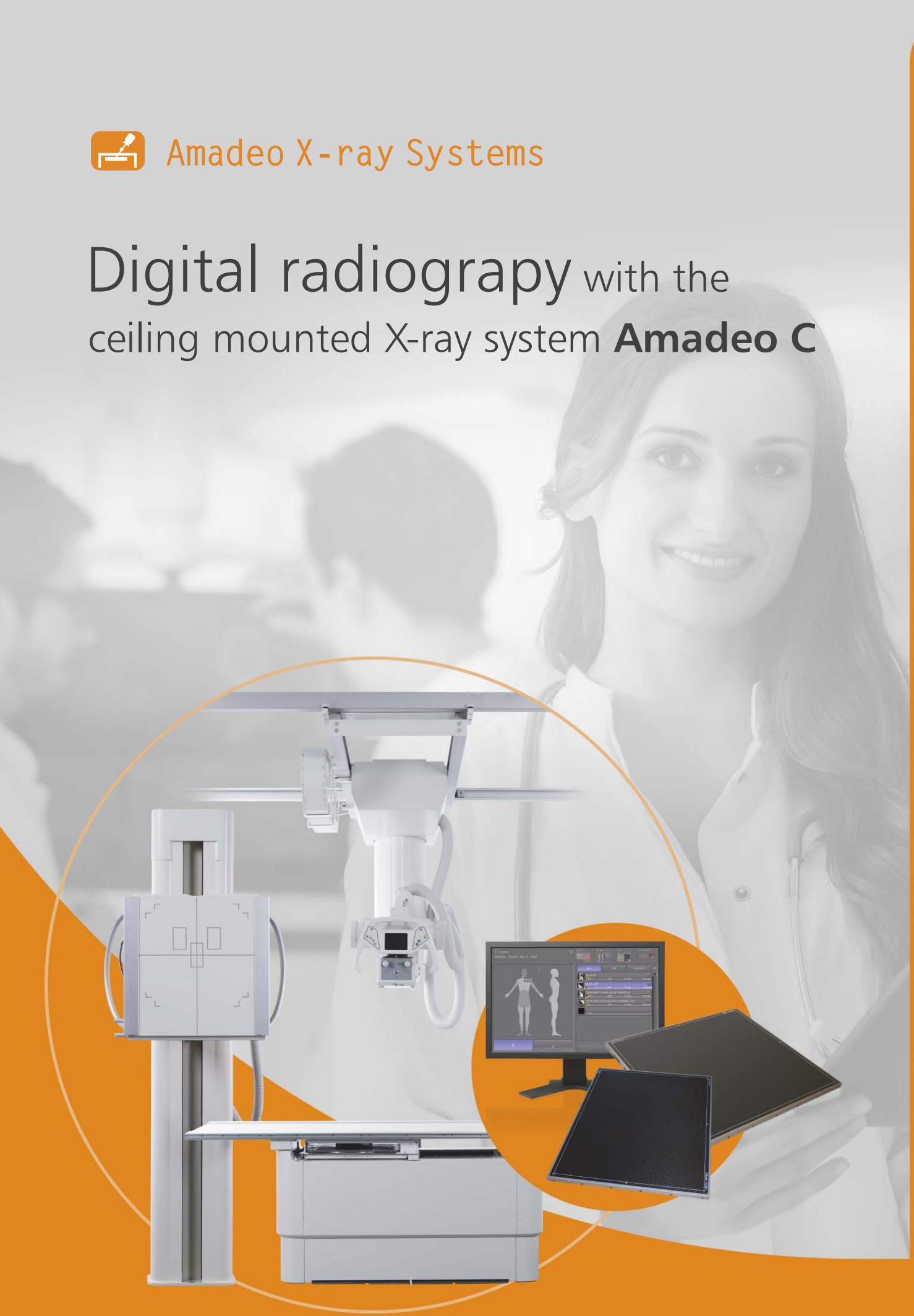
Amadeo X-ray Systems

Digital radiograpy with the ceiling mounted X-ray system **Amadeo C**



Amadeo C-DR complete X-ray-System for digital X-ray

Amadeo C Systems

Ceiling-mounted X-ray system with adjustable patient positioning table and wall stand

The **Amadeo C** is a ceiling mounted X-ray system with wall stand and adjustable patient table. The ceiling mount is designed to make positioning the X-ray system straightforward and effortless. The system is modular and can be installed in confined as well as spacious interiors.

The flexible ceiling mount allows precise X-ray imaging under all conditions. Effortless manual positioning of the X-ray tube is made possible by the newly designed spring counterbalance system.

The floating tabletop of the height adjustable Bucky table is perfectly suited for routine examinations. Thanks to a generous maximum weight limit and large imaging area, large-bodied and overweight patients can be examined from head to foot without repositioning.

The grid wall stand is also freestanding and is equipped with electromagnetic brakes. The stand is ideal for a wide array of X-ray examinations. Thanks to the extended movement range of the grid, whole torso imaging is possible without repositioning the patient.

The ***dicom****PACS*®***DX-R*** operating console controls the entire X-ray system: from operating the X-ray generator to the finished superb quality image for diagnostic evaluation. All necessary settings are keyed into a single control panel. In addition, the integrated multimedia X-ray positioning guide offers advice on the correct adjustment technique and the positioning of the patient.

Benefits

Digital X-ray imaging with **Amadeo C** systems

Optimal use of available space

The versatile track system and preset settings make the wall stand and Bucky tray ideal for diverse interiors.

Your benefit: Customised design for individual needs

Excellent image quality

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

Your 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.

Your Benefit: Fast work flow with optimal documentation.

Easy handling

The functional design ensures easy handling and quick staff training. The X-ray tube and the Bucky tray can be lowered to ground level.

Your benefit: Safe and straightforward

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.

Your Benefit: You work with only one control console.

Well-designed

The system includes two tethered 43 x 43 cm flat panel detectors (alternatively one tethered 43 X 43 cm and one wireless 36 X 43 cm flat panel detector). Repositioning unwieldy detectors is a thing of the past.

Your benefit: No time lost repositioning detectors, quick staff training.

The X-ray tube and Bucky tray can be lowered to ground level.

Ceiling Mount

The quickest way to take high-precision X-rays

The logical, transparent operating procedure facilitates easy fingertip control of the system. The optional 10" Front Touch Display offers an excellent overview of all settings as well as all customization options.

The stands out because of its universality – and great flexibility. The new design with featherweight balancing with the EasyDrive system makes for particular easy and effortless positioning of standard X-ray tubes and collimators. The increased service life of the EasyDrive significantly reduces maintenance intervals and down times and lowers operating costs appreciably. Flexible rail solutions and customizable preferred positions facilitate variable positioning of wall mounts and Bucky tables in the most varied room layouts.

At a glance:

- easy operator prompts on the display on the control panel
- EasyDrive for effortless manual operation
- reduced operating costs
- maximum precision in positioning
- memory functions with 30 programmable preferred positions
- system control with the CAN-Bus
- RS 232 serial services interface 232
- variable room layout with a modular rail system for optimal space utilization and flexible installation
- very short installation times

Optional function: Autotracking

The perfect centring of the X-ray tubes and image receptor is guaranteed by the optionally integrated Auto-tracking function. The optimal imaging position can be reached in just a few steps.

Tube tracking:
The X-ray tube follows the vertical movement of the wall mount and centres itself automatically.
Bucky tracking:
The table Bucky follows the X-ray tubes horizontally and centres itself automatically.
SID tracking:
The X-ray tubes follow the Bucky table vertically at a pre-set distance.

Technical data

Ceiling rails	X-axis: 4m / Y-axis: 3m
Extension of the rail system (optional)	X-axis up to 6m, can be supplied in extension modules of 1m Y-axis up to 4m, can be supplied in extension modules of 1m
Horizontal longitudinal travel (X-axis)	119cm - 519cm
Extension of horizontal longitudinal travel (X-axis)	Includes up to three electromagnetic locks. For definable pre-set positions (e.g. SID distance 1.5m, chest imaging, etc.). Additional locks are available as an option.
Horizontal transverse travel (Y-axis)	105cm - 305cm
Extension of horizontal transverse travel (Y-axis)	Includes one electromagnetic lock. Additional locks are available as an option.
Carriage	Including balancer of 20kg - about 40kg. Length: 83.7cm, Witdth: 50.9cm, Height: 32.2cm
Column vertical (Z-axis)	165cm + 2cm divided into 4 units
Minimum focus-ceiling-distance	98cm
Tube angulation Catch positions	A-axis: 135° to -135° 120° / 90° / 0° / -90° / -120°
Tube rotation Catch positions	B-axis: 180° to -160° 90° / 0° / -90°
Digital soft-touch control display	SID (optional), horizontal tube rotation angle, automatic adjustment, mode (table/wall stand)
Weight	320kg - 360kg

Bucky Wall Stand

Highest Stability in a Slender Design
für X-ray examination of the whole body

The wall stands are versatile vertical Bucky stands for a wide range of radiographic examinations, such as thorax, vertebral column, pelvis, skull and abdomen. The extensive vertical range allows examination of the entire body. Only one hand is needed for any adjustment!

The vertical Bucky travel as well as the tilting movement can be accomplished by depressing the respective lever on the Bucky carriage. All movements are perfectly counterpoised to enable smooth and effortless motion, vertically as well as within the tilting plane. The Bucky carriage bearings are plastic-clad to provide a smooth and silent movement.

Benefits

- **Optimal conditions for excellent radiographs**
  The front cover plate is constructed from low absorption material for maximum contrast and minimum radiation exposure for the patient. The short object-to-film distance assures the optimum radiograph (typically 40 to 50 mm depending on the installed Bucky device)

- **Convenient patient positioning**
  The chin hollow facilitates the positioning of standing or seated patients for chest examinations.

- **Minimal space requirements – Easy installation**
  The wall stand with its small center column can be fixed to the wall as well as installed free standing without additional support. The operator controls can be changed from left to the right during installation.

Technical Data	
Vertical movement of the acquisition unit	min.: approx. 38 cm max.: approx. 190 cm
Holding force, vertical brake	250 to 300 N
Force to move vertical	= 25 N / < 25 N
Tilt angle (only for VK*)	90° to -20° with continuous intermediate positions
Braking force for the mechanical brake (only for VK*)	> 200 N
Additional arrester at 0° (only for VK*)	Basic equipment
Dimensions (height x width x depth)	Vertical adjustable: 224.5 x 65.1 x 36.7 cm Vertical adjustable and tiltable: 224.5 x 65.1 x 63 cm
Weight	Vertical adjustable: 141 kg Vertical adjustable and tiltable: 196 kg

* Vertically adjustable and tiltable

Bucky Table

Height adjustable patient table with precise positioning and centring mechanism

The free-floating tabletop provides optimal support for all requirements for routine examinations. The high patient load together with the wide imaging range makes it possible to examine obese and large patients from head to foot without repositioning. With the table height adjustment, even a patient in a wheelchair can be positioned quickly and easily. Furthermore, the flexibly adjustable working height enables the radiologist to treat the patient in comfort and without fatigue.

The powder coated surface is extremely resilient and as stable as possible – the fine structure and the evenness of the thin layer facilitates cleaning considerably. Furthermore, eco friendliness (no solvents) and good bacteriological characteristics are ensured.

Spezification

- **Best patient positioning**
  The low position of 55 cm permits rapid repositioning of the patient and minimises the effort required for this. This low position for getting on means that even disabled patients can be positioned without effort. The high range of movement up to 90 cm ensures comfortable preparation of the patient for the examination

- **Economical installation and maintenance**
  The well-known "made in Germany" quality keeps maintenance to a minimum and provides extremely rapid construction and installation. Depending on the position of the wall mount, the mounting position can be changed, even during installation.

- **Patient safety pramount**
  The safe-click operation prevents unintended movement of the X-ray table. The integrated collision protection avoids possible collisions with objects in the room.

Technical data	
Table height	min.: 55 cm max.: 90 cm
Length of the floating tabletop	Standard: 220 cm Optional: 200 cm / 220 cm removable from above
Tabletop mobility	Longitudinal movement: left 60 cm / right 50 cm Transverse movement: ±12 cm
Bucky travel range	Left: 30 cm Right: 20 cm
Movement force	<30 N
Object - film / detector - distance	max.: 7 cm
Patient load	max.: 320 kg
Dimensions (length x depth x height)	220 x 104 x 55-90 cm
Weight	approximately 250 kg

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 work station with installed ***dicom****PACS*®***DX-R*** software may be upgraded by the following options (selection):
  - Tools for taking images of an entire leg (full spine) or an entire 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

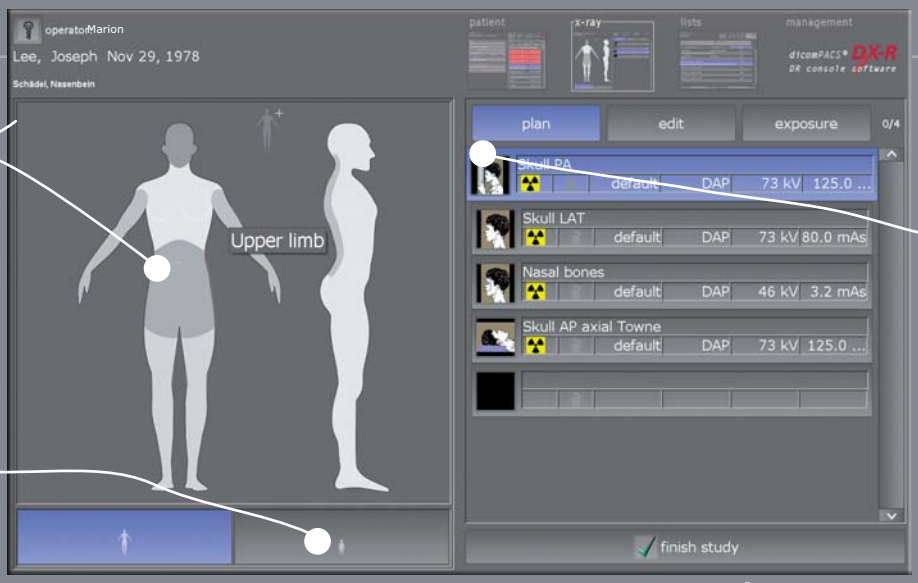


Chart for the planning of an individual X-ray job

Switch to the planning of X-ray jobs for children

The correct settings for adults and children at a mouse click

***dicom**PACS®**DX-R** job creation*

Video with sound for the step by step positioning of 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

Preview of the current X-ray image

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

Image processing

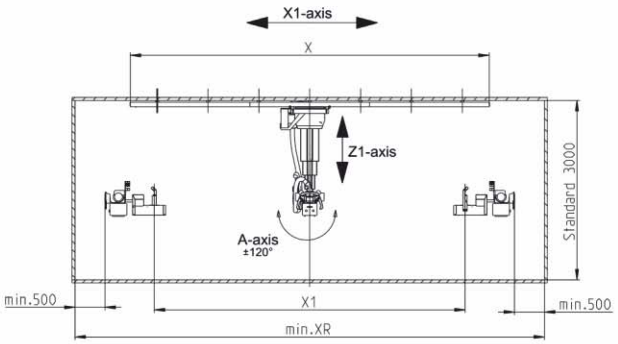
Automatic image processing for optimal quality

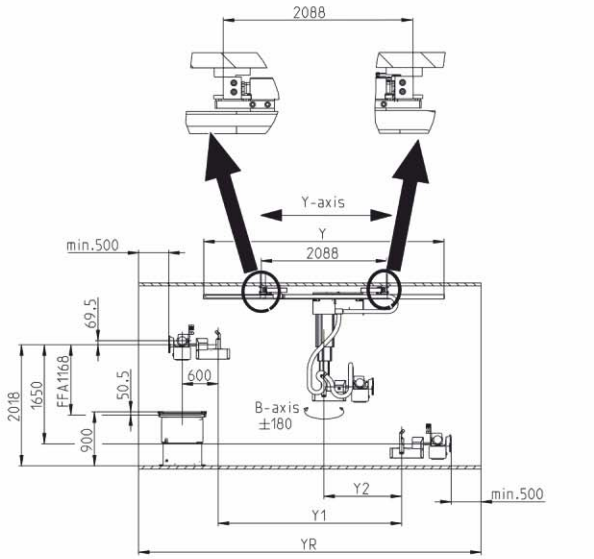
- Perfect images at all times - generally **no adjustment** required
- Integrated software for **automatic image optimisation**
- Professional, **adaptable image processing** for each individual examination to obtain best possible image settings for the needs of each customer
- Due to specially developed 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

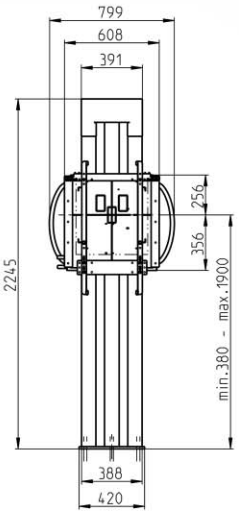
*Exposure with **standard** image processing*

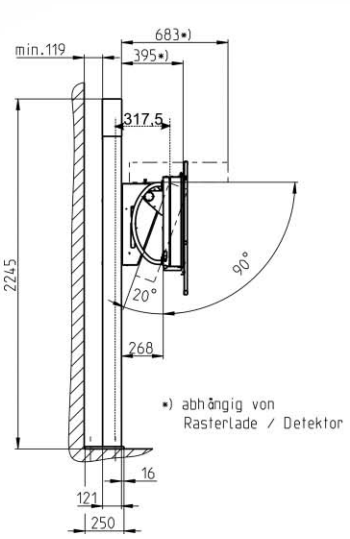
*Exposure with **dicom**PACS®**DX-R** image processing*

Dimensions of ceiling mount and wall stand

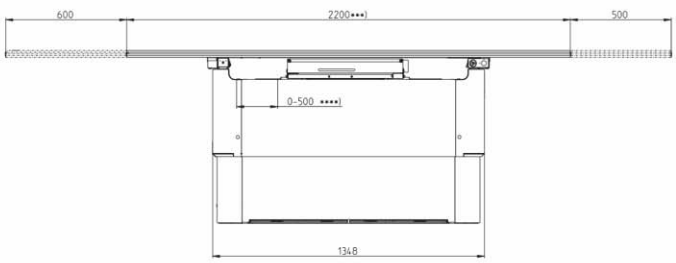


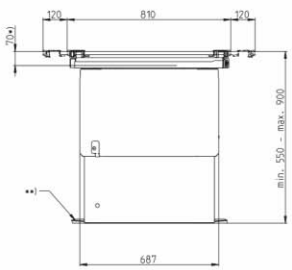


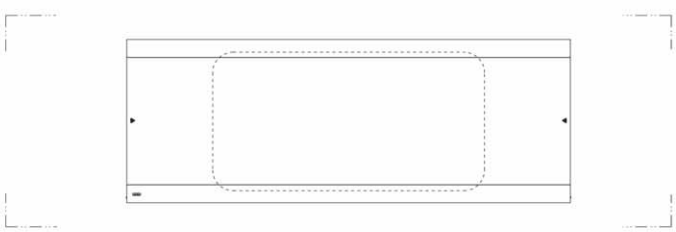




Dimensions of the bucky table







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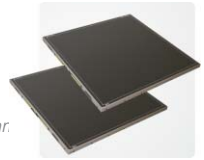
Delivery includes

The Amadeo C systems come with the following components:

Components	Amadeo C-DR Ceiling mount X-ray system with dual detector (17" x 17" fixed and wireless14" x 17")	Amadeo C-DR Ceiling mount X-ray system with dual detector (2x 17" x 17" fixed)
50 KW HF generator	✓	✓
X-ray table • *X-ray table with 4-way floating table, 220 cm* • *Longitudinal travel 110 cm and across 24 cm* • *Range of motorised height adjustment for table 55 – 90 cm* • *Motorised Bucky cabinets for oscillating grid, with 3-field ionisation chamber (AEC)* • *Removable oscillating grid M (40 L/cm, r 10:1, FFA = 86 - 112 cm)* • *Extremely solid construction for high patient load, max. 320 kg (700 lbs.)*	✓	✓
Wall stand • *Bucky can be tilted* • *Adjustable height, counterbalanced, vertical travel 152 cm* • *Motorised Bucky cabinets for oscillating grid, with 3-field ionisation chamber (AEC)* • *Removable oscillating grid L (40 L/cm, r 10:1, FFA = 100 - 180 cm)*	✓	✓
Ceiling mount • *Ceiling rails 4 m and 3 m (X-axis and Y-axis)* • *Movement range 3.19 m and 2.05 m (X-axis and Y-axis)* • *Smooth and effortless positioning of the X-ray tube on the ceiling mount* • *3x electromagnetic locks in X and 1x lock in Y direction at custom preset positions* • *Telescopic pole with motorised movement along Z-axis* • *Control panel with 5" display* • *Manually operated collimator with halogen full field light localiser*	✓	✓
X-ray tube • *Varian RAD-14* • *Dual focus rotating anode tube* • *Focal spot 0.6/1.2 mm* • *Tube overload protection* • *Heat capacity 300 KHU*	✓	✓
1 x flat panel detector 14" x 17" wireless and 1 x 17" x 17" flat panel detector fixed *WiFi direct Radiography detector 14" x 17" based on amorphous Silicon (a-Si) with Caesium Iodide (CsI)* • *Excellent image quality even on low dosage* • *Active area 35,5 x 43,4 cm (13,9" x 17,0"), Pixel pitch 154 µm* • *Resolution 2,815 (h) x 2,304 Pixel (v) (6.5 million pixel), approx. 3.3 lp/mm* • *Dimension 38.4 x 46 x 1.5 cm (18.1" x 15.1" x 0.6") (WxHxD) (ISO 4090)* • *Weight 3.7 kg (8.2 lbs.)* *Detector 17" x 17" based on amorphous Silicon (a-Si) with Caesium Iodide (CsI)* • *Active area 43,4 x 43,4 cm (17,0" x 17,0"), Pixel pitch 154 µm* • *Resolution 2,816 (h) x 2,816 Pixel (v) (7,9 million pixel), Resolution approx. 3.3 lp/mm* • *Dimension 46 x 46 x 1.5 cm (18.1" x 18.1" x 0.6") (WxHxD) (ISO 4090)* • *Weight 3.9 kg (8.6 lbs.)*	✓	-

Components	Amadeo C-DR	Amadeo C-DR
2 x flat panel detector 17" x 17" CsI *Detector 17" x 17" based on amorphous Silicon (a-Si) with Caesium Iodide (CsI)* *• Active area 43,4 x 43,4 cm (17,0" x 17,0"), Pixel pitch 154 µm* *• Resolution 2,816 (h) x 2,816 Pixel (v) (7,9 million pixel), approx. 3.3 lp/mr* *• Dimension 46 x 46 x 1.5 cm (18.1" x 18.1" x 0.6") (WxHxD) (ISO 4090)* *• Weight 3.9 kg (8.6 lbs.)* 	–	✓
Operation by ***dicom**PACS*®***DX-R*** acquisition station *Mini PC with 19" touch screen monitor, **dicom**PACS®**DX-R** console software with modern graphical user interface including basic software package* 	✓	✓
Wall stand with tilting function  	✓	✓
Optional components to upgrade the Amadeo C system:		
DAP meter (Dose Area Product meter)	●	●
Upgrade from 50 KW to 65 KW	●	●
Upgrade from 50 KW to 80 KW	●	●
Patient mat for X-ray table	●	●
Lateral holder for detector *• Detector holding tool for lateral fixing in the table profile rails* *• The detector is steplessly adjustable in the X-ray beam direction and can also be pivoted about its vertical axis*	●	●
Autotracking SID *• The X-ray tube automatically follows the vertical movement of the Bucky table at a pre-set distance*	●	●
Autotracking wall stand *• The X-ray tube follows the vertical movement of the wall stand and is automatically centered*	●	●
Autotracking Bucky *• The Bucky in the patient table follows the horizontal movement of the X-ray tube and is automatically centered*	●	●
Patient stretch grip on wall stand *• Grip handle on left and right side* *• Patient overhead handle*	●	●
Ceiling rail extension 1m *• Includes 2 mounting plates and slot nuts*	●	●
Additional ceiling mounting per set for 1m	●	●
Additional electromagnetic stop in X direction	●	●
Additional electromagnetic stop in Y direction	●	●

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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. 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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