THE IMAGING SOLUTIONS COMPANY

NATIONWIDE Imaging Services, Inc.
AN MXR IMAGING COMPANY

FUJIFILM
Value from Innovation

FDR Visionary Suite

- Tomosynthesis
- Energy Subtraction
- Long View Imaging

Freedom and Flexibility in Imaging

Experience a wide range of applications targeted to improve diagnostic capabilities combined with a precise design that facilitates imaging.

With unique image processing functions that enhance quality while reducing the operational dose rate, the FDR Visionary Suite is the next generation in functional X-ray systems — offering ease of operation with minimal impact for patients.

Compatibility with a Broad Range of Cassette DR Panels Ensures Maximum Flexibility

Wide Array of Applications Support Diagnosis

Tomosynthesis | Energy Subtraction | Long View Imaging

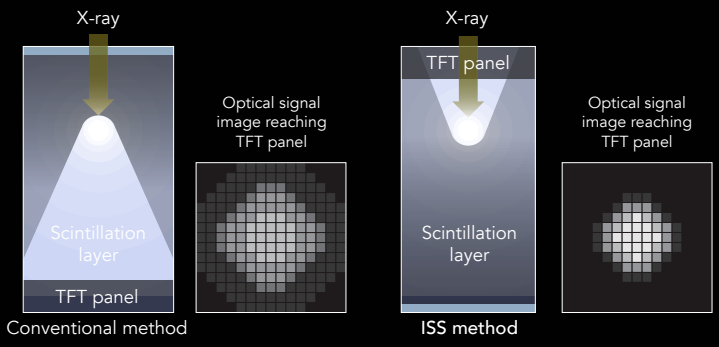
Stress-free, Optimized Imaging Workflow

Power Assist Function

Using the latest technological developments to allow further quality improvements with a low operational dose rate.

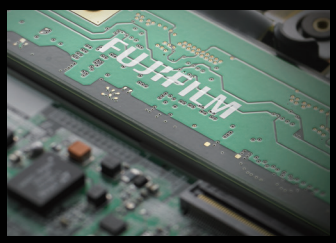
Using Fujifilm's "ISS method" reading technology to achieve sharper images

In contrast to conventional FPD offerings this system features an indirect conversion FPD using the "ISS method," where the TFT sensor is placed in front of the scintillation layer instead of behind it. With this proprietary method the scattering/dissipation of X-ray signals is significantly reduced, achieving sharper images with a lower X-ray dose.



Improved sensitivity in low-density areas using noise reduction circuitry*

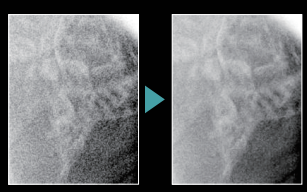
Image noise is reduced by using a proprietary noise reduction circuitry. Granularity in low-density areas is improved, helping to boost image quality.



* FDR D-EVO Advanced C43A

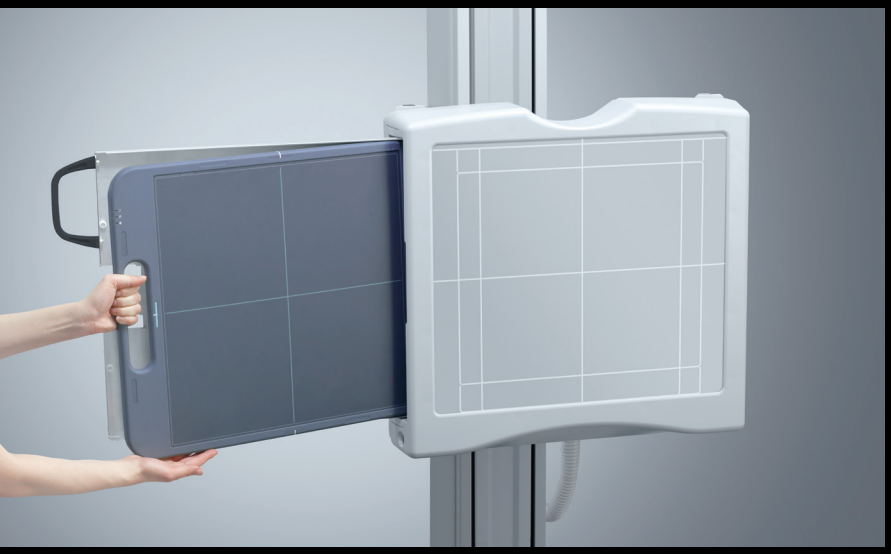
Image processing technologies producing optimized images

The system features imaging processing technologies that enable desirable image display. These technologies include "Dynamic Visualization," which optimizes images for diagnosis on-screen, and "Flexible Noise Control (FNC) Processing," which reduces granularity by automatically extracting and excluding image noise components.



FNC processing

Multiple Panel Combinations and Variations



Select the ideal imaging method for each examination and site requirement by selecting from a broad range of panel sizes and types.

Full Function Model

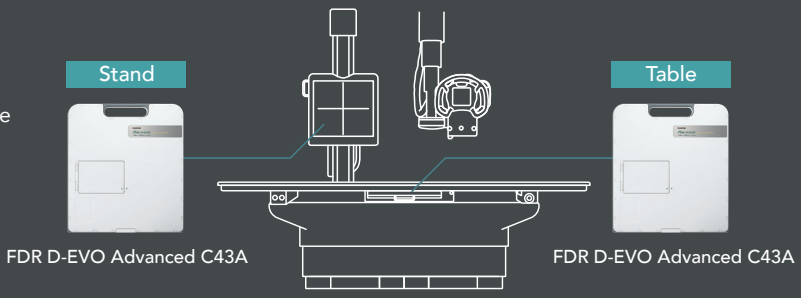
With cutting-edge optional technologies such as Tomosynthesis, additional imaging information can be provided, further improving diagnostic capabilities.

CsI Scintillator

Tomosynthesis*

Energy Subtraction*

Image Stitching*

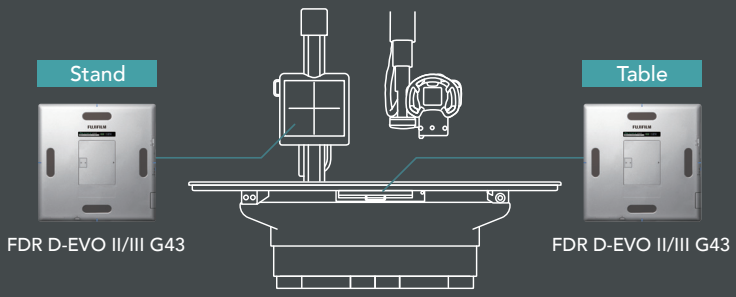


Standard Model

This model is capable of a wide-range of general radiography imaging, including long view imaging and an Autopositioning option, enabling optimized work flow.

GOS Scintillator

Image Stitching*



							
Panel Name/Panel Type		FDR D-EVO Advanced C43A	FDR D-EVO II/III C43	FDR D-EVO II/III C35	FDR D-EVO II/III G43	FDR D-EVO II/III G35	FDR D-EVO II/III
Scintillator		CsI	CsI	CsI	GOS	GOS	CsI
Size		43×43 cm	43×43 cm	35×43 cm	43×43 cm	35×43 cm	DII C24: 24×30 cm DIII C25: 25x30 cm
Applications*	Tomosynthesis	●	-	-	-	-	-
	Energy Subtraction	●	-	-	-	-	-
	Long View Imaging	●	●	●	●	●	-
Cassette Tray		●	●	●	●	●	(Free exposure position type)

* These applications are optional.

Wide Range of Applications That Contribute to Improving Diagnostic Capabilities

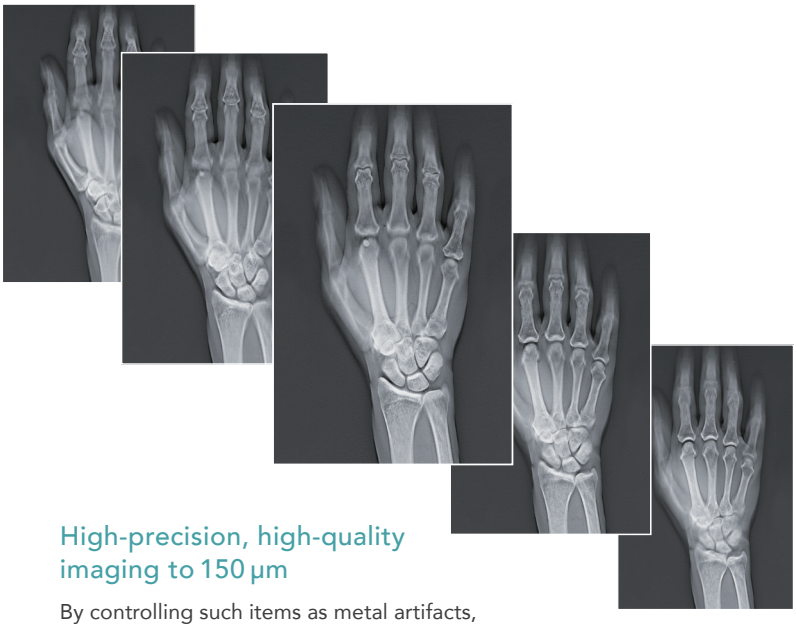
Tomosynthesis*

Freedom to reconstruct and display image slices

With this technology the X-ray tube moves linearly, acquiring a series of images in a single sweep, which can then be reconstructed to create cross-sectional image slices.

Automatic X-ray dose control and background reconstruction

Using the imaging conditions for a single preliminary image as reference, the conditions for Tomosynthesis imaging are set automatically.



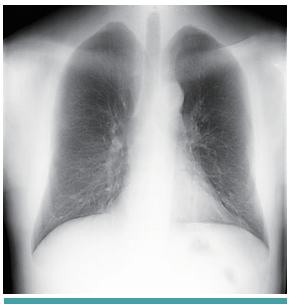
High-precision, high-quality imaging to 150 µm

By controlling such items as metal artifacts, high-precision imaging down to 150 µm is possible.

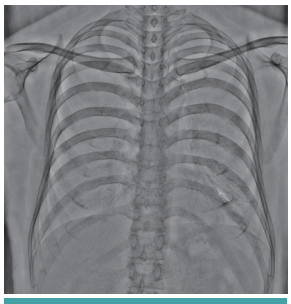
Energy Subtraction*

Separates images of soft tissue and bone for improved viewing

This technology takes two X-rays, utilizing the difference in X-ray energy absorption to create specific images of soft tissue and bone, etc. The dose rate is changed automatically between shots.



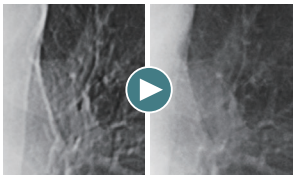
Soft Tissue Image



Bone Image

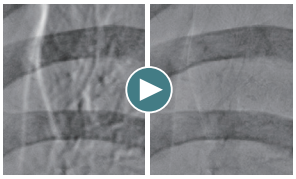
Controlling motion artifacts

Motion artifacts that may occur between exposures are suppressed by multiple resolution alignment processing, allowing for clear images of soft tissue and bone.



Alignment processing: OFF Alignment processing: ON

Soft Tissue Image



Alignment processing: OFF Alignment processing: ON

Bone Image

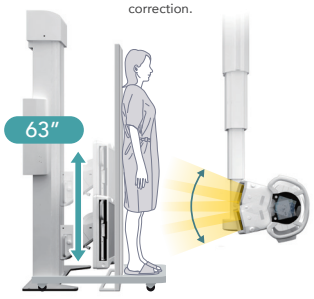
Long View Imaging*

Display full-length images of spine or lower limb

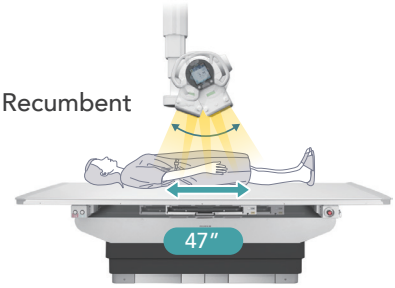
This technology uses multiple images taken in one sweep and automatically stitches them to create images of wide area of up to 63″ upright and 47″ recumbent. Disjointed images caused by patient body movements can be automatically corrected through image alignment.*

*Depending on the degree of disjoint between images it may not be possible to implement automatic image correction.

Upright



Recumbent



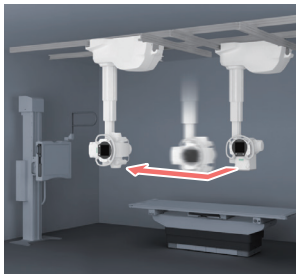
* These applications are optional.

Fast, Easy Robotic Positioning Eliminates Repetitive Muscle Strain

① Preparation

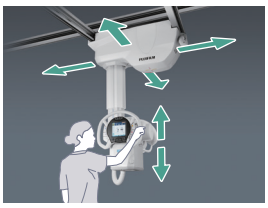
Completion of room preparation without touching the system

The system features an auto-positioning function that moves the X-ray tube into position automatically. It is possible to pre-set and restore positions from the image guidance menu. *Option



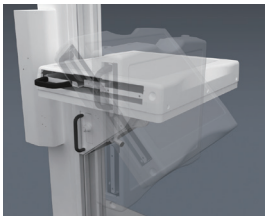
Power Assist Function

The Power Assist Function enhances manual X-ray tube positioning by the use of motors, providing quick and extremely light movements. It can reduce the physical exertion for radiographers when positioning the tube. *Option



X-ray stand

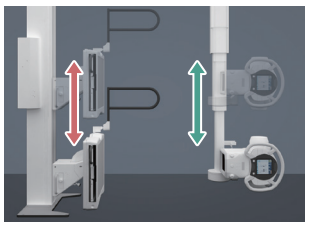
A movable scope of 16 to 75" from the center of the exposure makes it possible to take images of the entire lower limb from the cervical vertebrae down. The exposure platform can be adjusted from -20 to 90 degrees*, making it possible to take images of the head and upper limbs. *Option

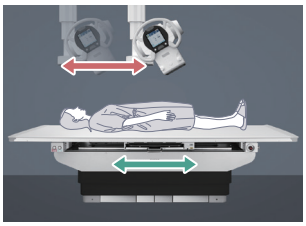


X-ray table

Using the foot switch and grip switch* it is possible to adjust the height quickly and easily between 21 and 33.5". *Option

② Patient Guidance and Positioning





Manual Operation ⟷ Automatic Tracking

Easily define the imaging position for each individual patient

With the auto-tracking function the panel and X-ray tube are automatically kept in alignment, making it possible to focus on patient positioning and care. By switching between automatic and manual functions positioning can be simplified, allowing the operator to maintain full control.

Setting made easy with an LCD touch panel

The touch panel presents image-related information clearly and also enables settings to be changed easily. It is also possible to change the angle of the square LCD panel by 90 degrees to match the direction of the X-ray tube, making it easy to see at all times.

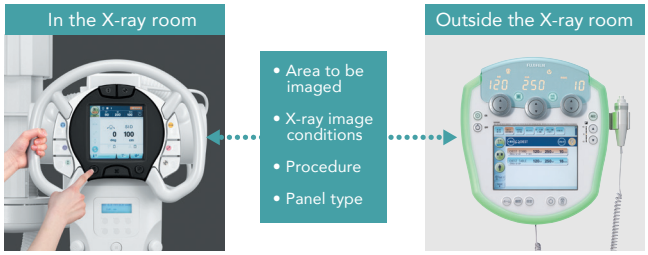
Radiation field linking function

The pre-selected radiation field size for the area to be imaged is automatically set and alignment of the field to the upper or lower potion of the detector is also automatically performed.

③ Taking Images

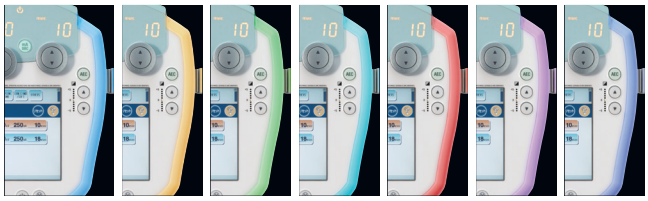
● "Sound and light" notifies those away from the machine when an X-ray is being taken

"Ready up" and "X-ray in progress" notifications can be clearly understood by sounds and lights on the frame and hand switch. There is a choice of seven colors for the notification lights.



● Change conditions in the X-ray room using the touch panel

All conditions can be changed using the LCD touch panel on the X-ray tube supporting arm, making it possible to set conditions in the X-ray room alone. The changed conditions are relayed in real time to the controller outside the X-ray room.



Provision of Easy-to-use Advanced Applications

Tomosynthesis

Determine the image position and take an X-ray.

Collection of images

Imaging conditions are automatically calculated from the pre-shot and up to 60 images are collected.

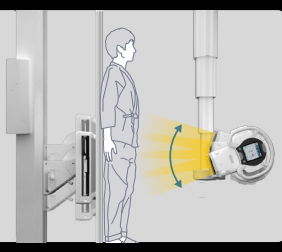
Images are reconstructed into slices

Metal artifacts are suppressed to create a high-precision image.

Work flow ② Image Stitching

1 Imaging

The parameters to obtain an image of wide area are set and an exposure is performed.

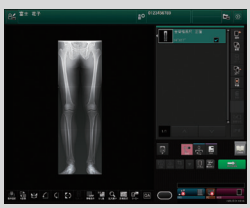


2 Collection of images

Multiple images are taken automatically within the pre-set parameters.

3 Automatic stitching

Multiple images are stitched automatically. Disjoints in stitched images caused by patient body movements are also automatically corrected.



FDR Visionary Suite Specifications

■ X-ray Generator

- Rated output : 50 kW / 80 kW
- Tube voltage : 40 to 150 kV
- Tube current : 10 to 630 mA (50 kW model)
  10 to 1000 mA (80 kW model)
- AEC : Xe detector-type phototimer receiver
  combination up to three receivers

■ X-ray Tube Support

- Ceiling fixture : Fixed rail of 13 / 18′ (4 / 5.5 m)
  Moving rail of 6.6 / 8.5 / 10.8 ft (2 / 2.6 / 3.3 m)
- Movement range: Longitudinal 9.7′ (2.95 m) (13′ (4 m) fixed rail)
  Longitudinal 14.6′(4.45 m) (18′ (5.5 m) fixed rail)
  Transversal 4.6′ (1.4 m) (6.6′ (2 m) moving rail)
  Transversal 6.6′ (2.0 m) (8.5′ (2.6 m) moving rail)
  Transversal 23′ (2.7 m) (10.9′ (3.3 m) moving rail)
  Vertical 5.2′ (1.6 m)
- Rotation : Vertical axis ±180°
  Horizontal axis -180° to +120°

■ X-ray Tube Unit

- Maximum anode heat content : 400 kHU
- Maximum anode heat dissipation rate : 2200 HU/s
- Focal spot : 0.6 / 1.2 mm

■ Collimator

- Filtration : Inherent filtration 1.1 mmAl eq.
  Added filter of Cu 0.1 / 0.2 / 0.3 mm
- Standard accessories : Auto-filter
  Line marker
  Detent (fitted at the home position)
- Area dosimeter adapter (Option) :
  An adapter for dosimeter manufactured
  by VACUTEC/PTW

■ Table

- Tabletop size : 31.8x92.5″ (810×2350 mm)
- Table height : 21 to 33.5″ (535 to 850 mm)
- Longitudinal range : ±14.8″ (±375 mm)
- Transversal range : ± 4.9″ (±125 mm)
- Bucky moving range : 31.5″ (800 mm)
- Max. load : 650 lb (295 kg)
- Standard accessories : Tracking device
  Bucky tracking driver
- Options : Compression belt
  Side cassette holder
  Grip switch
  Hand grip
  Drip hanger
  Rear foot switch

■ Stand

- Distance between Bucky top edge and floor surface :
  Manual : 25.3 to 84.4″ (643 to 2143 mm)
  Motorized : 26.4 to 83.2″ (671 to 2113 mm)
- Tilting angle (Function for BR-120T) : -20° to 90°
- Standard accessories:
  Tracking device
  Lateral arm holder (mounted on top edge of the Bucky)
  Side patient hand grips (mounted on back side of the Bucky)
  Stop switch
  Foot switch
- Options:
  Cassette holder
  Front handle
  Both side operation
  Compression belt
  Patient stand (for long view radiography)
  Wall mounting option (for BR-120)

FDR D-EVO Advanced C43A Specifications

- Scintillator : CsI
- Detector external size (W x D x H):
  ~18.3 × ~20.3 × ~.7″
  ~464.5 × ~516.7 × ~18 mm
  *excluding convex part of the cable
- Weight : ~10 lb (4.5 kg) including battery
- Pixel size : 150 µm
- Maximum detecting area : 2816 × 2816 pixels
- Image preview : less than 2 sec
- Cycle time : less than 8 sec

FDR D-EVO Advanced C43A

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