

DR 800

DIRECT RADIOGRAPHY SYSTEM

Dynamic, multi-purpose direct radiography solution offering real time fluoroscopy and general radiography imaging

- Single touch, remote-controlled user-interface and VarioDrive auto-positioning, improving workflow and maximizing patient comfort
- Integrated patient-side positioning controls, and optional table top or wireless in-room console to support the most demanding workflows
- Wide range of general radiography and portable applications, including fluoroscopy, rapid sequence examinations (incl. DSA) and portable applications, such as wheelchair, stretcher and optional full leg/full spine exams
- Easy patient access, for a high level of productivity and flexibility

The DR 800, part of Agfa's family of Direct Radiography (DR) solutions, provides enhanced flexibility in diagnostics through its direct digital dynamic remote-controlled fluoroscopy and radiography system. Using an advanced Flat Panel Detector (FPD), it provides optimal versatility and flexibility. Its many features improve both workflow and patient comfort, including LiveVision video camera technology to assist patient positioning, a Source Image Distance (SID) of up to 180 cm - critical for thorax imaging - and optional full leg/full spine imaging. At the same time, it offers the high quality images and productivity gains expected from all of Agfa's DR range - with immediate image availability.

Versatility, across the range of applications

With its latest generation Flat Panel Detector (FPD), the DR 800 can handle a very wide range of both radiographic and fluoroscopic examinations, and provide images immediately. The fluoroscopy applications include gastrointestinal examinations, urogenital work and angiography, while the broad range of radiography applications includes skull, thorax, abdomen, spine and pelvis. Advanced clinical applications such as full leg/full spine examinations, large field/low dose tomosynthesis and digital subtraction angiography (DSA) with roadmapping are also available.

At the same time, an additional wireless detector can be connected for direct exposure exams, for example on a stretcher or bed. This makes it ideal for pediatric, extremity and lateral images, as well as for use with patients with reduced mobility. The system can further be expanded with an overhead ceiling tube and wallstand, offering a room that can cover all imaging needs.



DR 800

Ease of use and fast workflow enhance productivity

This versatile, real-time imaging solution accelerates workflow by reducing examination preparation time. The single-touch intuitive user-interface and positioning console are available both remotely and, on the patient-side which allows control of all table movements, collimation, spectral filtration settings, and digital acquisition parameters where needed, offering user-friendly operation and a smooth workflow. By enabling a greater number of patients to be seen in the same amount of time, it further enhances productivity.

Optimizing patient comfort

The DR 800 has also been designed to provide optimal comfort for the patient. The LiveVision video camera for dose-free patient positioning, and the smooth but swift VarioDrive movements for manual and auto-positioning both contribute to a quick and easy procedure for the patient. The predetermined filters and auto collimation for each protocol allow a potential dose reduction, while MUSICA technology maintains optimal image quality.



Technical Specifications

HIGH FREQUENCY GENERATOR

- Nominal output: 80/65/50 kW
- Maximum generator frequency: 400 kHz
- Voltage range: 40 kV to 150 kV
- Maximum power line impedance: 0.17 Ohm
- Operating modes:
 - 3 points (kV, mA, ms)
 - 2 points (kV, mAs)
 - 1 point (kV, AEC)
- Exposure modes:
 - GenRad: static imaging
 - Fluoroscopy: pulsed or continuous dynamic imaging
 - Rapid sequence: pulsed dynamic imaging with AEC dose control

X-RAY TUBE

Tube specification

- Nominal focal spot values:
 - 0.6/1.2 mm (600 kHU tube)
 - 0.6/1.0 mm (1000 kHU tube)
- Anode rotation speed: 3000/10000 rpm
- Nominal anode input power:
 - 43 and 100 kW @ 10000 rpm (600 kHU tube)
 - 40 and 80 kW @ 10000 rpm (1000 kHU tube)
- Anode diameter:
 - 102 mm (600 kHU tube)
 - 110 mm (1000 kHU tube)
- Anode material: Rhenium - Tungsten - Molybdenum
- Anode angle: 13°
- X-ray coverage at 1 m: 45 x 45 cm
- Inherent filtration: 0.7 mm Al eq
- Radiation protection: complies with IEC-60 613 standard
- Anode heat storage capacity: option for 600 kHU or 1000 kHU
- Maximum heat dissipation:
 - 1500 W (600 kHU tube)
 - 2000 W (1000 kHU tube)

REMOTE CONTROLLED TABLE

Table top

- Tabletop dimensions:
 - (standard table) 2400 x 800 mm
 - (short table) 2100 x 800 mm
- Ground to tabletop distance: 500 to 1000 mm
- Radiation attenuation: <0.5 mm Al eq.
- Lateral movement: VarioDrive up to 5 cm/s
- Lateral movement range: 35 cm
- Longitudinal movement: motorized at 5 cm/s
- Longitudinal movement range:
 - (standard table) + 80 to -80 cm or +100 to -20 cm
 - (short table) +80 to -80 cm
- Software provides anti-collision safety

Tilting

- Table tilt range: +90° to -90° ± 0.5°
- Tilting speeds:
 - Standard table: from 4,7°/s to 5,3°/s
 - Short table: from 5,4°/s to 56,2°/s

Lifting

- Motorized variable height: 50 to 100 cm
- Anti-collision safety:
 - Software controlled
 - Photo-cell sensor (optional)

Patient support

- The flat tabletop (standard), 240 x 80 cm with rail as accessory, has a large width for convenient positioning and centering, especially for bariatric patients. It has low x-ray absorption and optional carbon or curved tabletop.
- Maximum allowed patient's weight on the table:
 - 320 kg (with constraints)
 - 265 kg (without constraints)
- Maximum allowed patient's weight on the foot rest: 265 kg

Column

- Longitudinal travel range:
 - (standard table) 154 cm or 138 cm with tabletop longitudinal movement
 - (short table): 124 cm or 108 cm with tabletop longitudinal movement
- Longitudinal travel speed: VarioDrive at max 20 cm/s (remote)

- Motorized collimator
 - Operating modes: Manual, remote-controlled or automatic
 - Collimator rotation around beam axis (optional): -90 to 120
 - Motorized filters: 1 mm Al + 0,1 mm Cu / 1 mm Al + 0,2 mm Cu / 2 mm Al
 - LiveVision integrated webcam for patient monitoring, dose-free positioning and swift full leg full spine workflows (optional)
- DAP Measuring system
- Motorized source-image distance: 115 cm to 180 cm
- Tube assembly rotation: 270 degrees
- Tube assembly rotation indents 0°: ±18°, ±36°, ±54°, ±72°, ±90°, ±180° Possible to make exposures on the stretcher, with the table in the vertical position, or on the wallstand bucky depending on the configuration
- Motorized angulations: ±40° (10°/s maximum)
- Motorized compression cone: generating max. 200N pressure (optional)

OPERATOR CONTROLS

- Centralized MUSICA Acquisition Workstation touch based interface for an integrated workflow, including worklist management, exam setup, image visualization, post processing, status notifications and GenRad/ Dynamic exposure controls; accessible on remote and in-room displays (optional)
- Fixed remote console with full VarioDrive positioning, collimator and compression controls
- Foot controlled and manual exposure switch
- In-room foot controlled dual exposure switch
- In-room wireless footswitch
- In-room single or dual display trolley (optional)
- Choice of clinical review, touch and diagnostic monitors (up to 5)
- Ceiling mounted displays on fixed pivot or track (optional)
- Optional table-side table mini-console for elbow controlled table top movement
- Optional wireless in-room console replicating the fixed console

Technical Specifications

LARGE FIELD FLAT PANEL DETECTOR

- Pixel matrix: 2880 x 2880 pixels
- Useful sensitive matrix: 2840 x 2874 pixels with 148 µm pixel size for a 17 x 17" image
- Resolution: 3.4 lp/mm, 16 bits ADC
- Frame rate: up to 30 fps
- Acquisition modes:
 - GenRad: Static, AEC controlled exposure; MUSICA image processing
 - Fluoroscopy: Dynamic, Automatic Brightness Control System controlled exposure; MUSICA Dynamic processing
 - Rapid sequence: Dynamic AEC controlled exposure, MUSICA processing

DETECTOR HOLDER

- RaySense automatic scatter-grid selection prevents retakes and tedious grid handling action (optional)
- AEC: 3 cells, solid state

RADIOPROTECTION ACCESSORIES

- For patient-side usage the system can be supplemented with:
 - Ceiling mounted transparent lead acrylic protective shield on fixed pivot or track
 - Height adjustable transparent lead acrylic mobile shield

SYSTEM ACCESSORIES AND OPTIONS

Ceiling Suspension

- Longitudinal rails length: 440 cm
- Transversal bridge rail length: 300 cm
- Movement:
 - Longitudinal range: 326 cm
 - Transversal range: 202 cm
- X-ray tube rotation (vertical axis): between -135° and 200°
- X-ray tube angle (horizontal axis): between -190° and 150°

Wallstand

- Tilting or non-tilting
- Column height: 230 cm
- Vertical movement range:
 - Vertical bucky: 67 cm to 157 cm
 - Tilting bucky: 72 cm to 140 cm
- Tilting angle range (tilting bucky): between -20° and +90°
- Movement controls: manual movement, balanced by counter weights and with mechanical brakes
- Wall stand X-ray absorption: 0.6 mm Al eq.

Wireless DR detectors

- For direct exposure exams or wallstand use CR interfacing
- Interface with a complete Agfa CR portfolio, ranging from cost efficient tabletop to multi-plate digitizers

Table Accessories and Options

- Lateral holder for portable detector
- Should braces
- Pediatric cradle
- Head stabilizer
- Patient footrest

- Handgrips
- Shoulder rests
- Compression belt
- Lower limbs support, ankle support
- Lateral arm rest on the table
- Joystick console
- Concave tabletop

EasyStitch Full Leg Full Spine imaging

- Orthopedic-grade long view imaging and advanced measurement schemes

Large field/low dose tomosynthesis

- High performance iterative reconstruction algorithm for synthesis of large field tomographic sections at low patient dose

Digital Subtraction Angiography (DSA)*

- Rapid sequence exposure, with mask imaging subtraction for clear visualization of blood vessels enhanced by contrast media without the interference of bones or dense soft tissues in the environment
- Roadmapping and overlay with DSA

GENERAL

Electrical characteristics

- Electrical connections: 230 V +/-10 %; 20 A (table); 3 Phase 400 - 480 (generator)
- Power requirements: 5 kW (table); 50 kW/65 kW/80 kW (generator)
- Nominal power: 1000 W
- Idle power: 500 W (table); 22 W (generator)

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