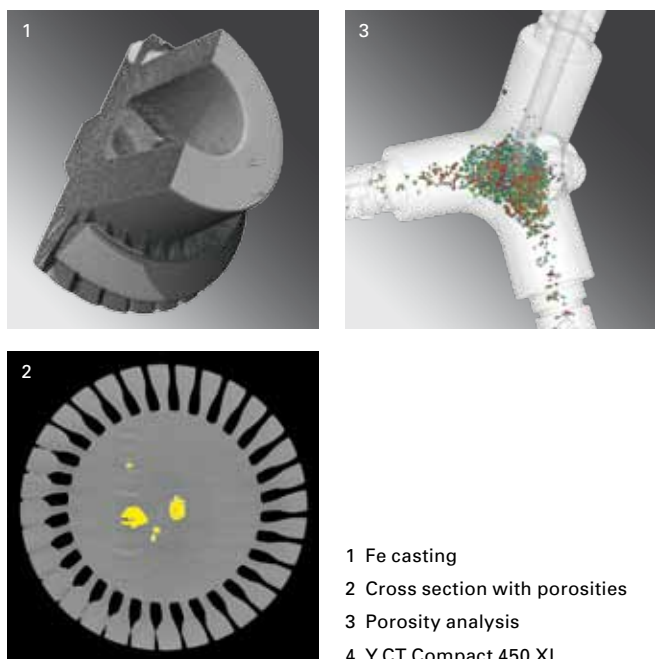
Computer tomography (CT) offers a unique three-dimensional view into the inspection item and enables a far more precise analysis than is possible with two-dimensional x-ray methods.

YXLON, with its wide range of CT systems and use of the latest technologies, can meet any number of inspection requirements, making it possible to perform highly precise geometric tolerancing and dimensioning as well as reliable actual/nominal comparison.

Furthermore, CT systems provide valuable information on the optimization of production processes, for example, by facilitating faster first article inspection or production efficiency.

YXLON CT systems were developed for a wide range of applications: for 100% safety in inline inspections, universal X-ray systems and high-resolution CT in microelectronics and metrology.

YXLON. X-ray and CT technology at its best.



1 Fe casting  
 2 Cross section with porosities  
 3 Porosity analysis  
 4 Y.CT Compact 450 XL



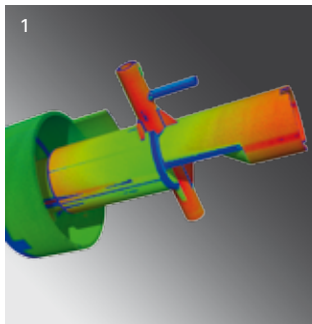
## Y.CT Compact

is equipped with a 450 kV X-ray source and a line detector, making it optimally suited for inspecting medium- to large-sized, high-density parts or materials, such as cylinder heads or gearboxes.

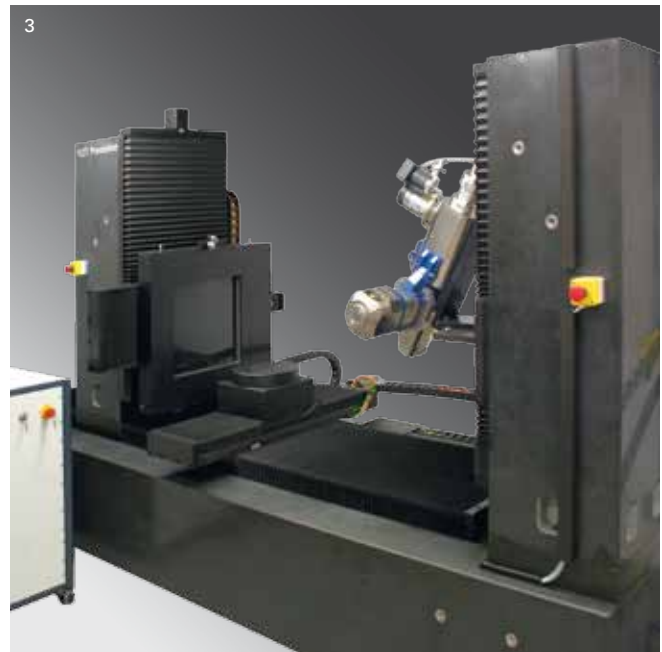
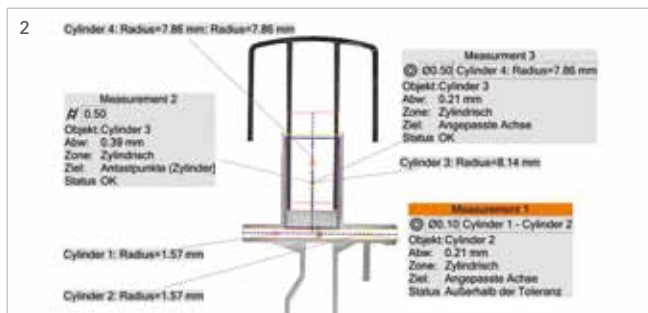
The Y.CT Compact can be used in production monitoring and for initial sampling of cast components, offering:

- Compact design
- Easy operation
- 3-D quality control
- Reduction of testing cost per unit

<b>CT Mode</b>	Fan beam CT
<b>Max. inspection envelope (ø x h)</b>	450 mm x 750 mm
<b>Max. sample weight</b>	50 kg
<b>X-ray source</b>	Y.TU450-D11 0.4 mm @ 0.7 kW / 1.0 mm @ 1.5 kW
<b>Detector</b>	Y.LineScan, 254 µm Pitch
<b>Magnification</b>	XL-Mag: 1.3 – 2.3
<b>min. Scan time</b>	15 s per slice
<b>Cabinet size (WxHxD)</b>	M: 185 x 180 x 230 cm XL: 185 x 180 x 255 cm XL-Mag: 246 x 189 x 255 cm
<b>Cabinet weight</b>	M: 10 t XL: 11 t XL-Mag: 13 t



- 1 Plastic injection molding
- 2 Geometric dimensioning and tolerancing
- 3 Y.CT Precision



## Y.CT Precision

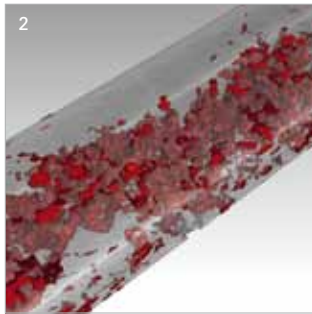
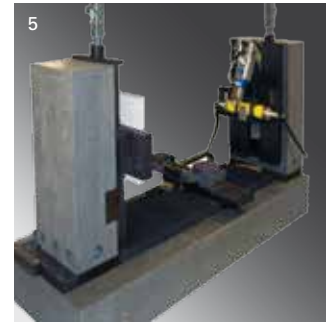
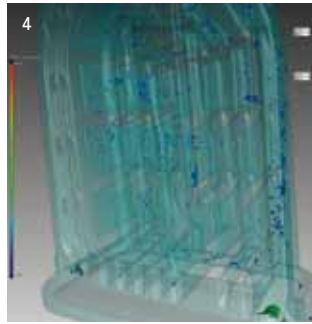
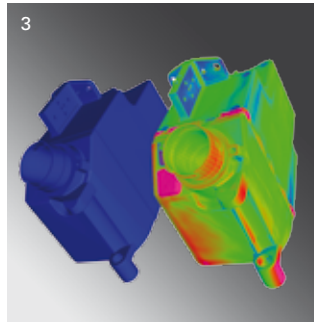
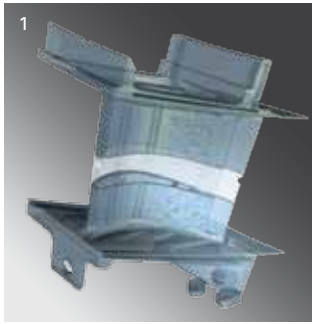
Enables maximum detail recognition of up to 1  $\mu\text{m}$  for small parts as well as inspection of large parts with a maximum inspection envelope of 550 mm.

This opens up a broad range of applications, both for daily use in research and development, as well as in quality assurance for inspection parts, such as fiber-reinforced composites, plastic injection-molded parts and mechatronic modules.

- High-precision 3D data
- Able to detect even the smallest details
- High reproducibility and long-term stability
- Fast results
- Wide range of applications

<b>CT Mode</b>	Cone beam CT
<b>Max. inspection envelope (<math>\phi \times h</math>)</b>	550 mm x 600 mm
<b>Max. sample weight</b>	20 kg
<b>X-ray source</b>	YY.FXE225.99 directional and transmission tubehead • max. Power 320 W • Detail visibility < 1 $\mu\text{m}$
<b>Detector</b>	Y.Panel 1621 Universal Special, 200 $\mu\text{m}$ Pitch, 2000 x 2000 Pixel, 16 bit
<b>Magnification</b>	max. x 190
<b>min. Scan time</b>	< 1 min
<b>Manipulator size (W x H x D)</b>	140 x 210 x 300 cm
<b>Manipulator weight</b>	6 t

Data for a typical configuration



- 1 Turbine blade
- 2 Tensile sample with porosities
- 3 Wall thickness analysis
- 4 Porosity analysis acc. P201
- 5 Y.CT Modular
- 6 X-ray cabinet



## Y.CT Modular

The modular design of Y.CT Modular covers a very wide array of applications, ranging from inspection of large, high-density cast parts to measurement of the smallest components. Available components range from high-performance 600 kV X-ray sources to high-resolution micro-focus sources, digital detector arrays and highly efficient line detector arrays. If requirements change, upgrading is possible at a later date.

- Extremely high penetration with 600 kV
- Maximum resolution
- Detectors optimized for the application
- Modular and upgradeable
- Very large range of inspection parts from high resolution to large scale

<b>CT Mode</b>	Cone beam CT / fan beam CT
<b>Max. inspection envelope (ø x h)</b>	820 mm x 800 mm
<b>Max. sample weight</b>	60 kg
<b>X-ray source</b>	Y.TU600-D01, Y.TU450-D11 0.4 mm @ 0.7 kW / 1.0 mm @ 1.5 kW Y.FXE225.99 directional and transmission tubehead max. Power 320 W Detail visibility < 1 µm
<b>Detector</b>	Y.Panel 1621 Universal Special, 200 µm Pitch, 2000 x 2000 Pixel, 16 bit Y.LineScan, 254 µm Pitch
<b>Magnification</b>	max. x 190
<b>min. Scan time</b>	< 1 min
<b>Manipulator size (WxHxD)</b>	150 x 270 x 350 cm
<b>Manipulator weight</b>	7.5 t

Data for a typical configuration

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Technology with Passion

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