Amadeo DR Systems

| with *dicomPACS* ® **DX-R** Software

| X-ray Systems for the Future

Digital radiography

with **Amadeo R-DR** including bucky table and wall stand as a dual detector or wireless system

IAmadeo R-DR

High contrast and low noise even at low doses

|Amadeo R-DR
| with *dicomPACS* ®*DX-R* Software
|X-ray Systems for the Future

Universal X-ray system with bucky table and wall stand - ideal for small rooms

Today, every radiology practice has to operate efficiently and economically, creating a need for high performance digital systems. The introduction or upgrading of digital technology offers unique opportunities to streamline the workflow in clinics and practices as well as to operate profitably - including perfect image quality.

The **Amadeo R-DR** is a universal X-ray system with bucky table and wall stand. Due to its compact design it can be installed in the most confined spaces. Since it is easy to operate, radiographers can quickly familiarise themselves with the system.

The X-ray tube assembly and the bucky tray of the wall stand can be lowered all the way down to the ground. The large floating table top has a high bearing capacity so that even large patients can be examined without any problem. A shorter table top is available for confined spaces.

The ***dicomPACS*®*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.

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

Benefits

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

Ideal for small rooms

A shorter table top is available for the complete system.
Benefit: The system is fully operational even in very confined spaces.

User friendly design

The **Amadeo R-DR** is the ideal imaging unit for X-ray diagnoses from
head to toe. The bucky table and wall stand allow X-ray images to be taken
of the skull, thorax, pelvis, skeletal system and extremities of patients in
a prone, sitting or standing position.
Benefit: All types of examinations can be covered by the
Amadeo R-DR system.

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.
Benefit: In particular when comparing images directly to the
commonly used GadOx (Gd^{2}O^{2}S: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 functional design makes the system easy to operate and allows radiographers
to quickly familiarise themselves with the system. The X-ray tube assembly and
the bucky tray can be lowered all the way down to the ground.
Benefit: Safe and easy operation

User-friendly

The professional *dicomPACS*®*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

By making use of a 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 *dicomPACS*®*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 *dicomPACS*®*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
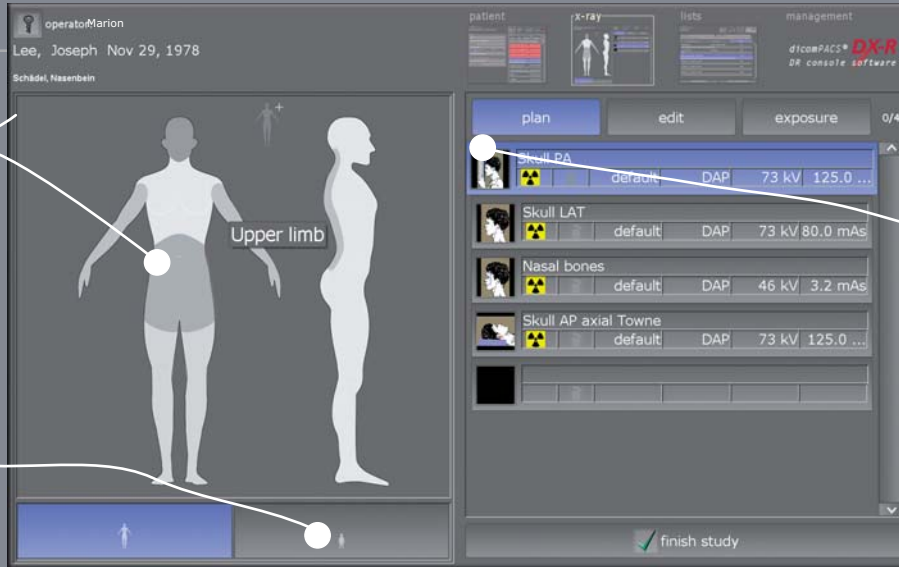
Chart for the planning of an individual X-ray job

The correct settings for adults and children at a mouse click

Switch to the planning of X-ray jobs for children

operator: Marion
Lee, Joseph Nov 29, 1978
Schädel, Nasenbein

Upper limb

| plan | edit | exposure | 0/4 |

Skull PA — default — DAP — 73 kV — 125.0 ...
Skull LAT — default — DAP — 73 kV — 80.0 mAs
Nasal bones — default — DAP — 46 kV — 3.2 mAs
Skull AP axial Towne — default — DAP — 73 kV — 125.0 ...

✓ finish study

dicomPACS®DX-R job creation

Video with sound for the step by step positioning of the patient

Shows an example of a correct X-ray image

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

Radiographic Positioning Guide) — **Foot supine** — Back
Positioning and centering

Material:	24/30, S 200 (400), appropriate side marker, lead apron, weights
Bucky:	cassette/detector
Exp. EU:	45-52 kV
Exp. CH:	42-46 kV
Speed class:	S200
Format:	24/30 or 18/24
TFD (=FFD, =SID) EU:	105 cm
TFD (=FFD, =SID) CH:	120 cm
TFD (=FFD, =SID) USA/UK:	100 cm
TFD (=FFD, =SID) WHO:	130 cm
Grid:	no
Filter:	no
Measuring chamber:	
Focus:	small

Drawing — Correct X-ray

Positioning, Errors, Further Information

Patient position: The patient is half recumbent, the lateral foot contacts the film, the plantar surface is perpendicular to the film. Use weights if needed. To localize foreign bodies, mark the site of entry (put a paperclip or a pen onto the cassette).

Central ray: Perpendicular to the base of the first metatarsal and the center of the film.

dicomPACS®DX-R radiographic positioning guide

Opens examples of inaccurate X-ray images with comments

Preview of the current X-ray image

operator: Steve Miller
Yabara, Olivia Apr 11, 1990
Shoulder L, Abdomen, Pelvis

| plan | edit | exposure | 3/6 |

Shoulder AP — 1 — default — DAP — 66 kV — 20.0 mAs
wrong position — default — DAP — 66 kV — 20 mAs
Clavicle PA — default — DAP — 63 kV — 16.0 mAs
Abdomen AP upright — default — DAP — 85 kV — 125.0 ...
Pelvis AP — default — DAP — 81 kV — 320.0 ...
Hip joint AP — default — DAP — 77 kV — 200.0 ...
Sacroiliac joint (Barsony) — default — DAP — 81 kV — 200.0 ...

✓ finish study

100 %

Preview of the X-ray image and worklist in dicomPACS®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 **dicomPACS®DX-R** image processing*

Dimensions of the wall and X-ray stands

Profile Front Profile Front

7 1/8"± 3/16
6 11/16
6 5/8
89 1/2"
66 15/16"
11 3/4"
max. 73 1/2"
min. 15"
13 1/2"
29"
8 7/8"
10 1/2"± 3/16

min.6 7/8"
29 1/2"
76 1/4"
3 7/8"
min. 88 1/2"
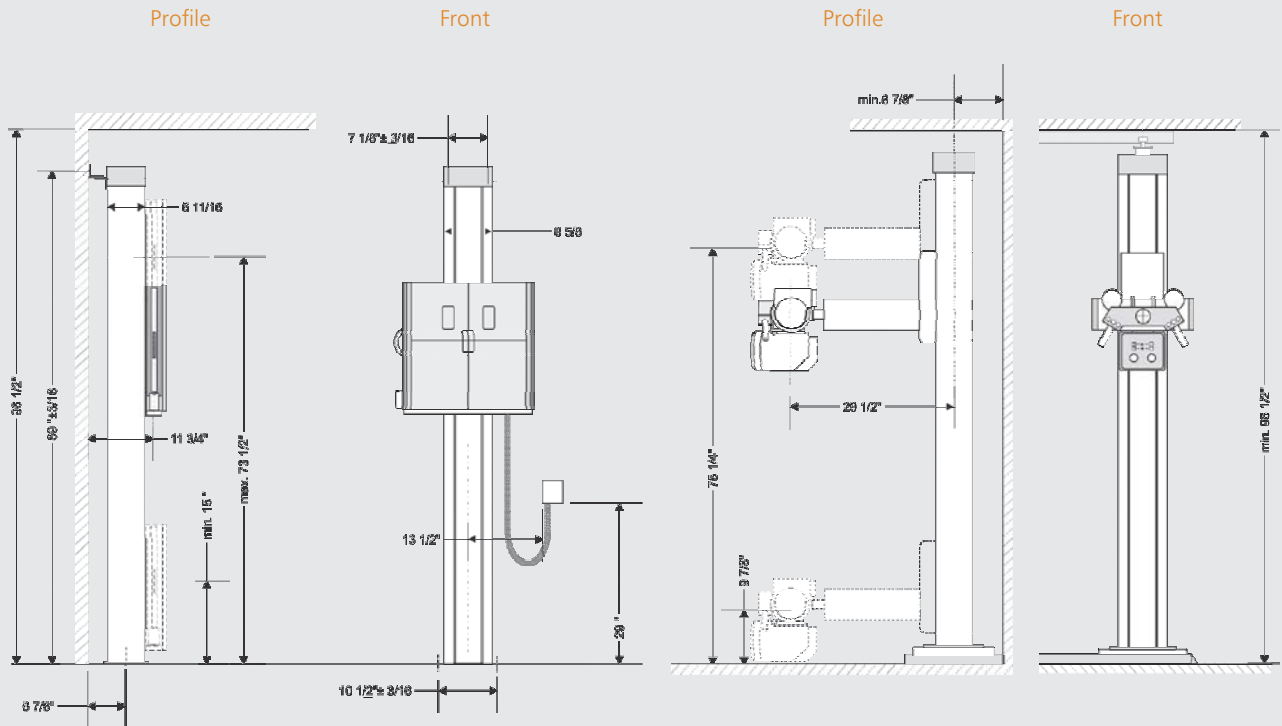
Dimensions of the integrated X-ray table

Front

23 5/8" 66 5/8" 19 11/16"
55"

Profile

4 5/8" 32" 4 5/8"
28 5/16"
24 1/2"

Top view

FOCUS PLANE
4 x 15/32" holes
22 7/16"
53 1/8"
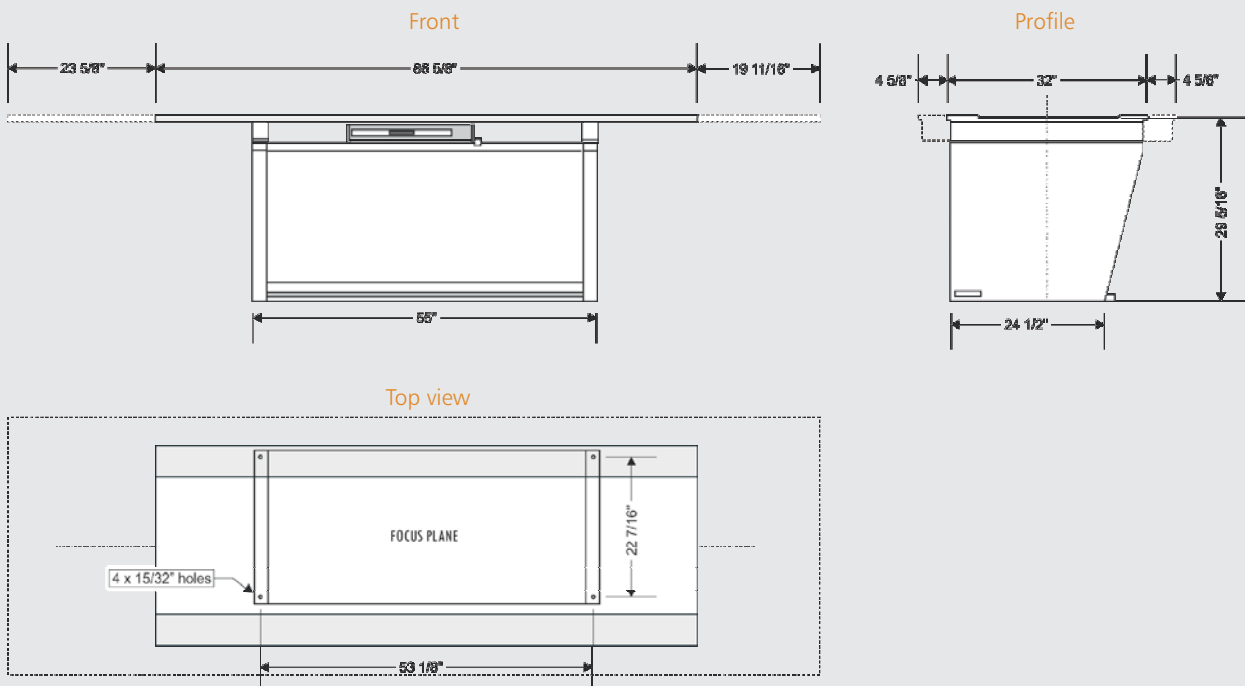
[dimensions without guarantees]

Delivery includes

The Amadeo R systems come with the following components:

Components	Amadeo R-DR DR system with integrated fixed dual flat panel	Amadeo R-AX System for film/ CR cassettes without generator control	Amadeo R-DRw System with CR cassettes/ wireless flat panel with generator control
50 KW HF generator	✓	✓	✓
X-ray table • 4-way floating table (220 x 81 cm) • Movement range: longitudinal 110cm, lateral 24cm • Motorised bucky for oscillating grid • Oscillating grid for FDD 86 - 112 cm • 3-field ionisation chamber (AEC) • Bucky can travel across the entire length of the table • Two stage electromagnetic locking device with foot control	✓	✓	✓
Wall stand • Height adjustment, with counterweight balance, vertical movement range 149 cm • Motorised bucky for oscillating grid • Oscillating grid for FDD 100 – 180 cm • 3-field ionisation chamber (AEC) • Choice of electrical or mechanical brakes • Easy glide system for effortless vertical positioning	✓	✓	✓
Tube stand • Mobile stand with command / tube support arm, • Smooth motion as a result of counterweight balance • Height adjustable with 360° rotation • Movement range: longitudinal 195 cm, lateral 162 cm • Manually adjustable collimator with halogen Full field light beam localiser • Dose area product meter	✓	✓	✓
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* *Max. KVP: 150 kVp*	✓	✓	✓
2 x Flat panel detector 17" x 17" CsI *Detector with excellent image quality and immediate image availability*	✓	–	–
1 x Flat panel detector 14" x 17" or 17" 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*	–	–	✓

Components	Amadeo R-DR	Amadeo R-AX	Amadeo R-DRw
Operation by *dicomPACS®DX-R* acquisition station *Mini PC with 19" touch screen monitor, **dicomPACS®DX-R** console software with modern graphical user interface including basic software package*	✓	–	✓
Operation via PC with generator control software	–	✓	–

Optional components to upgrade the Amadeo R system:			
DAP meter (Dose Area Product meter)	●	●	●
Upgrade from 50 KW to 65 KW	●	●	●
Upgrade from 50 KW to 80 KW	●	●	●
Wall stand with tilting function	●	●	●
X-ray stand Option ‚R' (Rotation	●	●	●
X-ray stand Option ‚T' (Transversal)	●	●	●
Motorised collimator without filter change	●	●	●
Motorised collimator with filter change	●	●	●
Manually exchangeable lumbar spine/ thoracic spine filters	●	●	●
Patient positioning table – height adjustable *• 4-way lifting table for effortless patient positioning • Length: 220 x 81 cm, optional: 185 cm • Height: min. 55 cm, max. 85 cm • Convenient foot pedal control • max. patient weight: 230 kg*	●	●	●

Portfolio

Overview - products of OR Technology

Medici DR Systems
with *dicomPACS* ®*DX-R* Software
DR Retrofit Systems for the Future

DR retrofits - expanding sets for existing X-ray systems (available for U-arm and wall stand and table systems)

Leonardo DR Systems
with *dicomPACS* ®*DX-R* Software
Portable X-ray Systems for the Future

DR suitcases - compact suitcase solutions for mobile and portable X-ray

Amadeo DR Systems
with *dicomPACS* ®*DX-R* Software
X-ray Systems for the Future

Complete DR systems - digital X-ray systems incl. stand, table, generator, flat panel etc.

Divario CR Systems
with *dicomPACS* ®*DX-R* Software
CR Systems for the Future

CR solutions - CR systems for digital X-ray with cassettes

Conventional X-ray Equipment
X-ray Systems for the Future

Conventional X-ray equipment and accessories - the latest technology for conventional X-ray systems

dicomPACS®
Digital
Image Management

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

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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