READY

CoreX

In-line CT inspection: accelerate production start-up and final component inspection

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In-line CT inspection: accelerate production start-up and final component inspection

1. Open the door,
2. Place the part manually,
3. Press Start.

Results in less than one minute for both internal and external dimensions, hidden defects, with traffic-light pass/fail indication.

Simple, fast, and cost-effective.
No need to send parts to a laboratory or metrology room.

What CoreX can do: Measure with one click, detect internal defects, integrate with your systems

Complete geometry inspection, inside and outside

CoreX measures all geometric features of a part, both internally and externally, without cutting or opening it.

- *Lengths, angles, fillet radii, draft radii, diameters, depths, thicknesses, pitch, center distances*
- *Threads and symmetries*
- *Parallelism, perpendicularity, symmetry, concentricity, angularity, and position*
- *Circularity, cylindricity, flatness, coaxiality, run-out, line profiles, and surface profiles*

Porosity and material loss analysis

- Detection of porosity and internal voids
- Analysis of materials with different densities
- Component validation according to specifications

Export and compatibility with third-party software

- STL file export for reverse engineering
- Compatibility with any 3D metrology software
- Image stack export for existing CT analysis software

The ideal solution for:

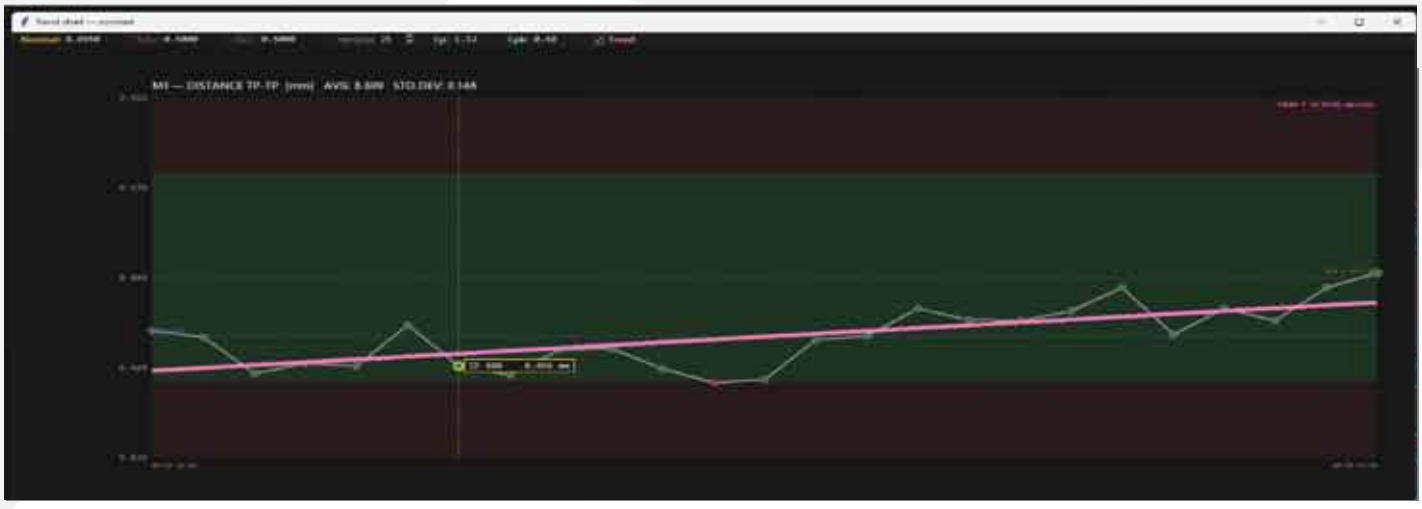
Plastic
Rubber
Aluminum
Titanium
Magnesium
Carbon fiber
Wood
Glass
Light alloys

All the power of 3D computed tomography with a simplified editor designed for shop-floor operators

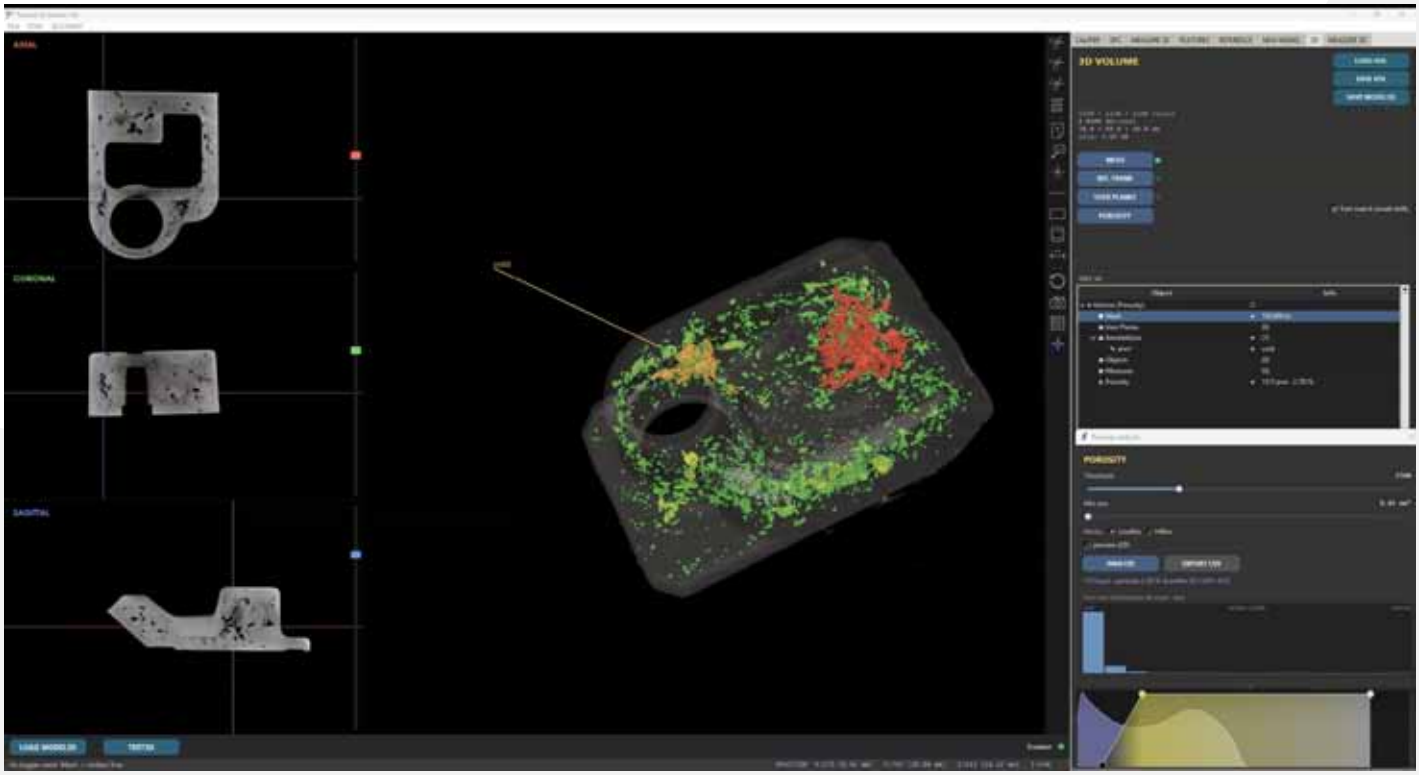
Complete geometry inspection, inside and outside

CoreX measures all geometric features of a part, both internally and externally, without cutting or opening it.

- Interface designed for shop-floor operators
- A single button provides all results on the same screen with traffic-light indications
- Histogram showing the measured value relative to the tolerance range
- Statistical production trends for monitoring process drift
- Report generation for internal use or quality documentation
- Data storage for integration with company management systems
- Program loading via barcode



Automatic internal inspection with objective result in less than one minute



Automatic acquisition and reconstruction

Load the part and select the appropriate material preset with a single click. CoreX acquires and reconstructs the 3D model in less than one minute. Metal Artifact Reduction is available as an option to filter potential metallic inserts.

Detect, measure, validate: fully automated

CoreX detects porosity and material loss, classifies them according to their dimensional and geometric characteristics, and provides a direct pass/fail result within the operator editor. One click to inspect the part, with objective and repeatable results.

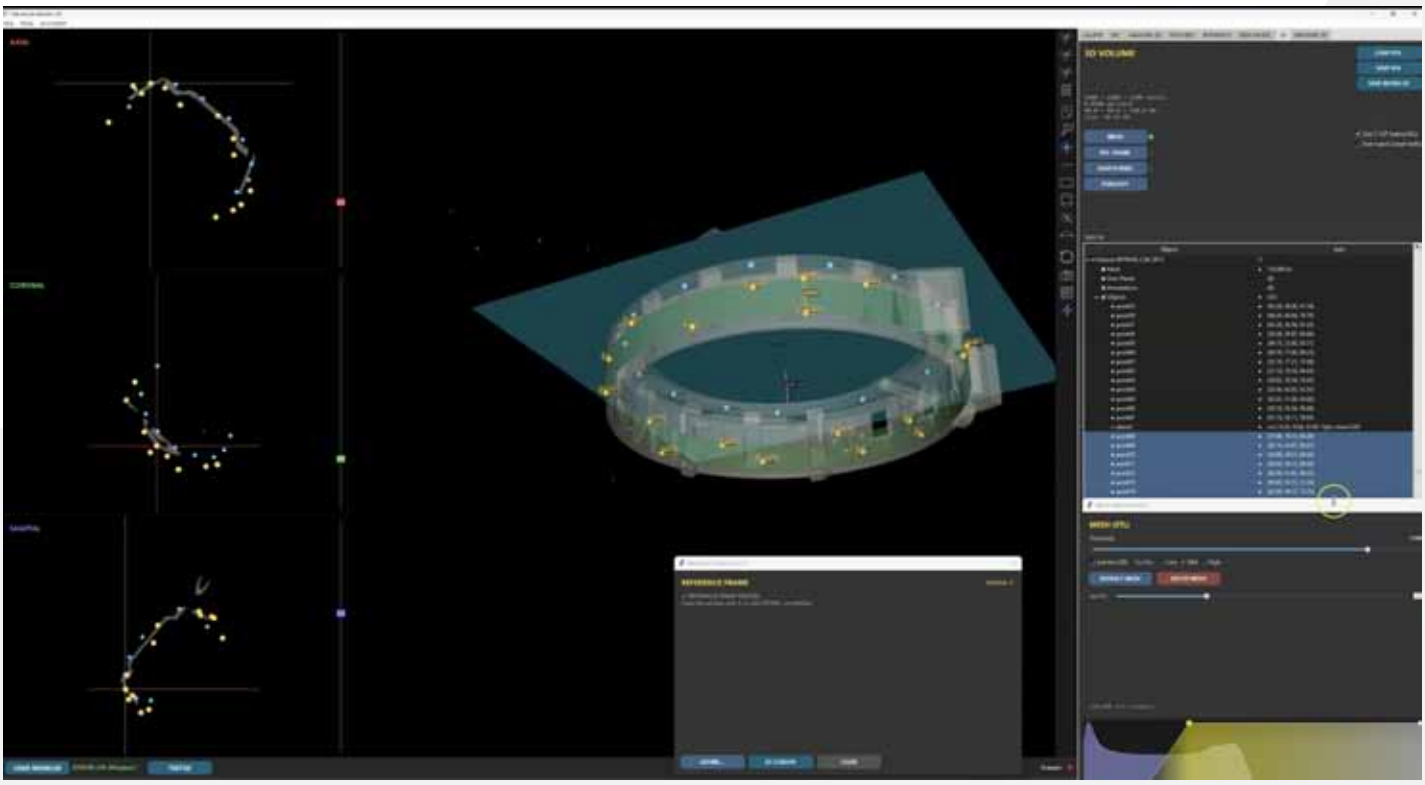
Explore every detail, slice by slice

For users who want to go beyond automatic validation: manually browse sectional slices, assign different colors to different densities for immediate interpretation of the internal structure. Add labels and tags to critical areas and visualize the position of every defect within the 3D model.

Faster, more objective, non-destructive

With traditional methods, sectioning a part to inspect its internal structure could require up to thirty minutes for each batch change: production stopped, the part destroyed, and the result dependent on operator interpretation. With CoreX, inspection is completed in less than one minute, the part remains intact, and results are objective and documented.

3D metrology made simple

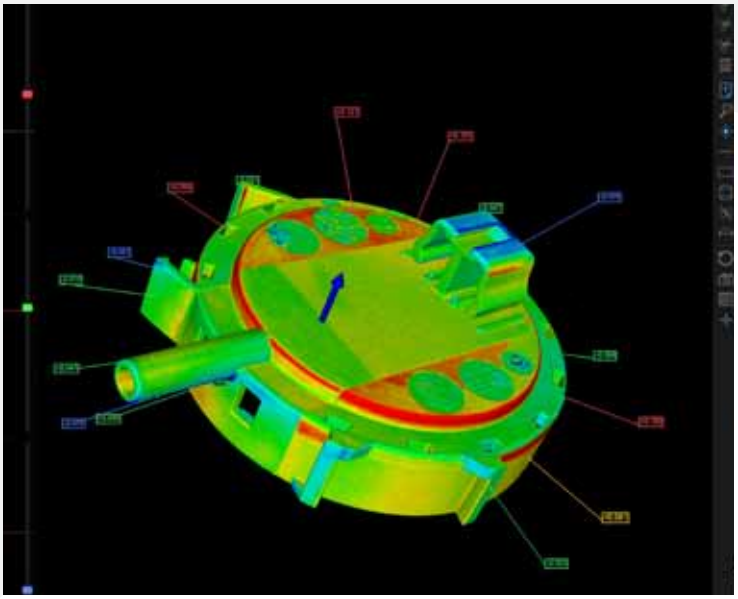


Creating a measurement program has never been easier

On the 3D model, geometric references consistent with the technical drawing or manufacturing process are created: planes, points, lines, and axes passing through cylinders.

From the 3D model to the 2D section: as simple as a profile projector

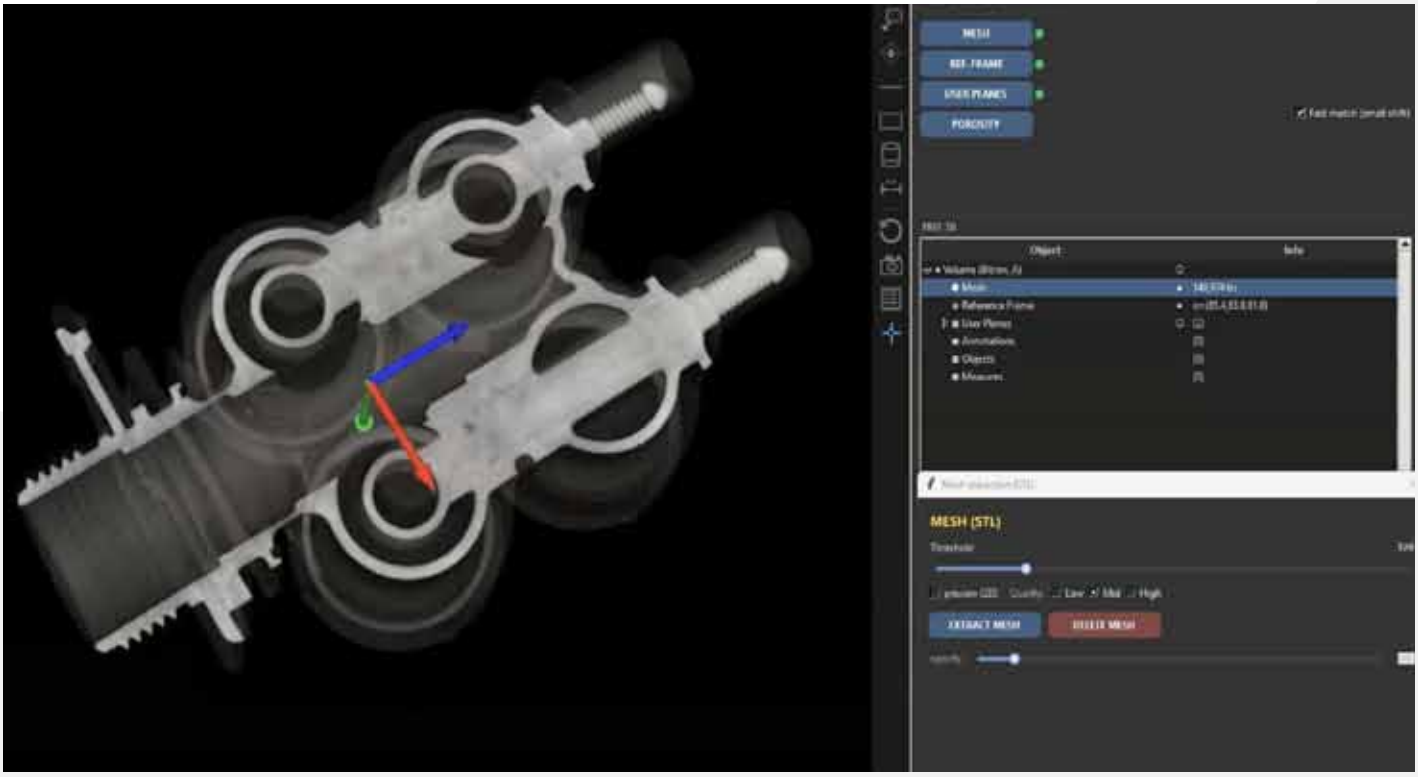
Using the created references, the section location is defined. CoreX extracts the section and makes it available for measurement. From that point, the instrument operates like a profile projector: unlimited sections, easy to program, easy for shop-floor operators to interpret.
The complexity of 3D metrology disappears behind an interface anyone can use.



Color Map

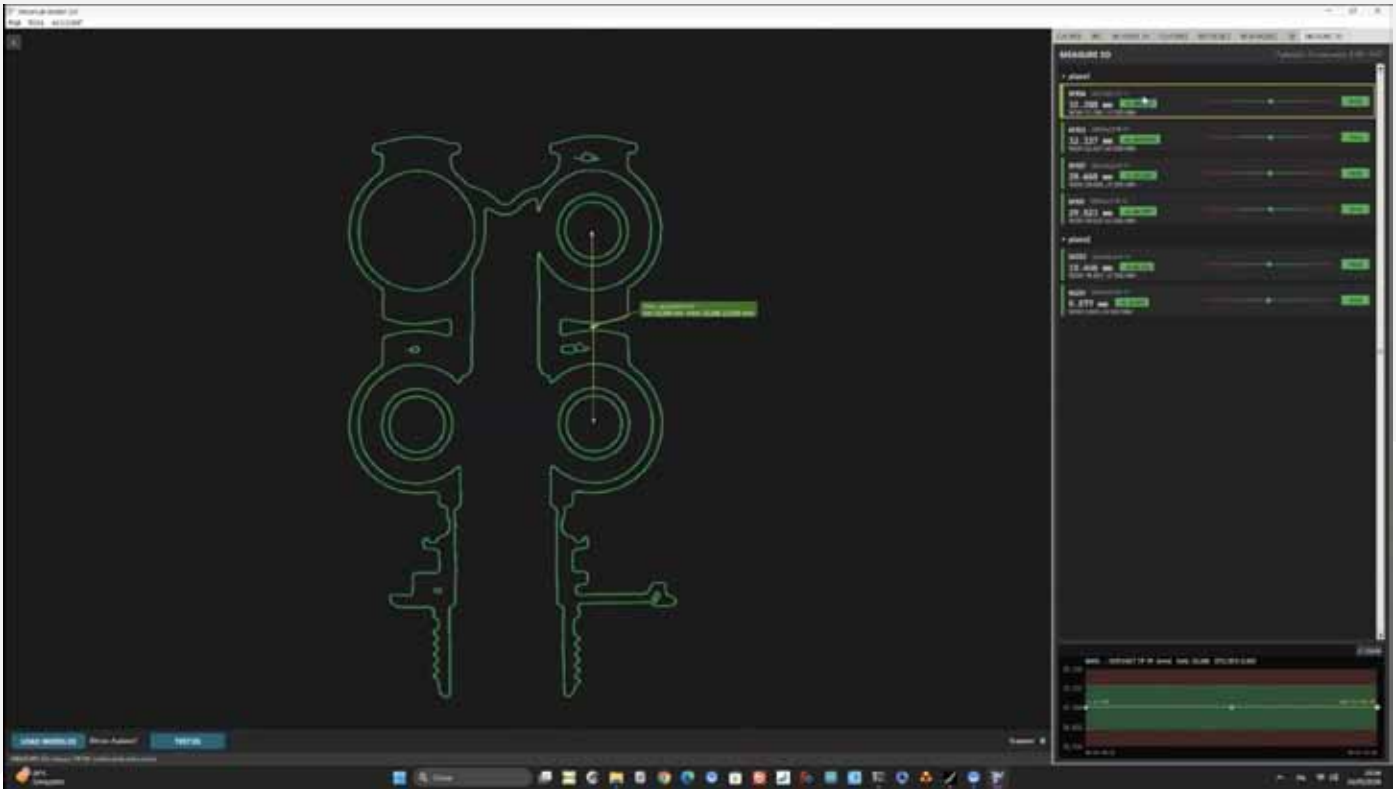
Fast and intuitive, it highlights deviations between the actual part and the STL file.

As powerful as a CT scanner, as easy as a profile projector



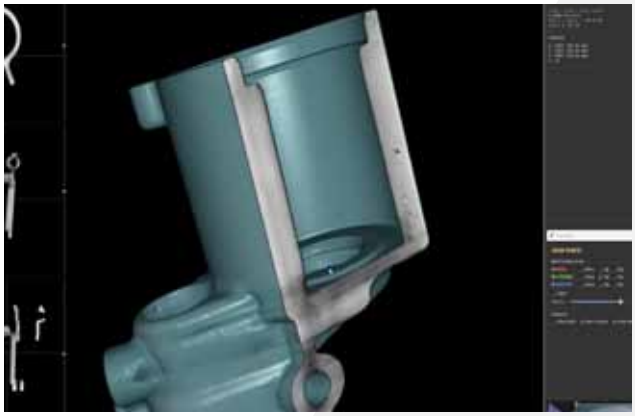
From measurement results to quality certification

For each measurement, nominal values and tolerances are defined. CoreX automatically provides a pass/fail result without operator interpretation. Three-dimensional models can be exported for use with any third-party metrology software, integrating CoreX into existing workflows.

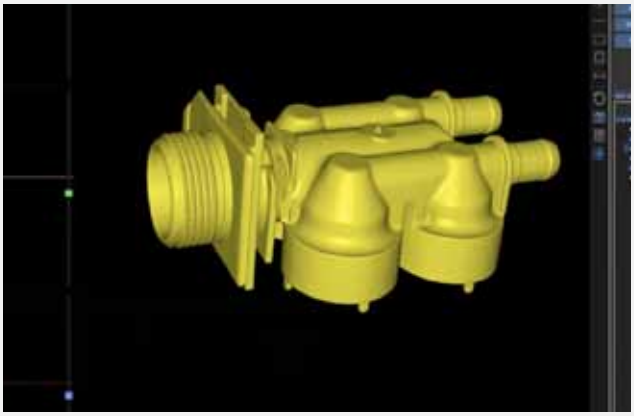


Application examples

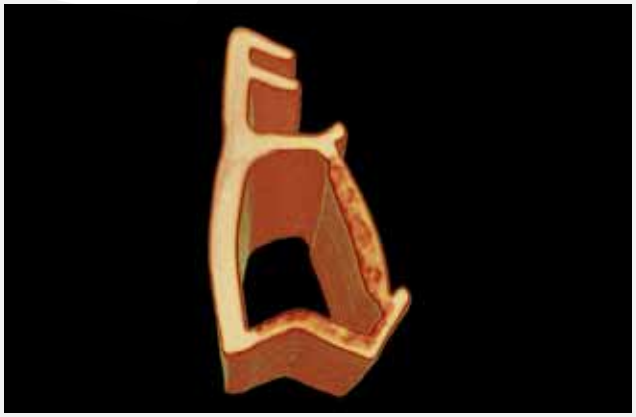
Glass vials: internal dimensions and volume measurement without the aberrations typical of optical measurement.



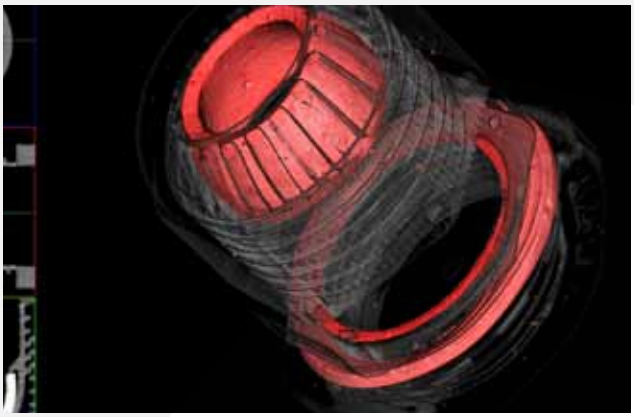
Aluminum die castings: porosity inspection during production start-up.



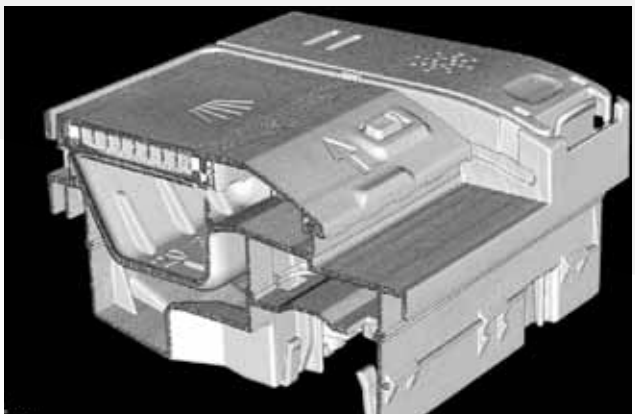
Plastic molded components: dimensional and porosity analysis for production validation.



Extruded seals and extrusions in general: section measurement without sample preparation.



Multi-material assemblies, single-part or multi-part, for final validation and assembly verification.



Dimensional inspection of assembled products for reverse engineering and analysis of returned components under warranty.

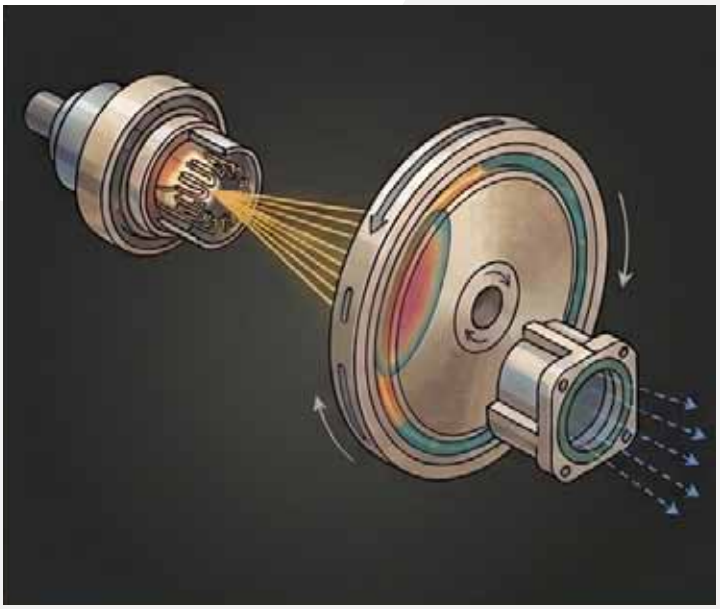
Why is CoreX so fast, simple, and cost-effective to operate?

Designed for a specific purpose, optimized for it

Laboratory CT systems are designed to inspect anything: large and small parts, dense and lightweight materials, fine details and thick sections. This versatility comes at a cost: complexity, long cycle times, and high operating expenses.CoreX was designed with a different objective. Each configuration is sized and built for the dimensions and material of the parts it will inspect. The source and detector are optimized for that specific task, parameters are reduced to the essentials, and the operator simply presses a button.

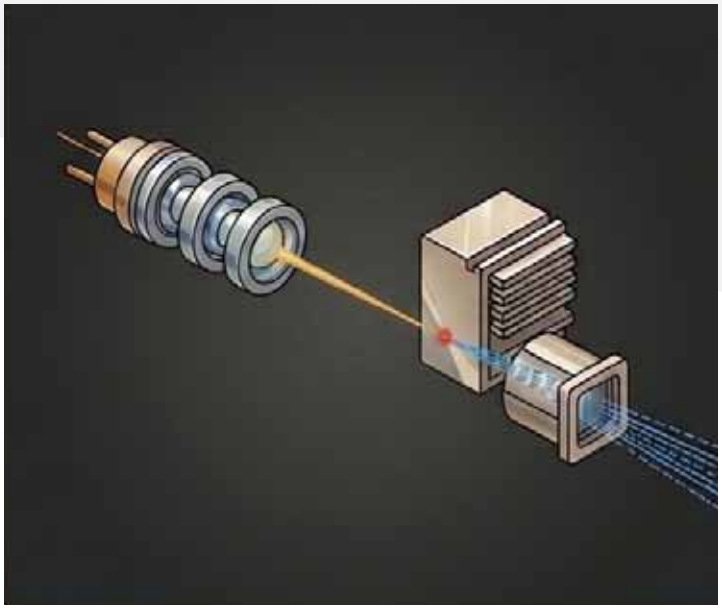
Rotating anode: power, speed, durability

For applications requiring maximum speed, CoreX is available with a rotating anode source. Unlike a conventional source, the electron beam does not continuously strike the same target area. Energy is distributed across a rotating disc, eliminating concentrated wear and enabling power levels of up to 2400 W compared to 75 W for a comparable fixed-anode source.
The result is extremely fast acquisition, maximized source lifetime, and minimized operating costs.



Fixed-anode microfocus source: detail and durability without maintenance

When applications require inspection of very fine details, CoreX is equipped with a sealed microfocus source. A technology designed for long service life with minimal operating costs: no annual filament maintenance, only periodic calibration, just like any other measuring instrument.



The right version for your application

CoreX One: rotating anode, immediate return on investment

CoreX One is equipped with a rotating anode source and a fixed-position rotary stage. The configuration is optimized for maximum acquisition speed, making it the ideal choice for high-volume production environments that require continuous process control without slowing down the line.

Ideal applications:

- End-of-line inspection of extrusions and serial production components
- Production start-up and first article validation
- Internal defect detection in medium and large components
- In-process dimensional metrology

CoreX Micro: microfocus source and variable voxel size for high-detail metrology

CoreX Micro is equipped with a sealed microfocus source and a rotary stage preconfigured in four positions. By moving the part closer to or farther from the source, the geometric magnification ratio can be adjusted, resulting in larger or smaller voxel sizes depending on the feature being inspected. Scans are completed in approximately one minute and are designed for manufacturers of small components requiring maximum resolution on fine details.

Ideal applications:

- High-detail metrology of small components
- Defect inspection on complex and thin-walled geometries

Shared features: sealed source, zero annual maintenance

Both versions use sealed sources: no annual filament maintenance and no scheduled source replacement. Like any measuring instrument, CoreX requires only periodic calibration, in addition to any legal requirements applicable in the country of installation.

COREX ONE & COREX ONE L — TECHNICAL SPECIFICATIONS

Parameter	CoreX ONE	CoreX ONE L
Application	Industrial CT for shopfloor use	Industrial CT for shopfloor use
FOV	140x140 mm	220x220 mm
Rotating Axis	360° continuous	360° continuous
X-Ray source	130Kv x 2400 W/pulse	120Kv x 2400 W/pulse
X-Ray detector	High speed Dynamic CsI (IGZO TFT) 1792x1792	High speed Dynamic 2048x2048
Voxel size	80 µ	100 µ
Focal spot	50 µ	85 µ
MPE	30 µ + L/300	30 µ + L/300
Electrical Configuration	220 Volt 50/60Hz - 10A - 2500W	220 Volt 50/60Hz - 10A - 2500W
Weight	450Kg	450Kg
Range of use	15°-35°	15°-35°
Part configuration	Single part & multi parts allowed	Single part & multi parts allowed
Emission	lower than 1 micro Sv/h	lower than 1 micro Sv/h

COREX MICRO SERIES — TECHNICAL SPECIFICATIONS

Parameter	Micro 150-14	Micro 130-14	Micro 150-22	Micro 130-22
Application	Industrial CT for shopfloor use (all models)			
Rotating Axis	360° - step by step)	360° - step by step)	360° - step by step)	360° - step by step)
X-Ray source	150Kv x 75W	130Kv x 39W	150Kv x 75W	130Kv x 39W
X-Ray detector	High speed Dynamic 1792x1792 CSL (IGZO TFT)		High speed Dynamic 2048x2048 CSL (IGZO TFT)	
MPE	30 µ + L/300	30 µ + L/300	30 µ + L/300	30 µ + L/300
Preset FOVs	**4 Preset FOVs:** **min FOV 20x20 mm** Voxel size 10 µ Focal spot 30 µ **max FOV 140x140 mm** Voxel size 80 µ / F: 1 µ	**4 Preset FOVs:** **min FOV 20x20 mm** Voxel size 10 µ Focal spot 30 µ **max FOV 140x140 mm** Voxel size 80 µ / F: 1 µ	**4 Preset FOVs:** **min FOV 40x40 mm** Voxel size 20 µ Focal spot 30 µ **max FOV 220x220 mm** Voxel size 140 µ / F: 1 µ	**4 Preset FOVs:** **min FOV 40x40 mm** Voxel size 20 µ Focal spot 30 µ **max FOV 220x220 mm** Voxel size 140 µ / F: 1 µ
Electrical Configuration	220 Volt 50/60Hz - 10A	220 Volt 50/60Hz - 10A	220 Volt 50/60Hz - 10A	220 Volt 50/60Hz - 10A
Weight	450Kg	450Kg	450Kg	450Kg
Range of use	15°-35°	15°-35°	15°-35°	15°-35°
Part configuration	Single part & multi parts	Single part & multi parts	Single part & multi parts	Single part & multi parts
Emission	lower than 1 micro Sv/h	lower than 1 micro Sv/h	lower than 1 micro Sv/h	lower than 1 micro Sv/h

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