Amadeo X-ray Systems

Digital radiography

with the **Amadeo S-DR** U-arm system for X-ray imaging without cassettes

Amadeo DR complete X-ray system for digital X-ray imaging


back
annotations
flip/mirror
grid
brightness
stitching
image selection
magnifier/zoom
R
management
iiyama

Amadeo S-DR

Compact U-arm system for confined spaces

Digital X-ray systems offer the advantage of an efficient and economical workflow. Compact systems require minimal space and are easy to operate, which makes them ideally suited for private practices. It goes without saying that they deliver perfect image quality as well.

The **Amadeo S-DR** U-arm X-ray system is a universal imaging stand with an optional mobile patient table. Images of patients in a standing, sitting or lying position can be taken effortlessly thanks to the special cross arm and the long vertical operating range. The compact design of the **Amadeo** X-ray stand allows it to be installed in very confined spaces.

The unit is impact resistant and easy to clean due to its powder coated surface. Its ergonomic handles allow it to be moved and rotated safely with just one hand. Electromagnetic brakes dampen all movements, except when tilting the bucky device which locks at 0°. The **Amadeo S-DR** is completely counterbalanced and fitted with roller guides, making it particularly smooth running and silent.

The ***dicom****PACS*®***DX-R*** control panel operates the entire X-ray system from controlling the X-ray generator to the finished, high quality image ready for diagnostic evaluation, and including all necessary settings. In addition, the integrated multimedia X-ray positioning guide offers many tips on the correct adjustment technique and positioning of the patient.

Amadeo DR complete X-ray system for digital X-ray imaging

Benefits

Digital X-ray imaging with **Amadeo S-DR**

Ideal for small rooms

The X-ray system has been designed for small rooms – images of patients in a standing, sitting or lying position can be taken effortlessly thanks to the special cross arm and the long vertical operating range.

Benefit: Fully functional in confined spaces.

Excellent image quality

The standard high quality direct radiography detector operating on the basis of a caesium iodide (CsI) scintillator provides excellent quality even in the case of low X-ray dose parameters.

Benefit: In particular when comparing images directly to the commonly used GadOx (Gd^2O^2S:Tb) detectors, this enhanced quality is clearly visible.

Fast

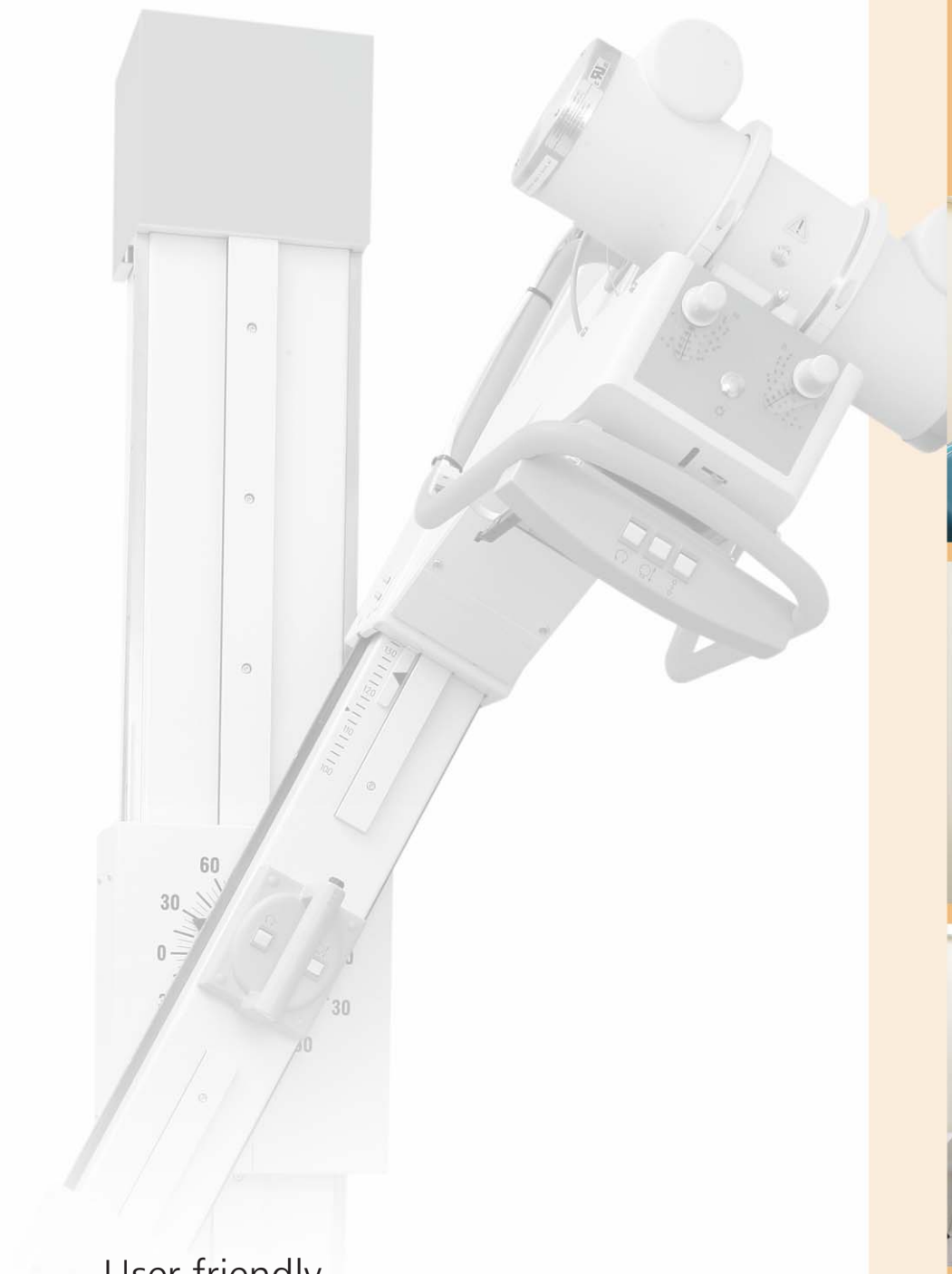
The X-ray image is available for viewing and diagnosis within 6 – 8 seconds after the exposure is triggered.

Benefit: Fast work flow with optimal documentation.

Easy to operate

The X-ray unit can be moved and rotated safely with one hand. Electromagnetic brakes dampen all movements, except when tilting the bucky device which locks at 0°. The Amadeo S-DR is completely counterbalanced and fitted with roller guides, making it particularly smooth running and silent.

Benefit: Safe and easy operation



User-friendly

The professional ***dicom**PACS*®***DX-R*** acquisition software appeals through an intuitive and modern graphical user interface. Examinations may be conducted comfortably at the monitor while all the necessary adjustments of the X-ray parameters are automatically communicated to the generator.

Benefit: You work with only one control console.

Cleverly designed

Due to the 43cm x 43cm detector, the extra effort of rotating from vertical to horizontal images is no longer necessary. When the grid is removed, it is, of course, also very easy to take images of extremities etc.

Benefit: No extra effort is required to rotate the detector.

Software

Advantages of the professional ***dicom****PACS*®***DX-R*** X-ray acquisition software

- Modern graphical user interface (GUI) adaptable to almost **any language**
- Capture of patient data via **DICOM Worklist, BDT/GDT, HL7** or other protocols – data may also be captured manually
- Use of **DICOM Procedure Codes** for the transfer of all relevant examination data directly from the connected patient management system (HIS/RIS)
- **Freely configurable** body parts with more than **200 projections** and numerous possible adjustments
- Safe and fast **registration of emergency patients**
- Allows the user to **switch between examinations** of a patient, for instance to avoid having to re-position the patient frequently
- Integrated **measuring, special image filters and many other tools** for measuring and image optimisation
- Allows the user to **subsequently add images** to an examination, even after that examination has already been completed
- Entry of recurring **examination procedures as macros**, e.g. thorax screenings
- **Fully integrated radiographic positioning guide** for each examination in human and veterinary medicine incl. comprehensive notes, photos, videos and correct X-ray images
- A single workstation with installed ***dicom****PACS*®***DX-R*** software may be upgraded the following options (selection):
  - Tools for taking images of an entire leg or spine (full leg/ full spine) **(image stitching)**
  - Planning and working with **digital prostheses templates/ operation planning**
  - Connection of several diagnostic monitors
  - Capturing additional patient and examination data and their freely configurable statistical evaluation

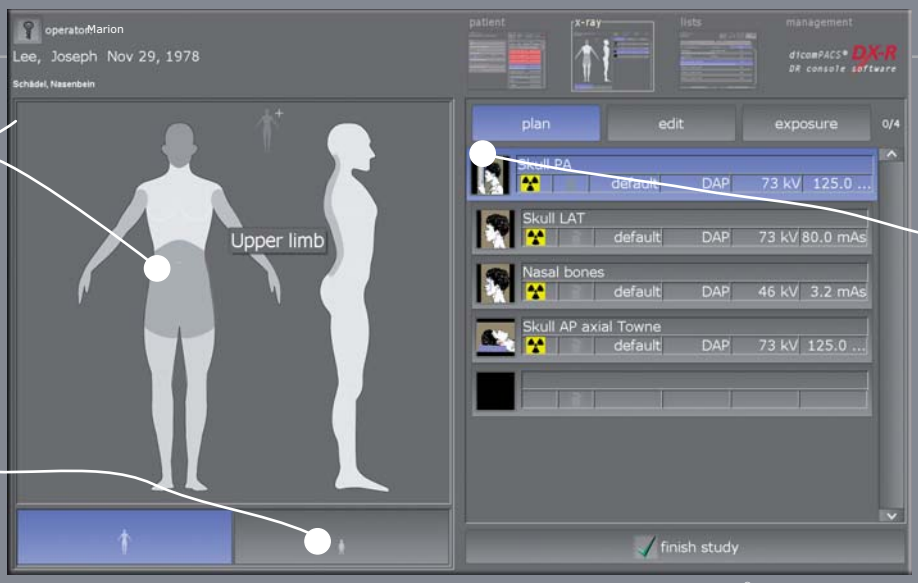


Chart for planning an individual X-ray job

The correct settings for adults and children at a mouse click

Switch to planning X-ray jobs for children

***dicom**PACS®**DX-R** job creation*

Step-by-step video with sound for positioning the patient

Presentation of helpful hints for the positioning of the patient, central beam, tips and tricks, frequent errors etc.

Shows an example of a correct X-ray image

***dicom**PACS®**DX-R** radiographic positioning guide*

Opens examples of inaccurate X-ray images with comments

Previews of the current X-ray image

*Preview of the X-ray image and worklist in **dicom**PACS®**DX-R***

Software

Automatic **image processing** for optimal quality

- Perfect images at all times - generally **no adjustment** required
- Integrated software for **automatic image optimisation**
- Professional, **adaptable image processing** for each individual examination to obtain best possible image settings for the needs of each customer
- Due to specially developed processes, the image processing allows the user to **vary the X-ray settings on a large scale** while the image quality remains virtually the same (**possibility of reducing the dosage**)
- **Bones and soft tissue** in one image - this enables the user to significantly improve his diagnosis
- **Details of bones and microstructures are very easy to recognise**
- Noise suppression
- **Black mask** (automatic shutters)
- Automatic **removal of grid lines** when using fixed grids

*Exposure with **standard** image processing*

*Exposure with **dicom**PACS®**DX-R** image processing*

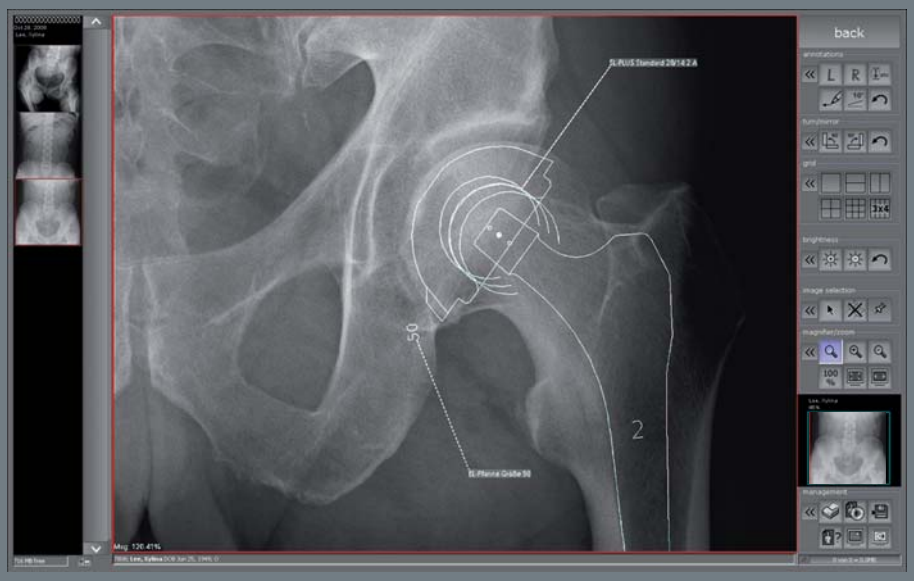
Image diagnostic at the highest stage

- Completely integrated ***dicom****PACS*® **Viewer for image diagnosis**, further processing and storage of images in an SQL database incl. image manipulations, export options, layout adjustments, freely configurable user interface and much more
- Stepless **zoom, PAN, magnifyer, ROI, crop, rotate, mirror** etc.
- Insertion of **image annotations**, e.g. free texts, arrows, ellipses etc.
- **Measuring** of distances, angles, areas and density

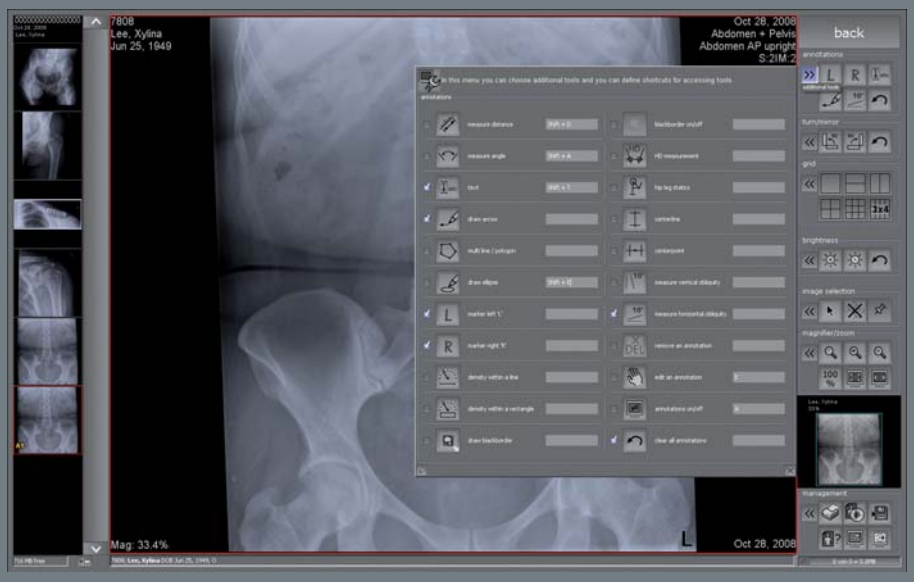
- Adjustment of window/level options and **gamma correction**, sharpening filters, noise suppression
- Many additional functions such as **Chiro Tools**, calculation of **Cobb's angle, pelvic obliquity measurements, integrated capturing of diagnostic reports** etc.
- Creation of **DICOM patient CDs** with free **WEB viewer**
- **Export of images** to JPEG, TIFF, BMP and DICOM format
- Image transmission via integrated **e-mail function** – no external e-mail program required
- Easily upgradable to the professional, **integrated image management system** (PACS)

Integrated viewer

Completely integrated ***dicom**PACS*® viewer for image diagnosis



An integrated prosthesis documentation module provides preoperative planning (optional).



The system enables fast and easy customisation of the operating interface for individual customer preferences.

Useful tools such as the configurable measuring magnifier make diagnosis much easier.

The stitching module merges a number of separate digital X-ray images into a single image.

Comprehensive search tools enable the comparison of X-ray examinations of one or more patients.

Software

The browser based viewer solution ***dicom**PACS*®***MobileView*** for mobile terminals (optional)

dicom**PACS*®MobileView*** is a web based viewer, that contains all the basic functions for viewing images. The viewing can take place virtually independent from the browser on mobile devices, such as an iPad. ***dicom**PACS*®***MobileView*** offers doctors and nursing staff a previously unknown, mobile freedom in the workplace inside and outside of hospitals or practices, with the radiological image material available at all times.

Fields of application of *dicom*PACS®*MobileView*

dicom**PACS*®MobileView*** can be installed in addition to existing ***dicom**PACS*® diagnostic modules (diagnostic workstations). It is irrelevant whether the ***dicom**PACS*®***MobileView*** software is used on a network PC (pure viewing workstation) or/ and on a mobile device.

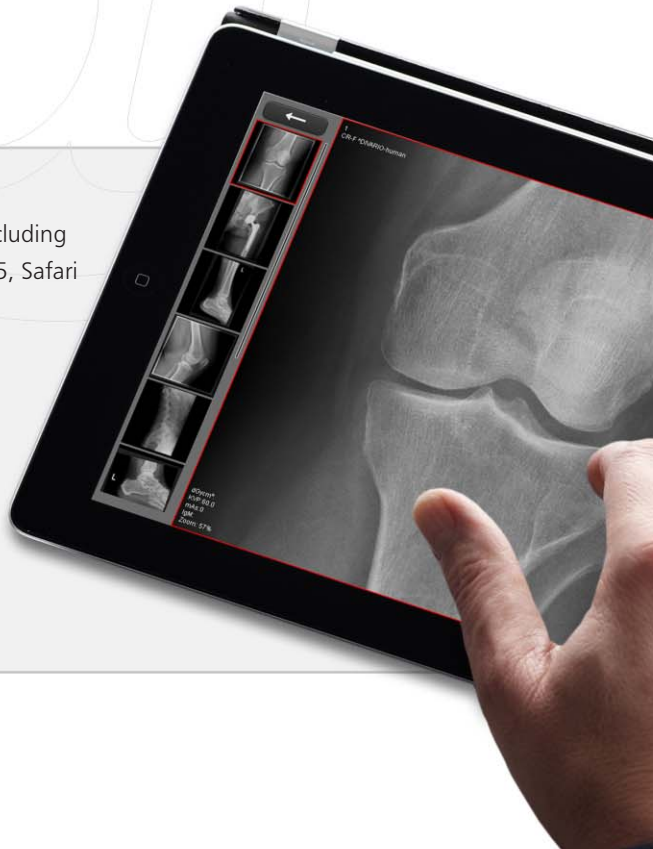
Worldwide access to all image material is available via a network connection, e.g. VPN access via the internet, of the used mobile device to the central ***dicom**PACS*® system in the office or clinic.

Licensing model

dicom**PACS*®MobileView*** is used on a concurrent user licensing model. This means that the number of concurrent users is pre-defined.

The main advantages below at a glance:

- High flexibility through the use within various internet browsers, including Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, Safari 5, Safari for iPad and Android browser Intuitive operation
- Supports the multi touch operating technology (e.g. zoom in and out with two fingers)
- Supports full screen mode
- Allows accessing the ***dicom**PACS*®***DX-R*** or ***dicom**PACS*® database without any additional modules
- Allows playing series (e.g. ultrasound)
- High loading speed with modern streaming technology
- Uses concurrent user licenses



Automatic image processing for optimal quality of X-ray images with ***dicom**PACS*®***DX-R*** image processing

- Perfect images at all times - generally **no adjustment** required
- Integrated software for **automatic image optimisation**
- Professional, **adaptable image processing** for each individual examination to obtain best possible image settings for the needs of each customer
- Due to specially developed processes, the image processing allows the user to **vary the X-ray settings on a large scale** while the image quality remains virtually the same (**possibility of reducing the dosage**)
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*Exposure with **standard** image processing*

*Exposure with **dicom**PACS®**DX-R** image processing*

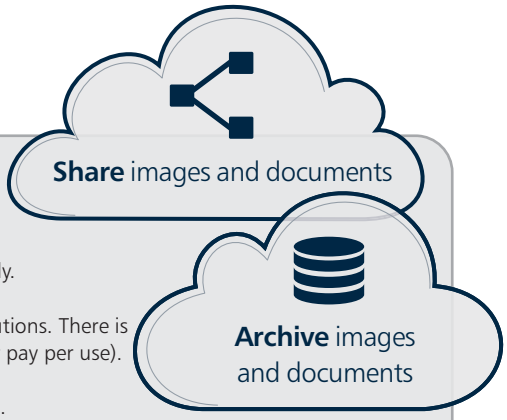
Software

ORCA – the DICOM cloud for medical images and documents [optional]

ORCA (OR Technology Cloud Archiving) is a cloud based platform specially designed for storing, viewing and sharing medical images and documents. ***ORCA*** offers two exciting applications: ***ORCA*** *Archive* and ***ORCA*** *Share*.

ORCA *Archive* transfers and stores image files from direct sources (e.g. digital X-ray, CT, MRI and ultrasound systems) as well as from Picture Archiving and Communication Systems (PACS). ***ORCA*** *Archive* can be used as a backup solution. Wherever the internet is accessible, images archived in the cloud can be viewed at maximal resolution and quality (DICOM) via the integrated browser based ***ORCA*** *View* program and our acquisition software ***dicom****PACS*®.

At the same time, ***ORCA*** is a platform for sharing data with external partners. The application ***ORCA*** *Share* facilitates exchanging images and medical findings with staff, colleagues and specialists. It can also be used to give patients access to medical reports and images. Recipients are sent an access link via email. There is no need to install software locally.



Benefits of Cloud archiving through *ORCA*

Fast access: Register on https://orca.de.com and begin working with ORCA immediately.

No expensive equipment: ***ORCA*** provides access to remote servers and software solutions. There is no need for an office filled with expensive equipment. Billing is usage based (flat rate or pay per use).

Excellent scalability: System memory can be adjusted according to your requirements.

24/7 access: Images and documents are accessible at any time from all mobile and stationary devices with an internet connection.

Straightforward: The user friendly interface is self-explanatory. Support is available online.

No more service contracts: ***ORCA*** is automatically updated and serviced without extra charges.

Data security: ***ORCA*** guarantees automatic data backups and high security standards. Data loss as a result of malware or hardware failure is a thing of the past.

Accessibility: Excellent accessibility is ***ORCA*** top priority.

Fit for the future: ***ORCA*** archives all data in modern computing centres. The server technology is updated regularly.

Communication: ***ORCA*** is also a communication platform. Sharing images and documents with doctors and other authorised persons is a breeze.

Optimal workflow: ***ORCA***'s many special functions and settings make workflow customisation easy.

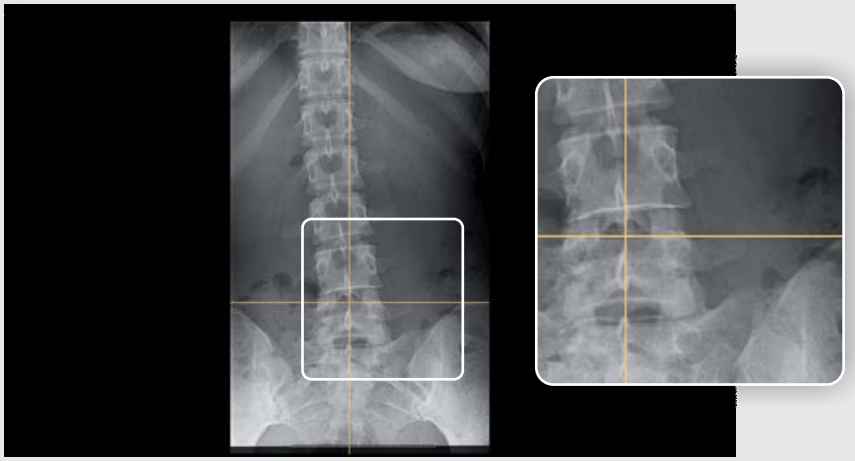
Cloud based solution to access and archive images and diagnostic reports via the internet

Software

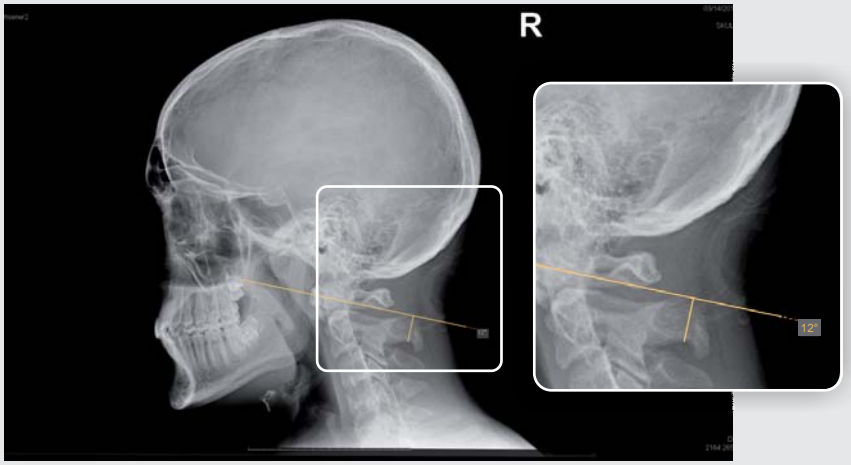
Special **Chiro Tools** for optimal diagnosis

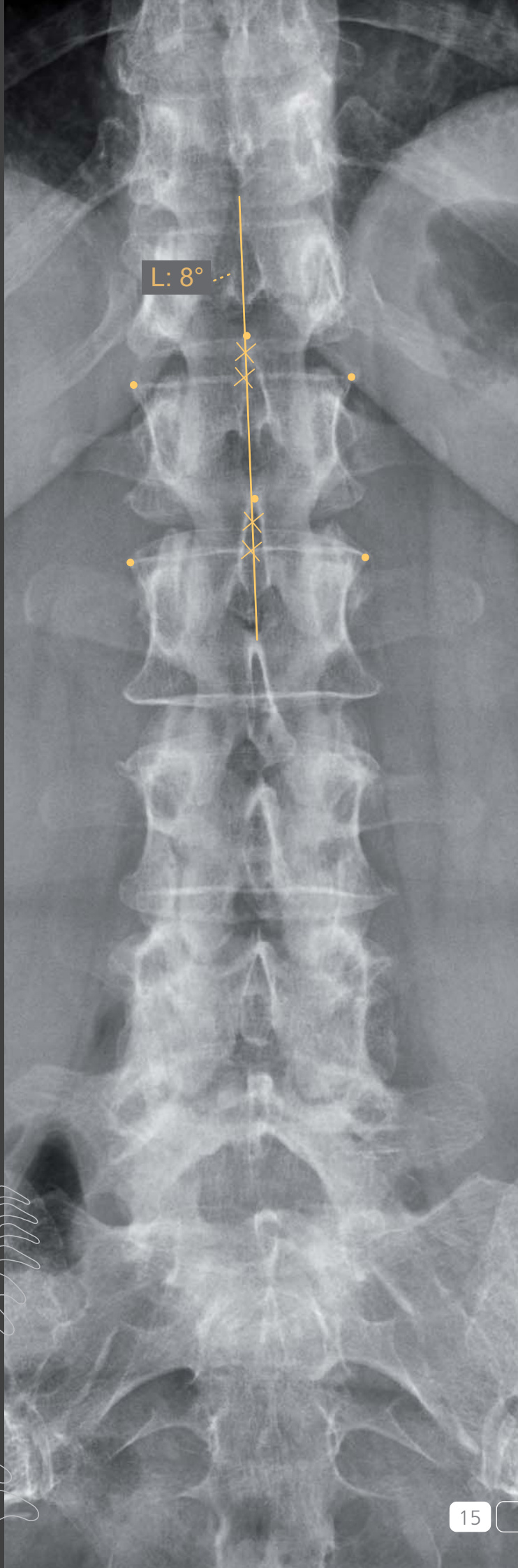
The Chiro Tools have been developed in cooperation with experts from the USA and Canada and offer great possibilities for diagnosing accurately as well as for planning further treatment. According to the tool used, automated center lines and points, defined curves, angle measurements etc., are generated after the manual selection of the points of interest.
Of course all the standard tools (like distance measurement, angle and Cobb angle, mark spots etc.) are also included.

Axis line
The tool creates a vertical or horizontal axis, depending on the direction, in which the mouse pointer is moved.



Orthogonal line
This tool is used to mark perpendicular lines on existing or yet to be drawn baselines. The divergence from the x/y-axis (nearer axis) is displayed by default.

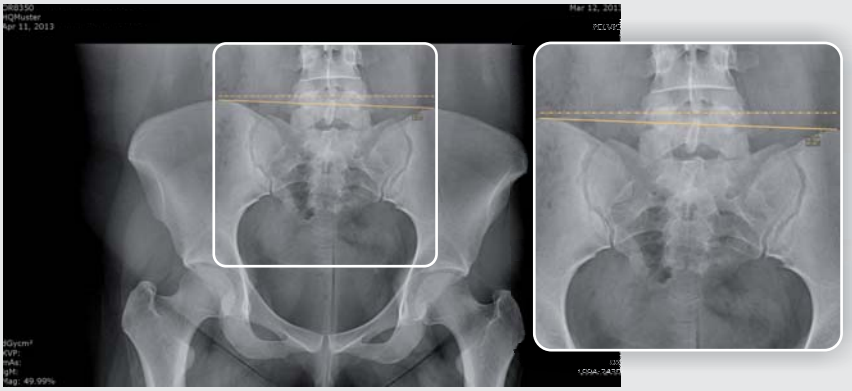



L: 8°

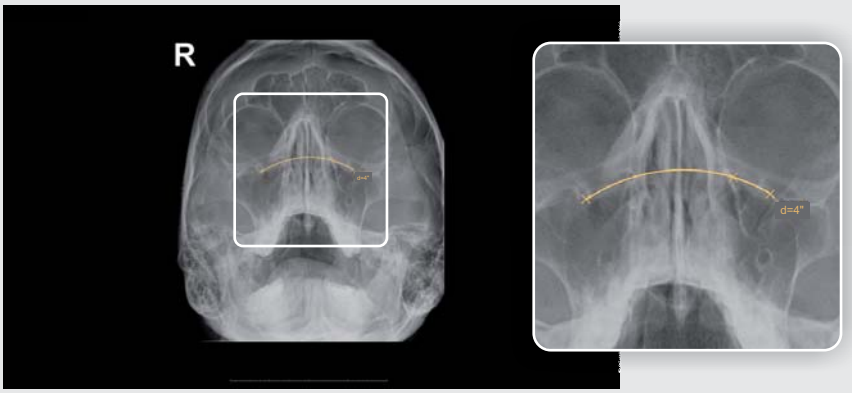
Chiro tools

George's line
This tool is used to draw vertical lines on each vertebra along the spine in a lateral view and to calculate their distances (in mm or inch).

Horizontal or vertical level
This tool calculates the horizontal or vertical level. By default the nearer axis is used for calculation.

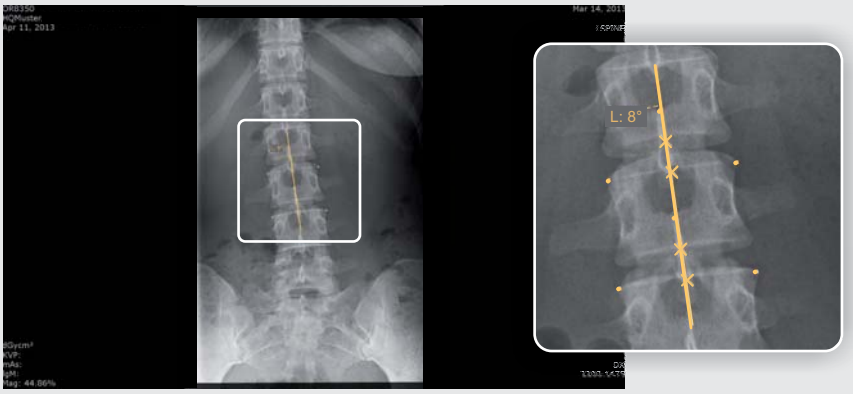


Circumscale
An arc is drawn through three defining points and the diameter of the corresponding circle is displayed by default.

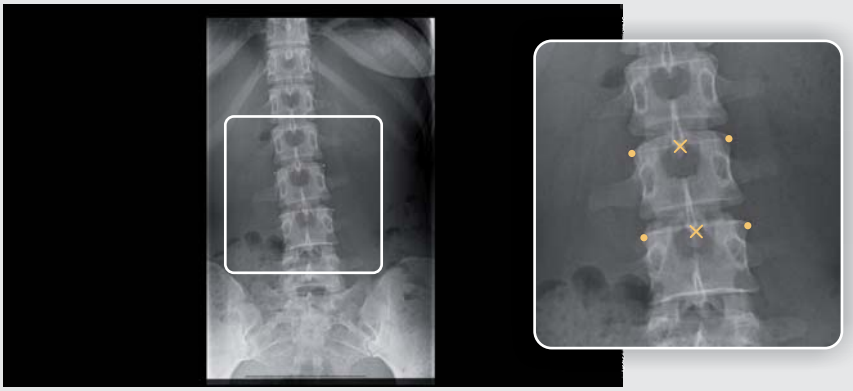


Spinal curve
This tool is used to draw an arc in the lateral view of the spine. The annotation uses a fixed radius set by default to 220 mm. Radius or degree can be adjusted manually.

Vertebrae line
This tool generates a vertical line of six points (2x3) along the spinal canal and displays the lateral divergence and side of laterality in degrees.

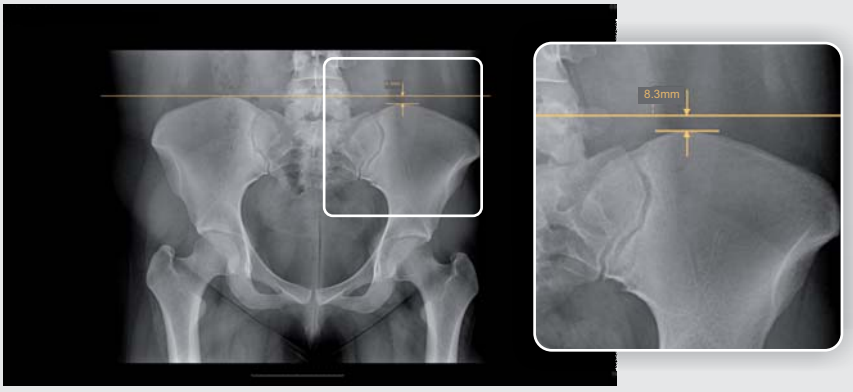


Center point
This tool calculates the center point between two points.



Distance comparison
This tool compares the distances between three set points (between point 1and point 2 and between point 2 and point 3) and shows the larger distance.

Pelvic obliquity
This tool is a measurement that is calculated automatically after two simple clicks which generate two horizontal lines showing the distance between these two parallels.

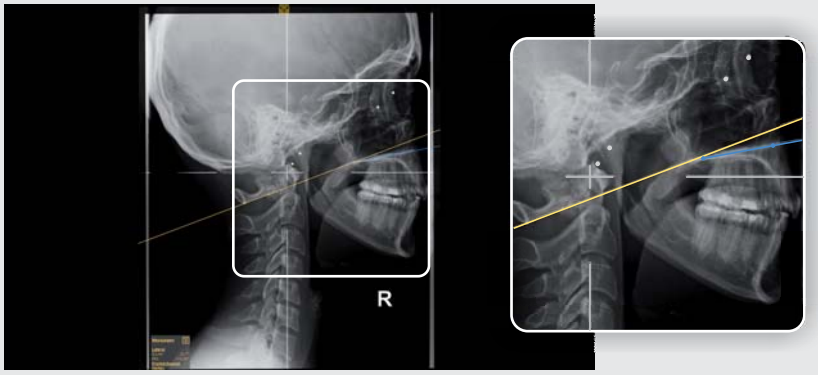


Software

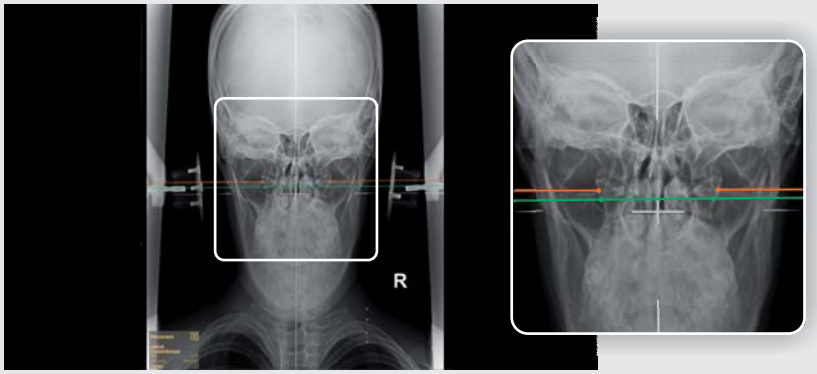
*dicom*PACS® Diagnostic tools for Upper Cervical Chiropractic

The Upper Cervical Chiropractic tool set has been created in cooperation with leading experts from the US and Canada. It offers a variety of ways to reach a fast and accurate diagnosis. Templates like the Cephalometer, Grid, Circumscale, and Relatoscope enable you to continue working as you are used to.

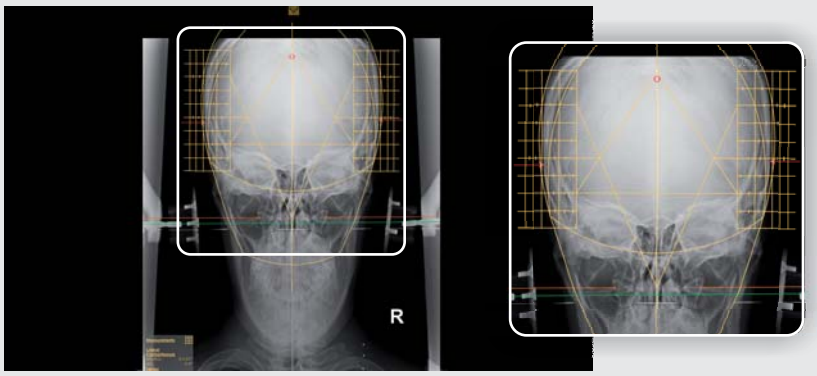
S-Line and Hard Palate Line and Raw Data Box
You simply set two points each on C1 and the hard palate to create the S-Line and the Hard Palate Line. We will show you the horizontal angles. All measured values will be shown in the raw data box. You can also show and hide values manually.

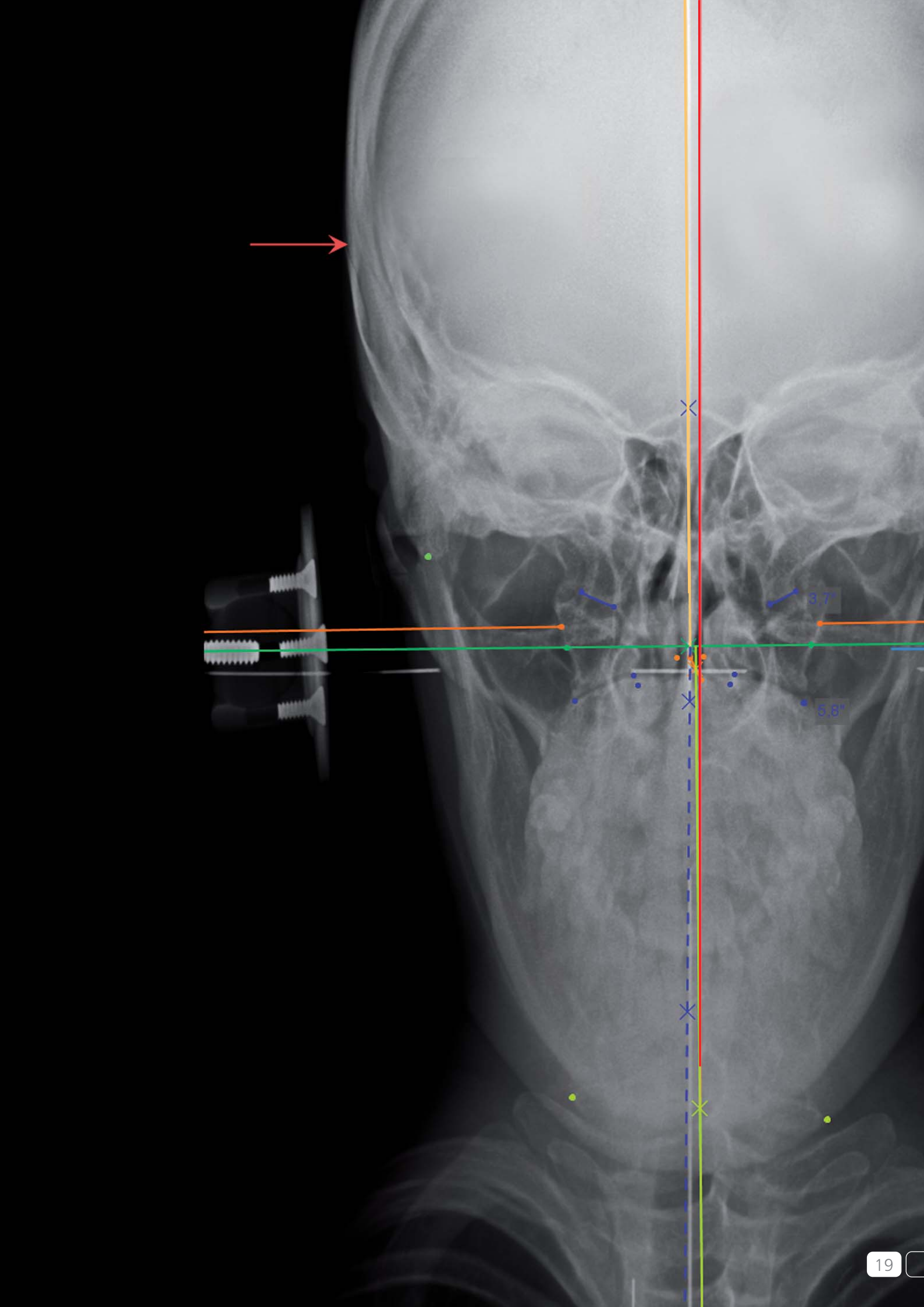


Atlas Plane Line and Atlas Check Line
The horizontal angle and the angle between Atlas Plane Line and Atlas Check Line will be shown in the raw data box.



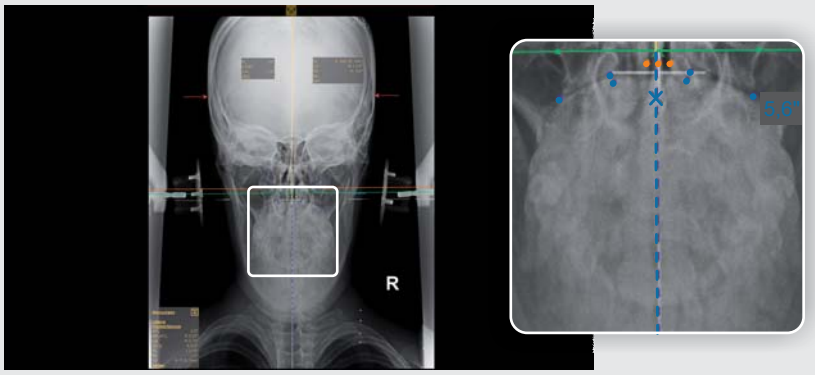
Cephalometer and Central Skull Line
Use the Cephalometer to draw the Central Skull Line. Laterality and Skull Tippage will be calculated automatically. The Four Elements and Listing Information will be inserted and are completely editable.



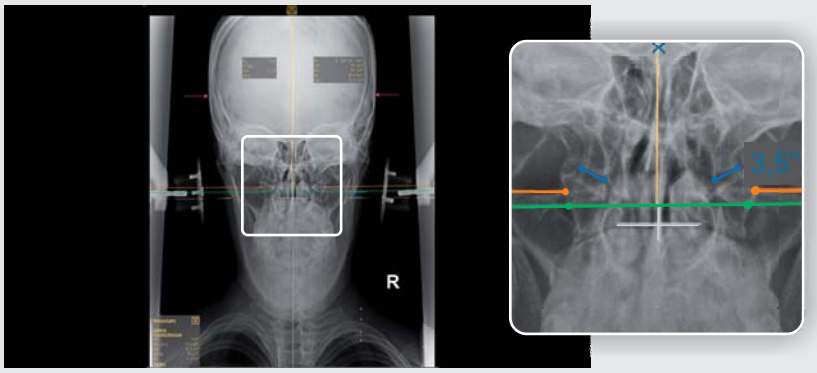

3.7°
5.8°

*dicom*PACS® Diagnostic tools

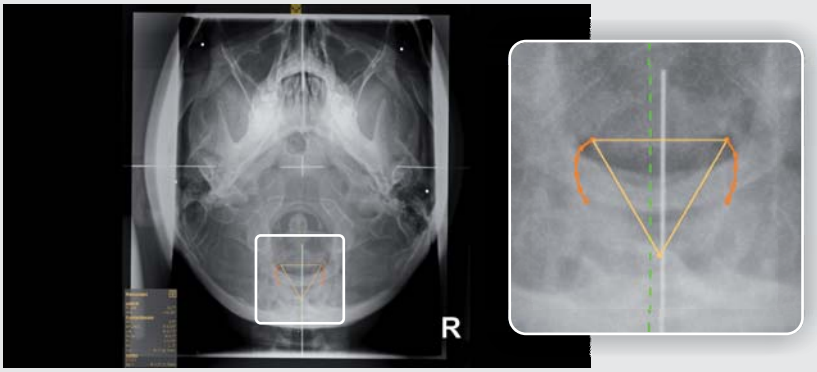
Axial Circle
The Body Center Line will be set automatically and the Axial Circle will be calculated and shown on the side of laterality. You can set the calculated measurement manually to the value you prefer.



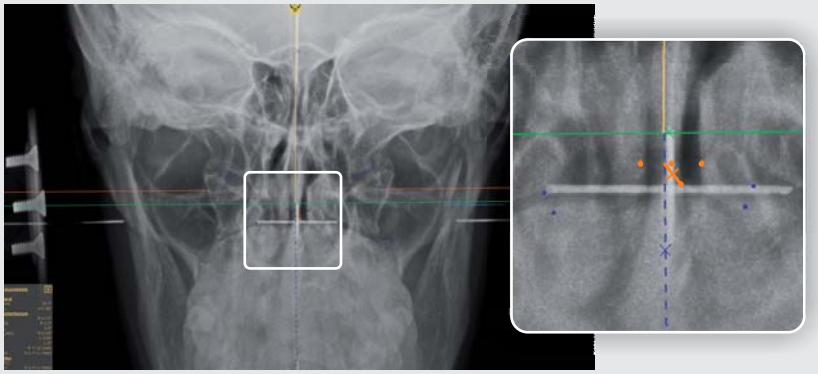
Condylar Circle
Choose between the three point and four point Condylar Circle. The middle point will be shown. You can set the calculated measurement manually to the value you prefer. The Relatoscope will use the shown value.



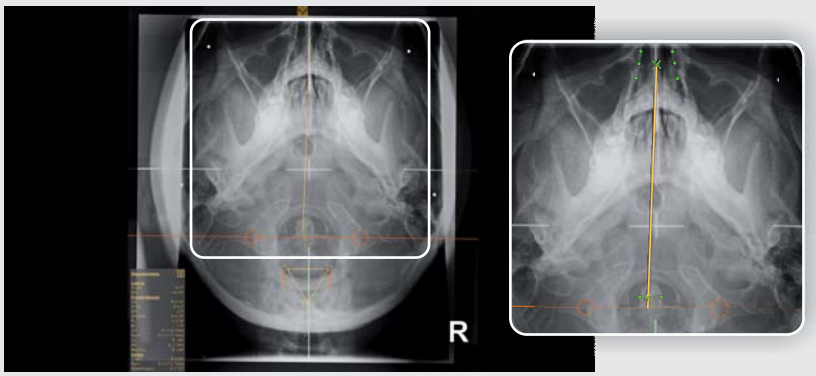
Odontoid Center and Vertex Square
Mark the lateral aspects of the dens and the Odontoid Center Line will be inserted. After marking the C2 canal, the Vertex Square will be inserted and the Spinous value will be calculated depending on the Condylar Circle.



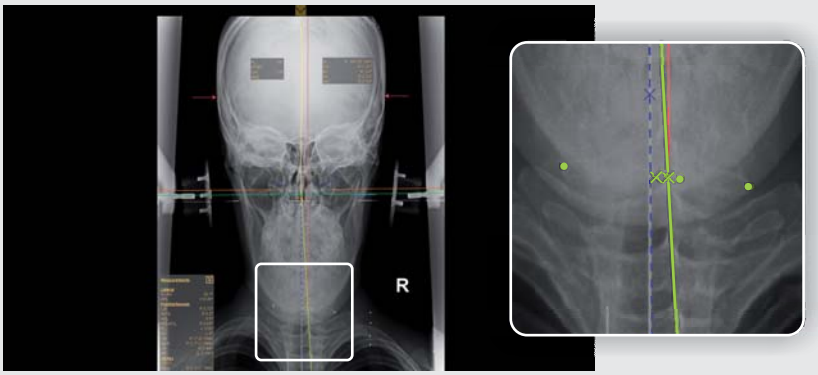
Odontoid, Spinous and Relatoscope
Use the Relatoscope to apply the Spinous value from Vertex to Nasium View. Mark the lateral aspects of the dens and the (corrected) Odontoid will be inserted automatically.



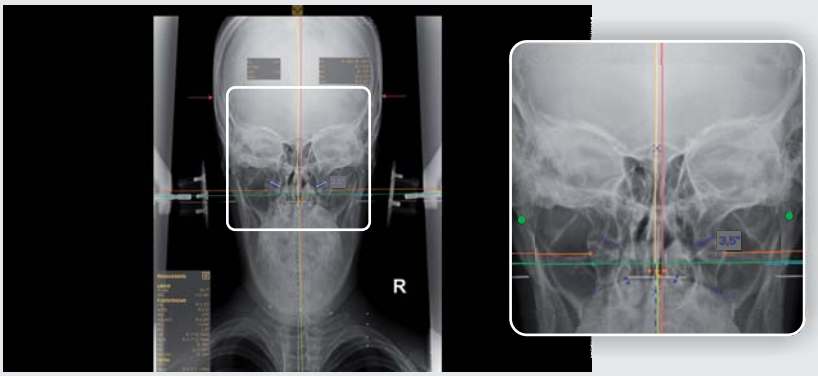
Vertex Skull Line
After marking the nasal structures, click the Inferior Point button. The point will be set automatically depending on the Listing Information value and the Vertex Skull Line will be inserted. Atlas Rotation will be calcuated.



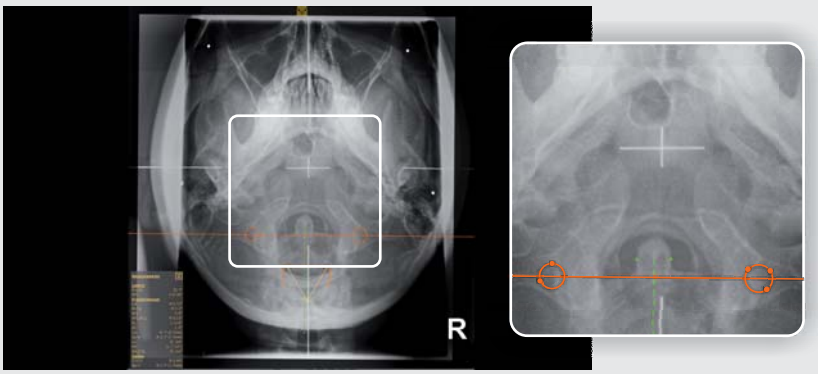
Lower Angle and Angular Rotation
The Lower Angle and Angular Rotation will be calculated automatically after setting the Inferior Point. You can also set a corrected Inferior Point.



Intermastoid Line
Mark the inferior tips of the mastoid processes. The measured value, its orthogonal divergence from the Central Skull Line, will also appear in the raw data box.



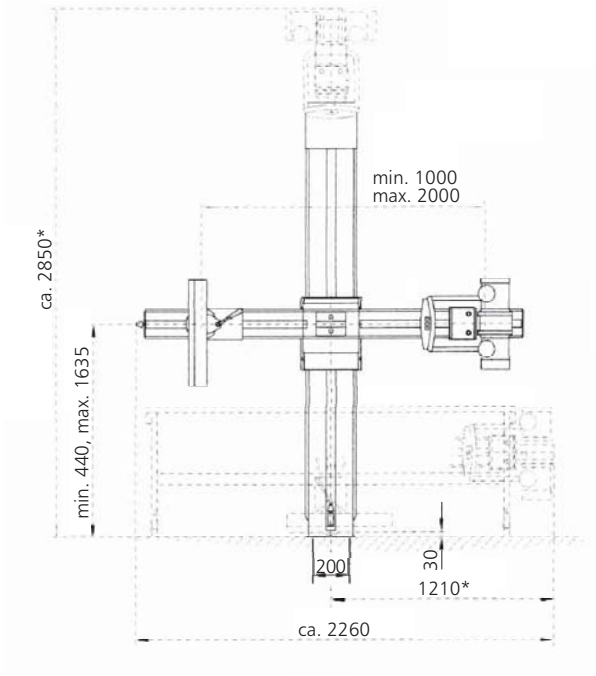
Vertex Atlas Line
After marking the transverse foramina of the atlas with three points each, we will draw the Vertex Atlas Line and show the convergence of C1 and C2.



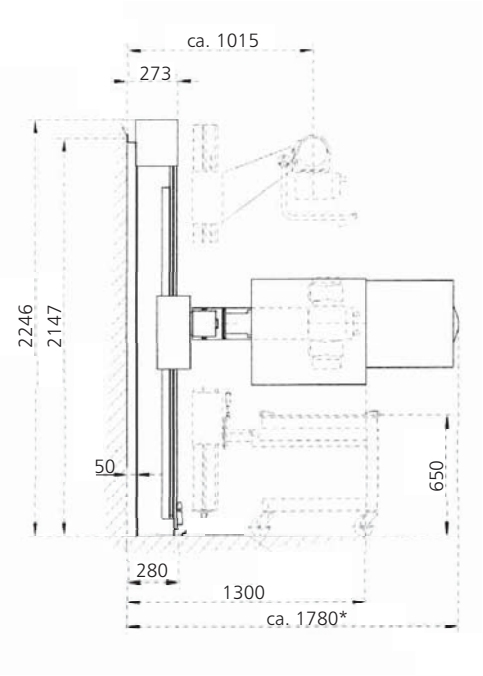

30
0
30

Dimensions of the U-arm X-ray stand

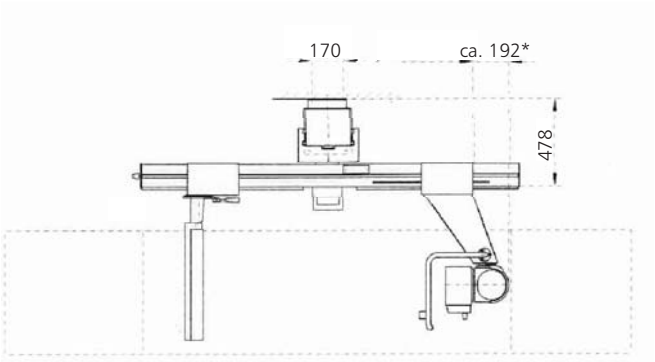
Front



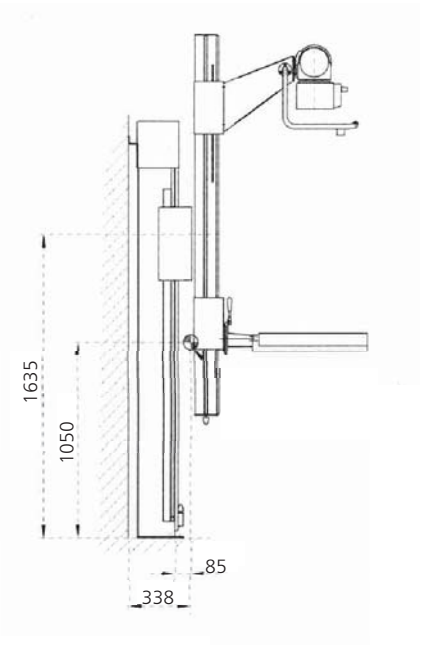
Profile



Top view



Profile



*Dependent of components

[dimensions may vary]

Delivery includes

The **Amadeo S** systems includes the following components:

Components	Amadeo S-DR DR system with integrated fixed flat panel	Amadeo S-AX System for film/ CR cassettes without generator control	Amadeo S-DRw System with CR cassettes/ wireless flat panel with generator control
50 KW HF generator	✓	✓	✓
Measuring chamber (AEC field)	✓	✓	✓
U-arm X-ray stand ▪ *The central beam is permanently centred on the bucky tray* ▪ *Film focus distance can be adjusted from 1.0 m to 2.0 m* ▪ *Central beam ground clearance from 420 mm minimum to 1630 mm maximum.* ▪ *Tube cross arm can be rotated from +135° to – 35°* ▪ *Electromagnetic brakes dampen movements* ▪ *Particularly smooth running and silent*	✓	✓	✓
X-ray tube 150 kVp ▪ *Optical focal spot: 0.6 and 1.2* ▪ *Anode revolutions: 2 850 rpm* ▪ *Anode angle: 12°* ▪ *Heat capacity: 300 KHU* ▪ *Focal spot: 0.6/ 1.2 mm* ▪ *Peak voltage: 150 kVP*	✓	✓	✓
Manual Collimator	✓	✓	✓
Motorised bucky with removable grid	✓	✓	✓
Grid for SID 86 to 112 cm	✓	✓	✓
Grid for SID 100 to 180 cm	✓	✓	✓
Flat panel detector 17" x 17" CsI *Detector with excellent image quality and immediate image availability* *[example]*	✓	-	-
Flat panel detector 14" x 17" wireless *Wireless X-ray imaging! Fits into an existing X-ray system without requiring modification (in conformity with the X-ray film cassette), fast charging, long life batteries* *[example]*	-	-	✓

Components	Amadeo S-DR	Amadeo S-AX	Amadeo S-DRw
Operation by ***dicom**PACS®**DX-R*** acquisition station *...the professional console software with modern graphic user interface with generator control, integrated X-ray positioning guide and basic software modules:* • ***dicom**PACS®**DX-R** DICOM Send SCU* • ***dicom**PACS®**DX-R** DICOM Patient CD* • ***dicom**PACS®**DX-R** Cognition Optimised Processing* 	✓	-	✓
Operation via PC with generator control software 	-	✓	-
Optional components to upgrade the Amadeo S system:			
DAP meter (Dose Area Product meter)	●	●	●
Upgrade from 50 KW to 65 KW	●	●	●
Upgrade from 50 KW to 80 KW	●	●	●
Motorised collimator without filter exchange	●	●	●
Motorised collimator with filter exchange	●	●	●
LWS/ BWS filter - to replace manual	●	●	●
Patient table I • *Mobile patient table with power driven height adjustment,* • Dimensions L/W/H: 2300/ 753/ 580-890 mm • Weight: 123 kg • Max. patient weight: 225 kg • X-ray transparent area: 2296 x 588 mm • Attenuation equivalent 100 kv: <0,75 mm AL 	●	●	●
Patient table II • *Light and flexible patient table* • *Rollers are equipped with block brakes* • *Patient load max. 150 kg (300 lbs.)* • *Dimensions L/W/H: 2000/700/760 mm* 	●	●	●
Patient table Z-Table • *Patient table with smoothly mobile floating table top* • *Rollers are equipped with block brakes* • *Patient load max. 150 kg (300 lb.s)* • *Dimensions L/W/H: 2000/660/760 mm, weight: 80 kg (177 lbs.)* 	●	●	●

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Portfolio

Overview - products of OR Technology

Medici DR Systems

DR retrofits - digital upgrade set for existing X-ray systems incl. ***dicom**PACS®**DX-R*** acquisition software, also available for stationary and mobile X-ray machines

Leonardo DR Systems

DR suitcases - compact suitcase solutions for portable X-ray incl. ***dicom**PACS®**DX-R*** acquisition software

Amadeo X-ray Systems

Complete digital X-ray systems (incl. wall stand, bucky, generator, flat panel incl. ***dicom**PACS®**DX-R*** acquisition software etc.) as well as mobile and portable X-ray solutions

Divario CR Systems

CR solutions - CR systems for digital X-ray with cassettes incl. ***dicom**PACS®**DX-R*** acquisition software

X-ray Accessories

Accessories for X-ray
(e.g. radiation protection walls, gloves etc.)

dicomPACS®

Image management (PACS) - comprises acquisition, processing, diagnosis, transfer and archiving of image material

ORCA

Cloud based archive solution - safe, long-term archiving of patient data with intelligent usage of internal databases, communication platform with colleagues and specialists and transfer of image data to patients

dicomPACS® DX-R

X-ray Acquisition Software

X-ray acquisition software [only for OEMs] - acquisition and diagnostic software for X-ray images from flat panels or CR systems

OR Technology
Digital X-ray and
Imaging Solutions

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