

DX-D 600

DIRECT RADIOGRAPHY SYSTEM

HIGH-PRODUCTIVITY, EXCELLENT IMAGE QUALITY, DIRECT RADIOGRAPHY SYSTEM WITH USER-FRIENDLY DESIGN IN THREE CONFIGURATION OPTIONS.

- Single or Dual-detector, high-productivity, high-throughput general radiography system with three configuration options: manual, auto-tracking and fully automatic “move to” positioning
- Excellent contrast detail provided by MUSICA processing, producing exam-independent consistent image quality
- DICOM connectivity to PACS and RIS
- Wireless Cesium Iodide DR detector technology with columnar crystal growth for higher sensitivity (DQE)
- Option to integrate with Agfa HealthCare CR systems for maximum versatility

The DX-D 600 Direct Radiography system combines user-friendly design with Agfa HealthCare’s MUSICA image quality to create this high-productivity, direct radiography (DR) solution. The DX-D 600 is family of ceiling mounted X-ray systems with configurations ranging from a system using manual movement to a fully motorized, auto-positioning solution, ideal for facilities with a high patient load that are looking to streamline workflow to increase patient comfort. The fully integrated NX Workstation communicates seamlessly with PACS and RIS, and eliminates the need for a separate generator console. Both APR and X-ray parameters are captured in the

DICOM header after exposure and become part of the patient demographics for future reference. The DX-D 600 features Cesium Iodide detector technology, which offers excellent image quality and fast image availability. GOS technology (Gadolinium Oxy-Sulphide) is also available. Both detector types are available in fixed or removable formats for versatility, including wireless. Agfa HealthCare’s proprietary MUSICA image processing software delivers image consistency for improved workflow and excellent contrast detail to help enhance diagnostic confidence.



Configurations to meet every need

The DX-D 600 is available in three different basic configurations, which can be tailored to meet your workflow and budget. The fully automatic system offers the latest in robotic auto-positioning technology, as well as fully-automated tracking. Position selection is available at tube head or through the exam tree preprogrammed settings for increased speed and convenience. The semi-automatic configuration includes vertical tracking with the wall stand and the table. The fully manual system is easily positioned without the aid of motorization.

Features such as the innovative design with a touch screen control panel at the tube head, generator control and image preview on single NX monitor, grid sensing for both table and wall stand, solid state AEC (Automatic Exposure Control) for high-speed accuracy, and LED lighting are features designed for convenience and quality patient care.

Excellent ease of operation, in any situation

This solution can efficiently handle demanding X-ray departments. The versatile ceiling suspended tube crane operates with a touch sensor keypad, which controls all the ceiling support movements and displays the X-ray parameters and patient information. The radiographic table allows easy positioning with four way float top movement and a wide vertical range as well with a 660 pound capacity. Manual movement and tracking or move-to positioning options for tube and wall stand allow you to select the level of automation you require for increased department efficiency and patient comfort. Combine room configurations with choice of panels to custom tailor your room your way.

MUSICA: tuned to optimize image quality

Agfa HealthCare's "gold standard" MUSICA image processing software has been specially adapted and tuned to optimize DR image quality improving visualization of fine detail by optimizing both density and contrast simultaneously. Fine bony detail is enhanced in the same image to provide sharpness across the full dynamic range. The result is few if any manual adjustments are needed, improving both workflow and image consistency.

Detector technology

The cassette-less DX-D 600 direct radiography workflow allows high productivity, and includes the choice of GOS or Cesium Iodide technology for even higher panel sensitivity (DQE). The single plate design eliminates tiling artifacts, while the direct availability of images speeds up workflow and reduces patient waiting times. Wireless, fixed or tethered detector options cover a wide range of budget and workflow requirements.

Combine CR flexibility and DR performance

The DX-D 600 can be integrated with Agfa HealthCare's CR systems, such as the DX-G and DX-M. With Agfa HealthCare's CR needle detector technology, the combined systems deliver the high image quality with the flexibility of cassette-based CR systems.

Services & Support

Agfa HealthCare offers service agreement solutions tailored to the individual customer's situation. The service agreements are available in Basic, Advantage, and PM Only levels, making lifecycle costs predictable.

A worldwide team of some 1,000 service professionals is at your disposal to provide support at all phases of your project. As an additional service, they can help you customize your examination tree or link RIS protocol codes, for an even higher return on investment. Furthermore, this team carries out tasks that go well beyond maintenance, including value added services such as super user training, staff training and software upgrades.

DX-D 600 FEATURE PRODUCT MATRIX

Feature	DX-D 600 Automatic*	DX-D 600 Semi-Automatic*	DX-D 600 Analog Manual
■ FULLY MOTORIZED "MOVE TO" AUTO-POSITIONING	Yes	-	-
■ AUTO-TRACKING WITH TABLE AND WALL STAND	Yes	Yes	-
■ MANUAL POSITIONING	Yes	Yes	Yes
■ TFT TOUCH SCREEN AT TUBE	Yes	Yes	-
■ TILTING WALL STAND	Yes	Optional	Optional
■ AUTOMATIC COLLIMATION	Yes	Optional	Optional
■ CENTERING LASER	Yes	Yes	Optional
■ DAP METER	Yes	Optional	Optional
■ FLFS**	Optional	-	-

* Available in Chest Room Configuration as well.

** FLFS is a Work in Progress.

Technical Specifications

ENVIRONMENTAL REQUIREMENTS

There are no special environmental conditions required for the safe operation of the ceiling suspension. However, it is not designed for the use in the presence of explosive or flammable gases as might be found in operating rooms.

Operating

- Atmospheric pressure:
 - Minimum 700 hPa
 - Maximum 1,060 hPa
- Relative humidity:
 - Minimum 30 %
 - Maximum 75 %
- Ambient temperature:
 - Minimum 59° F
 - Maximum 86° F

PATIENT TABLE

- Tabletop width: 34.17 in (86.8 cm)
- Tabletop length: 86.61 in (220 cm)
- Table height (motorized adjustment): 22.83 to 36.22 in (58 to 92 cm)
- X-ray absorption: < 0.05 in Al (1.3 mm)

- Tabletop travel longitudinal: 43.11 in (109.5 cm) (+23.62 in, -19.49 in) (+60 cm, -49.5 cm)
- Tabletop travel transverse: 9.84 in (± 4.92 in) 25 cm (± 12.5 cm)
- Tabletop material: Carbon fiber
- Max. patient weight: 660 lbs (300 kg)
- Bucky travel along table access: 24.02 in (61 cm)
- Automatic exposure control: 3-field solid state sensors
- Focused Antiscatter included in the table

CEILING MOUNTED X-RAY TUBE SUPPORT

- Minimum source-ceiling distance: 28.58 in (726 mm)
- Vertical telescope travel range: 62.36 in (1,584 mm)
- Tube rotation range, alpha: -135° +135°
- Tube rotation range, beta: -180° +180°
- Software configured rotation stops for both alpha and beta rotations

Technical Specifications

DETECTOR

- **Image size:**
 - 16.93 x 13.78 in (43 x 35 cm)
 - 3,072 x 2,560 pixels
 - 16.93 x 16.93 in (43 x 43 cm)
 - 3,072 x 3,072 pixels
- **Scintillator:**
 - Cesium Iodide/GOS
 - Photodiode Array
 - Contiguous a-Si
 - matrix Fast Imaging
 - Cycle Time

COLLIMATORS

- **Inherent filtration:**
 - 0.078 in (2 mm) Aluminum equivalent
- **Full field light localizer:** >160 lx
- **Rotation:** up to maximum $\pm 90^\circ$

WALLSTAND

- **Vertical Movement:** 58.9 in (1,495 mm)
 - 15.7 to 74.6 in above floor (center to center)
 - (400 to 1,895 mm)
- **Tilting bucky:** -20° to $+90^\circ$ (horizontal position)
- **Table surface-detector plane distance:**
 - < 1.6 in (40 mm)
- **Radiation absorption:**
 - < 0.02 in Al equivalent (0.6 mm)
- **Automatic exposure control:**
 - 3-field solid state sensors
- **Optional wall stand grids:**
 - 59.1 to 70.9 in (150 to 180 cm)

SYSTEM ACCESSORIES

- Table compression band
- Table hand grips
- Table mattress
- Overhead hands support for wall stand
- Hand grips for wall stand
- Vacudap 2004 (External Dose Area Meter)

INSTALLATION DATA

- **Line voltage:** 3-phase, 480 v 60 Hz
- **Automatic line compensation:** $\pm 10\%$
- **Power consumption:**
 - 105 kVA (Gen 64 kW); 120 kVA (Gen 80 kW)
- **Ceiling height:** 8.43 - 9.08 feet (2.60 - 2.80 m)
 - (for normal use)

ELECTRICAL REQUIREMENTS

- **Frequency:** 60 Hz
- **Voltage:**
 - Minimum 115 V ~
 - Maximum 240 V ~
- **Maximum current:**
 - Momentary 3.5 A
 - Continuous 1.6 A

GENERATORS

Generator model	SHF 345 (CR only)	SHF 545	SHF 645	SHF 845
■ INPUT POWER	3-phase, 480 v 60 Hz			
■ MAX. POWER (KW)	32	50	64	80
■ MAX. MA	400	640	640	800
■ POWER OUTPUT @ 0.1S		640 mA @ 78 kVp 500 mA @ 100 kVp 400 mA @ 125 kVp 320 mA @ 150 kVp	640 mA @ 100 kVp 500 mA @ 128 kVp 400 mA @ 150 kVp	800 mA @ 100 kVp 640 mA @ 125 kVp 500 mA @ 150 kVp
■ COMPATIBLE X-RAY TUBES	All	All	E7252X, E7254FX, E7869X	E7254FX, E7869X
■ RANGE OF RADIOGRAPHIC PARAMETERS				
mA	From 10 mA to 800 mA through the following mA stations: 10, 12.5, 16, 20, 25, 32, 40, 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800. (Depending on the Generator model)			
mAs	Product of mA x time values from 0.1 mAs to 500 mAs			
ms	From 1 to 10,000 milliseconds through the following time stations: 1, 2, 3, 4, 5, 6, 8, 10, 12, 16, 20, 25, 32, 40, 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1,000, 1,250, 1,600, 2,000, 2,500, 3,200, 4,000, 5,000, 6,400, 8,000 and 10,000.			
AEC	mAs: 0.1 mAs to 500 mAs exposure time: Nominal shortest irradiation time = 1 ms			

X-RAY TUBES

Housing	Focal spot	Target angle	Heat capacity (kHU)	Anode speed
■ TOSHIBA E7239X	1.0 - 2.0	16°	140	Low
■ TOSHIBA E7876X	0.6 - 1.2	12°	230	Low
■ TOSHIBA E7884X	0.6 - 1.2	12°	300	Low
■ TOSHIBA E7252X	0.6 - 1.2	12°	300	High/Low
■ TOSHIBA E7254FX	0.6 - 1.2	12°	400	High/Low
■ TOSHIBA E7869X	0.6 - 1.2	12°	600	High/Low

DX-D 600

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*NOTE: The DX-D 600 is not indicated for use in mammography.

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