

# DR 600 Ultimate speed precision comfort imaging

Digital X-ray and AI, leading the way in intelligent care

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The high-productivity and innovative features. The speed and intelligence of SmartXR Al. The precision and movement of ZeroForce technologies. They all come together seamlessly in the fully automated DR 600, to deliver a streamlined workflow, increased throughput and enhanced experience for patients and operators alike. Even in the busiest imaging environment.











In your high-throughput imaging environment, speed, precision and comfort are at a premium. We've built upon our long-term experience and close relationships in radiology and beyond to design a top-performance digital X-ray room: the DR 600 high-productivity, direct radiography (DR) imaging solution.

What makes the DR 600 special isn't only its individual features and capabilities: it's how they come together in a complete and integrated solution that provides high quality images, while maximizing productivity, versatility and ease of use.

Robotization, in combination with the pre-programmed MUSICA workstation exam tree, the automated MUSICA image processing, and seamless integration with RIS and PACS, all work in concert to give you what you need: the right images, quickly and efficiently, with unmatched ease of use for the operator and comfort for the patient.

#### **SmartXR**

The SmartXR Assistant lightens the workload and provides a helping hand for fast, smooth image acquisition. From aligning the panel, to positioning the patient, to setting the precise dose and beyond, SmartXR supports enhanced operational and clinical performance, while keeping the operator in control, at every moment.

#### Why choose the DR 600?

- Excellent image quality provided by our most advanced generation MUSICA image processing software
- Single or multi-detector, highproductivity and high-throughput digital X-ray room
- > Full automation, auto-positioning and auto-tracking
- ZeroForce Technology, offering smooth operation with almost zero effort for manual movements
- > Significant potential for dose reduction¹, with the Cesium Iodide detector
- Handles a broad range of general radiography and tomosynthesis exams
- > DR Full Leg/Full Spine capability with EasyStitch technology for both standing and recumbent patients
- Predictive workflow assistance from Agfa's SmartXR Assistant, supporting improved productivity and consistent outcomes:
   SmartAlign, SmartPositioning, SmartDose and SmartRotate
- LiveVision technology, enabling accurate radiation dose-free remote positioning

Testing with board-certified radiologists has determined that Cesium Bromide (CR) and Cesium Iodide (DR) detectors, when used with MUSICA image processing, can provide dose reductions of 50 to 60%, compared to traditional Barium Fluoro Bromide CR systems. Contact Agfa for more details.





movements of the tube head, wall stand and table in all different directions are quick and require almost zero effort.



## **Comfort zone**

What is comfort? In imaging, we need to consider the comfort of patients and operators alike. The DR 600 takes on comfort in several ways: how easy it is to operate the system correctly, how quickly the image taking process is completed, and more.

## Light, easy, automated operation

Full automation, including the latest in auto-positioning technology, fully automated tracking and manual positioning, makes the DR 600 easy and light to operate.

ZeroForce Technology means all movements of the tube head, wall stand and table in any direction are quick and require almost zero effort. Designed for both ergonomy and productivity, the DR 600 is easy to steer and use, so the operator can work comfortably and quickly, even in high-throughput situations.

The height-adjustable table and floating tabletop offer very easy positioning for a wide range of patients and types of studies, providing greater comfort for technologists and patients alike, while minimizing the time needed for taking images.

The ceiling-suspended tube crane is operated through a touch screen control panel and integrated soft console on the MUSICA workstation monitor. Ceiling movements are controlled by simply selecting a thumbnail on the MUSICA workstation, followed by autopositioning. The touch screen features a preview image; and with its APR (Anatomically Programmed Radiography) and X-ray parameters, such as each patient's name, exam and view, workflow is streamlined.

Additional features include LED lighting that indicates when the table or wall stand is in use, a programmable parking position for the auto position function, and a configurable cleaning position for the unit that allows easy access to all parts of the system.

We have previews and images in seconds, without leaving the room. This means we can also do any retakes immediately.

#### Fiona Rooke

Diagnostic Services Manager, Yeovil District Hospital, UK

#### At busy Logan Hospital, MUSICA and the DR 600 are keeping the imaging workflow smooth and efficient, while meeting the quality and dose reduction needs for patients and staff.

Michael Neep, Team Leader Radiographer, Logan Hospital, Meadowbrook, Queensland, Australia



## Smart solutions for dose management and reduction

The DR 600 comes with a choice of Cesium Iodide (CsI) fixed, tethered or wireless detectors. The excellent DQE and image quality of the Cesium Iodide detector offer the potential for significant patient dose reduction<sup>1</sup>, with fast availability of images that speeds up workflow and reduces patient waiting times.

By using leading-edge Automatic Exposure Control for high-speed accuracy and collimators with Dose Area Product meter, the DR 600 optimizes and automatically reports doses. Short exposures offered by new dose sensing technology keep dose measurement accurate to the millisecond.

As part of the DR 600's SmartXR portfolio, SmartDose uses 3D machine vision to determine the thickness of the patient, and then tailors exposure parameters specifically for that patient's anatomy. It saves time by eliminating manual adjustments, while avoiding the risk of retakes from incorrect exposure settings.

# Convenient remote control for positioning or collimation

Optionally, a handheld remote control is available, with a choice of two configurations, enhancing the convenient, easy operation.

The 'Positioning' configuration includes buttons for auto center, auto tracking and beta rotation of the tubehead. The 'Collimation' configuration replaces those with collimator shutter control buttons.

SmartPositioning technology augments a first-person LiveVision camera view of the patient with smart overlays to project the image area and exposure control onto the patient's body. Visual cues will indicate when positioning can be further optimized.

A holder for the remote control unit can be mounted on a wall or even on the wall stand itself.



## Maximum load and positioning capabilities

In terms of load and position, the DR 600 is the Agfa DR solution that is ideal for the widest range of patients and types of studies. The radiographic table supports a high patient load (320 kg / 705 lbs), enabling you to undertake the most logistically challenging studies.

Both table and wall stand bucky include grid sensing that alerts the operator to the grid's insertion, providing optimum exposure quality, and detector sensing for standard cassette sizes, according to ISO 4090.

Full motorization of vertical/horizontal table bucky tracking and autopositioning, and a tilting bucky on the wall stand, offer precise positioning. And the rotating bucky makes rotation from landscape to portrait simple.







#### In-bucky detector charger:

The fully automated version includes an optional in-bucky charger for the detector, ensuring a fast and efficient workflow.

## Up to speed

Every moment counts in a busy imaging environment: for the radiologist, technologist and patient. So the speed of a solution can't be measured on one element alone: you have to take into account the entire imaging flow, from positioning the patient, to the image acquisition, to the availability of the image.







The MUSICA workstation provides quick previews and reduces time between exposures. Previews can also be displayed at the tube head display, by default or on demand.



# Modern automation technology maximizes productivity

The DR 600 provides the latest in auto-positioning technology, fully-automated tracking and manual positioning — with quick, near zero-force movement in all different directions, making it indispensable in an emergency situation.

The combination of automation with the pre-programmed MUSICA workstation exam tree and the automated MUSICA image processing gets you up to speed, for maximum productivity.

Solid integration with your radiology information systems (RIS) and picture archiving and

communication systems (PACS) — such as configuring the system to translate RIS protocol codes directly into exam tree settings — offers further workflow improvement and helps accelerate your return on investment.

# Easy acquisition, with the MUSICA workstation

The DR 600 harnesses the power of both MUSICA image processing and the MUSICA workstation workflow to provide quicker previews that reduce time between exposures and thus deliver a higher rate of throughput. The result is a lower cost per exam and faster patient throughput.

With its intuitive interface, the MUSICA workstation is fast and easy to use: it requires no training to get you up-and-running, and you get just what you need in fewer mouse clicks.

#### Flexible workflow

With the DR 600, you have complete workflow flexibility. You choose the next exam on the acquisition workstation, and it's easy to switch the order of exams on the tube head display. So you can keep the patient throughput flowing smoothly.



With our DR solutions, the patient is usually in and out in 15 minutes – about half of the time it took before.

#### Fiona Rooke

Diagnostic Services Manager, Yeovil District Hospital, UK

### **Precision**

'Almost' and 'approximately' aren't good enough in imaging. You want the right image the first time. That means the patient and components must be positioned correctly for image acquisition, and the image must be processed optimally.

## 'First time, right time' MUSICA image processing

At the heart of the DR 600 highproductivity solution lies Agfa's MUSICA gold standard image processing software the latest intelligent and automated digital radiography image processing software for consistently reliable, high-quality image visualization. Exam independent, MUSICA automatically analyzes the characteristics of each image and optimizes processing parameters – independent of user input and dose deviations. As a result, minimal re- or post-processing is required. In addition, MUSICA provides a consistent look and feel on your digital images from either computed radiography (CR) or digital radiography (DR). The DR 600 and MUSICA acquisition workstation can support both CR and DR in a single environment for customers making the transition from CR to DR.

## DR Full Leg Full Spine option with EasyStitch technology

The fully motorized wall bucky has vertical tracking with the tube, offering the option of DR Full Leg Full Spine (FLFS) with EasyStitch technology.

Based on fully automated single focus technology, EasyStitch minimizes distortions. Angular tracking is available for dedicated exams, while motorized movement of the wall stand and tube head provides accurate stitching capabilities, for high precision in images. An optional table overlay allows you to perform FLFS right on the table.

## Next generation MUSICA offers you even better viewing of difficult areas

- > Balanced presentation of both soft tissue and overlapping bone structures
- > Visualization of subtle details in the abdomen
- > True representation of implants with clear bone interfaces
- > Confident, comfortable reading





## The new generation of the MUSICA image processing software is extremely successful.

**Dr. Gunther Sigmund**, Head of Radiology, Klinikum Mutterhaus der Borromäerinnen, Trier, Germany





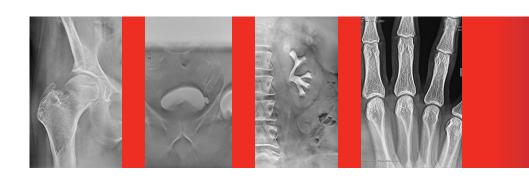
**EasyStitch technology:** minimizes distortions, for high-precision FLFS imaging.



Having the digital tomosynthesis offers us an additional imaging choice that speeds up diagnosis. It reveals things that might not be visible with classical X-ray. Yet it can be done without moving the patient from the X-ray department.

Robert Zbyslaw, Radiologist, Ilawa Hospital, Poland







#### **Digital tomosynthesis**

MUSICA also offers digital tomosynthesis software<sup>2</sup>, which powers very fast, multi-slice image reconstruction, automatically presenting images with optimal contrast, and providing consistent image quality across the individual slices and images.

Agfa's tomosynthesis algorithms for iterative reconstruction not only deliver images with less noise and fewer artefacts, but also enable very fast image reconstruction.

#### **Nothing to hide**

Digital tomosynthesis adds clinical value in a wide range of domains, including orthopedics (for the detection of microfractures, weight bearing exams, etc.), pulmonology (nodules) and urology. Separating anatomical layers, it visualizes findings that might otherwise be 'hidden' by dense tissue. You see more, more quickly: for a faster diagnosis and higher patient satisfaction!

## Detectors that capture every detail

The MUSICA image processing empowers a complete range of high-quality detectors in all sizes: 10 x 12", 14 x 17" and 17 x 17".

Moreover, the improved fill factor and high resolution of the CsI detectors provide greater detail. This is especially useful in fields such as neonatal, pediatrics, rheumatology and diagnosis of stress fractures.

Digital tomosynthesis powers high-resolution, limited-angle tomography with fast multi-slice reconstruction.



Digital tomosynthesis is available on the DR 600, when used with the DR 14s detector.

## The right choice

Making the right choice for your facility can be challenging. You want to be sure that you take the best decision as it has long-term implications, both practical and financial.

# Premium quality imaging founded on proven technologies

At Agfa, imaging and integration are our core business. Built with solid, factory-quality hardware manufactured at our award-winning factory in Peissenberg, Germany, the DR 600 gives you the confidence of knowing that it is founded on the same proven technologies as all Agfa solutions: high quality, equipment, excellent productivity and competitive service and maintenance agreements.

## Professional services optimize room performance

Beyond the installation and staff training involved in implementing the DR 600, Agfa provides advice when planning your room. This helps you optimize the performance of your facility and benefit from the increased ergonomy and productivity for many years to come.

## Relationships for the long term and a scalable growth path

As an established and proven state-of-the-art, innovative vendor, we are committed to long-term, productive relationships that ensure you enjoy all the benefits of developing imaging technology. Our program of new products is specifically designed to help you continue on your digital path from CR to a full DR system.

The DR 600 offers you all the benefits of DR productivity and CR versatility. By combining the DR 600's direct image capture capabilities with versatile panel formats that allow you to design the room that you need, MUSICA image processing, quicker preview on the MUSICA workstation and tube head, a touch screen display on the tube head and a user interface with the same look and feel for both CR and DR, the DR 600 enables you to migrate to direct radiography seamlessly.













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