OR Technology

NDT

**Strong Workmate for** Non Destructive Testing (RT)


# Who We Are – What We Do

OR Technology
Digital X-ray and
Imaging Solutions

- producing digital X-ray technology and developing image management systems for radiographic inspections (RT)
- engineering in-house customised software solutions
- global sales and service network
- large product and accessories portfolio
- represented on all continents and in over 60 countries
- high quality standards:
  ISO 13485 : 2003
  FDA 510(k)
  CMDCAS

# Advanced

## Radiographic testing

The NDT industry utilises many test methods. **Radiographic Testing (RT)** is, in addition to ultrasonic examinations, one of the most common techniques. It is used to detect internal voids, flaws or cracks in different materials. Traditionally, the recording medium is X-ray film.

Advanced RT includes Computed Radiography (CR) and Direct Radiography (DR) as digital imaging systems, which represent the latest technology standard. While CR systems use an imaging plate in a cassette as capturing device, Direct Radiography (DR) systems often use Flat Panel Detectors (FPD) that show the X-ray image immediately on a monitor – by a simple click on a button. The digital panels require less time and radiation than traditional X-ray films.

OR Technology was a pioneer when bringing forward the advanced RT method in the 90ies by developing the medical solution ***dicom**PACS*®. Our portable digital systems generate images in the highest quality for detecting minimal deviations for your inspection requirements.

Nondestructive Testing



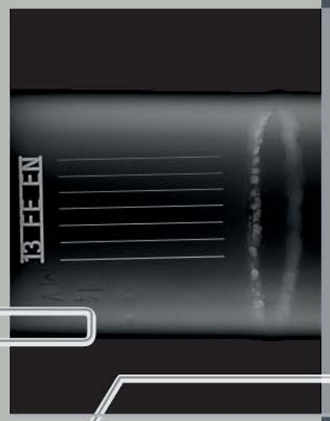
# Applications RT

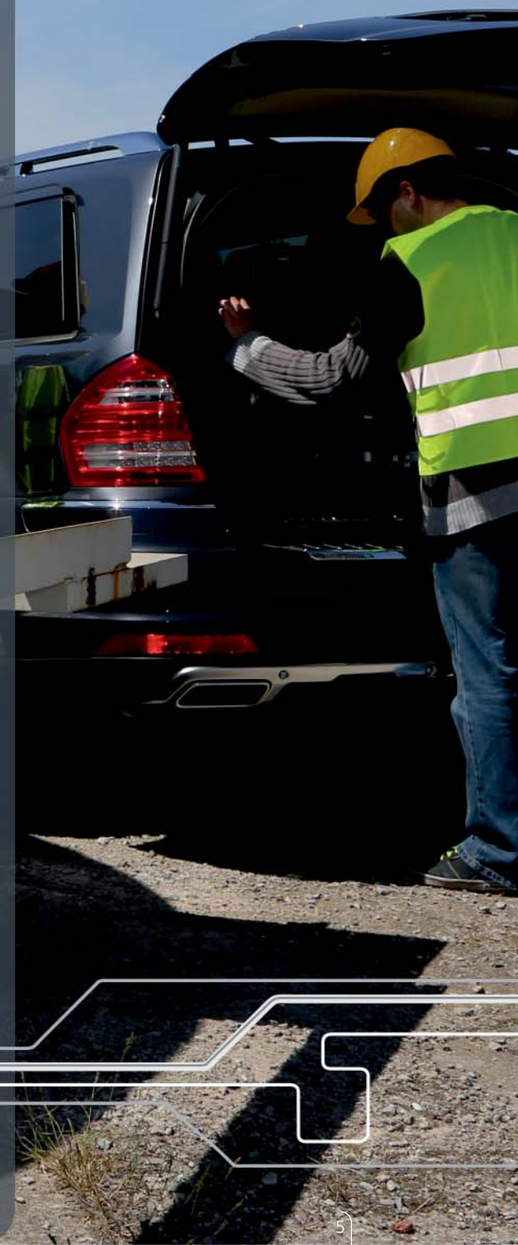
## Industries, applications, materials

- Oil, gas, petrochemicals and water
- Automotive, marine and aviation
- Structural statics
- Energy and power
- Components testing
- Jewelry industry
- Arts, archeology and geology
- Insurance investigation
- Custom manufacturers

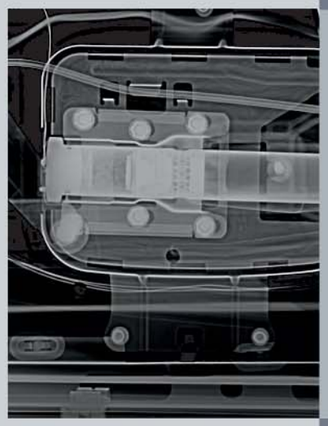
# Oil, Gas, Petrochemicals and Water

RT  is a fundamental NDT method for pipe testing, with a view to the properties of pipe material (corrosion under insulation, erosion) or the quality of welded steel joints which should resist extreme pressures and temperatures.



# Automotive, Marine and Aviation

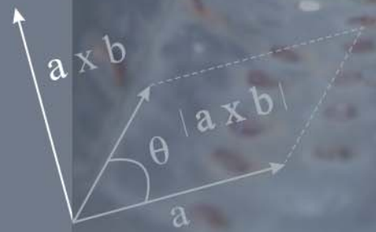


Digital X-ray is widely used for non destructive testing of parts by the motorised industry:

**Automotive** – inspection of composite panels, assembled components (e.g. airbags) etc.

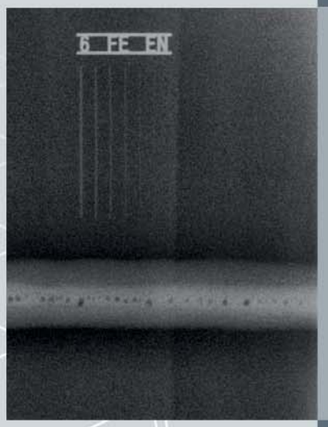
**Marine** – hull inspection of ships (e.g. welds)

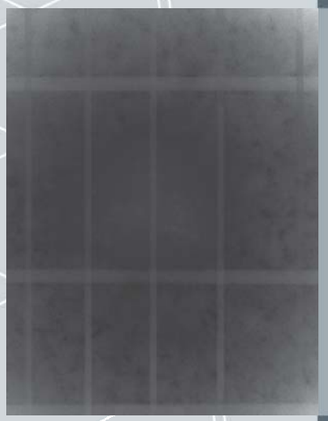
**Aviation** – inspection of turbine blades, aircraft wings and windows, landing gears, composites (e.g. delaminating), structures (e.g. frames, honey combs); FOD (foreign object damage) and water ingress

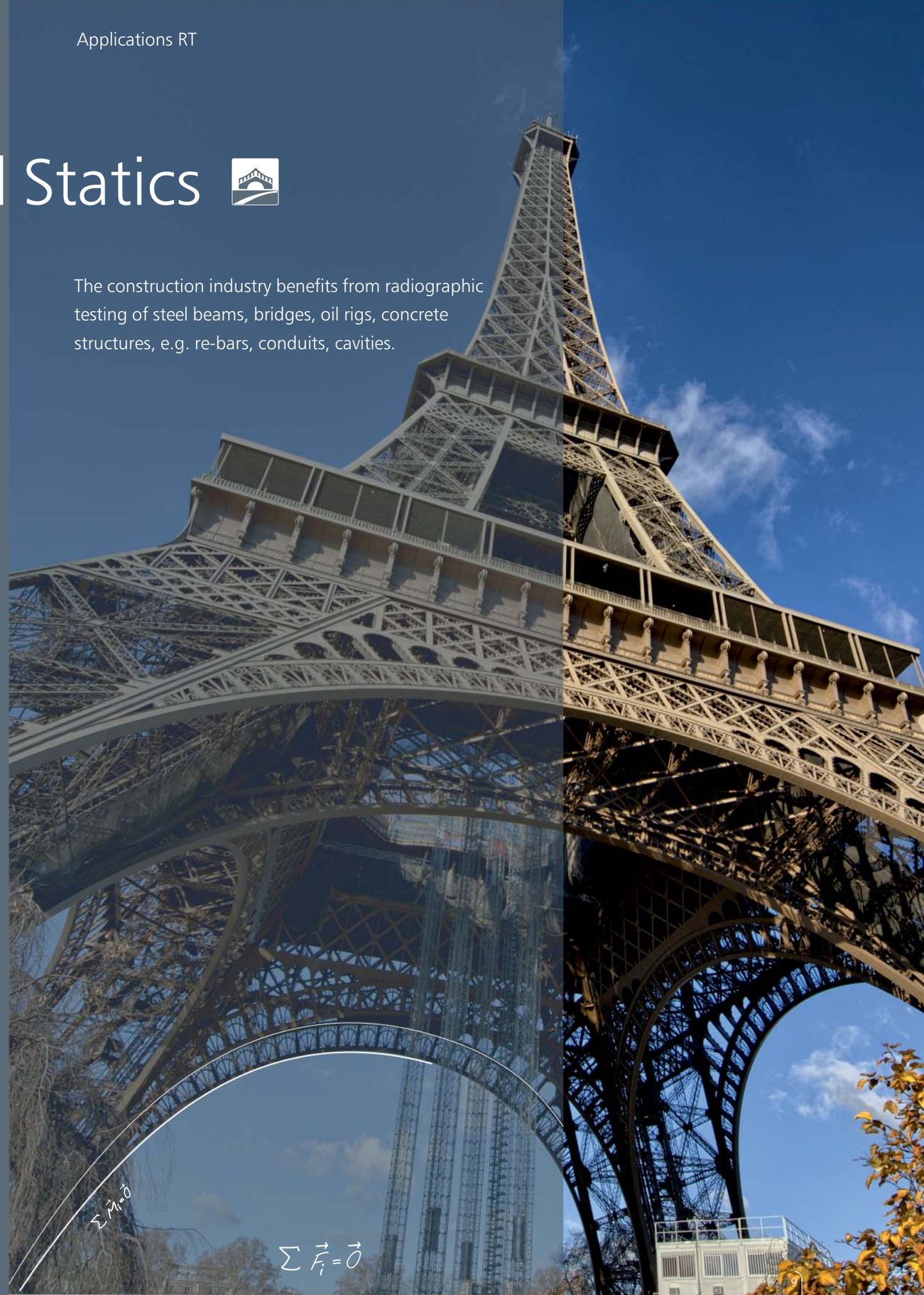


# Structural Statics

The construction industry benefits from radiographic testing of steel beams, bridges, oil rigs, concrete structures, e.g. re-bars, conduits, cavities.



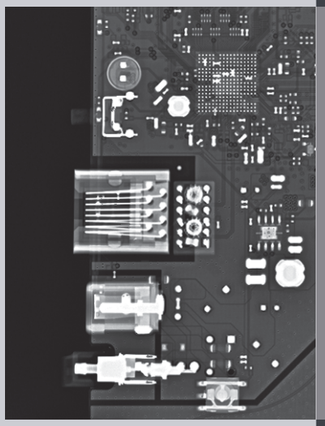


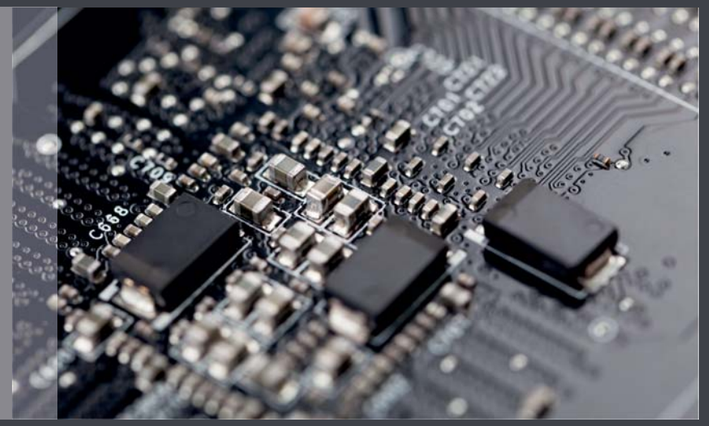
# Energy and Power

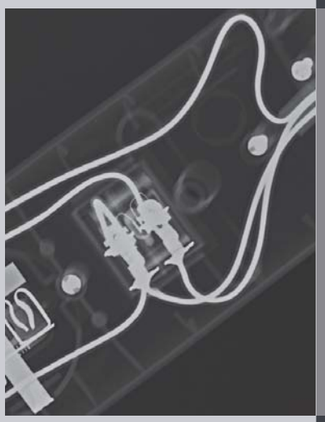
Radiographic testing is useful for the detection of cracks and corrosion in boilers, vessels or storage tanks, for examination of valves and radiographic inspections at power plants.

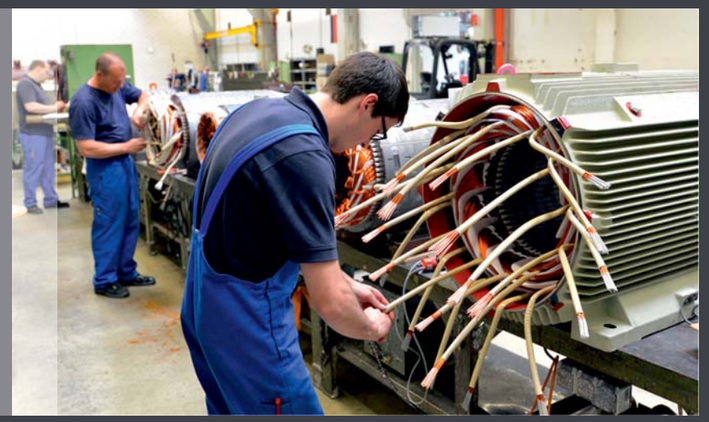

# Components Testing

Radiographic testing  is suitable for efficient quality and service control of mechanical and electronic components made from different materials like aluminum castings (e.g. cracks, pores, segregations), forgings, springs, PCB, switches etc.



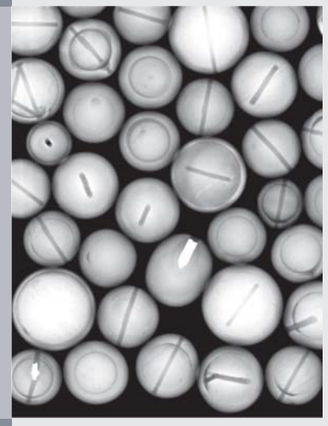


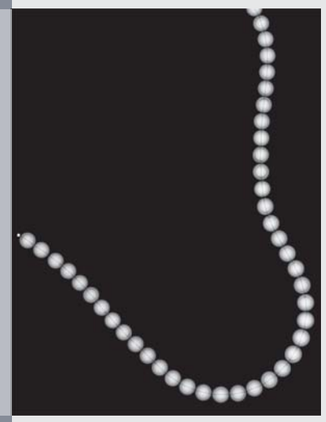




# Jewelry Industry

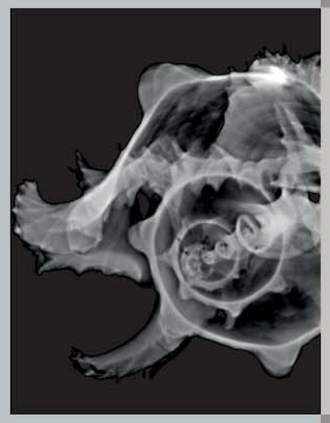
Non-destructive analysis of gemological material (e.g. quality and origin of pearls) is made possible by radiographic testing.





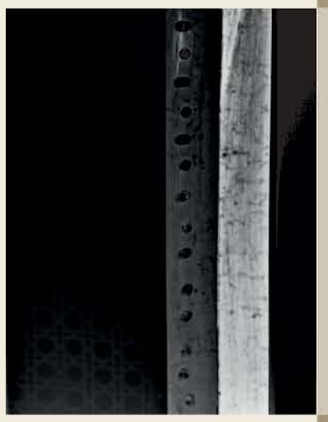
# Arts, Archeology and Geology

Scientists and historics can look inside fossils, artifacts or works of art without disturbing them. X-ray is useful to authenticate paintings or other art objects, to analyse structures and localizations, to evaluate the reconstruction of sculptures, chests, wall coverings etc.



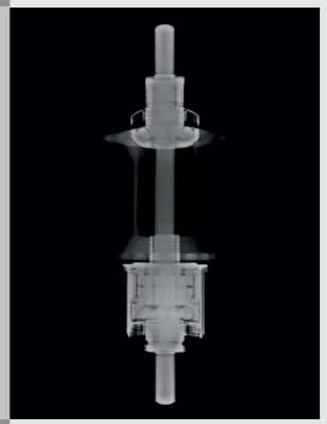
# Investigation

RT helps insurance investigators to determine the cause of a fire or to detect subsurface defects, such as caused by transport, installation, improper use … or simply by termites.



# Manufacturers

Small and affordable systems are now available for custom manufacturers to test the quality or safety of various parts for a car, a motorcycle or a bicycle.



# Software

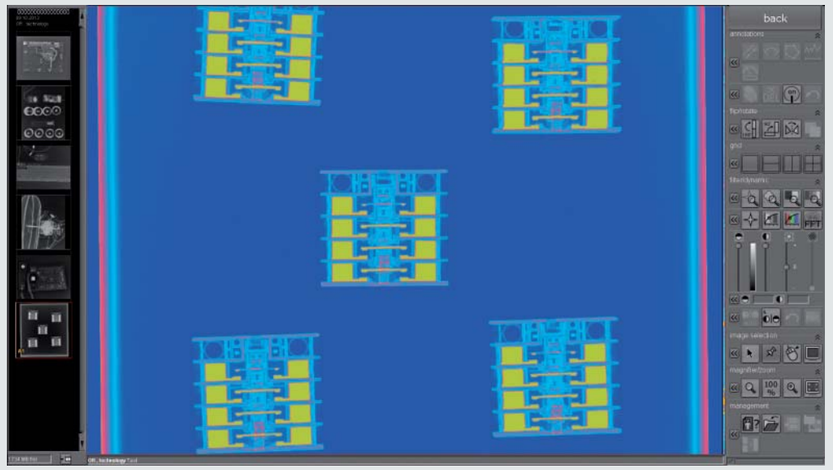
engineered by OR Technology

OR inspect

Specifications of **OR**inspect®

- completely integrated viewer for image analysis (processing, manipulation, storage, export etc.)
- **measurement** of distances/thickness, angles, areas and densities
- image annotations (arrows, ellipses, free text etc.)
- **stepless zoom**, PAN, magnifier, ROI, rotation, mirror, crop etc.
- adjustment of window/level options and gamma correction, **sharpening filters**, high pass filter, noise suppression
- advanced inverse (black/white), colour LUT
- multi exposure (SNR improvement)
- image comparison (optional)
- **automatic or manual stitching**
- printing of images both on Windows printers and laser imagers via DICOM Basic Print
- export of images to JPEG, TIFF, BMP and DICOM/DICONDE formats
- worldwide image distribution via Web Server (optional)



# RT Components

## and Accessories

Whether you are working hard outdoors or tucked away cosily in a lab – OR Technology's portable DR solutions are tailored individually.

**Various industrial sources**

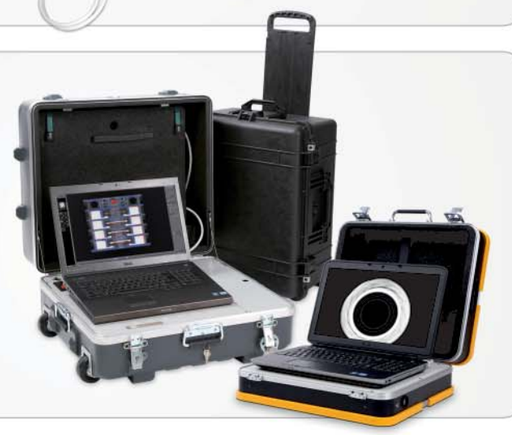
e.g. voltage, weight, continuous/pulsed, battery operation


**Different flat panel detectors**

e.g. size, wired or wireless

**Multiple variety of cases**

e.g. material, size, design



**High resolution monitors** (lab option)

**Configurable laptops**

e.g. ruggedised, sunlight readable display

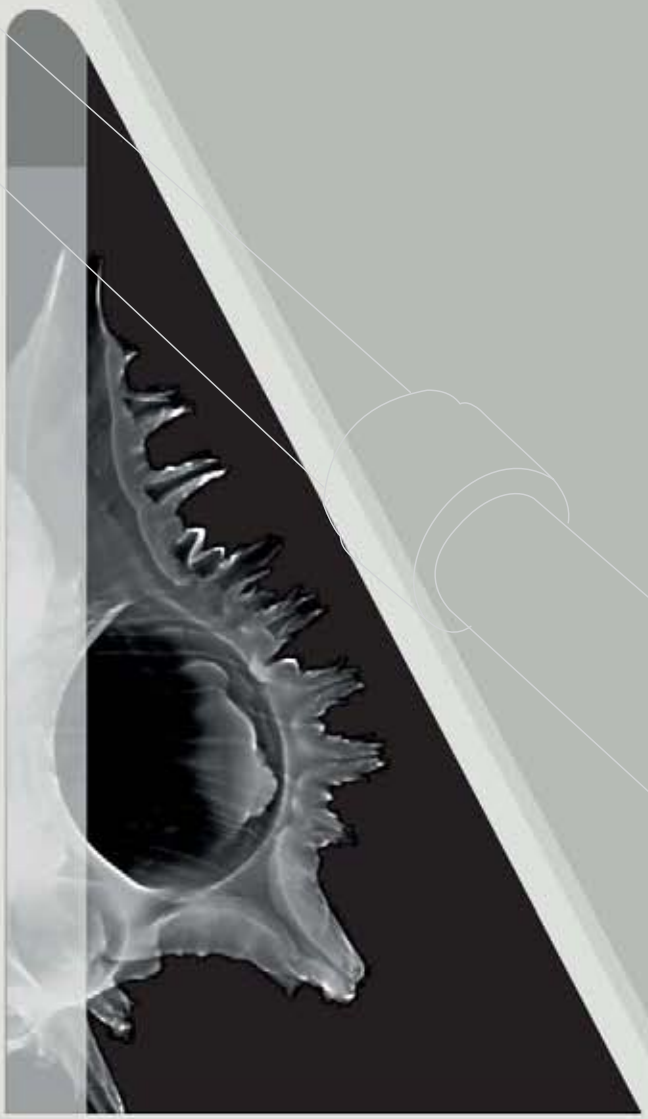

**RT Accessories**

Sometimes it is the little things that make the difference.
OR Technology is aware of this fact.
That's why we offer a big variety of additional equipment and accessories.

Version 001_10_2013

OR Technology
Digital X-ray and
Imaging Solutions

www.or-technology.com | **X-perts in X-ray**



**OR Technology** (Oehm und Rehbein GmbH)
18057 Rostock, Germany, Neptunallee 7c
Tel. +49 381 36 600 500, Fax +49 381 36 600 555
www.or-technology.com, info@or-technology.com

Info hotline: +49 381 36 600 600