FUJIFILM
Value from Innovation

NEW

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
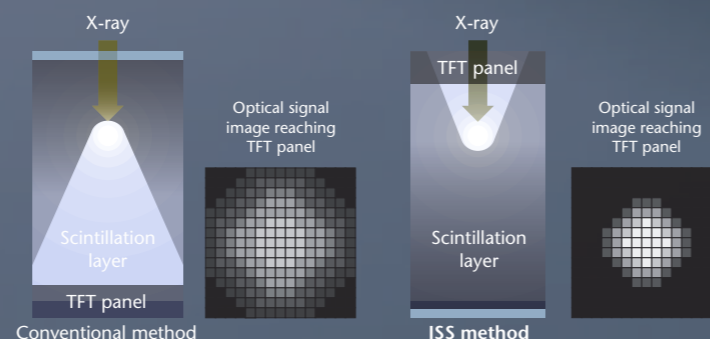
Wide Array of Applications Support Diagnosis

| Tomosynthesis | Energy Subtraction | Long View Imaging |

Stress-free, Optimized Imaging Workflow

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

1. 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.

X-ray

Scintillation layer

TFT panel

Conventional method

Optical signal image reaching TFT panel

X-ray

TFT panel

Scintillation layer

ISS method

Optical signal image reaching TFT panel

2. 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

3. 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.
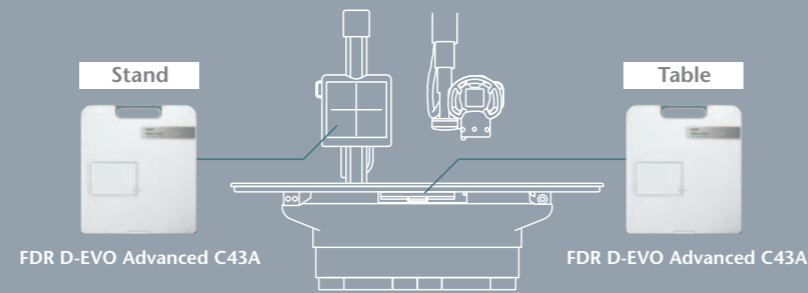
Image Intelligence™

▶

FNC processing
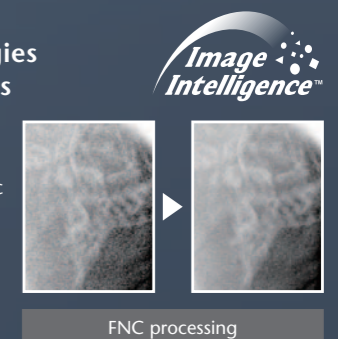
Multiple Panel Combinations and Variations
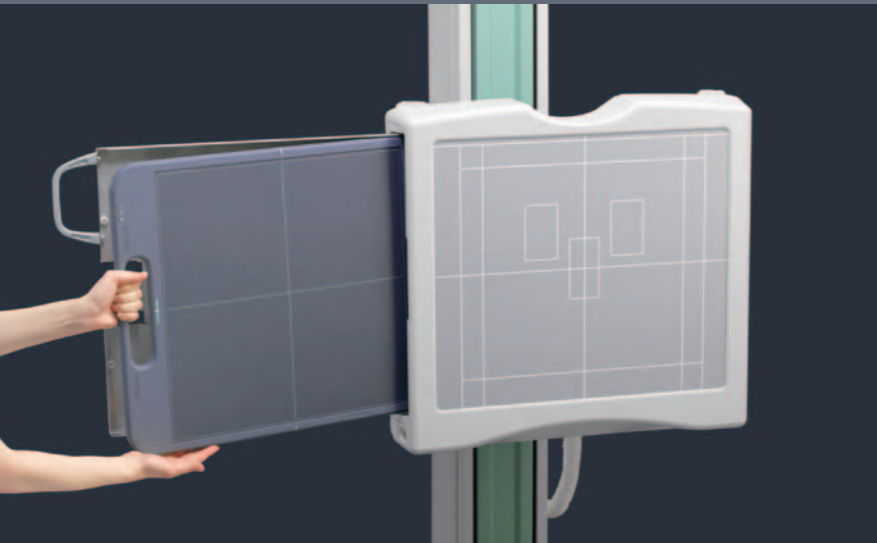
It is possible to select the ideal imaging method for each examination and site requirement by selecting from a broad range of panel sizes and types.

[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* |

Stand

FDR D-EVO Advanced C43A

Table

FDR D-EVO Advanced C43A

[Standard Model]

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

| GOS Scintillator | Image Stitching* |

Stand

FDR D-EVO G43i

Table
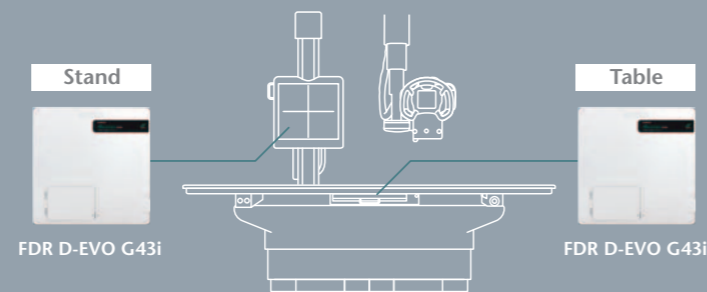
FDR D-EVO G43i

Panel Name/Panel Type		FDR D-EVO Advanced C43A	FDR D-EVO plus C35i	FDR D-EVO G43i	FDR D-EVO G35i	FDR D-EVO plus C24i
Scintillator		CsI	CsI	GOS	GOS	CsI
Size		43×43cm	35×43cm	43×43cm	35×43cm	24×30cm
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 through an arc, 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.
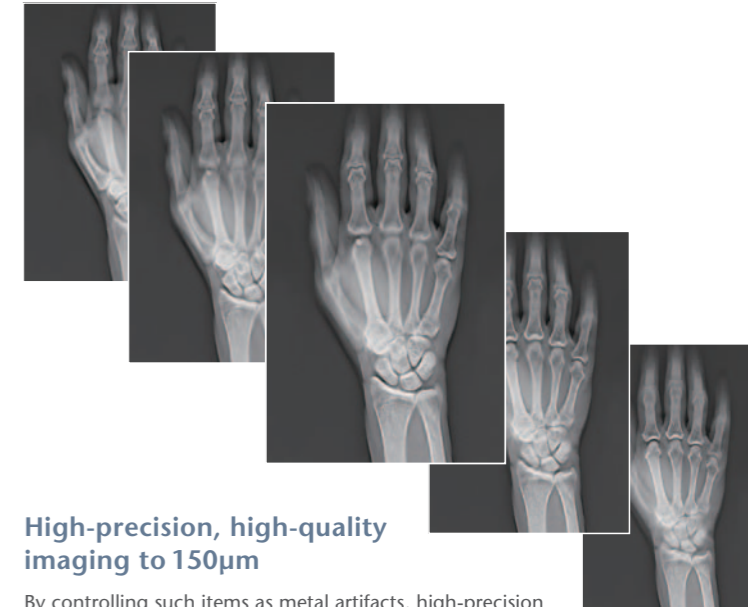
High-precision, high-quality imaging to 150μm

By controlling such items as metal artifacts, high-precision imaging down to 150μm 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
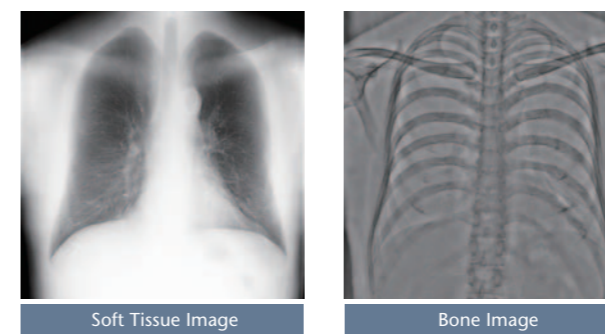
Controlling motion artifacts

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 Alighment processing: ON

Soft Tissue Image

Alignment processing: OFF Alighment processing: ON

Bone Image
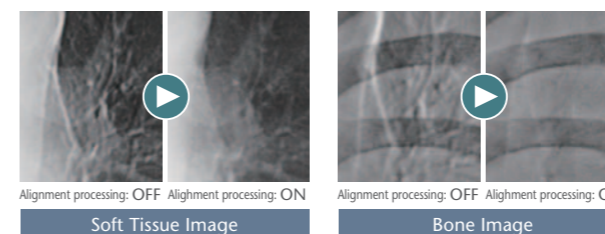
Long View Imaging*

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 160cm upright and 120cm recumbent. Disjointed images caused by patient body movements can be automatically corrected through image alignment.*

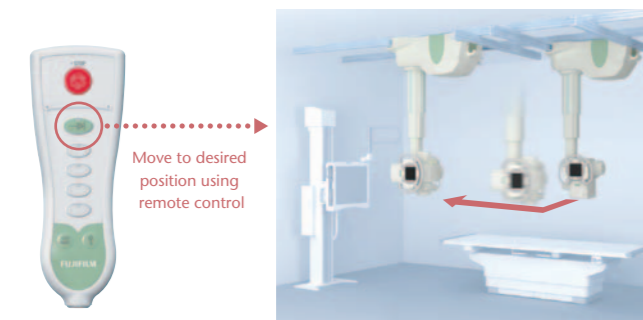*Depending on the degree of disjoint between images it may not be possible to implement automatic image correction.

Upright

160cm

Up to **120**cm
when in recumbent position

Recumbent

120cm
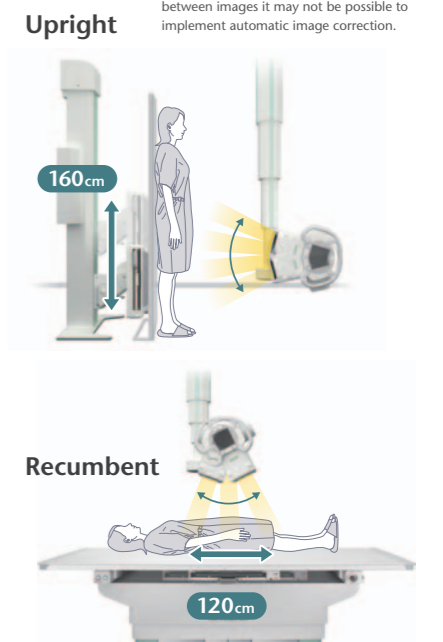
* These applications are optional.

Smoothly and Surely Ensuring a Stress-free Imaging Environment

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① Preparation

Move to desired position using remote control

● 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.

● X-ray stand

A movable scope of 40 to 190cm 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.
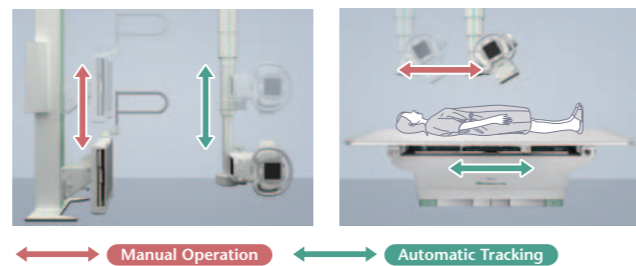
*Option

● X-ray table

Using the foot switch and grip switch* it is possible to adjust the height quickly and easily between 53 and 85cm.

*Option

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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.

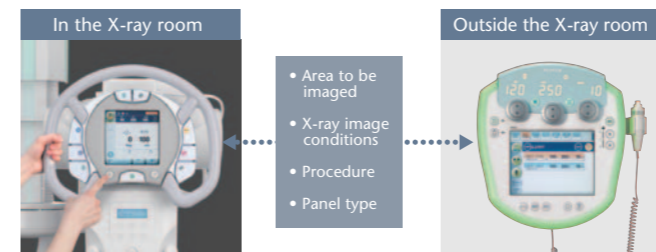### ● Radiation field linking function

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.

● 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.

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③ Taking Images

In the X-ray room | Outside the X-ray room

- Area to be imaged
- X-ray image conditions
- Procedure
- Panel type

● 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.

● "Sound and light" notifies those away from the machine when an X-ray is being taken
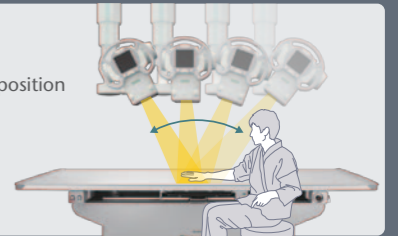
"Ready up" and "X-ray in progress" notifications can be clearly understood by sounds and lights on the frame and hand switch. There is a choice of seven colors for the notification lights.
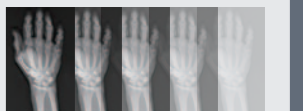

Work flow ①　Tomosynthesis

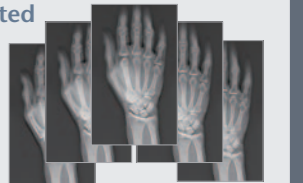**1 Imaging**

Determine the image position and take an X-ray.

2 Collection of images

Imaging conditions are automatically calculated from the pre-shot and up to 60 images are collected.
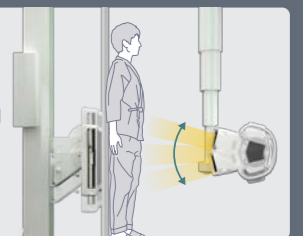
3 Images are reconstructed into slices

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

Work flow ②　Image Stitching

1 Imaging

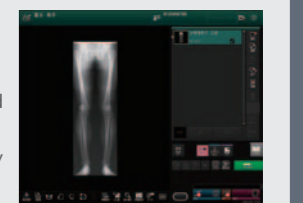The parameters to obtain an image of wide area are set and an exposure is performed.

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.

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- Long View Imaging

FDR D-EVO Advanced C43A

FDR Visionary Suite Specifications

■ X-ray Generator

- Rated output : 50 kW / 65 kW / 80 kW
- Tube voltage : 40 to 150 kV
- Tube current : 10 to 630 mA (50 kW model)
  - 10 to 800 mA (65 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 4 / 5.5 m
  - Moving rail of 2 / 2.6 /3.3 m
- Movement range : Longitudinal 2.95 m (4 m fixed rail)
  - Longitudinal 4.45 m (5.5 m fixed rail)
  - Transversal 1.4 m (2 m moving rail)
  - Transversal 2.0 m (2.6 m moving rail)
  - Transversal 2.7 m (3.3 m moving rail)
  - Vertical 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 : 810 × 2350 mm
- Table height : 535 to 930 mm
- Longitudinal range : ±375 mm
- Transversal range : ±125 mm
- Bucky moving range : 800 mm
- Max. load : 295 kg
- Standard accessories : Tracking device
  - Bucky tracking driver
- Options : Compression belt
  - Side cassette holder
  - Grip switch
  - CFRP tabletop
  - Hand grip
  - Drip hanger
  - Rear foot switch

■ Stand

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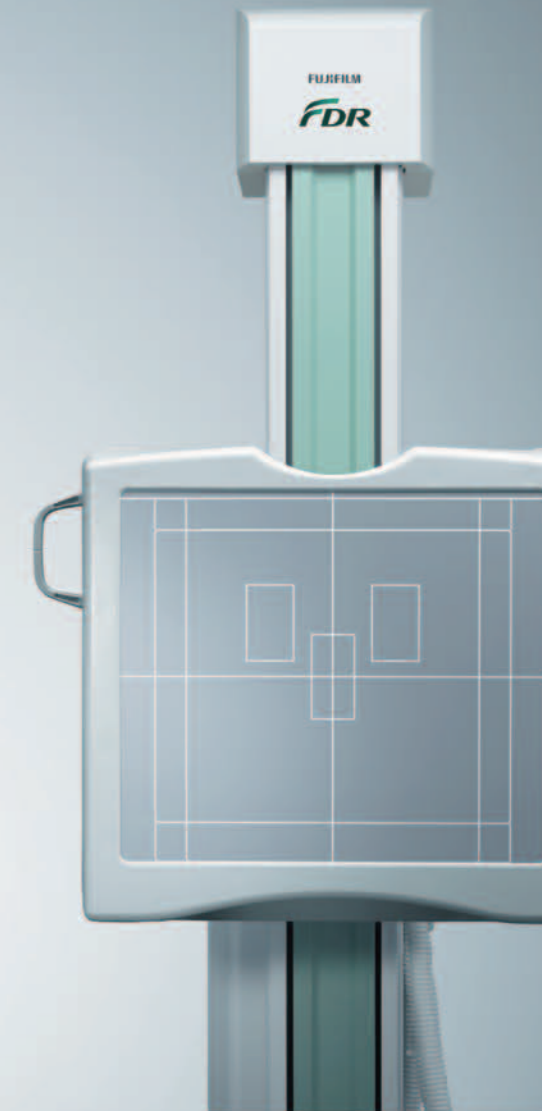 - Wall mounting option (for BR-120)

FDR D-EVO Advanced C43A Specifications

- Scintillator : CsI
- Detector external size :
  - 464.5±1(W) × 516.7±1(D) × 18±1(H) mm
  - *excluding convex part of the cable
- Weight : Approx. 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

Specifications are subject to change without notice.
All brand names or trademarks are the property of their respective owners.
All products require the regulatory approval of the importing country.
For details on their availability, contact our local representative.
Actual X-ray images are varied by conditions of X-ray system or subjects or other factors.