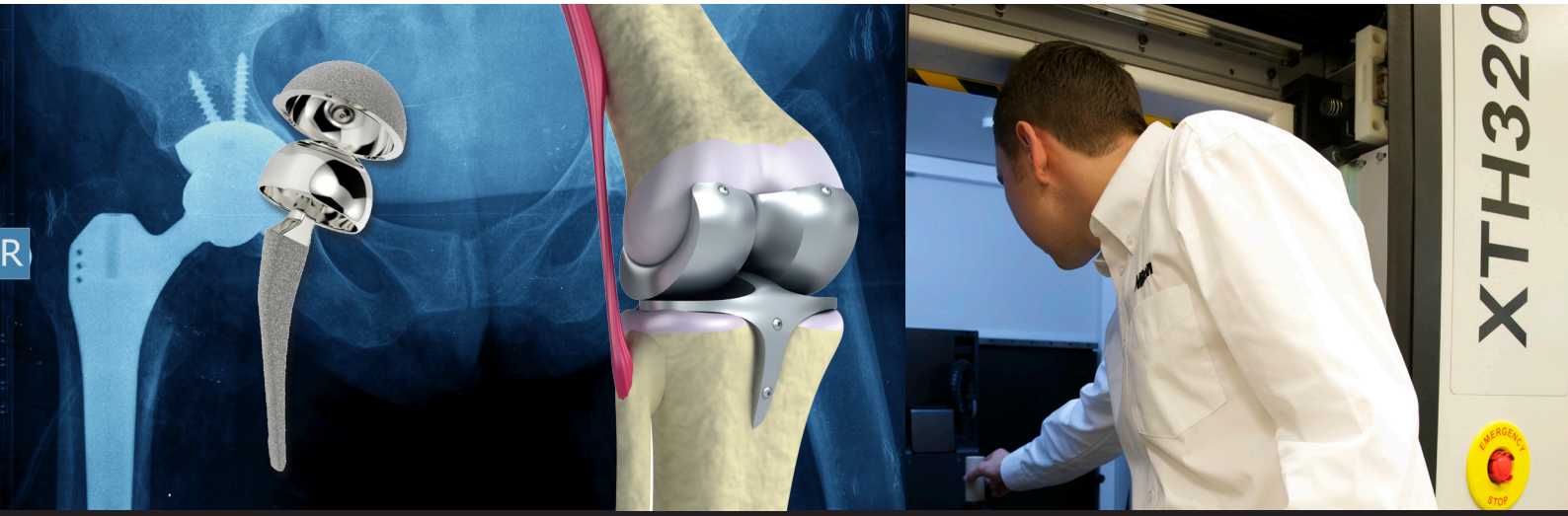
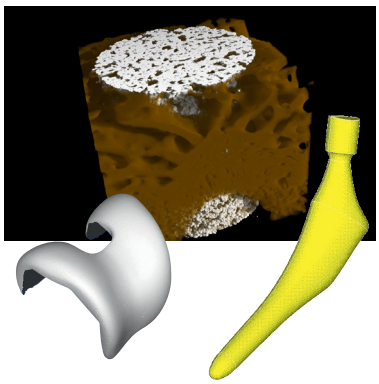
ApplicationFocus
Implants and prostheses



Industrial CT inspection of implants and prostheses

There are so many sizes of implants produced today and their dimensions are critical for use in the human body. New manufacturing technologies need careful inspection to guarantee a long service life. Computed Tomography (CT) provides a detailed inner and outer 3D image that is not only able to verify the correct positioning and shapes, but also the structural integrity of (additively manufactured) prosthesis and implants. Also technology is evolving, and material researchers are developing bone implants made of titanium foam. They offer favourable biocompatibility, superior surface roughness and strength. CT investigation can visualize and quantify the bone in-growth in the ramified porous implant structure.



Customer challenges

- Avoid destructive testing of expensive prototypes and unique implants
- Reduce lengthy inspection processes
- Reveal internal structures (voids, cracks, etc) of life-critical parts
- Dimensional measurements of complex shapes with comparison to CAD
- Perform automated measurements for a high volume of production

Nikon Metrology's solutions

XT H / MCT systems featuring microfocus sources

- High performance image acquisition and volume processing
- Easy system operation and low cost-of-ownership
- Straightforward inspection automation
- Proprietary 160-450 kV microfocus X-ray source
- Metrology CT with absolute accuracy measurement
- Full 3D images with comparison to CAD provide maximum insight

For more information, go to www.nikonmetrology.com or email sales.nm@nikon.com

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